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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

- Adenoids and Tonsils
- Cancer
- Cataract
- Care of the Baby
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- Colds
- Clean-up Placards
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- Typhoid Placards
- Venereal Diseases
- Water Supplies
- Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

- Prenatal Care (by Mrs. Max West)
- Infant Care (by Mrs. Max West)
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- Save Your Baby
- Hints to North Carolina Mothers Who Want Better Babies
- Table of Heights and Weights
- The Runabouts in the House of Health (pamphlet for children from 2 to 6 years of age)
- Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 20 months to 2 years.
- Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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MENTAL HYGIENE

In this issue we are endeavoring to emphasize the necessity for a practical study of mental hygiene. Mind health is just as important to an individual's happiness and success as freedom from tuberculosis or any other disease which jeopardizes life.

The study of mental hygiene can and should be made just as practical as the study of any other phase of preventive medicine.

About fifteen years ago Clifford W. Beers, the famous author of "A Mind That Found Itself," came to Raleigh and assisted in the organization of a State Mental Hygiene Association. Several of us put a deal of time and effort into the matter of undertaking to interest the public in the practical phase of preventing mental disease. If we may judge by the increasing ratio of mental diseases as evidenced by the increasing demands which are each year made on our institutions for the feeble-minded and the insane, the hopes and objectives of the little group of optimists who started out so bravely fifteen years ago have not been realized.

The people of North Carolina need to know:

First: That with the exception of building and maintaining roads, and providing annually for the education of our million school boys and girls, by far the heaviest burden on the taxpayers of the State is providing for the many thousand feeble-minded and insane.

Second: That this burden is increasing with each year, requiring an ever-increasing outlay in money for their adequate care.

Third: That with the complexities of modern life all the time becoming more acute, the only hope for lessening this burden is through a system of education and training which will embrace an adequate knowledge of preventive measures in order to stop the drain at the source.

Fourth: That syphilis remains the leading single cause of hopeless insanity and that every means at hand should be employed to prevent its spread; and that numbers of persons are innocently infected with syphilis, in which cases there cannot be any just cause for concealing the condition.

Fifth: That there should never be any more stigma fastened on a person with a diseased mind than upon one suffering with cancer or any other disease. An individual's mind is just as liable to disease as his heart or kidneys.

Everybody should understand definitely that a person may recover from an attack of mind disease just as permanently as from an attack of typhoid fever. The stigma placed on people who have unfortunately suffered an attack of mental disease and recovered often makes it harder for such people to gain a livelihood afterward. This feeling is unjust and really reflects on the intelligence, as well as the humanity, of the general public. It is a hangover from pre-science days when the priests and barbers were the chief votaries of medicine and taught that a person with a diseased mind was harboring devils; and were being so punished for their sins.
A view of North Carolina's great Central State Hospital at Dix Hill, Raleigh. Competent experts from other states have declared this to be one of the best managed institutions in America. Hundreds of patients treated within these walls have been restored to health and sanity.
Your invitation to issue a statement about the scope of our work to your readers throughout North Carolina is appreciated. There are many things that people of our state do not know about our work, which would be better for them and us, if they did know.

First, they ought to understand that our official name for the last twenty or twenty-five years is The State Hospital, at Raleigh, and not Insane Asylum, as people generally call this institution, because this name has been called over in their minds from a period when institutions of this kind were about what Insane Asylum would indicate, namely: institutions for custodial cases. We are making an effort to live up to the meaning of a State Hospital, which indicates that we should take cases of mental sickness for the purpose of curing or improving the patients.

It is a mistake to take cases that need only custodial care because such cases can be kept cheaper in county homes, or hospitals, and be nearer their people who visit them during their life time. This class of patients are incurable, and therefore should not take our space which should be used for curable cases and those kinds that can be improved sufficient to send back home.

Our state hospitals in North Carolina have been increasing in population for the past ten years very rapidly. This is due to varied reasons but the chief reason in my opinion is due to the increased confidence in these hospitals to relieve mental sickness.

We believe that it is as possible to prevent mental sickness along preventive lines as it is physical sickness, which has been so well demonstrated by the work of the State Board of Health. In order to prevent mental sickness, we must go through the same processes of educating our people in preventive measures in mental sickness, the same as the State Board of Health has been doing for two decades or more, along preventive measures for physical disease.

About fifteen years ago we had a mental hygiene exhibit in the city auditorium at Raleigh, and in connection with this exhibit, we had speakers of great reputation, over a period of two weeks, to speak to our people on the various phases of mental health, and the management of mental cases. At the close of this exhibit and conference of speakers, we organized a State Society for Mental Hygiene.

The war came on soon after we started this work in the state, and we had to discontinue a good deal of our work at our annual meetings. While we were making these efforts, we were getting into our district literature on prevention of mental diseases; but since the war we have not had the money or the means to look after this work in our district.

It is generally believed, especially by the Secretary of the State Board of Health and the Editor of the Bulletin, that much can be done in educating our people about the nature of mental sickness, and the difficult problem that we have to handle at our hospital. We will have more difficulty in making our people understand the nature of mental sickness than we have had in giving them information about physical diseases and their prevention.

There is some mystery about mental sickness in the minds of people that they do not have about physical trouble. I suggest that our three state hospitals, at Morganton, Goldsboro, and Raleigh, be the main centers to send out the desired information about mental sickness to the people of our state. In order to do this we should organize a traveling mental
TWO DISEASES CAUSE TWO-FIFTHS ADMISSIONS TO STATE HOSPITAL AT GOLDSBORO

Several months ago, when we first began to formulate plans for this issue of the BULLETIN, we wrote to the superintendents of the three State Hospitals for the Insane and asked each one of them for a contribution, to be published in this issue. Dr. Anderson and his staff at the State Hospital at Raleigh at once responded with some very valuable information, which is published elsewhere in this Bulletin. We have never had a reply to our letter from the superintendent at the Morganton Hospital, but Dr. W. C. Linville, superintendent of the Hospital for colored people at Goldsboro, sent us the important statement which we publish in full below.

We hope that all our readers will read very carefully the statement of Dr. Linville. It is short and to the point. It will be noted that he gives definite facts and figures concerning the great number of admissions to the Goldsboro Hospital during 1927, caused directly by syphilis and pellagra. Dr. Linville makes the pointed statement that thirty-two per cent of all admissions, or practically one-third, for the fiscal year ending July 1, 1928, was definitely caused by syphilis. For the same period ten per cent of the patients admitted was a direct result of pellagra. These two diseases are preventable, easily preventable, provided all agencies could work together to prevent them. Dr. Linville makes the clear-cut statement that "the right information and advice given to the people of North Carolina about these two diseases will save the people a great amount of suffering from them."

Dr. Linville's statement follows in full.

"The State Hospital at Goldsboro has just issued its Biennial Report, which report runs from June 30, 1926, to July 1, 1928. Some of the figures might be of interest to the people of North Carolina.

"We admitted 986 patients during the two years. During the first year 444 patients were brought here. Of this number syphilis caused the insanity of 178, or 32 per cent, of those admitted. Knowing as we do that only a small per cent of those infected with this disease lose their mind proves to us that this disease is playing havoc with the colored people of North Carolina. Up to the Civil War colored people of the South were not infected with this disease and for a long time it was thought people of the colored race did not have paresis, but we know now that they have it, and in severe form. A great many of these cases will remain in a State Hospital as long as they live. We treat all with intensive treatment and get good results in some, but all of these cases would have been better off to cope with life had they been treated before coming here, and I think all could have been saved if treated in time.

"Pellagra was the cause of insanity of 5 per cent of our admissions two years ago, 10 per cent last year, and is now about 15 per cent since July 1st of this year.

"The right information and advice given to the people in North Carolina about these two diseases will save the people a great amount of suffering from them."

The old idea that syphilis is a disease which must be dispelled from the people's minds must be dispelled from the people's minds. Is it not more disgraceful to keep it and transmit it to others?"
PARESIS

BY

R. K. ADAMS, M. D. State Hospital, Raleigh

Paresis, sometimes spoken of as Dementia Paralytica, or General Paralysis of the Insane, is a serious, and generally fatal disease of the nervous system due to the germs of syphilis (spirochaeta pallida). In the olden days before the development of modern laboratory methods it was thought that other factors such as alcoholism and injuries, especially to the head, could produce paresis, but with the discovery of the Wasserman reaction and the recent methods for laboratory examination of the blood and spinal fluid, the axiom “no syphilis, no paresis” is a true one.

The disease has been recognized for centuries, Willis in 1872 probably being the first to definitely describe it. Fortunately the nervous system seems to be quite resistant to the entrance of the germs of syphilis as only about two or three per cent. of those that suffer from syphilis develop paresis. On the other hand, when the germs do invade the nervous system the resulting disease seems very resistant to treatment. It has been held by some authorities in the past and is probably held by some at the present time, that paresis is most apt to develop in syphilitics who have had a great deal of treatment in the primary or secondary stage. However, very likely the reverse of this is true, and invasion of the nervous system is most likely to occur in those syphilitics who have had inadequate early treatment.

Paresis generally occurs from five to ten years after the initial infection and is characterized by a multiplicity of symptoms, yet it is possible to describe the various forms fairly satisfactorily. No attempt will be made to do this in detail here but a few of the more common types will be alluded to:

1. The Expansion or so called Classical Type.
2. The Dementing Type.
3. The Juvenile Type.

Unfortunately the disease is not always recognized in the earlier stages and at
times may be mistaken for neurasthenia or other milder nervous disorders. The patient himself rarely ever feels that he is in the early stages of a serious mental disorder, but on the other hand may feel unusually happy and well. Among the early symptoms might be mentioned, increased fatigability, inattention and decreased ability for prolonged mental efforts. These symptoms are soon followed by defects of retention and memory, impoverishment of ideas, loss of judgment and the development of delusions, especially in the so-called expansive or classical type. In this type the patient develops ideas of great wealth, power and position. These grandiose, expansive delusions are subject to frequent changes. At one moment the patient has thousands of dollars and the next moment this has increased to millions or billions. They are kings, emperors, princes or potentates, have diamonds by the bushels, etc. In no other mental disturbances are the delusional ideas so grandiose as in the expansive or classical type of paresis. In the dementing type the earlier symptoms may be the same as those of the expansive, but the delusions, if they do occur, are transitory and are not grandiose and expansive. Instead of delusions there is marked mental deterioration. In all types of paresis the tendency is for the patient to become bedridden from physical decline or cerebral hemorrhage (to which they are very prone), and to thus be invalids until death ends the picture.

Juvenile Paresis, which develops on the basis of congenital syphilis, or more rarely, on syphilis acquired during the nursing period, is rather infrequent. Its onset is generally at about ten years of age or at puberty or adolescence. The symptoms are not so clear cut as in paresis in adults. The main symptom is progressive mental deterioration. Delusional ideas may exist, but these are rarely ever of the grandiose type. The disease is somewhat slower than in adults. The average duration is about five years. The disorder responds less to treatment than do the types that occur in adults.

The best treatment, of course, is the prevention of syphilis. If on the other hand, a person has acquired syphilis, he should place himself at once under the care of a competent physician and remain under his care until discharged from treatment. All persons who suffer from syphilis should have frequent examinations made of the blood. In addition to this examinations of the spinal fluid should be made, even if the blood gives a negative Wassermann reaction, as the spinal fluid may be positive and the blood negative. Examination of the spinal fluid is very important, as it is possible by present laboratory methods to detect syphilis of the nervous system much earlier than was possible in the past.

After the organisms of syphilis invade the nervous system less can be done by treatment than can be done by stamping out the disease by intensive treatment during the earlier stages. After the nervous system is invaded, intravenous and intramuscular treatment can be given and in addition the intraspinal method can be used. Among the newer remedies for paresis could be mentioned the so-called "malarial treatment." It has been observed that paresis is very infrequent in countries where malaria is very prevalent and this had led to the treatment of the disease by inoculating the patient with the parasites of malaria. Four or five cc of blood taken from a malarial patient, preferably during a chill, is injected either intravenously or hypodermically into the patient suffering from paresis and in from ten days to four weeks the patient develops malaria. He is permitted to have from eight to ten chills and then the malaria is terminated by the administration of quinine. The tertian or quartan parasite must be used. This type of treatment has been employed in the State Hospital at Raleigh and in a great many other hospitals and is apparently of value. It should of course be given to the younger paretics who are physically strong and should be used during the early stages of paresis, as it is obvious that no treatment will restore the paretic in the advanced stages and treatment in this type who are both physically and mentally deteriorated
may only tend to hasten death. If it is impossible to secure malarial parasites, typhoid vaccine can be given intravenously. This produces a febrile reaction, but this type of treatment probably is not as effective as the malarial and should only be used when it is impossible to secure proper malarial parasites.

The treatment of juvenile paresis lies in the treatment of the syphilitic parents and the prevention of infection during the nursing period.

**INSANITY TREATMENT IMPROVES**

Recognition of Mental Disorders as Major Health Problem Hailed as Encouraging

By PAUL O. KOMORA In New York Times

The New York State Department of Mental Hygiene recently made public the results of a study of mental disease expectancy according to which approximately 4 1-2 per cent of the persons born in New York State under existing conditions "may be expected to succumb to mental disease of one form or another" and become patients in hospitals for the mentally afflicted. This means that one person out of each twenty-two of the population is a patient in a mental hospital some time during his or her lifetime.

May I point out a significant aspect or two of these figures with regard to the national problem of mental morbidity? Approximately 75,000 new patients are admitted to the mental hospitals of the country every year. At this rate we may expect, with all the assurance of a life insurance mortality table, that 1,000,000 men and women now going about life's business will have become mental cases of more or less institutional severity in the next fifteen years.

A MAJOR PROBLEM

These figures impress us all the more when we learn that there are as many patients in the mental hospitals of the country as in all other hospitals combined. It is not the question whether mental disease is actually on the increase but the fact that there are so many persons requiring treatment for mental conditions that is significant; the fact that mental disease is now recognized as a major health problem that should be dealt with as vigorously as tuberculosis, cancer or any other widespread disease. This is a victory for the mental-hygiene movement, which sensed the importance of the problem of mental disease twenty years ago and has labored ever since to bring it to the surface.

The overcrowding of our State hospitals for mental disease is a distressing concern of State Governments throughout the na-
tion, an index of the seriousness of the problem, but it is also a hopeful sign. It is an indication that people are beginning to think about insanity in terms of disease amenable to treatment and in many cases just as curable as bodily disorders. We are adopting a more rational attitude toward the subject, with the result that there are now more known cases of mental morbidity than before.

A MORE BENEFICIAL VIEW

The rapid multiplication of out-patient mental clinics, the development of psychiatric social service, and the extension of community organization and extra-institutional facilities for the treatment of mental breakdown in the family, and more of an inclination to seek advice and treatment in the early stages of mental disease. This is all to the good, even with mounting hospital admission rates, because we are bringing the problem out into the open where better provision can be made for dealing with it.

The campaign of education is beginning to tell, and it is confidently hoped that in time we may bring mental disease under control to a point comparable with the control of, say, tuberculosis, thanks to improved economic conditions and the work of the public health movement. The warfare against disease is being extended to include all the enemies of mankind, and it is the hope of the American Foundation for Mental Hygiene, which was recently organized to secure greater resources for the support of those who are fighting the battle against mental disease, that this last spectre will some day take its place among those that have lost forever their power to darken human lives.

EXTRACTS FROM REPORT OF THE SUPERINTENDENT OF THE STATE HOSPITAL FOR THE INSANE, MORGANTON

We had hoped to present in this issue of the BULLETIN a contribution from the Superintendent of the State Hospital for the Insane at Morganton, along with the excellent contributions in this issue of the BULLETIN from officials of the Central State Hospital for the Insane at Raleigh and the Superintendent of the Eastern State Hospital for the Insane at Goldsboro. We regret, however, that we have been unable to procure a response to our invitation to the Superintendent of the Morganton Institution, but we are pleased to republish herewith some extracts from a report by the superintendent of that institution for the third quarter of 1928, made to the Board of Directors at Morganton.

This newspaper summary, containing, as it does, much interesting information in addition to the comments of the superintendent, was published in the Greensboro News in its issue of October 8, and is hereewith reproduced:

"At the quarterly meeting of the board of directors of the State hospital the report of Superintendent McCampbell, for the quarter ending September 30, showed 2,310 patients on the roll, 1,107 men and 1,203 women. The admission rate continues high, the report stated. One hundred and eighty-one patients were admitted during the quarter, an average of more than two per day. During the period the enrolled population was increased by 124. 'The resident population,' the report continues, 'owing to death and exercise of a most liberal parole system, has only increased to the number of 26 patients' during the quarter.

But this rate, if it continues, as is probable, 'will give an average of approximately 100 residual patients yearly, this being the uniform rate of increase during the past three or four years.'

"From the foregoing it will be understood that the permanent population of the institution is increasing at the rate of 100 per year. With that number added each year it can be seen how quickly additional dormitory space provided by legislative appropriation is taken up. 'This alarming rate of increase,' continues Supt. McCampbell, 'can be checked by a more rigid restriction in the admission of unsuitable patients, and, in my opinion, such a step will be necessary unless the state sees fit to make more generous appropria-
tions for both permanent improvement and maintenance; and pending such action by the legislature restriction to urgent cases will have to commence at once, since we have already the limit as outlined by the budget bureau as to population and the amount appropriated per capita for maintenance. Any other alternative will result in a lowered standard of care and the present standard can not be lowered with due consideration to our unfortunate wards and the exacting demands of the public.

"Another class that figures more largely than either of those named are the old and senile, those who become troublesome in second childhood. Most of these people are mentally off, but most of them are sent to the state institution because the family desires to sidestep the burden and the counties refuse to provide for them in county homes. All this class needs is care. They are beyond expert treatment and only await death as a relief. They get into the Morganton institution as the others mentioned, because they are certified as insane and dangerous or troublesome. Some of them have no people to care for them and must be sent somewhere. Others could be cared for at home but the burden is shifted to the state. It is admitted that the state can care for these people, give them better care and at less cost than can be done by the counties or even the families, in most instances. But if the state is to provide homes for old people, infirmaries for the sick and the helpless, it would be better to go at it directly. The classes mentioned should not be put into the institutions for the insane under the guise of insanity. Of course all of them—the epileptics, the morons, idiots, the inebriates and the criminals whose minds become much affected when punishment looms; the dopesters and all the others—all these cases, or nearly all, have their appeal and somebody to push their application with assurance that they are simply insane and belong in the Morganton institution.

"But the result is that the classes mentioned gradually take up space that should be occupied by the insane, those for whom the institution is intended and many of whom could be and are helped by expert treatment. Therefore unless what is called 'unsuitable' are rigidly excluded presently the 'innocent' insane will be held in county jails awaiting room. And some of the people who have helped crowd the Morganton institution with people who do not belong will raise a mighty yell about the situation.

"This matter has been gone into here for public information; especially to get the exact situation before all persons who may be interested in applicants for admission to the State hospital at Morganton; and more especially for the consideration of clerks of court and examining physicians. All should remember that pressure for unsuitable cases may mean, and most likely will mean for some time to come,
the exclusion of suitable cases who really belong.

"In view of the superintendent's report as to available room the board adopted the following: 'It being apparent that space in the institution must be conserved, the superintendent is instructed to hold for the consideration of the board all cases of doubtful eligibility.'

"Room in state institutions for the insane becomes more pressing with each passing year on account of the enlarged demand. Epileptics, the feeble minded, idiots, drug addicts and inebriates and persons charged with crime or convicted of crime, are not legally admissible to the Morganton institution. Provision is made for some of these elsewhere and for others there is no provision, and all provision is inadequate for the number asking admission. As a result numbers of the classes mentioned get in the Morganton institution from time to time because they are committed as insane and the real character of their trouble may not be discovered until after they are patients. Then they must be kept, they can't be turned out until their condition admits of their going at large, and it is usually impossible to transfer those for whom quarters are provided elsewhere because of the lack of space. That is what Dr. McCampbell had in mind when he declared that 'restriction to urgent cases will have to commence at once.' Of course to friends and kin of applicants all cases are urgent. Even the inebriates who have become a nuisance and are healed toward the jail on account of misconduct; also the embezzlers and other crooks, frequently become insane and urgent cases in consideration of the alternative. It is the same as to epileptics, drug addicts and morons and idiots who become a nuisance or a burden at home, and those responsible for them are the public who demand relief. Some of the ineligible cases are detected and kept out. But many of the 'unsuitable' cases do get in because the examining physicians really believe them proper subjects, or feel that they should be sent somewhere, and promptly certify that they are proper subjects for the state institution at Morganton. Also clerks of the Superior Court who pass the final word by signing papers for admission, more than often sign whatever appears to be in proper form on its face, without thought as to final results."

The State Hospital for colored people at Goldsboro. A worthy example of the manner in which a great State is caring for the most unfortunate of her people.
Everyone is concerned with mental hygiene. This may seem strange to those who believe that mental hygiene has to do only with "crazy" or queer people. But it is very true that every one of us, every day, is required to deal with problems that concern either our own mental hygiene or someone else's. There is no mystery about the term "mental hygiene." It means just what it says—mind health. Naturally there are all degrees of physical healthiness. Thus a man with an infected tooth may be able to do his work fairly well and yet be unable to say he is perfectly healthy. If he does not tend to his tooth, however, the time will probably come when his work will be impaired and he may become definitely sick. The same thing is true about the man who has a mild worry, or a feeling of inferiority, or perhaps an excessive shyness and sensitivity. The symptoms are not very pronounced and he may be able to perform his daily tasks without much trouble, and yet he is not altogether mentally healthy. Of course he is not insane, but if he does not tend to his worry or shyness the time will probably come when he too, will grow definitely sick—but mentally sick this time, not physically so.

What mental hygiene tries to teach people is the way to keep as mentally healthy as possible, or to correct mental unhealthiness before it causes serious trouble. To do this it is necessary to understand something about those curious forces that are at the roots of every one of our displays of behaviour—good, bad, or indifferent. No longer do intelligent people believe that a boy or girl, or even an adult, is "bad" just out of sheer cussedness. Instead we now realize that there is a definite reason for "badness," although that reason may be deeply hidden both from the person himself as well as from his friends. The same thing is true with regard to "goodness," in each instance there is some force at work in our lives that motivates our conduct. Formerly this force, whatever it may be, was thought to be, inherited from our ancestors. Now we know that it is more likely to be acquired during our early childhood and formed as a reaction to the way our parents trained us and brought us up.

One of these forces (psychologists call them "mental mechanisms") has to do with the way we adjust ourselves to meet new experiences that arise in our lives from day to day. No one prefers discomfort if he can avoid it, whether discomfort be physical or mental, and as a result each of us tries to dodge the unpleasant things of life as much as possible. Young children seek to avoid discomfort deliberately and frankly. But as they grow older and begin to realize that some discomforts must be borne if they are to get along in the world, they still try to avoid them, but this time without consciously intending to.

As a matter of fact, all life is really a series of adjustments to new (and consequently, for the most part, unpleasant) situations. Thus the baby has to adjust to the bottle after the mother's breast when it is weaned. A few years later he has to adjust to the discipline of the classroom and the teacher, in addition to that of the home, when he first starts to school. A little before this time he has been required to adjust the idea of having to give as well as to take in his play with other children. When he gets to be sixteen or seventeen he must make a very
important adjustment as he realizes that adulthood is just around the corner and that soon he must leave the shelter of his home and parents behind and begin to stand on his own feet, able and willing to forge his career independently. Then comes another adjustment after he has grown up when he has to adjust to dozens of situations and personalities in business life, or to the personalities of his mate and children. And so it goes, each day calling for a new adjustment until the moment of his death.

Mental hygiene is concerned about these adjustments because at any stage an unsuccessful adjustment may be made, and then some kind of trouble results—not very serious trouble, perhaps, but sufficient to slow up progress and to make for unhappiness. When an adjustment to a strange or uncomfortable experience in life is not made satisfactorily the reason often is found in a desire on the part of the person to avoid having to make that particular adjustment. When this happens, it is called an “escape from reality.” Let me explain a bit more clearly what I mean with the story of Bill.

Bill was a normal, healthy boy of fourteen who was on his way to school one morning. Half way there he began to feel sick at the stomach. He had eaten something that disagreed with him and was suffering from a mild, but genuine, attack of ptomaine poisoning. Now it so happened that if Bill had reached school that morning he would have found himself faced with an algebra examination for which he was not prepared and which he probably would have flunked. But he began to enjoy himself. The folks had all been alarmed about Bill and now he returned home, and after the doctor had left some medicine to feel better. Strangely enough he also could scarcely express a wish before some­one rushed off to gratify it. He lorded it over the family for a day or two longer and then went back to school.

Some three months later Bill again was on his way to school when the horrible thought came to him that he had another algebra examination that morning; it was the final examination of the term and he was sure to flunk it, which meant he wouldn't be promoted. Here was a reality—a situation that he must adjust to; but how? If he went to school he would have to take the examination; if he returned home he would have no plausible excuse for doing so. Something had to be done. And then like a saving grace flashed the memory of what had happened three months before and a smile of relief spread over Bill's face. “Why, of course,” he said to himself, “teacher cannot expect me to take an examination if I am sick. Not even mother will expect me to go to school if I am sick; guess I had better be sick.”

And so Bill returned home a second time, again complaining of nausea and sickness to the stomach, the outward symptoms of which seemed to be the same as those accompanying the first attack, but this time, of course, they were symptoms based on no real illness at all.

Bill had tried to get out of a difficult adjustment by strategy. That is a rather natural thing for any of us to do once in a while, but Bill found he had a powerful weapon he could use to dodge all sorts of unpleasant facts and so he used it whenever occasion arose. If wood was to be chopped, errands run, or any other task to be performed, Bill always had an immediate attack of “stomach trouble” that prevented. He continued to do this as years went by until at last he forgot (or pushed down out of his conscious mind) the reason for having “stomach trouble,” so that he finally was aware only of the fact that whenever something uncomfortable had to be done, he became so “ill” he couldn't do it. He had grown into a chronic nervous invalid because of this habit of dodging realities instead of facing them and getting them over with.

That is the explanation of how a large number of nervous people and nervous invalids “get that way;” they keep on dodging unpleasant facts—or even denying that facts exist, until finally they meet a fact so obvious and so important that it cannot be dodged. Then, because they...
have never been taught how to accept life as it is, they are helpless to deal with the experience, and see failure staring them in the face. No one likes to fall or admit failure, so these chronic reality-dodgers look about for an escape that will seem plausible and will preserve their self-esteem as well as the respect of their friends. They realize that the world seldom holds a sick person responsible for failure, so they determine, like Bill (but this time quite unconsciously), to become sick. Their symptoms may not be those of stomach-trouble; that is just one kind out of thousands. Instead the symptoms may be those of eye strain, headache, weakness, fatigue, or almost anything. Of course, I do not mean to imply that all cases of eye strain, fatigue, etc., are caused by desires to escape performing some unpleasant duty. Perhaps a majority of such complaints are based on real organic disease. But I do mean that when doctors examine these particular reality-dodgers, they seldom can find any genuine physical disease to account legitimately for the symptoms.

Another way of escaping from the unpleasantness of real life is found in excessive day-dreaming. A little day-dreaming is all right, but when it becomes too frequent, it makes it hard for us to concentrate on our studies or work, as well as difficult to mix easily with others or make friends quickly. The habit of too much day-dreaming is formed in childhood also. When the young boy or girl finds life growing pretty stiff, or when he finds he is being scolded unfairly, or when he discovers that others are doing better than he is, and he becomes discouraged by a feeling of inferiority, then he is tempted to run away from all this harshness and flee to a little make-belief world that he builds for himself. In this world of imagination he permits only pleasant thoughts to enter; only experiences that make him always the conquering hero. In it, he is the one who invariably saves the game in the last minute of play; he is the famous captain of industry, or banker or soldier to whom all others bow down; or he is the pugilist who knocks out the enemy and saves the heroine. The same general kind of day-dreams are popular with the girl who also may be oppressed with a conviction of her inferiority, or who feels life is harsh.

Everyone has a feeling of inferiority at times, but some have it oftener or deeper than others. It is a belief that somehow we are not as good as others, or that we cannot compete equally with them. Fortunately many feelings of inferiority are not justified, for close study reveals in most cases that the boy or girl who is discouraged by such a belief, is not really inferior at all. On the other hand some cases are warranted.

From a mental health point of view, it is not so much the feeling of inferiority that is important, as the way we react to such feelings. Some types of reactions are healthy, some are unwholesome, while still others may be definitely harmful to society and to the person himself. One way of reacting to a feeling of inferiority, is to grow gradually seclusive and aloof; to avoid friends and to withdraw from most social activities and then to brood over the matter and day-dream to excess. When others see us doing these thing, they fail to recognize our reason and conclude we are "high hat" or stuck-up, when in reality, we are just the opposite and long desperately to be as free and natural as they are. Another way of reacting is, of course, only figuratively speaking, to buckle around ourselves a thick and protecting armor of bluster and loudness of boasting. Still another way—a most undesirable way—consists of doing foolhardy stunts or even in stealing or performing some other kind of anti-social behavior, in the hope that people may say, "Well, anyone as reckless or as bad as that cannot be inferior."

So far this article has been mostly explanatory. Now you are doubtless asking what can be done to avoid or to remedy some of these unhealthy ways of thinking. We must realize first that no one ever is inferior in everything. We may have no talent for music or ability in athletics or capacity to obtain high scholastic marks, but somewhere we have
hidden within us a capacity or ability to do something else superlatively well and thus excel as we desire to do. Thus a boy with a lame leg who couldn't play football got over his feeling of inferiority when he found he could easily lead the class in mathematics (where a lame leg didn't matter). The girl who had no talent for music or drawing proved to have latent ability as a Girl Scout leader. The remedy lies in trying to find (or asking some wise adult friend to help one find) some hidden talent that may be brought to light and developed and trained so that it will offset other lacks.

For those inclined to day-dream too much, one way of lessening this habit consists in sitting down with paper and pencil and drawing up a daily schedule of activities. Keep this schedule as full of activities as possible, performing each one exactly on routine time. Including plenty of athletic or out-door activities from waking till bed-time and so arrange them that most are entered into with others and not alone. If the temptation to day-dream comes on hardest when you sit down to study, try the simple trick of pricking yourself with a pin as your mind begins to wander.

For the chronic reality-dodger it is more difficult to suggest specific helps. What is needed most is the substitution of the habit of facing facts, to replace that of running away from them. But this is easier said than done. Being made aware of just what it is that one is doing when headache or "indigestion" comes on in time to permit us to avoid something unpleasant is the first step. The next is a courageous determination that we will face facts. That takes months of repeating and is very hard, but often it can be made successful if persisted in. Having some older person for whose good judgement we have respect, is a great help in any of these situations, especially when we can talk over the whole matter frankly with them. If help is not secured from any of these suggestions, then have no hesitation to talk with a doctor who is an experienced specialist in nervous and emotional difficulties, if there is one in your vicinity. He will be able to suggest more specific ways that will fit your individual case.

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**SOME FACTORS IN THE DEVELOPMENT OF MENTAL DISEASE**

**BY JOHN F. OWEN, M. D., State Hospital, Raleigh, N. C.**

Recently there has been a very noticeable increase in mental diseases throughout the country as is shown by the following notation taken from a bulletin issued by the Department of Commerce. "In the group of states with complete returns for 1926, the number of mental patients under care, per 100,000 of the general population was 176.2 on January 1, 1910, 203.8 on January 1, 1922, 209.4 on January 1, 1923, 215.5 on January 1, 1926, and 219.1 on January 1, 1927."

That mental diseases are increasing is shown not only by the institutional cases but by the fact that people are visiting physicians seeking relief from minor mental ailments which at the time do not require hospitalization. There are many reasons why mental diseases have multiplied, especially since the World War. Stress incident to existence is greater, family ties are not as secure, there is evident disregard for certain moral laws, and many other influences not present before the end of the last decade.

Of the laity only those having relatives who are afflicted with disorders of the mind are able to understand the suffering produced by them. These diseases are usually persistent and when remissions occur there is always the tendency to recurrence.

The inconvenience does not alone affect the patient as in certain instances the pra-
vider for the home is the one who is attacked, and it at once takes on a phase of economic loss, especially is this felt by the dependent family. Several such cases make the loss felt to any given community and ultimately they become a state charge. It should be mentioned, however, that the patient is unusually happy and fortunately cannot understand the plight of those whom he or she is supposed to support.

In view of the ever increasing numbers of mental aberrations and their insidious onsets, it behooves us to learn something of the first manifestations so we may be able to institute such measures as will abort certain cases and eliminate as many of these mental catastrophes as possible. There are none so optimistic as to believe that we can stamp out disease of the mind completely but it has been shown that mental hygiene has certainly been helpful in combating them; also additional information gradually coming to light aids us considerably in the treatment of mental conditions both in and outside institutions.

An attempt will be made in this article to discuss the mechanism or the method of development of certain functional mental disorders, and mention will be made, of course, of some of the early signs seen in children. There are many mental diseases originating from an organic source, that is to say ones having a definite disease of the brain, such as in syphilis and in epidemic encephalitis (sleeping sickness), and in diseases, such as pellagra, which primarily affects parts of the body other than central nervous system (brain and spinal cord). Because of the likelihood of confusion the organic mental disorders will not be dwelt upon. They are in reality a distinct type and come under a separate field of preventive medicine in as much as they occur as an end product.

In order to understand the developmental factors in disease of the mind it will be necessary to refer to certain phases of psychology, especially referable to childhood. Following the general line of thought, as expressed by Leonhard Seif, we find that the child early begins to cast about and endeavors to find his true worth. If the child is fortunate enough to find himself in a suitable environment, and his situation socially is well prepared and developed, he at once begins to lose his sense of inferiority, develops courage, self-reliance, and his tendency to co-operate will increase and the child will eventually become a useful member of society. On the other hand if the child finds himself in a dependent state, feels a certain amount of weakness, he naturally develops a sense of inferiority and strives to overcome this by compensation. This inferiority may be brought about not only by constitutional defects but by the organic inferiority; that is to say that even physical infirmities have a deleterious effect upon the mind if a child feels that he is as well prepared to go through life as certain of his fellows.

These boys are all set for a Watauga winter, which, like the summer up there, is well nigh perfect.
These inferiorities take on the expression of various disorders. If the child cannot overcome these feelings of incompleteness he or she eventually develops some type (psychoneurosis or real severe) of mental disorder.

When an individual develops a sense of inadequacy along any particular line he naturally puts forth some effort to overcome this feeling of weakness. He may properly fight the situation or may try to withdraw to a dream world or place of unreality. Competition is often responsible for many "nervous breakdowns," especially among those who feel that they are not as able as those with whom they have to compete. The ones whose efforts are thwarted by competitors at home, at school, at play or at work try to make excuses for their failures. These excuses are not apparent to them but is a natural result of a tendency to compensate for their dependent feelings. As an example: A child may develop a speech defect, such as stuttering or a stammering, periods of unconsciousness may ensue and quite frequently complaints of physical distress are made. If the feeling of incompleteness occurs early in childhood, the parent, teacher, and physician are able to exert a great and lasting influence; and in a great majority of cases are able to give the individual advice that will help him weather a life of stress and eventually find his niche in life.

Seldom do we encounter a fully developed case of insanity until about the age of puberty, yet a well known exception is that of the abnormal mental condition frequently associated with epilepsy. The usual symptoms in addition to the convulsions are mental dullness, confusion, bewilderment, anxiety, tendency to violence, fears, exhalation, delusions and hallucinations. Many lay persons mistake the manifestations of mental defectives as types of insanity whereas this is a condition where the brain has failed to develop. There is, however, associated mental disorders occurring in individuals of defective development. Certain mental disturbances occur from physical causes and may be apparent early but these, for obvious reasons, will not be discussed as was stated above.

When relatives give a history of the onset of a mental disease in one of the family the following well known factors are invariably given; blow on the head, death or sickness in the family, unpleasant love affair, unhappy marriage or home-life, change of environment, etc. etc. They fully believe that either of these may be the underlying cause when as a matter of fact they are only precipitating causes in persons who are potentially this or that type of mental prospect. This information is, of course, useful to the physician both for analytical and therapeutic reasons but absolutely worthless as to giving him insight into the developmental background.

In other words emotional stress at the proper time lighted the fires of a condition which had been lying smouldering for perhaps a great many years.

When the last straw of emotional discord is applied to one who is unstable and a fit subject for an attack of mental disease any of the following functional types of disorders may set in. First, the psychoneuroses which are usually divided into four sub-divisions although finer divisions may be made. Hysteria, psychasthenia and neurasthenia are usual classification of the psychoneuroses. These disturbances are known as minor psychoses (insanities) and while all who suffer from them do not find their way into institutions they are disabling and serious. Very seldom either of the above run true to type and very frequently there is an interlacing of symptoms. In general the psychoneurosis or neurosis, the terms are used synonymously, show the following manifestations: In hysteria we may find insomnia, convulsions, mental conflicts, stupor, physical disorders simulating practically every form of physical ailment.

Psychasthenia is characterized by morbid fears or phobias, obsessions, doubts, impulsive, nervous tensions, anxiety, depression and at times agitation.

Easy fatigability both mental and physical, irritability, depression and somatic complaints are the chief features of neurasthenia. The outlook in the above cases is
rather doubtful but is considered much better than in the cases of more serious mental disorders.

The next large group is that of the affective disorders. The most important of these is the Manic Depressive Psychosis or insanity and this condition is closely allied to a disease called Involutional Melancholia, comes on at about the "change of life," both in male and female, and is characterized by uneasiness, worry, insomnia, over-activity, with no particular difficulty in thinking. In the real Manic Depressive Psychosis group we have two main types; one in which the patient is over-active, talkative, destructive to property, emotionally excited, entertains delusions, and experiences hallucinations. In the same type of mental disorder may be the depressed type in which the patient has a feeling of mental and physical insufficiency, is in a despondent, sad or hopeless mood. Frequently there is retardation in thought and sometimes complete inhibition occurs.

Dementia Praecox is perhaps the worst mental disorder which we have and is by far the most common. This disease usually begins in young persons and the course extends usually over a period of life. In this disorder is found a splitting of emotions from intellect. There is an apparent deterioration of mood, very little intellectual deterioration. This type of patient may be over-active, talkative, violent, destructive to property, or he may be under-active, seclusive and divorced from his surroundings. Practically all of these patients experience hallucinations and entertain delusional ideas of all kinds.

In Paranoic Conditions we find patients who show clinically fixed suspicions. They have persecutory ideas and at times their delusions are of the grandiose type. Litigation is a prominent feature of some suffering from this condition. He is, however, correct in his conduct, has adequate emotional reactions, and a clearness and coherence of train of thought.

Generally speaking if a mental disease, such as the above, has once become fully established the outlook for complete recovery is rather poor. However, consider-

able work is being done at the present time showing that some alleviation may be expected, but obviously the time to begin treating mental disorders is when the first symptoms begin and this is often seen in childhood by various abnormal manifestations in the child's behavior.

Hogs in the eastern end of the State are dying of flu. If that disease has entered the swine the State could well afford to chase them down into the sea, to be rid of it entirely.—Greensboro News.

"Where is your mother, Johnny?"
"Playing golf."
"And your aunt?"
"She's out learning how to drive our new car."
"Then, I'll see your father, please."
"He can't come down, now. He is upstairs giving the baby a bath."—Exchange.

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This Wake County youngster is waiting for her mid-morning glass of milk.
The clock in the downstairs sitting-room of the big boarding house boomed out the last stroke of ten. Jane Turner threw down her book and leaped to her brown oxford clad feet.

"Early to bed and early to rise makes a man healthy, wealthy and wise," she repeated sagely, nodding her bobbed, brown curls as if to add weight to the wise Benjamin Franklin's bedtime classic.

"And who cares these days if you're wise as long as you dance all night, smoke, pet and keep your slim girlish figure?" Blonde Lucile Hearin asked, as she flicked the gray ash from the stub of the cigarette she was smoking.

A thoughtful look came into Jane's brown eyes as she slipped out of the sheath of her one-piece blue jersey frock.

"Lucile, you're smoking too much, and going to too many late dances," Jane pronounced as she untied her brown oxfords.

"Well, what if I am. It's nobody's business but mine," Lucile flared.

"Don't suppose it is," Jane answered evenly. "But I notice that nice looking Jim Thayer, who has such a good position in the First National Bank never takes you out any more. He certainly doesn't dance until three o'clock every morning with Lem Thompson's and Mae Davis' crowd."

Lucile threw down the butt of her cigarette. "Who cares about Jim Thayer. He's hopeless. They say he even keeps a set of rules tacked up in his bathroom to live by, and he never allows himself to be out later than ten o'clock more than two nights a week. I wouldn't—" Lucile's voice choked and trailed off into nothingness.

Jane looked at Lucile with clear, discerning brown eyes. When Jane had spoken of Jim Thayer she knew she had struck a vulnerable spot in Lucile's armor. For Jane knew that Lucile, for all her pretended boredom and sophistication wasn't nearly so bored or sophisticated as she pretended to be—and she loved Jim Thayer.

"If you want Jim," Jane said cheerfully, "I don't see a thing in the world you can do, Lovely-dovey, but learn to live by rules, too, and go to bed at ten o'clock every night, but two!"

"Who said I wanted Jim?" Lucile's cheeks grew a vivid pink under their orange rouge.

"Well, you do, don't you?," Jane asked innocently.

Lucile's permanent waved blonde head went down into her arms on the table.

"Oh-h!" Jane was all compassion. "I didn't mean to hurt you, Lucile."

Lucile dabbed at her mascaraed eyes with a wisp of a blue crepe de chine handkerchief. "I do love Jim," she sobbed on Jane's shoulder, "but I didn't know anyone knew."

Jane gently wiped the tears from her roommate's eyes with her own substantial white linen handkerchief. "I'd give a great deal to have Jim care for me again, as I thought he did once before—" Lucile hesitated.

"Before you began going with Lem Thompson and his crowd, took to smoking cigarettes, and drinking a bit now and then," Jane supplied for her.

Lucile nodded her head slowly. "Jane Turner, you know too much. I guess I'd hate you if I didn't love you."

"Well now," Jane said matter-of-factly, "you say you love Jim and you love me. Neither of us love Lem Thompson, but we do love you."

Lucile started. "You don't mean Jim loves me?"

Jane nodded her head mysteriously, but refused in spite of all of Lucile's entreaties to tell any more.

"Promise me, Lucile," she said at last, "that for a month you'll do as I tell you."
If you will I'll tell you at the end of that time just what Jim said—if he doesn't tell you himself before the month is gone."

A loud blast from an automobile horn came up from the street in front of the boarding house. Lucile jumped to her feet looking at her tiny white gold wrist watch.

"Mercy! It's 10:15. That's Lem Thompson. We were to have been at Rudolf's to begin the dancing at 10:15."

Lucile dabbed a bit of powder on her nose, gathered her vivid Spanish shawl about her shoulders, and turned to Jane.

"Got to be going now. I'll see you tomorrow night about your bargain."

Jane, the belt of her striped bathrobe tied about her firmly rounded young body, leaped to the door, and stood there, her arms spread apart.

"No, Lucile, our bargain begins tonight; right now or never. You've had a rotten cold for two days. You've doped yourself on aspirin tonight to be able to go to this party. Either you let me tell Lem Thompson you're not going to Rudolf's with him tonight, or you give up Jim."

"Of all the nerve!" Lucile raised her blonde head haughtily and prepared to go by Jane, who had dropped her arms to her side and stood leaning against the door facing.

A door at the end of the boarding house hallway opened, and tall, dark Jim Thayer stood outlined in it for a moment, looking to see what the disturbance was. He saw the two girls, nodded his head in recognition, and closed his door.


From the upper floor of the boarding house Jane Turner called to Lem Thompson that Lucille wasn't going to the dance at Rudolf's with him that night. Jane had a purpose in calling from the second floor. She wanted everyone in the boarding house, including Jim Thayer, to know that Lucile had not gone to the dance at Rudolf's with him.
The Health Bulletin

January, 1929

dolfs that night. Jane proposed to make this her first step in the making of a girl out of Lucile Hearin, who would be after Jim Thayer's own heart.

To Jane her plans for making Lucile over into the kind of girl Jim Thayer liked were as simple as eating, breathing and sleeping. Indeed, they were only the proper methods of doing these things with a few others added. All her healthy young life, as a matter of course, Jane had followed the few simple health rules she proposed to re-model Lucile with now.

When Jane first brought the twelve amended health rules, that her third grade followed zestfully in their Health Club work, neatly typed to Lucile, there was immediate consternation on her roommate's part.

Lucile read in a puzzled voice, that gathered scornful force as she read, the first of the twelve rules.

"Wash face and hands, comb hair before each meal."

"Jane Turner, you don't think I'm a third grade youngster to have to obey a rule like that?"

"You went directly in to supper tonight, and ate without washing your hands when you came from your office," Jane said calmly.

"Oh-h! But I'm not a kid."

"No, but grown-ups get germs on their hands as well as children do. Jim Thayer never eats without first washing his hands." Jane clinched Rule 1 with that.

They decided that if Lucile powdered her face, which she always did, that would pass for washing it before each meal. This was provided she washed her face with good soap and clear water twice a day, at arising and on retiring. Lucile was guilty of neglecting to give her face this simplest and best of all beauty treatments. She depended upon the hasty cold cream bath she gave her face each night she wasn't too tired to do so, for her face cleansing.

"Brush teeth twice daily!"

"I always do when I don't forget," Lucile said in a slightly humble voice when she read Rule 2.

"Which you mustn't forget," Jane commented crisply.

"Straighten bed, room and pick up clothing." Lucile read slowly.

There was only sketchy maid service at the boarding house the two girls lived in. From the day they had first started to room together Jane had been the maid for their room.

"You see," Jane explained Rule 3, "you'll have to learn to be a good housekeeper, because it would go a long way toward keeping a man like Jim Thayer after you were once married to him."

Lucile passed on to Rule 4, but not before Jane knew that she would have help from now on in caring for their room.

"Eat no candy between meals.—Oh-h!"

"Ruin that beautiful complexion you'd have if you would eat properly and care for it correctly," Jane said.

"Drink seven or eight glasses of water daily. Gee! You want to turn me into a water tank?" Lucile questioned.

"No, just want you to give your body the amount of water it needs to help you properly digest your food and eliminate waste. Incidentally the water taken internally will help to give you the skin Jim Thayer will love to touch," Jane added slyly. And Lucile promised herself to drink seven or eight glasses of water daily, as well as to eat no candy between meals.

"Drink three glasses of milk daily," was Rule 6. Lucile groaned. "I can never do that, Jane. I'll lose my girlish figure."

"I heard Jim Thayer say," Jane pronounced solemnly, "that he liked a girl to be pleasingly plump.

Lucile looked down at her skinny arms and legs. She must be at least ten pounds under the normal, average weight for a girl of her age and height. Though fashionably skinny she could hardly be called pleasingly plump. But if pleasingly plump was what Jim liked, she supposed pleasingly plump was what she would have to be.

Before Lucile read Rule 7, "Eat some fruit and vegetables with each meal," Jane knew that Lucile would swallow all of Rule 6, three glasses of milk daily.

"Rule 7, Lucile grimaced, "is about as fascinating as Rule 6. I like fruit, but you know I seldom eat vegetables."
"Brush Teeth Twice Daily."
"Which you should do," Jane said imperturbably. "I could spend the whole evening giving you perfectly good reasons why you should eat vegetables, and then they wouldn't all be told."

"Don't—don't! That's enough!" Lucile held up her hands. "I'll promise you I'll begin eating vegetables at once."

The other four rules were:

"Put nothing in your mouth, except food and a clean toothbrush."

Lucile flushed guiltily. These rules were made for children, but it seemed that she needed everyone of them. She often put things other than her food, and her toothbrush in her mouth.

"Shield mouth when coughing and sneezing."

She didn't do that either. Jim Thayer did, though. A thorough gentleman Jim was. Why, a lady, too, would certainly shield her mouth when she coughed or sneezed. Lucile began to wonder if she had coughed or sneezed around Jim without covering her mouth and nose.

"Stand and sit straight."

Lucile instinctively squared her shoulders and sat up straight in her chair. She had what she thought was a cute little slump when she sat or stood, but no more. She was beginning right now to stand and sit straight.

"Sleep with windows open."

She had been doing that, but only after protest on her part, and because Jane insisted it wouldn't do for them to sleep any other way.

The last rule was: "Sleep at least eight hours every night."

"Phew!" If she got six, sometimes four or five when she was out at one of the late dances, she was doing well. She promised Jane to go to only one dance a week, and then not stay later than 12 o'clock when she had to work next day. Lucile thought she might be able to keep Rule 12, but it certainly was going to be hard. She sighed. Lucile liked to remain up late when there was nothing special to do, just for the excitement of getting into bed after the whole house was quiet. But Jim went to bed early. Lucile blushed. If he went to bed early, she must go, too.

There were two rules added which the children did not have to observe. "No smoking. No drinking."

Lucile didn't mind the "No drinking." She had taken some vile bootleg liquor at times, because the other girls in her crowd did, and she thought it was smart to do so, too.

"No smoking." That was different. Lucile had learned to smoke when she first started to work as a stenographer in a big law office three years before. There were four other girls in the office, and they all smoked. Lucile had begun smoking too, and had gradually grown to depend upon her cigarettes. She appealed to Jane. Jane explained to Lucile that the "No smoking" rule was the result of neither moral training, or religious fear. Jane said she believed a perfectly nice girl could smoke and remain a perfectly nice girl, but it wasn't good for one's health to smoke too much. When one got in the habit of smoking one never knew when one had smoked too much. One's breath never was sweet and fresh, and Lucile already had a nasty little cough from smoking too many cigarettes. Hence she, Jane, thought it best not to smoke at all.

"Jim Thayer smokes some himself, but I don't think he would like his wife to smoke," Jane finished the argument.

That night Lucile did not light her customary bedtime cigarette, nor did she light one again for many nights.

When Lucile had read and subscribed to all of the rules of Jane's third grade class' Health Club she was made an honorary member of the Club. As Jane was an honorary member herself it required very little coaxing to get the Club to admit Lucile as an honorary member also. The children delighted their teacher to question the new member as to her observance of the Health Rules each day. The following morning Jane was to report the absent honorary member's observance of the rules and the children were to vote her a blue star for that day, or vote that she was not to have one, just as they did for the other members of the Club. Failure to receive a star meant that the members had broken one or more rules for that day.
"Eat Some Fruit and Vegetables With Each Meal."
For three weeks Lucile received a blue star each day, and at the end of each week a silver one.

Only one more week to go. With a perfect record at the end of four weeks Lucile would receive a gold star, and with the gold star a special award, as did all of the winners of gold stars. In Lucile's case the special award was to be the confiding of Jim Thayer's secret to her by Jane—if Jim Thayer hadn't confided it himself.

No one, not even the ever helpful and vigilant Jane, knew what hard battles Lucile fought against bad habits, and lack of habits during those three weeks.

At the end of the first week Lucile came very near breaking the "early to bed rule," as the children called it. The fact that Jim had been lovelier to her all week than he had been since he discovered she ran with Lem Thompson made Lucile tell Thompson rather sharply over the telephone that she couldn't work all day, and dance all night. Jim had heard her tell Lem this and he had waited in the front hall until Lucile started upstairs. Then he had asked her to go to ride in his new coupe. It was a wonderful night and Lucile enjoyed the ride. Jim was very careful that he did not keep her out late, though neither of them spoke of an early bedtime.

Thursday night of the last week before Lucile was to get her gold star as an honorary member of the Health Club arrived. Jane had to attend a teacher's meeting that ended in a social and did not get home until eleven o'clock. She tiptoed into the boarding-house's entrance and up the stairs to hers and Lucile's room. Flashing the light on Jane saw that Lucile's bed was vacant: Jane was tired and yawned. Lucile had made such a good record and Jim had been so attentive all the month she hated to see her room-mate lose the gold star. Perhaps Lucile would have some good excuse, as she, herself, did for being out late on this particular night.

On the small writing desk in their room Jane saw a square white poster, printed in red ink:

**BIG DANCE AT RUDOLF'S**
Thursday Night
Everybody and his Girl will be There COMES!
The Kurly Koon's Orchestra Will Furnish The Music

Jane read slowly, hardly daring to let herself think. Lucile had been called to the telephone during supper. Lem Thompson and another one of those dances at Rudolf's, cigarettes, "something to drink." Jane shuddered. She remembered the time Lem Thompson had brought Lucile home at 4 o'clock in the morning so badly shot up with that "something to drink" that she had had to go down, let her in, and carefully hide her condition from the other occupants of the boarding house, and her employer next day.

It would be a heart sickening task to have to do that in the morning and tomorrow when success was to have crowned the re-making of Lucile Hearin. Well, no use to worry about it now.

Jane slipped into bed and reached for pen and paper. She was terribly sleepy; and it was after eleven, but really, she must write a letter before she went to sleep.

Outside the house a car came quietly to a standstill. A few minutes elapsed. Someone opened the front door of the boarding house. There were muffled steps on the stairway, a person walking up in stocking feet. The knob to Jane's and Lucile's door turned.

Jane looked up from the letter she was writing. It was Lucile, but such a different Lucile form the one Jane had been afraid would come home to her. This Lucile had not been to the dance at Rudolf's, not this night!

Milk, vegetables, regular hours, no dissipation, and good hygienic habits had added six or seven pounds in weight to Lucile's thin figure, cleared her naturally lovely skin, straightened the slump in her graceful body and given a sparkle to her blue eyes and put natural color in her cheeks. But tonight there was something in Lucile's face, in her eyes, that no health rules, no matter how carefully observed, would ever put there.
"I'll never be able to thank you and the health rules enough, said Lucile.
"Jane," Lucile whispered tensely, "I know. You needn't tell me. Jim told me tonight. He loves me, and—" Lucile hesitated prettily, "he wants me to marry him just as soon as we can arrange things."

"Fine!" Jane's eyes were bright with happiness for her friend. "But what report am I to make the Health Club tomorrow for you. Tomorrow is the day you get your gold star, and you broke the 'early to bed' rule tonight. I'll bet if Jim Thayer finds out you failed to get that gold star he won't like it."

"Special excuse! What more do you want, Jane? Isn't getting engaged special enough for being out late, even for third graders? Lucile cried. "And Jim doesn't care whether I get a gold star or not. He says he loves me, because I am me, and not for any old health rules I have kept."

Jane judicially considered. "I'll put it up to the Health Club in the morning and see what they decide. I'm sure, old girl, Jim does love you for yourself, but if the health rules hadn't made you cut out Lem Thompson and late dancing parties Jim would have never had an opportunity to find out what kind of a girl Lucile Hearin really is."

Lucile encircled Jane with impetuous arms. "I'll never be able to thank you and the health rules enough. Jim and I owe all of our happiness to you and them," she said penitently.

Jane kissed Lucile and mussed her bright hair. Lucile was apparently satisfied. She seemed to be confident that the third graders would understand staying up late to get engaged if their teacher did seem to be skeptical about it.

Lucile undressed happily, casting now and then an anxious glance at Jane busily writing in her bed.

"Jane," she said yearningly at last, as that young lady showed no signs of stopping writing, "I wish you had a sweetheart, too."

"Aw! Go chase yourself to bed," Jane said inelegantly, putting a row of X's clear across the bottom of the sheet she was writing on, and beginning another one, "and let me finish this letter so that I'll get it tomorrow, won't you."

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**CHOREA—ST. VITUS' DANCE**

BY

NEWTON G. WILSON, M. D. Madison

Under the head of chorea are grouped several types of symptoms, each group having the jerky irregular contractions of certain muscles.

The common form is Acute Choreas—Sydenham's Chorea, also known as St. Vitus' Dance. The latter designation is more correctly applied to an epidemic form of chorea that was known in the middle ages. The influence of religious excitement was thought to be a factor in the production of the disease. Religious pilgrimages were made for relief of the symptoms and the most popular church was the Chapel of St. Vitus, in Zebern in one of the Rhenish provinces.

In Acute Choreas or Sydenham's Chorea, the disease is characterized by irregular involuntary muscular contractions and more or less mental disturbances. Endocarditis, a disease of the inner lining and valves of the heart is so often associated with this type of chorea that it is often a very serious condition.

It is found much more often in girls than in boys, nearly three to one and occurs oftener between the ages of ten and fifteen years. Tonsillitis, rheumatism and scarlet fever sometimes precede chorea and possibly infected tonsils play a part in causing the disease.

Bright, highstrung, emotional children, are the ones usually affected. This type of child expends its energy, physical and mental, more recklessly than others.

There are mild, severe and maniacal types of acute chorea. In the mild type the child seems to have the fidgets. It
cannot sit still. There are crying spells, night terrors or other emotional disturbances. There may be indigestion, pains in the limbs and headache. After these symptoms have persisted a week or more there may be noticed awkwardness of movement and jerkiness or irregularity of the gait in walking. Only one hand or the hand face or one foot and leg may be involved. There may be some difference noted in speech.

In the severe form the pulse is rapid, the vessels in the neck may be seen to throb and the child is unable to get about or to dress and undress itself. There will be more or less constant irregular contractions of groups of muscles so that the child may not be able to feed itself. It may be extremely irritable and unreasonable in its actions toward those about it.

In the maniacal type of chorea insan- ious the patient passes from wilfulness or melancholia into a maniacal delirium.

The severe and maniacal forms may develop out of the mild form. The disease begins as a rule in the hands and arms, then the face and lastly the feet and legs. It may begin however in the legs or face. It may be on one side only or the hand and arm of one side and the leg of the opposite side. There may be much muscular weakness so that there is partial paralysis. Since the heart is affected in a majority of these cases and the mind and muscles affected temporarily in all of them it is a serious disease and treatment should be begun early.

Treatment really should include prevention. Very bright, nervous children between the ages of eight and fifteen should be carefully looked after. Their food should be taken regularly, they should have regular hours for rising and retiring, and should not indulge in violent exercises. Their enthusiasm for their studies should be held within bounds. Their contacts with the opposite sex should not be intimate nor should active participation in religious or political controversies be indulged in. Such children burn up the vital, mental and physical resources much faster than their less favored brothers and

The road leading to this little school house (never mind the county), is so narrow that when the nurse asked the teacher what she would have done had she met a car the teacher replied: "Back to camp——", which was three miles away. Outside it looked like Peter Pan's Woods. Inside there were pictures and posters made by the children. It was also used for Sunday School. In the wall were driven twenty nails. On each nail hung a cup. Under the nail the child's name was pasted. That pleased us.
sisters but cannot rebuild any faster. Hence they require more time for rest and sleep.

Infected tonsils being thought to be one of the causes of chorea they should not be allowed to remain.

After the attack has developed the treatment necessarily must be outlined and watched by the family physician. The complications that may occur will call for special treatment. The nursing care will tax the patience of the mother or other members of the family who have charge of the patient. Where a trained nurse can be provided it is advisable. The patient should be put to bed at outset and kept as quiet as possible. School books and other reading should not be allowed. The food should be adequate, palatable and digestible. This is a very hard order to fill in some cases as the patient’s appetite is likely to be capricious. Playmates of the patient should not be allowed in the room.

The disease, under proper care usually lasts about two months or less. Sometimes very much longer. If there has been damage to the heart, which there is apt to be, it may never be able to function adequately again under all circumstances. However, with a knowledge of the condition and an adjustment to the ability of the heart to work, there may be a useful and active life ahead for the patient.

There is a disease of adult life which usually occurs after thirty years of age known as Huntington’s Chorea. This is a chronic condition and gradually grows worse as the years pass. In most cases it is hereditary but cases develop in families which have never had it. People who belong to such a family should not marry, as cases from generation to generation are known to have existed for more than two hundred years. In the families who are subject to this hereditary disease, many other types of nervous and mental disease occur also.

Habit spasm or habit chorea is not serious in itself but sometimes is most annoying to the patient and ludicrous to observers. This condition has no relation to true chorea.

It sometimes assumes almost epidemic proportions in schools. It is usually a condition of childhood. There are quite a number of different kinds of movements noticed in habit spasm. Sometimes it is the shrugging of one shoulder, or rapid winking with contraction of one side of the face drawing the mouth to one side. The winking movements may be accompanied by a twist of the head or neck. There may be a sudden sniff with a twist of the head and neck. These movements are repeated irregularly throughout the day, and are entirely involuntary and unconscious actions.

With patience on the part of parents and teachers the habits may be overcome. Such children should be examined for adenoids, nasal deformity and eye defects, as one of these, through reflex nervous mechanism may be the underlying cause of the trouble.

There remains to be mentioned Hysterical Chorea, which like habit spasm is not chorea at all. Such cases may mimic chorea but under careful observation their true nature may be determined. As in other types of hysteria such patients should be thoroughly examined. The family should be instructed to not discuss or even mention the condition in the patient’s presence.

Hogs around Kinston are dying of influenza instead of cholera as at first suspected. Well, if a man can act like a hog, why not a hog like a man?—Raleigh Times.

Perhaps the psychologist who says there is no such thing as pain has never listened to psychologists.—Detroit News.

The new Ford does between 55 and 65 miles an hour. An added device when speedometer reaches 60 miles per hour automatically releases a catch that starts mechanism playing, “Nearer, My God, to Thee!”—Patchwork
We take genuine pleasure in publishing an original contribution elsewhere in this issue of the Bulletin, written by Miss Sudie E. Pyatt, editor of the Sanatorium Sun. The title of Miss Pyatt's article is "The Winning of Jim Thayer." We wish to commend this article to every senior high school girl and college girl in North Carolina for careful and prayerful reading. It is an article written especially for girls of high school or college age. We might also add that any young men readers of the Bulletin would also find much interesting material in this most thoughtful article.

EXPERTS DISAGREE ON SPANKING

"To spank or not to spank" is a problem which has been worrying parents for years. Now the experts disagree on the merits of sparing the rod.

Dr. John B. Watson, founder of Behaviorism, Dr. A. Thom, Director of the Habit Clinic of Boston, Prof. Ernest Groves, and many other authorities, voice opposing appears in the August issue of "Children, The Magazine for Parents."

Dr. Groves says, "We have at last arrived at the point where we do not tolerate the husband's beating his wife, but we still allow the parent to humiliate and hurt the child. What we claim brutality elsewhere we excuse when committed within the home provided it is inflicted on a child and not an adult."

"What parents need to remember is that the general current of family life in the long run is the only influence or discipline that makes the child obedient. The spectacular crises are not the times when we make children obedient, but when we reap our mistakes or failures. The parent who is sympathetic and firm, clear in his explanation, and well disciplined himself, maintaining fellowship and building up in the child, through association, a spirit of genuine loyalty, neither spans nor allows his child to be spanked."

Dr. Thom says; "For every child whose conduct is improved through fear of punishment, a score are made sullen, resentful and rebellious by the same methods."

Dr. Watson says: "It is perhaps unsafe to say that no child should ever be spanked, but no child needs spanking unless he has already been hurt by bad management. There are occasions when discipline can be enforced upon children already largely spoiled only by spanking them or by changing their parents."

Prof. Leta S. Hollingworth believes that "In the practical emergencies of home life, the child who has not been reared by the best psychological methods is likely to require a good spanking. Parents must be allowed to live too!"

What are the characteristics of a 'good' spanking? The parent must never spank while he is "mad". The child spanked must be under eight years of age or before the "age of memory", otherwise he will bear a grudge against the spanker or a loss of self respect. The experts do however agree upon some details. They all advise—

If you must spank do it immediately at the moment of bad behavior. Spanking must be associated with the bad act in the child's mind as the electrical shock is with the instrument that causes it.

Physical punishment of the whacking, slapping type meted out simply to indicate the parent's annoyance at the undesirable conduct, has no value; for it only makes the child defiant and resentful and fills him often with a desire to "get even" with the person who punished him.—Children, The Magazine for Parents.
Central State Hospital, Dix Hill, Raleigh. Photograph shows a section of buildings and grounds. It is one of the most modern hospitals in the United States, and one of the most beautiful places in North Carolina. More than seventeen hundred patients are now being cared for in this great institution.
Please meet this young lady from Winston-Salem. You can see that no caption is necessary for her picture as she speaks very well for herself.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may interested.

Adenoids and Tonsils ......................................................... Fly Placards
Cancer .................................................................................. German Measles
Cataract ................................................................................ Hookworm Disease
Care of the Baby ................................................................. Infantile Paralysis
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West) Table of Heights and Weights
Infant Care (by Mrs. Max West) The Runabouts in the House of Health
Prenatal Letters (series of nine monthly pamphlets) (for children from 2 to 6 years of age)
Minimum Standards of Prenatal Care Baby’s Daily Time Cards: Under 5 months, 6 to 9 months, and 12 months; 1 year to 18 months; 19 months to 2 years.
What Builds Babies? Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 21 months; 2 to 3 years; 3 to 6 years.
Breast Feeding ................................................................... Save Your Baby
Sunlight for Babies ................................................................ Hints to North Carolina Mothers Who Want Better Babies

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THE FEBRUARY DISEASE CALENDAR

With the exception of occasional periods of widespread epidemics such as the epidemic of influenza occurring in the State in September, October, and November, 1918, the month of February always marks the high peak in respiratory diseases. Occasionally there may be more trouble in January or March, but it is the exception rather than the rule. Whether or not weather conditions have anything to do with it has not been definitely proved, but all physicians know that the acute respiratory infections are more common and more intractable during this month than almost any other period of the year.

Many diseases such as smallpox, which in former days, was one of the great plagues of the world, causing the death of uncounted thousands of people every year, have been brought under control through the definite use of preventive measures. It is a significant fact that smallpox was one of the first diseases in the world to be controlled by strict preventive measures through the method of preventive vaccination, but that the infective germ causing the disease has never yet been isolated. It is one of the most contagious diseases in the world, and there can be no doubt that it is caused by a definite and specific germ. Most bacteriologists assume that it is caused by what is called a non filtrable virus; that is, it is so small that it cannot be definitely isolated, and does not take the usual stains utilized to distinguish germs, such as the germs causing diphtheria and other diseases.

The usual prevalence of contagious respiratory diseases during this month serves to bring home to the minds of all research workers and physicians the fact that the control of respiratory diseases is today one of the greatest problems in the whole field of medicine. The students in medical colleges are taught definitely how to diagnose and operate for appendicitis or other definite abdominal conditions, but when the student goes out into practice he finds that for every case of appendicitis that he is called on to diagnose and treat, he will probably be called upon to prescribe for at least one thousand cases of respiratory tract infection. The worst of the situation is that treatment is unsatisfactory, and about all the advice that the most learned authorities proffer in these conditions is to avoid groups of people, go to bed, and send for the doctor, when attacked by one of the respiratory infections.

It is obviously impossible for the average person who has to work for a living to avoid crowds. While the advice is sound and the best, under the circumstances, that can be given, it is impossible for the majority of the people to follow. For example, the clerk in a store must face the crowds in the store every day or forego the pleasure and necessity of eating and wearing clothes. When the weather is cold, the buildings must be heated for comfort, and the crowds that come in, probably every day, from widely separated areas to trade in the larger stores, naturally affords a fine mixing place for exchanging infections between one another, as well as the operatives of the store.

At the present time it is unthinkable to suggest suspending school activities when such infections appear among the pupils. To follow such a plan would be
to disrupt and demoralize the school system and destroy the primary objects of education. The best advice that can be offered is that the children being sick should be excluded from school, and of necessity this action has to be taken after they appear in the schoolroom, and after whatever infection they have, has been disseminated to all susceptible pupils. A better plan than the foregoing has been found in careful ventilation of the schoolroom, in which the air is kept temperate and the rooms not over-heated and the children thus provided with an abundance of fresh air, and at the same time with proper heating facilities the room is comfortable.

Through quarantine and isolation of children for whooping cough, measles, and scarlet fever, such diseases have come to be less of a menace to school children than formerly, although in the opinion of the informed health officers progress made even in the control of these diseases has not amounted to very much so far. Diphtheria and smallpox need no longer be considered much of a public health problem, as the chief problem remaining for the control of those two diseases is in getting people to take advantage of the definite and successful preventive measures now available.

For a long time the disease known as "grip," first called "la gripe," and more recently called "influenza," all one and the same thing, is the disease that causes more concern when afflicting older people during this month. Some physicians and some medical writers refer to "influenza" when this particular respiratory infection is more severe, and have a habit of calling it "grip" when it is simply milder and not present in such widespread epidemic form. However, the disease is the same, and the infective agents, entirely unknown at present, are thought to be identical.

Kipling, the English writer, sometime ago precipitated a great deal of discussion in medical circles by suggesting, in an address to a body of health officers in England, that the influenza and diseases of similar character may be caused by infectious agents arising from cosmic sources in the interstellar spaces. He is reported as having suggested that this source might account for the widespread infection occurring throughout the world, and also for the difference in virulence of the disease in different epidemics. Physicians competent to pass upon the question regard the disease, however, as one of contact origin, and that its spread occurs simultaneously with the ordinary transportation of human beings.

Kipling's idea naturally is interesting and it is also one that is not inclined to make for passive or philosophic attitude toward the question of disease. If such infections as influenza could have their origin outside our earth and its atmosphere, it is not pleasant to think what might happen in the case of more virulent or dangerous infections which might blow down upon the earth somewhat in the nature of an enveloping cloud of poison gas. It would be easy enough to contemplate all animal life on the earth as being completely wiped out within a period of twenty-four hours.

But so far as medical science can speak, nobody is yet prepared to disprove the possibility of Kipling's suggestion. Health officers and students of preventive medicine, whose life work and business it is to protect the public from attacks of epidemic disease, have made no progress whatever during the last ten years, or since the terrible epidemic of influenza in 1918, in the control of that disease. Some of the newspapers rather openly criticised the United States Public Health Service in December for its announcement that it had arranged a Board of Strategy during that month to devise methods for combating the spread of the epidemic appearing in California and throughout the West and into the South in December. The criticism was directed toward the point that the Public Health Service had had ten long years for its Board of Strategy to be operating and to come to some conclusion and to adopt definite methods of preventing the spread of the disease. The truth is that the Public Health Service has not been able to do anything about it, neither has any
February, 1929

THE HEALTH BULLETIN

state board of health, or any other research agency, because no more is known today about the disease than was known in 1918.

Just about everybody now knows or ought to know that the chief danger in influenza, and the ordinary respiratory diseases is in the complications which follow and which so often result in death from pneumonia, heart disease, kidney involvement, and many other conditions which terminate fatally. There are different types of pneumonia, with varying manifestations of virulence. Some of the laboratories, especially the New York City Health Department Laboratory, have perfected preventive or curative serums, to be used in one or two types of pneumonia with varying results, more or less satisfactory. However, one of the most dangerous types, and the most frequently fatal, is not affected, it seems, by any serum as yet devised. We are aware that certain manufacturing houses make claims to the contrary. Such claims have not yet been fully justified.

It will thus be seen that the Disease Calendar for February is always a serious one, because the diseases most prevalent during this period of the year are diseases about which so little is definitely known and in which preventive measures are of less avail.

In concluding this chapter we can do no better than advise, in the language of all the health officers and newspapers concerning the subject, that the best thing to do is to avoid crowds, cough and sneeze in your own handkerchief, and when you get sick stay in bed until you get well, and retain your direct personal relations with a good physician from the beginning to the end of the attack.

CANCER—A SOCIAL PROBLEM

(Radio Talk from Station WPTF, Raleigh, N. C., Tuesday afternoon, December 4, 5:50 o'clock)

THURMAN D. KITCHIN, M. D., President N. C. Medical Society, Wake Forest

Modern methods of travel and communication have welded the people of the world into a vast social organism, each member standing in the closest relation of interdependence. Today it is true as never before that man cannot live unto himself nor die unto himself. He cannot even be ill unto himself. Involved as human society is today in a network of personal relationships, problems which a few years ago were individual now become the responsibility of society as a whole.

Certainly a disease which takes a toll of over one hundred thousand lives annually in the United States may be regarded as a social problem. More people die of cancer than killed by railroad trains, street cars, automobiles, drowning, mining accidents, machinery, poisons, homicides, and suicides all put together. More people die of cancer than of all infectious diseases combined excepting tuberculosis. Cancer affects all races, all classes, all sexes, and is found in all countries and under all climates. One out of every ten men and women now living will die of cancer if the present death rate continues. Well may it be called the most fatal disease known to modern civilization.

Again, regarded from an economic standpoint cancer is a social problem. It has been estimated that this disease causes an actual monetary loss of approximately seven hundred million dollars a year. This sum does not include the cost of medicines and of actual nursing, nor does it take into consideration other members of the family kept from work on account of a cancerous member. As we are too well aware, the victims of cancer pass through a long period of illness and suffering, becoming less and less productive, finally taking their beds and becoming helpless, requiring constant nursing either by trained nurses or members of their own family for a long period before they finally succumb. The slow, relentless progress of cancer is depress-
ing in the extreme not alone to the families of those afflicted, but to their friends and in many instances to the entire community.

There is one phase of Cancer as a social problem which may easily be overlooked. There can hardly be placed too much emphasis upon this point: Death from cancer occurs at an age when a person should be most active and productive and at a stage when his services are most needed both by his family and by society at large. We know that cancer is pre-eminently a disease of middle life and later. It loves a shining mark and leaves confusion and desolation and distress in its path. Families are broken up, widows are compelled to find new means of support, children are taken from school, the community finds that it has met an irreparable loss.

It is an unwelcome truth—but true, nevertheless, that cancer is actually on the increase. It is not only an apparent increase due to better diagnosis but an actual and absolute increase. This is probably due to the fact that the tremendous success in other fields of medicine has given people a longer lease on life and has succeeded in bringing more people up to the cancer age. Cancer is the most important of the so-called preferential diseases of old age. Accordingly—by attacking those in the prime of life, after they have weathered other ills, cancer defeats the work of all other health efforts. How imperative on this account that cancer be controlled!

Merely to pronounce this scourge a social problem and to spread the alarm is but to depress and discourage and fill with apprehension those whom we wish to help. There is a brighter side to the picture, for cancer is curable if apprehended and treated in its early stages. It is always first a local disease and at this stage can be eradicated. It must be attacked as a social problem through education of all the people as to the importance of early diagnosis and treatment. Some will be unduly frightened and will go to doctors needlessly but that many lives will be saved by such education can not be doubted. Education will cause people to have a proper regard for their safety and cause them to take the necessary steps for their own protection. Fears thus created will do no harm if these fears are taken to a competent adviser.

Although physicians and nurses have been coming into intimate contact with cancer patients all these years without taking precautions against infecting themselves, there is no record of one cancer patient having given cancer to another person. Thus there is no cause to shun a cancer patient on account of fear of contracting the disease. Victims of this dreaded disease need every bit of tenderness and sympathy possible for them to receive, and it is a blessing that there is no ground whatever for fear of contagion which might lead to unnecessary and uncharitable attitude toward the afflicted ones.

The widespread belief that diet plays a part in the production of cancer is likewise unfounded. It affects impartially the vegetarian and the meat eater. It affects lower animals and shows no preference for those subsisting mainly on meat diets. The frequent occurrence of cancer among fishes would rule out soil and climate as causes. Thus far in our knowledge the cause is connected with three factors—

1. Age. Middle life and later.
2. Chronic irritation, undoubtedly an exciting cause.
3. Heredity—that is, an inherited predisposition or susceptibility.

More has been learned about cancer in the past twenty-five years than in all previous time, due to biological experimentation with the production and study of cancer in the lower animals—notably the rat.

Public education concerning this disease being the only hope of checking its ravages, allow me to outline a few of the more important steps in this education.

1. Instructions in methods of preventing cancer.
2. Recognition of the early sign of cancer.
3. The necessity of seeking competent medical advice immediately upon the appearance of symptoms which arouse suspicion as to their nature.
4. That every cancer begins as a local
condition and as long as it remains local it can be positively cured by surgery and X-ray and Radium.

Dr. Joseph Bloodgood, the noted cancer authority, says: "The records of the great hospitals of the world seem to show that the correctly informed individual should have at least sixty per cent chances of a cure when attacked by cancer, while the ignorant or incorrectly informed individual does not have more than ten per cent chances of a cure."

Is it unreasonable to believe, then, that with the proper cooperation on the part of a fully informed public the death-rate from cancer can be reduced? Our agencies of research and the practical application of our knowledge must be commandeered and made to function with precise and unfailing assiduity. It must be realized that cancer, in the organization of our modern life, touches in a vital manner the life cycle of practically every person. Surely every intelligent man and woman should take an active interest in the cancer problem because it has a direct bearing on the welfare of society and every member thereof. When the modern mind has grasped fully this urgent, this overwhelming necessity for individual and concerted thought and action, this baffling social problem—Cancer—will be solved, and this devastating disease will be controlled just as other diseases, which only a few years ago were reaping a rich harvest of human lives, have been brought under control.

TIME CALLED ON DIPHTHERIA

It is time for the people of North Carolina to end the disgrace of the great number of cases of diphtheria and the high death rate prevailing from that disease in this State. Never mind how many people had it, where they lived, and how old they were, nor how many people died from it, if there were one case and one death in the State of North Carolina only during 1928, we could justly say there was one case and one death too many of the disease.

More than thirty years ago diphtheria was justly looked on as one of the most treacherous and most dangerous diseases in the world. When a doctor at midnight called hurriedly to see a child struggling for breath, and pronounced the disease diphtheria back in those days, before the discovery of antitoxin, it was almost equivalent to signing the death warrant. The whole family and community were naturally horror stricken when the disease made its appearance. The death angel, in his visit over the Egyptians, striking dead the oldest born in each household in the days preceding the Exodus of the Israelites, struck no more terror to the
population than an epidemic of diphtheria produced in any thickly populated American city in 1890.

With the discovery of diphtheria antitoxin, and with the perfection of that process of treatment, and upon its widespread use becoming available to the people of this State, the disease has lost much of its horror. Within recent years the death rate has naturally been reduced from the terrible mortality prevailing thirty years ago, and now when a parent calls a physician immediately upon the appearance of first suspicious symptom of sickness in a child which might resemble diphtheria, and the physician promptly responds and has with him fresh antitoxin and administers it in large doses, death seldom occurs. All of these facts are well understood by a majority of people, including all physicians, and yet the death rate remains very high, because, as our investigations have shown repeatedly, there is often delay in sending for a physician, and sometimes a delay in diagnosis, with subsequent treatment with fresh antitoxin, resulting in deaths which could be otherwise easily prevented.

At the present time there is no excuse for a case of diphtheria, especially among young children. This statement is based on facts, and that fact is possible because of the perfection of a process known as toxin-antitoxin, which is strictly a preventive of the disease. Three doses of fresh toxin-antitoxin administered at weekly intervals in sufficient size, guarantees protection from diphtheria in eighty-five per cent of all cases. Then there is a similar test, known as the Schick Test, which any good doctor can use some three months following the administration of three doses of toxin-antitoxin, and the reaction to this particular test will show definitely in every case whether or not immunity has been procured. If immunity has not been established, two more additional doses of toxin-antitoxin run the total percentage of protection up to more than ninety-five per cent.

This material (toxin-antitoxin) is prepared and distributed free of charge by the North Carolina State Laboratory of Hygiene at Raleigh. It is sent to any physician who needs it and who will order it. It is kept in the refrigerator of every whole time health officer in the State, available for the use for physicians at any moment when needed. This process must not be confused with antitoxin which is the curative agent used in treating the disease. The toxin-antitoxin method of at least three doses is a strict preventive and must be given weekly, and preferably months, in advance of any suspected exposure to diphtheria.

From all reliable reports, we hear that more than five times as many children were given toxin-antitoxin, or preventive treatment against diphtheria, in the state of Virginia, our neighboring state, during the past year than were given to the children of North Carolina, although the population of North Carolina is greatly in excess of that of Virginia, and although the per capita expenditures for public health in North Carolina is considerably in excess of that of Virginia. There should be no longer any excuse for temporizing in this matter. More toxin-antitoxin should be used by every physician and every health officer in this State. More of it should be used every day in the year. Every organization in the State, theoretically or otherwise, supposed to be concerned about child welfare should make it the first order of business of this year to see that the children in every community in the State are protected against diphtheria before summer is over.

We would suggest that every parent teacher association in the State, every denomination, including the individual church congregations of these denominations, should make it their business to agitate among their people for the necessity of diphtheria prevention being utilized. The mayors of every city and town should make it their business. All of the superintendents of city and county schools and most especially the principals of the larger individual school systems should get exceedingly busy and see that the protection is afforded. The local medical societies, as well as the district and State medical associations, should certainly feel the grave
responsibility resting on their shoulders, and discharge their duty to their patrons and to the people in a manner creditable to themselves. The ministerial associations, as well as the teachers association, could certainly spend some valuable time in discussing ways and means to get the toxin-antitoxin into the arms of the children of their charges. The school children themselves can help because they could carry the information in posters and literature necessary to their parents to convince them of the wisdom and necessity for this. The storekeepers and merchants could help by displaying these posters in their shop windows. The newspapers, as always, would be ready to publish any local plans and programs for getting these protective measures across. The motion picture houses could help out, and if the politicians could possibly be induced to exhibit one-tenth of the zeal in this election year in agitating this most beneficial measure that they always exhibit in a campaign year, much valuable energy could be directed into a useful channel for one time.

Before the last day of December of this present year every child in this State over six months of age and certainly under six years of age should have at least three protective doses of toxin-antitoxin. We hope and trust that we will be able to publish the names of all the one hundred counties of this State in the first issue of the Bulletin next January with the statement that each county in this State has administered this protective treatment to at least seventy-five per cent or more of its children under six years of age. Which county will be the first to come across in this most necessary and humanitarian enterprise?

**PREVENTION OF DIPHTHERIA FOR THE PUBLIC GOOD**

BY

H. D. STEWART, M. D., Monroe

There are, perhaps, eight thousand children in Union County of the diphtheria age. Of this not over half have had the toxin-antitoxin. The county commissioners offered this protection against diphtheria free for two months. Many parents neglected to have their children immunized. Some dreaded the needle. Others were too ignorant. Some did not seem to care.

Your child from 18 months to 5 years of age may develop diphtheria any time. The disease may come as a thief in the night. Two children have recently died in Union County of laryngeal diphtheria. A number of others have had the disease, but recovered.

Some cases of diphtheria are rather mild and the membrane may not grow in the larynx rapidly enough during the natural duration of the disease to entirely close the air-passage in the larynx. Other diphtheria infections of the larynx may be so severe as to stop the air passage in twelve to thirty-six hours, and the child dies of asphyxia or carbon-dioxide poisoning. This happened in thousands of cases before antitoxin was introduced by Behring, April 15, 1893.

There are some things about diphtheria that all mothers should know. Daylight croup is always membranous croup or diphtheritic croup. If a child develops a case of croup in the daytime, or if a child develops croup in the night-time and the case continues into the day, this is laryngeal diphtheria. The mother should call a doctor promptly and have a curative dose of antitoxin administered at once. Diphtheritic croup does not let up when day comes. Ordinarily catarrhal croup subsides at daylight and returns again the second and third night. Catarrhal croup is not dangerous, and there need be no alarm, if the diagnosis is certain. A little sedative cough syrup or paregoric, an enema or a
mild purgative of calomel will fulfill all re-

cquirements as a rule.

To all mothers of Union County or else-

where, who may be reached through the
columns of this paper: If your child has
an unmistakable case of croup in the day-
time, call your doctor at once. Tell him
about the case before he comes, and tell
him to bring antitoxin in ten-thousand unit
doses.

Catarrhial croup usually results from con-
gestion of the mucous membrane of the
larynx superinduced by dampness, and cold,
and by error in diet involving the ingestion
of too much protein. Diphtheria is a room
contagion. The laryngeal type is not nearly
so contagious as the tonsillar type, the
pharyngeal type or the nasal type.

The diphtheritic membrane usually forms
within six to twelve hours after the onset
of the disease. If the case is not promptly
treated, the membrane rapidly spreads from
tonsil to tonsil to pharynx, etc. The mem-
brane is thick and gray and continuous.
It may be easily observed after a few
hours. The child should then have anti-
toxin without losing time waiting for labo-
atory findings or laboratory reports.

Please pardon the report of some of my
personal experiences with laryngeal diph-
theria. One cold dark night at two o'clock
I walked into a home several miles in the
country just in time to see a beautiful little
black-haired tot, two years old, die of
laryngeal diphtheria. The parents thought
the child had ordinary croup and they had
not called a doctor.

One night about ten o'clock I was called
twelve miles to see a sick child. I was told
that it had pneumonia and had been under
the care of a physician for four days. I
took medicine for pneumonia. When I en-
tered the house I knew that the child was
nearly dead from carbon-dioxide poisoning
locked in and oxygen locked out by a
thick diphtheria membrane in the windpipe.
I begged the parents and the grandparents
to let me do a tracheotomy and introduce
a piece of fountain syringe tubing so that
the child might get its breath. The child
was pleading for breath and for life and
crawling all over the bed. The folks ob-
jected to a tracheotomy. A beautiful, four-
year-old, blue-eyed, blond-haired child
died while pleading to live. To me this
case was very sad.

It is your bounden duty as parents to
have your little tots immunized against
diphtheria by the administration of three
to five doses of toxin-antitoxin. Many
people do not know. It is the business of
their family physician to tell them. I am
making a fight against ignorance and preju-
dice. I have appealed both to your emo-
tions and to your intelligence.

This health article has been written with
the hope of saving some mother's child,
precious in her sight. No one understands
the immensity of the mother love, except
the mother herself, and even she does not
fully understand.—Monroe Journal

VACCINATION AGAINST SMALLPOX THE ONLY KNOWN
PROTECTION AGAINST THAT DISEASE

For more than one hundred years small-
pox vaccination as a preventive against that
disease has not only been approved by the
medical profession in every enlightened
country in the world, but it has been more
consistently and persistently urged upon the
people than any other medical question.

Notwithstanding the foregoing statement,
smallpox is still prevalent, especially in the
United States. While it seldom reaches
epidemic proportions now-a-days, on ac-
count of the swiftness through which health
authorities act with compulsory ordinances
and so on which soon stop the spread of
the disease when once it attacks a suffi-
cient number of people to constitute a mean-

ace in a thickly populated country. It
remains an important public health prob-
lem. It is an interesting question for us to
ask ourselves what we would think of the
population in any so-called civilized coun-
try one hundred years from now who still
permits diseases like diphtheria to exist.
knowing that we today have a practically
sure preventive for diphtheria, but no bet-
ter preventive than we have had for more

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than a hundred years in the case of small-pox. Practically everybody knows that small-pox is a dangerous disease and that it is loathsome and filthy, and always leaves ugly scars on the body of any person who has it; and yet, through carelessness, indifference, prejudice, and ignorance, we allow the disease to stay with us from one year's end to another. It is nothing less than a reflection on our intelligence. There is no other way to look at it.

There is a considerable class of people everywhere at all times who have been correctly characterized as the antis. Such people are always anti-everything. No matter what it is, they are against it. Everything everywhere in the eyes of that class of people is always wrong. They never offer anything as a substitute. In other words, they never have any constructive criticism. Their criticism is always destructive and usually senseless. Among that class of people there flourish in almost every large city throughout the world small organized cliques whose specialty is to oppose the humanitarian and sensible control of disease through vaccination. Such people generally are opposed to animal experimentation. They weep crocodile tears over the sufferings of the stray dog or cat or rabbit, but look with proud disdain upon the sufferings and death of children or adults from diseases that very often could be prevented. These are the people that encourage indifference and procrastination on the part of more sensible people, and who prevent the latter class from availing themselves of the protection offered through vaccination.

Vaccination as practiced now-a-days is as clean, as safe, and as sensible as any procedure could possibly be. We like to think that the chief reason for there being any adult unvaccinated person in any community in North Carolina today is because of carelessness or indifference or delay in securing this protection. The Surgeon General of the United States Public Health Service said late last year that there were thirty-four thousand cases of small-pox reported in the calendar year 1927 in the United States, more cases than any other country in the world with the single exception of India; that is, cases in the reporting service available to the different nations. In the State of North Carolina

The caption for this photograph might be "Up from the Cornfield." A State School Nurse was so enchanted with the overhead scenery on a beautiful day in Yancey County that she says while rounding a curve in the road she momentarily forgot she was not traveling that way (up).
during that same year seventeen hundred and two cases were reported to the State Board of Health. In other words, there were seventeen hundred and two people who were sick from this loathsome disease simply because they had not gone to the trouble of getting vaccinated.

It will not hurt to repeat here, although we have repeatedly published such statements, that in years gone by smallpox was one of the most devastating plagues in the world. The mortality was high; and it is probably one of the most contagious diseases in the world, and more easily spread by contact than almost any other disease. After vaccination was discovered and put into effect in the great population centers of the world, at a time when smallpox was killing its hundreds of thousands, the disease was gradually brought under control, and the only outbreaks of any extent in the world today is among the unvaccinated populations. In the United States these centers have invariably been in rural districts without health departments, where there has been no effort to get the people vaccinated and no available means on an extensive scale, or in the cities which are headquarters for some of the various cults and anti societies. The North Carolina State Laboratory of Hygiene has been for several years making an approved product of vaccine which has been available for use to any physician in the State who would ask for it, and which has been supplied to health officers in wholesale quantities throughout the State, and there is today no excuse for any individual in North Carolina not being properly vaccinated.

The Surgeon General in his statement about smallpox says that “it is difficult to understand why this condition is allowed to continue year after year. A large percentage of the property in this country is insured against loss by fire, and a man who fails to provide for his family by taking out life insurance is censured; yet, when smallpox is introduced into a community in the United States it usually finds many victims who have never been vaccinated and others who have not been vaccinated for many years.”

If there is an anti society in any community in this State which has the temerity in the face of modern science to oppose such sensible and common sense methods as vaccination, we hope the scales may fall from their eyes, so that they may see the grave error of their position and ally themselves with the people who are striving might and main to protect the public health from unnecessary disease.

**UNDULANT FEVER, ALSO KNOWN AS MALTA FEVER**

*A Disease of Foreign Origin Which Is Now Causing Some Concern in Medical Circles.*

There are many diseases which affect mankind, whose origin runs back to antiquity, such as, for instance, tuberculosis. On the other hand, new diseases, or, as is sometimes the case, new and definite manifestations, perhaps of old diseases, are constantly occurring.

In the progress made during the last century looking toward the eradication of typhoid from the world, it is only within the last few years that definite measures for control of that terrible disease have been outlined and put into widespread use. All of us over thirty years old can easily remember when typhoid fever was one of the most definite serious problems in the whole realm of sickness. There was hardly a community in the State of North Carolina which could feel anything like safety and immunity from the ravages of that disease during the late summer and autumn of every year. Finally, after years of research work and constant application of knowledge, the cause of the disease, the definite methods of its spread, and the precision with which it may be controlled have been extended to all the communities of the State. We now know exactly how to control typhoid. It is classed as a specifically preventable disease. The death rate in this State has been gradually falling every year for the past several years.

Diphtheria is another terrible disease whose history runs back certainly to the Israelites in their journey through the Wilderness more than thirty-four hundred
years ago, which was horrible and baffling throughout the centuries until Von Behring discovered the antitoxin treatment which was announced to the world along about 1893. Since that time the processes of control and treatment have been improved gradually until today, from the use of what is called toxin-antitoxin, diphtheria is practically destined soon to be eliminated from the category of a public health problem.

Other diseases have been controlled and almost abolished, we might say; but it seems that all such problems must have their origin in Pandora’s Box, which was poured out as a veritable curse upon mankind, for when scientists succeed in controlling and eliminating one such enemy of mankind as diphtheria or typhoid fever, another equally as dangerous to the well-being of people would seem to immediately take the place of the disease which has been abolished.

Undulant fever may be described as a disease of this latter character. It originated hundreds of years ago on the island of Malta in the Mediterranean Sea and therefore was designated as Malta Fever. Already the United States Public Health Service is designating the apparent increasing spread of this disease throughout America as of greater importance from the standpoint of public health than is typhoid fever.

The newspapers of November 28th carried the distressing news throughout the world that Dr. Edward Francis of the United States Public Health Service had contracted undulant fever while at work in the hygienic laboratory. Dr. Francis is one of the most distinguished scientists in the country. He is the man who has received a medal of honor from the American Medical Association for his outstanding work in tuberculin, or rabbit disease, which is also another dangerous infection liable to increase to distressing proportions at any time. Dr. Francis, by the way, contracted that disease in the course of his studies concerning it.

ANOTHER GOOD REASON FOR PASTEURIZING MILK

Undulant fever is so called because of the fact that the attacks come in waves or undulations. The disease is very serious, and when once contracted the patient may be ill for more than two or three years before any improvement whatever is noted. As the disease is contracted through contacts with hogs or cattle which are infected, and the infection is also passed on through milk obtained from diseased cattle, this fact constitutes another important reason for demanding pasteurization of all public milk supplies. This is especially important for all milk which is supplied in wholesale quantities to large numbers of people, such as the largest dairies which do a considerable retail business in cities and towns, and especially for those dairies which supply milk for drug store or fountain dispensation to a miscellaneous group of customers, such customers, of course, being of all ages, races, and sexes, and often from widely scattered areas, and thus making it so easy to spread this disease over a large territory.

The United States Public Health Service, under date of December 28, issued the following announcement concerning the importance of Malta fever:

"IMPORTANCE OF UNDULANT FEVER BEING MORE WIDELY RECOGNIZED"

"Undulant fever, a disease contracted from cattle and hogs which are infected with contagious abortion, is being more widely recognized as a problem of considerable importance from a public health standpoint. A number of cases of this disease have been reported from various States.

"The disease of contagious abortion is quite prevalent among cattle and hogs throughout the country. Persons who drink raw milk from infected cattle or who handle hogs or cattle that are infected are likely to contract the disease. The name, "undulant fever", is applied to the disease because the attacks of fever come in waves or undulations. The disease was first recognized on the island of Malta in the Mediterranean, and it was thought for a time that it was spread only through the milk of goats. It is now known, however, that the disease may be contracted from cattle and hogs. The disease is not only disabling but extremely chronic in dura-
tion. The patient may be ill for two or three years before any improvement is noted. Important studies made by Miss Alice C. Evans, a bacteriologist of the United States Public Health Service, have shown the relation between this condition in human beings and contagious abortion in cattle. In certain States it has been said that undulant fever is of greater importance from the standpoint of public health than is typhoid fever. Many cases are contracted from infected milk. Fortunately, however, efficient pasteurization readily destroys any of the germs of this disease which may be present in milk. The chief precautions, therefore, are the use of pasteurized milk and care when coming in contact with animals known or suspected to be infected with contagious abortion. In a series of cases of undulant fever recently studied among adults living on a farm there were 39 males and 6 females; six of the male cases are known to have derived their infection from hogs.

"Persons who are employed on farms or in packing houses are likely to contract the disease through exposure in their work; other persons may contract it through consumption of raw milk."

In a very able paper on this disease written by Dr. John P. Williams of Richmond, Virginia, and published in Southern Medicine and Surgery, June, 1928, the following conclusions were stressed by Dr. Williams:

"1. Brucella melitensis, variety abortus, is abundantly present in raw cow's milk in all parts of our country.

"2. Its pathogenicity for man has been established.

"3. The paucity of reported cases is probably due largely to a lack of familiarity with the condition and the difficulty of its diagnosis, especially in the rural districts where laboratory facilities are least available and the disease is most abundant.

"4. The economic loss caused by this disease to live stock raisers is well recognized, but adequate measures for its control will not be taken until its menace to the health of the whole community has been established. It therefore behooves all of us, especially the rural practitioner, to be on the alert and to have agglutination tests or blood cultures done on all suspicious cases, just as is now generally done for typhoid fever.

"5. Boards of health should give adequate publicity to the condition, and should furnish the necessary laboratory facilities. They should also take note of the fact that four days is not sufficient time for growth of this organism.

"6. The limitations of the agglutination test should be recognized. A positive reaction only in low dilution does not rule out the possibility of this infection, since several such cases have been reported in which the organism was found on blood culture. On the other hand, cases of tularemia will give high agglutination reactions against brucella melitensis.

"7. People should be warned of the danger of drinking raw milk from herds known to be suffering with contagious abortion, and should be encouraged to have their animals tested for the presence of this infection."

A THOUGHT PROVOKING LETTER

The Bureau of Health Education of the State Board of Health has for its chief objective the preparation and distribution of literature on disease prevention which will be helpful to the average family, especially those in remote sections of the State, in guarding against unnecessary disease. Sometimes we receive encouraging reports from far remote sections, and sometimes we are discouraged when we think how much there is to do and how much of this kind of work is necessary and how little progress we seem to make.

We are taking the liberty to quote from a letter recently received from the head of a high school in eastern North Carolina, which we are sure, from our own knowledge, could be duplicated in scores of other sections of the State. The encouraging part of this letter to us is the fact that here at least is one man who has the vision to see what is necessary to start the patrons of his
school on the road toward better living conditions. He also states the fact of inaccessibility to physicians without exaggeration or rhetoric or whining complaint. It is simply a fact as he sees it, and he so states it.

In this connection we go out of our way just here to state that the Editor of the Bulletin is in hearty accord with Dr. Harvey W. Wiley in his declaration that what the farming people of the United States need first and foremost is correct information and help on how to live and rear their children in a healthy environment.

Following is the quotation from our friend's letter:

"We are interested in giving our boys and girls in the high school intelligent sex training. I shall be very grateful to you if you can send me literature for the teachers to use as a kind of text. I should also be glad to have proper literature for about forty-five high school girls and for about twenty-five boys.

"We are a typical eastern community. The center of our community is approximately twenty miles from a physician. The cost of the services of the physician is so great by the time he arrives, that a goodly number of our people do without. In only a very few cases is a physician present at child birth, and very rarely does an expectant mother consult a physician. There is a tremendous amount of patent medicines sold here."

"If I should send you the addresses of the patrons of our school, would it be possible for you to send them your bulletin along with other literature that would be helpful to such people?

"I shall greatly appreciate any advice or literature you may send."

A photograph of the eighteen year old Granville County colored boy who rescued three people from drowning in an overturned car in a pond near Oxford one night in early December, 1928. True bravery is not confined to any age, sex, color, race or creed.

SANITARY INSPECTION FOR REST ROOMS NECESSARY

North Carolina, along with other states, undoubtedly needs a law permitting the proper authorities to enforce a rigid inspection of so-called "rest rooms" and "comfort stations" now so commonly advertised in connection with filling stations. Ordinarily the average rest room is anything but restful or comfortable, as operated by filling station attendants.

The law in North Carolina permitting the State Board of Health to carry on an inspection of the toilet facilities, and which requires compliance with certain regulations in connection with the privies on private premises in the villages and towns of the State, has been justified and has operated toward better sanitation throughout the State. Judging from the rapidly increasing numbers of filling stations everywhere, and from their generally dirty, insanitary condition, the time would now seem to be at hand when the law should be extended to cover such requirements for filling station rest rooms. From the standpoint of prevention of the spread of certain diseases, such a law would be justified; but from the standpoint of comfort and satisfaction for our own citizens when traveling, and for the tourists from outside
the State, rules and regulations requiring that these places be kept clean would seem to be imperative.

That this necessity is not confined to the State of North Carolina is indicated in an editorial appearing in the September number of The Motorist. The need for regulation and inspection seems to be general throughout the whole country.

In conclusion, we are herewith quoting in full the editorial from The Motorist, which was written by P. L. Lowder, editor of that publication.

"HERE'S NEED FOR DRASTIC ACTION"

"This is not going to be a particularly pleasant story to read but we are firm believers in constructive criticism and this story is written with a purpose, and with the thought in mind that publicity may remedy a really sickening condition.

"I have just returned from a thirty-five hundred mile trip, made between Chicago and a number of cities in upper Maine. The first day's jump was from Chicago to Chatham, Ontario, passing through Detroit. The second day covered the distance between Chatham and Buffalo, the third between Buffalo and Albany, the fourth between Albany and Portsmouth and the fifth day between Portsmouth and Bangor.

"It was a beautiful trip. Marvelous scenery. Sparkling lakes, majestic hills and mountains, miles and miles and miles of perfect highway. There was but one drawback.

"Never in my life have I seen such unspeakable filthy provision made for toilet facilities. Comfort stations, rest rooms, toilets; call them what you will, they were, for the majority, absolutely unusable except in case of direst necessity. Not all were as bad as some, and many were as clean as your own bath room, but, if you will hear the repetition, the majority were unusable.

"Pails of grease in the corners, oily rags hanging on nails driven into the walls, in such positions that one could hardly help coming in contact with them in using the place, sweepings from garage floors, human and animal filth in places which the human body comes in contact with, newspapers, mostly colored comic sections, stuck in boxes on the walls or laying on the floors, and in general, conditions that would make a person of even ordinarily clean habits and training gag when they entered the place.

"And such conditions are so easy of remedy. A pail of clean water thrown over the floor and swept out every morning would at least improve the condition of some of the so-called rest rooms. The removal of dirty rags and pails of grease would not take much effort. Certainly some place other than an alleged comfort station could be found for the storage of grease.

"After I had inspected half a dozen of these places and found them so repulsively foul, I became curious and made an inspection of eighteen consecutive places where the garage, or oil station had put a sign "rest room" or "comfort station." Of the eighteen in a row, thirteen would never pass a sanitary inspection of even the most slovenly character.

"Now then, I don't know whose business it is to see that these wayside toilets are kept clean. I don't care who provides the remedy, but I do believe that no place of any character, whether it be a gasoline station, a garage, a restaurant, a road house, or shanty with a sign "red hots and cold drinks," should be permitted to put up a sign "rest room" or "comfort station" until that rest room or comfort station had passed at least a fairly strict inspection. These comfort stations signs lure many a tourist, and if most of them are as sensitive as I am about asking for something for nothing, the average tourist who stops spends money.

"Something ought to be done. Something must be done. Put in pay toilets as railroads have, if necessary. The average tourist will be willing to pay for the privilege of using a clean comfort station, I'll bet a thousand dollars. As I said before, I don't care how the situation is remedied, but it must be remedied and if I know anything about human nature, it will be remedied. Men won't
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Stand for such foul conditions for very long.

"Maybe you think I am unduly steamed up about this matter. Well, just take a little trip across country and see for yourself. If you think I am exaggerating, make an actual count, as I did. You'll find a condition that needs drastic action, and needs it right now."

CONTROL OF COMMUNICABLE DISEASES IN SCHOOLS

BY

A. B. McCREARY, M. D., County Health Officer, Rockingham

We are all familiar with the methods of communicable disease control as set forth in the State Board bulletins. There are very few difficulties involved in quarantine enforcement of the sick child. The disease itself is usually a more effective quarantine than any form of legislation can be. The greatest difficulty that confronts the health officer is the control of contacts, so that the exposed child may develop the symptoms of the disease while isolated and prevent further contacts and consequently further spread. This is probably a question for each individual health officer, its enforcement dependent upon how far removed the community is from the abused idea of personal liberty.

Smallpox control is limited to vaccination and education. I think the system used in this State of no quarantine is the best method. Quarantine of smallpox is useless because the patient is usually associating with others before diagnosis and the idea of quarantine causes others to have a false sense of security. We all recognize that vaccination is the only sure means of prevention. And by allowing those who have the disease to parade in public places, it acts as a gentle reminder to the unvaccinated and gets those who were vaccinated years before interested as to whether their initial vaccination will protect. We always tell them that it is best to be vaccinated again; that the second take is never as severe as the first, and that after two successful takes they can feel that they have the greatest possible immunity that can be conferred without actually having the disease.

Although not quarantined all cases of smallpox are excluded from school until the scabs and lesions have healed. Chickenpox is excluded from school until the scabs and lesions have healed but is not quarantined. It is rarely a problem anywhere and is rather useful in reminding people of smallpox and the wisdom of vaccination.

Typhoid inoculation should be stressed. In the future in Richmond County we plan to hold all typhoid clinics at the schools from January to May, especially in the rural districts and urge all to be prepared before typhoid time. Smallpox, chickenpox, and typhoid are hardly school problems as far as attendance is concerned, but it can be made very useful in the general education program.

In the past four years in Richmond County scarlet fever has steadily declined. In 1924 we had 40 cases; 1925, 24 cases; 1926, 15 cases; 1927, 12 cases, and to date in 1928 there have been 4 cases. We urge the use of the scarlet fever serum but until it is dispensed from the State Laboratory just as toxin-antitoxin is, campaigns for inoculation will hardly be practical unless the department have budgets large enough to furnish the serum. All cases are quarantined upon suspicion and after diagnosis for 21 days after onset. We have found it satisfactory when a case breaks out in school to run the class on rainy day schedule and observe daily symptoms. We feel that they can be watched better in school and in that way cut down the number of contacts. I do not consider scarlet fever so high-
Diphtheria can be handled in one word; toxin-antitoxin. Wholesale inoculation of school children with toxin-antitoxin will effectively control diphtheria. Urge parents to inoculate pre-school children. It is a good idea to follow up every case of diphtheria that is reported and get a throat swab.

Whooping cough is a real school problem. We feel that we have prevented a few cases in school by use of the whooping cough serum. It probably offers a 60 per cent immunity for 2 or 3 months and is useful in tiding you over. Difficulty of making early diagnosis coupled with the fact that the patient is ambulatory makes it very difficult to manage by quarantine methods. Quarantine cases on suspicion and the handling of contacts is a problem for each man to work out. If any one finds a satisfactory method I hope they let me know. My experience with the vaccine has led me to feel that it is probably the best method of attack. Measles and whooping cough constitute the greatest school problem from the epidemiologist point of view. I recall a statement in the therapeutics class while in school, that where many drugs were listed as being the proper treatment for a disease, it was a pretty safe bet that the patient would get along about as well without any of them. My methods on measles have been of the shot gun prescription variety. Needless to say I haven't blundered on the specific. Handling contacts is the great trouble. We took temperatures and observed symptoms for a while and still they continued to break out in class rooms. We quarantined contacts for 14 days and had them to come back in school and break out on the 15th and 16th. Most of our cases seemed to develop between the 15th and 17th days. Then we allowed seven days grace after exposure and a ten day quarantine following. This cut down the number of cases for any given period. It prolonged the epidemic even if it did lessen the severity as some believe. From a school point of view, too much time was lost; from a control point, it was the nearest approach we were able to make. We may have had fewer cases of measles in Richmond County, but we certainly had them longer. Immune blood serum is not as practical to dispense as the other serums and coupled with the fact that the public refuses to consider measles seriously and the high communicability puts it and whooping cough in the same category. My brief experience has led me to form the conclusions that those diseases which are most effectively controlled are the ones for which there is a specific vaccine or serum. Consequently I am for serum sold. I favor quarantine more as a legal arm to be used as the occasion demands rather than for any specific value in preventing a spread. Threat of quarantine will sometime act as an incentive for inoculation.

Scabies is occasionally a school worry that starts us all at scratch. Exclusion and sulphur cover the subject. Septic sore throat quarantined for 7 days and quarantine contacts 3 days according to the bulletin seems effective. North Carolina is less urban than other Southern States with the possible exception of Mississippi and less rural than any of them due to the great number of small towns.

Excellent schools, multiplicity of good roads and myriads of automobiles. This helps to simplify the education phase of public health which is the most important.

Education is mightier than legislation, yet both are necessary. The cause can be greatly advanced by giving the public the facts by lectures, by bulletins, and through the press. The problems are virtually the same in the large and small units. In the larger units there is more machinery to handle the greater volume, but we all have great resources at our disposal and through the press. Each teacher can be trained to be a virtual deputy health officer. With the increase of consolidated schools it is not so difficult to sell the idea to the school principals and have it passed on to the rest of the faculty. We know, laymen and
all, that the person who gives us a disease has done us more harm than the petty thief who pilfers some trifle. Can the public be brought to the point to feel outraged and wronged by the careless individual who spreads disease, as much as they would by the sneak thief? They do not hesitate to divulge the thief’s name and appear to prosecute him. Could public sentiment be built up to include the careless or wilful violator of health laws? Can they be brought to the realization that their rights have been trampled upon and their health endangered? If public sentiment of that type can be developed, the violator will have a sense of shame, and pride will cause the offender to avoid the second offense. If he has no pride, that’s where legislation comes in. This will have to come through education of the public. Our State has made great strides along all lines in the past few years. Is it a wild dream to hope that such renaissance of public conscience is possible? Hit a man’s pocket book and then you hit him. Let them reach the full realization of what a careless neighbor’s action are costing them. And then we can stand by and watch the fun. The value of sanitation and hygiene measures should be part of the educational program.

This paper can be summerized very briefly.

1st. The value of educating the public.

2nd. Use all serum and vaccines which offer any worth while immunity.

3rd. Use of quarantine in emergencies, and as a whip.

I think these can all be summerized under the first.

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A winter landscape on the Elk Wallow Road in Yancey County.

**FITS AND CONVULSIONS**

BY

NEWTON G. WILSON, M. D. Madison

A fit may be defined as any sudden abnormal manifestation of mental or physical activity. It may also include the sudden temporary cessation of physical activity or a sudden temporary mental abnormality.

A convolution is a distinctive type of fit in which there are characteristic involuntary abnormal contractions of a group or groups of muscles.

Fits and convulsions often occur suddenly in infants, children and adults who were not known to be seriously sick prior to the fit or convolution. For this reason it is well to know something about the nature of fits and what to do when confronted with one. In a paper of this length the subject cannot be dealt with
in detail but some facts may be brought out that might be useful at a time when very much needed.

Fits and convulsions are not diseases within themselves but are striking objective symptoms of disease. The most common cause of convulsion in infants are the acute infectious diseases. Pneumonia, meningitis, influenza, diphtheria, scarlet fever, smallpox, dysentery or typhoid fever may be ushered in by a convulsion. In the acute infections mentioned above there will be fever following the convulsion and a rapid heart action and pulse rate. In convulsions due to such causes the whole body stiffens, the head is thrown back, the eyes close or stare, and breathing is stopped temporarily or is infrequent. In such conditions a doctor should be called at once. While waiting for the doctor to arrive the infant child should be made as comfortable as possible in a quiet and darkened room. It should not be rocked or fondled but placed in its crib or bed and all noises excluded. If the weather is hot the clothing and covering should be light. If the weather is cold the child should be made warm, especially should the feet be kept warm.

Another common cause of convulsions in children is that due to digestive disturbances. Improper foods and too frequent feeding as well as overfeeding sometimes causes tetanic convulsions which are repeated at frequent intervals or are nearly continuous. There is little or no fever and the whole or certain parts of the body may be affected. The convulsions in some of these cases seem to gradually pass from one or more of the extremities to the body on one or both sides. While waiting for the doctor to come in cases of this kind the child should be wrapped in blankets wrung out of hot water or immersed in a hot bath. As soon as the convulsions are controlled until after the doctor comes and administers chloroform.

Another cause of convulsions in children is intestinal worms. Children reared in towns and cities where sanitary conditions are good do not suffer from worms. But in country districts where there are no sewers and improper toilet facilities, barefoot children often become infected. The convulsions may resemble either of the types mentioned above and there may be two or three degrees of fever. Treatment of the convulsions prior to arrival of the doctor should be the same as outlined in the last paragraph.

Epileptic fits occur in children as well as in adults. The attack is sudden in an otherwise perfectly well child. If standing, the child will fall and stiffen, the teeth will be tightly closed, the eyes rolled upwards and consciousness lost. There is usually a hoarse inarticulate cry or grunt and the skin, especially around the mouth, has a bluish cast. Breathing is slow and noisy and the tongue may be bitten unless some solid substance is placed between the teeth. This is often the most violent of all types of convulsions and when seen for the first time appears to be a very frightful condition. It is usually not dangerous however, unless the patient falls against some hard substance and fractures the skull, or falls into water or fire. The patient should be immediately placed on a comfortable bed or otherwise made comfortable with his head low, and the collar opened at the throat if tight. He should not be disturbed (except to prevent him from biting his tongue) until he regains consciousness. Patients who are subject to epileptic fits should not be left alone where there is an open fire, or water sufficiently deep for them to drown in.

Fainting fits are not common in young children but quite common in adolescent girls. The immediate treatment is to get the head low, open the collar at the throat, if tight and to provide fresh air. A doctor should be consulted to ascertain the cause of the trouble and a thorough examination should be made. In most instances the cause is not serious but in some there is a dangerously low blood pressure, anemia or other serious trouble.

Rarer causes of convulsions in children will be mentioned in connection with fits and convulsions in adults. These are hysteria, eclampsia, uremia, diabetes, alcohol-
Eclampsia is a very dangerous signal when it comes on in a pregnant woman. It may be preceded by morning headache and blurring vision, or there may not be any premonitory symptoms. Prevention of this terrible condition may usually be had by seeing the family physician regularly and having regular urinalyses. When it develops urgency in treatment is very necessary.

Uremia may be responsible for convulsions in patients who have chronic Bright's Disease. It may occur in patients not known to have kidney disease. It sometimes occurs in pregnant women who have neglected to have urinalyses made, with subsequent necessary treatment.

Diabetic patients who are not being seen regularly by their doctor or who are not following his instructions may develop convulsions. The doctor will of course be sent for when the convulsion develops, but the best treatment is to be constantly in the care of the family physician and follow his instructions. An ounce of prevention is worth a pound of cure. It may be too late in either eclampsia or uremic and diabetic convulsions after the fit comes on.

Alcoholism sometimes causes convulsions but more often an unconscious stupor.
Treatment by a doctor is urgently needed in such cases, but of course the best treatment is prevention. In chronic alcoholism there may be paralysis.

Lead poisoning sometimes produces cramps and convulsions. In chronic poisoning there is sometimes paralysis of certain muscles. Lead colic is known also as painter's colic. Anyone handling paints can develop cramps and convulsions. In chronic poisoning there is sometimes paralysis of certain muscles. Lead colic is known also as painter's colic. Anyone handling paints can develop cramps and convulsions.

Hydrophobia causes the most terrifying convulsions known to medical practitioners. Prevention is the only cure. Every county should have a dog law which prevents dogs from running at large and it should be enforced. Every person bitten by a dog should ascertain whether or not the dog had rabies and if so take the Pasteur treatment. If in doubt take it anyway.

Tetanus is another cause of convulsions and here again the treatment should be preventive. Many thousands of lives were saved in the World War by giving tetanus antitoxin. Punctured wounds and burns by powder or firecrackers are liable to tetanus infection and such patients should be given tetanus antitoxin. It may be too late after tetanus or lockjaw develops.

**JOHN EARLY RECOVERS FROM LEPROSY**

“John Early, the North Carolina mountainman, who was brought to public attention by his repeated escapes from the jurisdiction of health authorities, will leave the U. S. Leprosarium at Carville, La., this month and return to his farm in North Carolina, having recovered from leprosy.

For more than a year microscopic tests of his tissues and blood have been negative for the leprosy bacillus. He is rugged, although scarred, and is expected to round a full period of useful old age. John Early constantly rebelled against his fate and the routine and painful injections of chaulmoogra oil and the discipline of the institution. He would depart at night by stealth and pre-arrengement with confederates on the outside of the institution, make his way by varied means to his destination and usually announce himself to the press and local health officer. In April, 1927, he went to his old home in North Carolina, from which a petition was received by the surgeon general of the U. S. Public Health Service, signed by practically all the residents of the town, requesting that he be allowed to spend the remainder of his days in those remote hills. The surgeon general was unable to grant the request. Armed resistance, subterfuge and habeas corpus proceedings failed in turn and John Early surrendered in May of that year, returning to the National Leprosarium at Carville, where he finally yielded to treatment. There is scant danger of his relapse, the public health service says. Only one recovered leper discharged from the institution since 1921 has suffered a recurrence. When Early was first detained by the public health service, he was kept at Port Townsend, Washington; afterward he lived in a little home for about four years as a guest of the District of Columbia. He then became a patient at the Louisiana Leprosarium, and in 1921, when the national home was established in Carville, he was moved. The treatment of leprosy is tedious and sometimes painful. Formerly injections of chaulmoogra oil caused excruciating pain for hours, but the public health service devised a year ago a painless method of administration by mixing with each dose a harmless anesthetic. Early’s eccentricities have served to keep the public aware of the fact that there is a leprosy problem in the United States. It is not unlikely that he contributed to the creation of the public sentiment necessary to pass the law of Feb. 3, 1917, enabling the U. S. Public Health Service to take over the care of lepers. In the last sixteen months, twelve four patients have been discharged as recovered or with the disease arrested from
THE HEALTH BULLETIN

February, 1929

NORTH CAROLINA CITIZENSHIP

The North Carolina Club at the University had its second meeting of the year on Monday night, October 29th. The speaker of the evening was Judge Robert W. Winston and his theme "The Quality of North Carolina Citizenship."

Judge Winston began his talk with an analysis of North Carolina's population. He pointed out that the early settlers were mostly plain people of English, Scotch and German extraction. Of these the English strain predominated. Next in order of number came the Scotch-Irish and the German. The number of French and Swedish was almost negligible. He did not include the Indians or the Negroes in the country, because they represent separate races.

The eastern coast being accessible to sailing vessels from the Old World was settled largely by the English and Scotch, and a few towns of some importance sprang up, such as Edenton, Wilmington, New Bern and Fayetteville. Other centers of political, social and economic importance, not on the water, were Hillsboro, Salisbury and Williamsboro. The Scotch settled mainly in the Cape Fear section.

The next largest element among the early settlers were the Germans and Moravians. We find the descendants of these thrifty people in the counties of Watauga, Catawba, Caldwell, Burke and Lincoln, and others.

PLAIN PEOPLE

All of these elements constituted after all a homogeneous group. They all stood for religious freedom; they loved their homes; they respected the marriage bond; they had a common mores generally. There were few Catholics or Jews and no Orientals in the colony. There were no titles of nobility or other manifestations of caste. There were no landed estates such as existed in South Carolina or Virginia. There was no great wealth and there were very few large slaveholders. The people traveled little. Rarely were their sons sent to European universities. There was little trade outside the colony, due mainly to the lack of harbors. The province was quite self-sufficing and composed of a people that have been characterized as "the freest of the free." It is not true that the state was settled by convicts and indentured servants but rather by a humble, thrifty and God-fearing people. Plain folks constituted the warp and woof of the State's citizenship.

Although a homogeneous, democratic and respectable people, North Carolinians have lacked certain essential qualities. They have been too inert and self-satisfied. For two hundred years practically no public improvements were made; little attention was given to education; there was no state consciousness or community consciousness. Few leaders arose and many of the enterprising people left the State. So great was the emigration that from 1840 to 1850 the population of the State remained practically unchanged. Up until the Civil War while people failed to develop habits of work because they could depend on slaves. After the Civil War the South remained stagnant because it was trying to preserve the status quo.

Since the dawn of the new century there has been an amazing development. New leadership has appeared; the look has been forward rather than backward; an educational foundation has been laid; diversity of industry has appeared. After being exploited by the Yankees for generations we are now beginning to exploit them (in a legitimate sense). We are asserting ourselves and utilizing our splendid resources. We have acquired so much state pride that we have become overly boastful.—The University of North Carolina News Letter.

With the great number of automobile fatalities each Sunday it begins to look as if America would have to go to church for safety's sake.—Cincinnati Enquirer.
YOUR CHILD IS WHAT YOU MAKE HIM—EVADING ISSUES

BY

WINIFRED W. ARRINGTON, A. B.

There are three ways, says an eminent psychiatrist, to meet unpleasant experiences; the first is to run away from them (physical retreat); the second is to hide from them (mental retreat); and the last is to stand ground and to attack them.

Celia B. was one of those who chose mental retreat. Celia was a plain girl with a manner that was timid and colorless. In her work as file clerk she was clumsy, and at home she had long been the least considered member of the family. Like other naturally drab people, she had always unconsciously resorted to the dramatic to make herself felt. Her imagination teemed with achievements to which, in real life, she was never equal. But even the dramatic had begun to fail her. Her self-esteem was unsatisfied and hungry for notice.

Then came the morning when she could not walk. Her right leg seemed paralyzed. Reflecting on her fresh misfortune, Celia, like everyone else, was alarmed. Yet, as time passed, she could not help being grateful for the concern that was showered on her. It was no mean distinction to be the object of doctor's visits and to be solicitously waited upon by relatives who ordinarily ignored her existence. The new handicap had its compensations for it transported her suddenly to the center of the stage.

HYSTERIA—MENTALLY EVADING ISSUES

What had happened? The psychiatrist explained when, at the suggestion of the family physician, he was summoned. Celia had stumbled upon a way to be temporarily at peace with her problem. In scientific terms she was a victim of hysteria, a mental phenomenon which consists in evading issues. Her paralysis was not actual but functional. Nor was Celia consciously pretending. She had attempted mental retreat, and the crippled leg was an unconscious trick of her mind; upon it had been shed the burden of earning her attention which should have been won by frank struggle with her obstacles. Only disaster could come of evasive tactics like these, said the psychiatrist, for they meant desertion of real life.

With the psychiatrist's help, Celia began to see that her life was full of petty evasions. She had always excused herself from parties and by pleading headaches and previous engagements, she had managed to play hide-and-seek with all other social contacts that she dreaded. The family remembered that, as a young child, she had the habit of throwing herself on the floor, kicking, screaming, and holding her breath when punishment was due, or when her teasing for privileges proved ineffectual. Even as an adult she was noted for making "scenes." All these things were pretexts for shirking the unpleasant. Had they ultimate value, there might have been reason for clinging to them, but they simply tided over the immediate situation, and increased the fear of situations to follow. Like a drug, they had exacted great dependence with each indulgence.

In the outcome there was a tardy lesson for Celia's parents. It was they, the psychiatrist found, who had first influenced her to sidestep the straight demands of life. In her childhood they had not been firm in their commands. They had allowed her to see that coaxing and tantrums could make them submit. Since their attitude toward her had varied with her moods, they had shown her a world which could be manipulated. Perhaps they had even set a direct example of evasion by shrinking obligations, giving round-about answers, or making dramatic temper displays of their own. They had been her teachers in the art of mental retreat.

Temper tantrums are weather vanes.
which show in what direction the child’s personality is tending. Parents who yield to them give the child a false idea of life values. They encourage him to circumvent facts and since the facing of facts is a cardinal principle of mental health, they predispose him to mental disorder.—Connecticut Health Bulletin.

PRISONS AS LABORATORIES FOR PERSONALITY STUDY

By WILLIAM A. WHITE, M. D.

I shall start with two analogies. If one wants to know what two people are talking about, one doesn’t get very adequate information on the subject of their discourse by listening to only one. Society has made its pronouncement as to what sort of activities are undesirable from its point of view. It is equally necessary to take the other end of the conversation and find out what the criminal has to say from his point of view.

Another analogy—if the Department of Agriculture is called upon to eliminate some insect pest from the land that is upsetting its agricultural projects by destroying crops, the first thing it does is to make an exceedingly careful and meticulously detailed survey of the life history of the insects that it wants to wipe out.

The problem of crime will never be solved so long as we forget that aspect of the subject and fail to make an accurate survey of the personality make-ups and problems of the anti-social offender.

There was a time in the history of crime and penology when inanimate objects and animals were tried and executed. Inanimate objects and animals have been set apart from the ritual of punishment, and even children have come to be regarded as outside of that domain of the law. Nowadays the children and obviously defective and the obviously so-called insane are no longer punished by the criminal law, but the obvious part of their defect is largely still in the intellectual field.

We are perfectly willing to set aside from the ritual of punishment and put in appropriations for social guidance people whose intellectual level makes them obviously irresponsible. But at the same time we are not prepared as yet to deal in the same way with people the emotional aspect of whose life is equally undeveloped. And so people who have an intellectual age of five or six years are no longer considered responsible but people who have an emotional level of five or six years are still considered responsible.

So that in order to deal with the problem of crime we must begin to understand the criminal in all of his various aspects, so that we will have a plot of his personality make-up from all of its various facets—the social, the intellectual, the affective, the economic, and other various influences that have been brought to bear upon his make-up; and when we have that we will have for the first time the scientific material for dealing with these various anti-social situations.

Added to that, we need are-evaluation of the fundamental concepts of the criminal law, such as punishment, guilt, responsibility, and a re-evaluation of what crime itself really means.

The work that is going forward is exceedingly encouraging. A great many things are being done in the criminological field. In the first place, Harvard University is undertaking a crime survey in the State of Massachusetts, and they are making it along these lines; the National Society of Penal Information, with the Laura Spelman Rockefeller Memorial fund back of it, is making a survey of the medical work in all of the state and federal prisons of the country, and they are going to make that survey from this point of view.
with a psychiatrist attached to assist them in the personality studies.

Various other activities are also in the field, and the National Committee for Mental Hygiene stands for this type of scientific endeavor. It is the sort of work that the biologists have been doing right along through the years. The method lies ready to our hand, and we merely have to apply it to the problems of delinquency with which we are dealing every day.

We wish to see the prisons made really into laboratories for the study of human conduct and possibilities of its modification along socially useful lines. The getting of the psychiatrist and the psychologist into the prisons makes it probable that before long we will begin to see that possibility realized. When it is, we will have the beginning of the collection of material for adequately dealing with the problem of crime in a scientific way which will take into consideration the personality make-up of the criminal and give us the kind of information that will enable us to tackle the problem intelligently.—Mental Hygiene Bulletin.

RURAL HEALTH SERVICE LACKING FOR SEVENTY MILLION PEOPLE LIVING OUTSIDE REACH OF ORGANIZED HEALTH DEPARTMENT IN THE UNITED STATES

Under modern conditions of transportation and travel, rural and urban health conditions react upon each other. Therefore, rural health work concerns the welfare not only of people who live in the country, but of city dwellers as well.

The sanitary quality of the tremendous volume of raw foods now shipped daily through interstate traffic is of great importance, for both humane and business reasons, to our public and our private interests and should be insured by adequate, co-ordinated, joint activities of governmental agencies—local, State, and Federal. To undertake the sanitary control of interstate traffic by inspection and quarantine at our city borders and on our interstate lines would be futile and ridiculous under present-day conditions.

Efficient local health departments in doing their work, perform duties of State-wide and nation-wide importance with which the States and the Federal health services are concerned. Therefore, it seems, from a sanitary standpoint, reasonable and proper for State and Federal agencies to encourage and help in the development and permanent maintenance of such departments.

Rural Health Service

Experience indicates that the best foundation for rural health service in the United States is the county health department under the direction of qualified whole-time health officers. It becomes more and more evident to those with practical experience in the public health field that the agencies concerned with the promotion of specialized health activities, such as typhoid fever prevention, hookworm diseases control, tuberculosis prevention, malaria control, venereal disease prevention, or child and maternal hygiene, can perform most efficiently and economically by correlating their specific activities in with and making them a part of a well-earned comprehensive program of local official health service under the immediate direction of qualified whole-time local health officers.

There are in the United States about 2,085 counties, including districts comparable to counties, wholly or in considerable part, rural, to which local health service under the direction of whole-time county or local district health officers is applicable, and in which such service would be highly advantageous. The number of these units of population in which such service was in operation at the beginning of 1920 was 109, and at the beginning of 1928 was 414.

During the calendar year 1927, whole-time county health work was established in 84 units and discontinued in 7. Of the units added to the lists in 1927, 64 are counties which were more or less inundated by floods in Mississippi Valley.
or in the eastern part of Kentucky in the spring of that year.

FACILITIES LACKING

Only about 17 per cent of our rural population is as yet provided with local health service approaching adequacy under direction of whole-time, local (county or district) health officers. Because of lack of efficient, whole-time rural health service, infections of man are conveyed very frequently across interstate lines.

Reasonable adequate whole-time rural health service throughout the United States would cost about $20,000,000 a year. Apart from the loss of human life, human health, and human happiness, our national economic loss annually from wage earning and in other items incident to preventable sickness because of lack of efficient county health service is estimated at over $1,000,000,000.

Money invested for well-directed whole-time county health service yields to the average local taxpaying citizen an annual dividend in dollars and cents ranging, under different local conditions, from 100 to 3,000 per cent.

FINANCIAL AID GIVEN

Of the 414 counties or districts with local health service under whole-time local (county or district) health officers at the beginning of the present calender year, 368, or 89 per cent, are receiving financial assistance for the support of their local health service from one or more of the following agencies: the State health department, the Public Health Service, the Rockefeller Foundation, or other agencies.

Over 80 per cent of the rural population of the United States is as yet unprovided with official local health service approaching adequacy. As a consequence of this deficiency there is a sacrifice of the health and lives and the material resources of many of our people every year—a sacrifice which is needless because it is preventable, and preventable by measures readily within our means and demonstrated to be in the highest sense economical.

As health conditions in a rural commuinity in one State influence those in other communities in that State, and in other States, it appears that all the State governments and the Federal Government may be properly concerned with the development and maintenance of efficient local health service throughout the extensive rural area of the United States. The local health departments in doing their work efficiently necessarily perform duties such as the collection of morbidity and mortality statistics and the carrying out of measures to prevent the spread of infection in inter-county and inter-state travel, for which the State governments and Federal Government have a degree of definite responsibility.

SALIENT BRANCHES OF WORK

All salient branches of health work, such as acute communicable disease-control measures, sanitation of private homes and
public places, malaria prevention, tuberculosis control, goiter prevention, infant and maternity hygiene, venereal disease prevention, school hygiene, etc., are carried out in the projects.

Attention is expected to be concentrated upon the different branches of the work in what appears to be the most advantageous sequence. The various activities can be co-ordinated with one another so that every dollar invested and every unit of energy expended may yield the biggest possible return in health promotion and disease prevention.

The director of the unit, the county or district health officer or sanitary officer, is given full responsibility for the detailed execution of the work. He has from time to time, and can secure at any time, advice and counsel and active assistance from specially experienced representatives of the State health department and the United State Public Health Service.

**DUTIES OF FIELD AGENT**

By having all branches of health work for the community conducted under the direction of one head, the whole-time county health officer, who is given a status of field agent in the Public Health Service, and in some of the States that of deputy State health officer, a maximum of service can be made to yield a remarkable dividend in the protection and promotion of human health and in a money saving to the community, resulting from the prevention of sickness and loss in wage earning, amounting to many times the cost of the service.

This plan of co-operative rural health work has been evolved in the course of field experience and has been tested under a wide range of local conditions. It seems applicable to all the rural districts of the United States. The provision of means for a reasonable rapid extension of this work would, according to all the evidence, prove highly advantageous from every standpoint—individual, community, State and national.

**ADVANTAGES OF CO-ORDINATION**

Rural health work is applicable to communities in the United States comprising about 60 per cent (or over 70,000,000) of our total population. Such communities include open country, incorporated towns and villages (with population under 2,500), and, as the county is the logical political unit for official rural health work administration, many towns and cities with populations from 2,500 to 50,000.

It is both significant and encouraging that organizations entering the public health field to promote or conduct some specialized activity—such as typhoid fever prevention, hookworm control, tuberculosis prevention, trachoma control, malaria control, venereal disease prevention, school hygiene, or advancement of child and maternity hygiene—realize as a rule, after practical experience, the advantage of co-ordination their specific activities with and making them a part of a well-rounded, comprehensive program of local official health service under the immediate direction of a qualified whole-time local health officer. Such arrangement is obviously in the interest of efficiency with economy in public health work in our rural districts.

In our rural communities there are about 1,000,000 persons incapacitated all the time by illness, much of which is preventable; about 70 per cent of the school children are handicapped by physical defects, most of which are preventable or remedial; about 30 per cent of persons of military age are incapacitated for arduous productive labor or for general military duty, largely from preventable causes; and over 60 per cent of the men and women between 40 and 60 years of age are in serious need of physical reparation, largely as a result of preventable causes. In view of these conditions, there is no room for reasonable doubt about the need for more and better rural health service in this country—United States Public Health Service.

If there is anything more baffling, exhausting and altogether discouraging than the education of people in the mass it hasn't been discovered yet.—James O. Spearing in the New York Times.
"I didn't know the Sanatorium had a paper," the new patient opened up the copy of The Sanatorium Sun that had just been handed him.

"The Extension Department of the Sanatorium publishes this paper at the Sanatorium for its patients who are at present in the institution, for its ex-patients and others in the State who are interested in tuberculosis and health," the editor, who had given the new patient the paper, explained.

"Um-m! Regular paper, isn't it?" the new patient asked, turning the leaves.

The editor smiled, rather blushed. Making The Sanatorium Sun a "regular paper" is her job. She didn't feel like making any comment, but no one knows better than she what it takes to make The Sun a "regular paper."

"Twenty-five cents a year, you say?" the patient queried.

"Yes."

"Sure, I'll subscribe," and the patient reached for his pocket book under his pillow.

"Say, you'll mail it out, won't you?" he asked, as he held up a fifty cent piece.

"Yes, we are always glad to send The Sun to people out in the State," the editor stated.

"Send it to my wife, too. The folks at home will want to read about the Sanatorium while I'm down here, and I'll want it after I go home. Sort of a home-town paper."

This is the conversation that usually occurs when the editor of The Sanatorium Sun solicits a subscription from a new patient. With variations it is also the conversation when the paper is introduced to any person who has not before seen a copy of the monthly periodical the Extension Department of the North Carolina Sanatorium publishes.

**FIRST COPY IN 1926**

The first issue of The Sanatorium Sun appeared in March, 1926. The periodical is now in its third year. The Sun was established for the purpose of providing the North Carolina Sanatorium and its Extension Department with an official organ, and to give the tuberculous people in the State a medium of expression. There is no other disease for the cure of which the patient can do more for himself, than tuberculosis. It has long been recognized by those in the forefront of the fight against tuberculosis that information concerning the disease is an important means of combatting it. Information as to the prevention, causes, symptoms, early discovery and cure of the disease.

So many patients on admission to the sanatorium say: "If I had only known the early symptoms of tuberculosis, I wouldn't be as sick as I am today."

A widespread knowledge of the symptoms of early tuberculosis, and what to do on discovery of symptoms will help, perhaps more than any other one thing to find tuberculosis in the early curable stage. The early symptoms of tuberculosis, and what to do on discovery of them are some of the things The Sun attempts to teach through its columns. Periodical examinations, not waiting for the symptoms to manifest themselves, is another thing. The examination of every member of a family in which a case of tuberculosis is found, is also another thing that is stressed.

**FOR THE PATIENT**

The patient on the cure in the sanatorium can do much to help himself. The Sun publishes articles each month that supplement the doctors' and nurses' instructions, and help to blaze the way to a tuberculosis cure.

The patient away from the sanatorium, back in his home again, can not immediately forget that he has had tuberculosis. The Sun acts as a follow-up agent for the sanatorium for these patients.

**NEWS FOR THE SUN**

News for The Sanatorium Sun is defined as: "Anything that happens anywhere in North Carolina, or elsewhere that is of interest to the tuberculous people in North Carolina, as a class, is news for The Sun." This news can and does range all the way from the marriage of a former patient in a county far from the sanatorium to the news of the voting of a $200,000 bond issue for a county sanatorium in Forsyth.

The Sun is a combined newspaper and health bulletin. A large per centage of the ex-patients of the institution subscribe for the publication, read it and contribute to its columns. A few business houses in this State and others advertise in The Sun. The paper goes to health officers, superintend-
ents of public welfare, public health nurses, and libraries in the State. It exchanges with other sanatorium publications of its kind in the United States and Canada, and with some weekly and daily papers in North Carolina. Since its establishment it has gone into every part of North Carolina, practically every State in the Union, Mexico, the Hawaiian Islands, Alaska and Canada. It has gone to all of these places by subscription, too.

**MEDICAL EDITING**

Dr. P. P. McCain, superintendent of the North Carolina Sanatorium, and director of the Extension Department, is superintendent and business manager of *The Sanatorium Sun*. Doctor McCain edits all of the medical and semi-medical articles that appear in the publication. He answers all questions for the "Tell Me, Doctor?" column, writes articles and editorials for the paper, and assists the editor in shaping the paper's editorial policy.

The Sanatorium medical staff frequently contribute to *The Sanatorium Sun*. Other well-known doctors in North Carolina have written articles dealing with some phase of tuberculosis for publication.

*The Journal of the Outdoor Life*, the lay publication of The National Tuberculosis Association, health bulletins, health magazines and other sanatorium publications are carefully scanned for any articles or ideas that might be passed on to readers of *The Sun* with profit.

Miss Sudie E. Pyatt is the accomplished editor of *The Sun*. Miss Pyatt is a former patient of the Sanatorium and is thus able to discuss with sympathetic helpfulness many of the most difficult problems the patients with tuberculosis and their friends have to face.

In addition to her work with *The Sun*, Miss Pyatt is a regular contributor to such important magazines as *The Journal of the Outdoor Life*.

**JOKES, TOO!**

There're jokes, too, in *The Sun*—and poetry. Almost all of the poetry and jokes are original. The tuberculous are famed for their poetry writing while on the cure. Some of it isn't bad poetry either, if it is published under the head of "Poetry And ——." Tuberculosis is no joke, but many patients manage to get a joke out of it. One of the most interesting parts of *The Sun* each month is the news of the wards, written in lighter vein, usually by some patient who has a nose for news, or a literary turn. On reading this news, a person who has never been to the institution gets an entirely different idea from what he probably has of tuberculosis patients. The best thing about it is that the stories are spontaneous, the outgrowth of the actual ward and cottage life of the patient and not forced writing of a life that does not exist.

**FREE DISTRIBUTION**

It is the hope of those who manage *The Sun* that eventually an appropriation will be made by the State large enough to allow *The Sun* to be sent to every patient of the institution, and to all reported cases of tuberculosis. Practically one hundred per cent of the patients subscribe to *The Sun* while on the cure in the institution, but some of them for one reason or another fail to renew when they are away from the sanatorium. Still if the paper was sent on to them they would continue to read it, and pass it on to people who are known to be tuberculous, or whom the former patient suspects of having tuberculosis. Former patients, having been through the mill themselves are always good at detecting the disease. It is a quite common occurrence to have a patient say: "My sister—or brother, or friend—I am afraid has tuberculosis. Won't you send them a sample copy of *The Sun*—or I would like to subscribe for them."

It is not possible to estimate the service *The Sun* could give to the cause of combatting tuberculosis if it was sent regularly into every home in the State in which a known case of tuberculosis exists. Each month there are 200 or more new cases of tuberculosis reported in North Carolina. Literature on tuberculosis is sent to all of these cases on the reporting of the case, but the return of tuberculosis is such that the person suffering from it needs constantly to be reminded of some phase of its prevention, discovery or cure. It is impossible to keep in touch with all of this number by correspondence. A copy of *The Sun* in the homes of these known cases of tuberculosis would keep constantly before the person some phase of the disease, at a very small cost per case. Not only will the information contained help the person with the disease to get well, but it will aid him in preventing other members of his family from acquiring it.
THE CRIME AGAINST OLD MEN

Hon. James J. Davis, Secretary of Labor in President Coolidge's cabinet, has joined the forces of those who denounce the prevalent custom of denying employment to men over forty years of age. He says: "Here and there the worker of 50 years may be in a physical decline, but that is exceptional. At 50 the worker should be at his best. He has lived beyond the restlessness of youth, and is more inclined to stay by his job. And this is a time when a marvelous development of automatic and labor-saving machinery is taking more and more of the strains from work and demanding less human strength. With this machinery the worker of 70 should be as active a producer as one of 20—and more reliable."

Secretary Davis quotes from a letter written to him by a man 90 years of age. This man says:

"Experience up to 50 years is but getting the tools ready with which to do the finer work in any line or profession. From 44 to 48 I was a postal clerk. At 51 I was superintendent of the registry department in the Atlanta postoffice. From 52 to 56 I was collector of internal revenue in southwest Georgia. At 64 I was elected justice of the peace in Indiana. At 72 I was financial officer and steward at the S. & S. O. Home at Knightstown, Ind. At 80 I was elected justice of the peace of Anderson township, Ind. At 84 I was re-elected and at 88 was again elected." During the year in which this man celebrated his 89th birthday he disposed of 407 civil cases, as justice of the peace. "I speak of these things," he said, "to show how inconsistent it is to lay a man or woman on the shelf after they have arrived at 50."

Secretary Davis refers to a number of men who have been active after reaching 80 years or over. John W. Voorhees, the grand old man of Tammany Hall, will be 100 years old in 1928, and daily attends to his work. Senator Cornelius Cole of California lived to be 102 years of age, and was active up to the time of his death. Oliver Wendell Holmes possesses one of the most liberal minds on the United States Supreme Bench, and is now 87. Francis E. Warren, of Wyoming, has been in the U. S. Senate since 1890, and is now chairman of the committee on appropriations, the Senate's most important committee. He is 84. Hundreds of similar cases could be given.

Cervantes was a failure until he was 55, and then he wrote that novel "Don Quixote." Voltaire achieved nothing until he was 65, and then wrote the lines that made him a lasting figure in literature. Handel was a bankrupt at 55, and after that age wrote music that made him immortal.

Secretary Davis ventures the opinion that if all men over 50 who are at the top of American industry were to be fired, the bottom would drop out of industry itself, and all American business would stop.—The Guardian.

MEN MAKE BUSINESS

John Wanamaker once said: "Business is not a matter of machinery; it is not a great granite building; it is not iron and steel and rock; it is the human force that is in it. It is the man."

MISS PYATT RESIGNS AS EDITOR SANATORIUM SUN

Since writing the article published on another page in this issue of the Bulletin about the Sanatorium Sun, information reaches us from Miss Pyatt that she has resigned to enter private work in another part of the State.

Mr. J. M. Gibson has succeeded Miss Pyatt as editor of the Sun. We hope that interesting publication will have a long and useful and successful existence under Mr. Gibson's direction.
SECOND STATE-WIDE INSTITUTE
ON PARENTAL EDUCATION
RALEIGH
February 13, 14, 15, 1929

Will feature problems of the growing and adolescent child. Among the leaders will be

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DR. WILLIAM LOUIS POTEAT,
MR. GUY PHILLIPS,
DR. PHYLLIS BLANCHARD,
DR. ERNEST R. GROVES,
MRS. CHASE G. WOODHOUSE,
DR. FRANK HOWARD RICHARDSON,
DR. CAROLINE HEDGER,
DR. ENGLISH BAGBY,
DR. FRANK GRAHAM.
Hurry up Spring and come on so me and these flowers can stay out doors all day long.
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FREE HEALTH LITERATURE
The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may interested.

SPECIAL LITERATURE ON MATERNITY AND INFANCY
The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N.C.

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CALCIUM IN THE DIET

Experts in nutrition, physicians, and research workers in increasing numbers are beginning to realize more than ever before the importance of calcium in the diet.

Calcium is the chief element in lime. It is one of the most important constituents of bone substances in all animals. There are two reliable sources from which calcium is obtained in the ordinary daily articles of food. One of these sources is the milk of animals; the other is the leafy vegetables. When either of these two articles of food is omitted from the diet for any great length of time, numerous unsatisfactory results are likely to follow. If both of the foregoing items should be omitted, there being no satisfactory substitute, untoward consequences would be sure to follow. All other types of food ordinarily used by people are deficient in calcium content, unless supplemented by milk or milk products or by leafy vegetables, and preferably by both.

Milk is an ideal food. In fact, it is the most satisfactory single item of food in the diet of people, but it has its deficiencies and is not an ideal food to be taken over a long period of time without some other food being supplemented. An illustration of this may be readily seen in infant feeding. For the first six months of a baby's life the mother's milk contains qualities provided by nature, which are ample for all the baby's needs. When an infant is placed on the bottle and raised on cow's milk, physicians long ago found out that it was absolutely necessary, if the infant was to live and make progress in developing a healthy child, that milk diet must be supplemented with a large daily dose of either orange juice or tomato juice. For a long time after this fact was discovered no one knew definitely just why this was necessary, or in just what way it acted, but a few years ago McCollum and other workers demonstrated in various foods the presence of elusive substances called vitamins. Since that time the reason for the necessity of supplementary feeding, when milk is the chief article of diet, has been understood.

Along with other important mineral elements necessary in food, milk is markedly deficient in iron. On the other hand, as said in the beginning of this article, milk is one of the chief sources of calcium. It is also rich in carbohydrates, fats, and proteins. In addition to milk and cheese and the leafy vegetables, citrus fruit is rich in calcium.

As just stated, it is necessary, in order to obtain a sufficient amount of calcium in the diet, to partake of both leafy vegetables in abundance and in addition milk or cheese, while the leafy vegetables comprise one of the chief sources of calcium, it would be impossible for any person to eat enough leafy vegetables, if they confined themselves to a strict vegetarian diet, to get a sufficient quantity of calcium to maintain balanced health. A vegetarian can supplement the diet by taking plenty of milk or cheese, in addition to the vegetables, to constitute a fairly balanced diet. However it would seem to be much easier and much more satisfactory to partake of some such foods as eggs and small amounts of meat to bring up the balance necessary to maintain good health. It is no longer necessary to urge upon pregnant women the absolute necessity of partaking of a diet rich in calcium. This is very necessary to the health of her future baby, especially in the formation of good teeth and bones.
A professor in the University of Georgia Medical School has recently been making some especially interesting studies at a biological station on Long Island concerning the effect of medicine on the individual, as based on the chemical condition of the blood when medicine is administered. Dr. Salant, the professor who is making the experiments, as described by a writer in *Science News Letter*, last December, found that blood pressure could be depressed or raised by the administration of certain drugs through the process of varying the alkalinity of the blood just preceding the administration of the drugs. Certain drugs, known to exercise a powerfully stimulating action, would produce the reverse effect. In simple language, Dr. Salant has indicated that when the blood is lacking in calcium, as in so many patients when ailing from various diseases, that the administration of stimulating drugs would cause a depressing action instead of the expected stimulating action.

In our opinion these are exceedingly im-

**SPRING TONICS**

According to the people who make it their business to attend to such things, spring will officially make its appearance in North Carolina at five minutes after eight o'clock Wednesday, March twentieth.

Not so many years ago, when the patent medicine almanac was one of the principal pieces of literature in many homes, it was the invariable custom to bring out the various spring tonics whenever the almanac stated that spring had arrived. In some sections of the State sassafras tea and epsom salts were the recognized remedies; in other sections sarsaparilla was a chosen remedy, especially when they had sufficient credit at the time store to buy it in bottle form. In many families, especially where the sniffs was still predominant among the children, boneset tea, one of the most vicious drinks ever concocted, was brought into extensive use. But the grand old stand-by in this State, as elsewhere, was sulphur and molasses, followed by "bottled in bond" iron from the nearest drug store, at a dollar a bottle. It is true that there was very little iron in it, but it had plenty of alcohol, and following the drastic dose of molasses and sulphur, the stuff was said to taste like ambrosia to the numbers of children who had to take it.

There is always an idea back of such folk remedies. The principle in the case of the old time spring tonic was that the children had been shut in and had not had their accustomed freedom to exercise in play and work. They had had little or no green food in the form of leafy vegetables, certainly for the two months preceding the advent of spring. They had been gorged on meats and game and food of that kind. Naturally on such a diet, being so badly out of balance, numerous complaints and ills of various character followed. They thought that the blood had become impure, and that idea has made many a patent medicine a millionaire, and if anybody believes that he or has entirely gone out of fashion, let him go out and make a little inquiry among the people anywhere. Great numbers of
people still believe firmly in the impure blood proposition. Again, the digestive tract was looked on as something in the nature of a plumbing system, and the intestinal tract was regarded as similar to the pipes in the house, and therefore, if abused and clogged, various remedies had to be brought into use to "clean out" the system. Every modern doctor still hears plenty about the desire of the patient to "clean out" his system. All of these old ideas come down to the people through ages and ages of practice.

Most of us today know little about the chemistry of foods or the genuine biological requirements of our bodies, but some of us are beginning to learn at least that good health is based primarily on a knowledge of food selection, proper habits, and temperance in everything.

No family in North Carolina today who is willing and able to work, or who has the price, need go a single day through the winter without an abundance of fruits and vegetables of various kinds. The industrious, careful farmer can provide a variety of green vegetables for his own table throughout the winter, as well as summer. Fruits of various types are available anywhere at reasonable prices. Added to all this, milk and butter and other products of the dairy, such as cheese, are available all the time, and milk and butter should certainly be on the table of every family every day throughout the year. There is a large variety of canned goods, including evaporated milk, which, for all practical purposes, is a satisfactory substitute when the fresh products cannot be obtained. Such foods are within the reach of every family either able to buy any food of any kind or to make it.

With careful attention to diet and living habits throughout the year there should be no more need of spring tonics (and the word "tonic" is and always has been a misnomer, and should be eliminated from the dictionary in the sense that it is used by most people) than there would be for any other radical change in living habits. There can be no more important study by growing children than the study of nutrition and foods.

We have a long way to go before we approach an ideal in these matters, but let us hurry on toward such a program for every family.

A typical old "overshot" grist mill in a mountain county. This type of mill probably represented man's first advance from the "pestle and mortar" toward a labor saving device in the manufacture of bread. These small mills are common now throughout our mountain sections where they are liberally patronized. The corn bread made from meal ground in these mills, when properly cooked, is a first class article of diet.
COOKING FOOD IN ALUMINUM UTENSILS

Several years ago somebody somewhere started a rumor that food cooked in aluminum utensils might be the cause of various diseases occurring in people who eat food cooked in such utensils. The first reports were fairly well broadcast throughout the country that eating food cooked in aluminum vessels was one of the causes of appendicitis. About the time all of the medical authorities got through denying any such cause, the appendicitis question was dropped and numerous other diseases substituted. Finally, at the present time, there seems to be a fairly well disseminated story to the effect that the use of such cooking utensils is the cause of cancer. We suppose that this might be considered a kind of “back to the wall stand,” for the reason that the cause of cancer is not definitely known, and on account of its widespread occurrence and the concern with which it is viewed by the medical and scientific world.

It has not seemed to make much impression on the general public that scientific authorities of the highest character have declared repeatedly that cooking food in aluminum utensils is no more dangerous than cooking it in iron, tin, brass, clay, or stone vessels, or any other kind. We hope that all of our readers will remember this statement, because, sooner or later, those who have not heard the report solemnly proclaimed from one quarter or another will do so sooner or later. Therefore we trust that the readers of the Bulletin will be prepared to give the report the lie, and not be concerned about any such statements.

Our readers may rest assured that the very first discovery by competent investigators or research workers which would suggest that cooking food in any kind of utensil, or any kind of food combination for that matter, or cooking in anything which would prove detrimental to the public health will receive due notice in the pages of the Bulletin, in order to give warning as far in advance as possible. The business of those of us who are responsible for publication of the Health Bulletin is solely to use every endeavor to prevent the spread of preventable disease among the people of North Carolina, no matter from what cause or how disseminated. Our readers may be reassured that when we get to the point that we cannot satisfactorily, at least to ourselves, perform this service, we will turn the business over to somebody who can.

THE DAY’S WORK

On a dark, blue morning in late January the letter we are publishing below came to the office table on the bottom of the pile of mail for that particular morning. To the Director of the Bureau of Health Education it is the most encouraging document that has come his way since assuming the duties of Director of that department some two years ago. As will be noted, the letter is very short, as such letters always are from people who have something to say, who proceed to say it and then stop.

Our friend Roland Beasley of the Monroe Journal once said that being editor of a country weekly was the hardest job in the world. He said that it was a hard job because the readers embrace so many classes of people. The editorials must be written, and all the news matter must be set up in such a manner that the ignorant, illiterate reader from the remotest backwoods of the country could painfully spell out the words, decipher the language, and understand the meaning. At the same time the highly educated, cultured reader of such a paper must be interested and pleased on reading the paper.

The principle is the same, and the obstacles are about as hard as confronted the old type teacher of the celebrated one-teacher school thirty or forty years ago. The teacher of such a school generally had sixty to seventy-five pupils in one room. The ages ranged from twenty down to six, and the classes embraced everything from the large brigade in the A. B. C. department up to the few stragglers who insisted on studying Latin, algebra, and so on.
March, 1929

THE HEALTH BULLETIN

So it is with the preparation of material that must go into the Health Bulletin. We have among our readers some of the most competent as well as critical health authorities in the country. College professors and college students as well as the practicing physicians, lawyers, and other professional people of high attainment are numbered among those interested in the monthly issues of the Health Bulletin. Happily it is becoming the custom and the rule, rather than the exception, for the Bulletin to be used in the classrooms of the public schools of North Carolina from the high school grades down through the seventh and sixth and even fifth grades. The teachers must be interested. It must meet their requirements in language and in technical content, as well as to interest and help the children who are required to read it as supplementary reading and study in their class work.

But most important of all the mailing list is gradually increasing among the class of adult readers all through the State, who are coming to rely on the monthly messages presented in the Bulletin on subjects about which they need information in their daily routine. This information is becoming more and more necessary as the complexities and difficulties of making a living increase, and good health is becoming more than ever before a necessity.

Many of this latter class of readers are people who have been denied, many of them, even common school education. They have to do their reading slowly and painfully, and the information contained in the pages of the Bulletin therefore must be simple, clear, and concise to be properly understood by this important class of readers. So the following letter is the most helpful and encouraging note that the Director of the Bureau of Health Education has received in a long time. Read it and see why.

"I have been reading one of your Health Bulletins, received by a neighbor, and it has become very interesting. Please send me one for my own every month."

ONE SERIOUS ASPECT OF AUTOMOBILE ACCIDENTS

In our concern for the loss of life annually occurring as the result of automobile accidents, together with the crippling and disability and property damages accompanying such accidents, we have failed to take note of one very serious aspect of this troublesome question. The matter to which we should like to call attention in this article is the enormous demands made on hospitals to take care of accident cases. We do not have any reports available at present to the Editor of the Health Bulletin giving detailed information on the subject, but we do know, from inquiry and experience, that the care awarded to accident victims not only by hospitals but by practicing physicians throughout the State is resulting in a serious financial loss to those two agencies.

The London correspondent of the American Medical Journal sets forth some interesting figures in the January nineteenth issue of that publication concerning the experience in England during 1927. The Journal correspondent points out that in the year 1927 about sixty-five thousand patients were treated in one hundred hospitals throughout England as the direct result of automobile accidents. The cost to the hospitals for treating these sixty-five thousand patients, about three-fourths of which were in the hospital and a little more than one-fourth of them outside the hospital, totaled one million one hundred and fifty thousand dollars. The hospitals were able to collect only one hundred and thirty thousand dollars from the patients, or from other agencies representing the patients, as the result of this big outlay in time and cost to the hospitals.

In England they have found that compulsory insurance of motorists has not proved to be practicable as one means of taking care of this serious strain on the hospitals and medical profession. The English people point out that, even if all motorists were insured, there is a large number of people involved in accidents incident to automobile travel that are not motorists, and, of course, would not be insured.

The English are proposing what is to our mind a practical solution of the problem.
They propose to establish some central voluntary fund from which hospitals could be helped. Already one infirmary in England has been presented with a few thousand dollars as a voluntary contribution from motor car owners toward defraying some of the expense that particular hospital had had during 1927.

The voluntary fund should be received from motor car owners or philanthropically inclined people throughout the State, and should be prorated to each county according to the contributions received from such county, and according to the needs of the county, based on population and accidents. What would be even a much better method, if it were not for the fact that everything seems to tend toward putting more tax on gasoline and motor cars, would be to assign a small proportion of gasoline taxes to be distributed pro rata, as described above, to the counties, to be awarded through official channels to physicians and hospitals making justified claims.

Only practicing physicians who have had experience know how serious such calls are upon their time and means. As a rule, most of these calls come at night, which makes the response to the call more troublesome and more hazardous, and results in great discomfort and sacrifice to the physician as well as the hospital staff. Often two or three or more are injured. Expensive equipment, such as x-ray apparatus and provisions for setting broken bones is required. Frequently major surgical operations have to follow such accidents. The physician in his private office, as well as the hospital, is therefore called on to supply large quantities of expensive surgical dressings, all of which is done, we would suppose, at ten per cent or less in the way of compensation. This is unfair not only to the physicians and to the hospitals, but it is unfair to patients who pay their bills when needing the service of hospitals or physicians.

The Legislature of North Carolina ought to take some cognizance of this situation before it adjourns the present session, and start some practical method for taking care of this unjust demand on two of the most necessary classes of the population.

PRESIDENT HOOVER HELPS FORMULATE HEALTH RESOLUTIONS

On the fourth of this month, as all the world knows, the United States Government inaugurations a new President in the person of Herbert C. Hoover, who was elected President for the next four years in the fall election.

For the information of many people who do not know it, President Hoover has for several years past been president of the American Child Health Association and has been actively interested in the conduct of that organization and in the promotion of child welfare work throughout the world. President Hoover has been quoted as saying:

"The golden age for the building of a sound body and those habits which tend to preserve health lies before the age of six. It is obvious that our greatest future gain must lie in the development of a thoroughly adequate program for the prenatal, infant and preschool periods. In this way only can we insure a lessening of need for corrections during the school years."

It is interesting and encouraging to note that the association, with the active assistance of President Hoover, a long time ago enacted the following resolutions:

1. "That there shall be no child that has not been born under proper conditions;"
2. "That does not live under hygienic surroundings;"
3. "That ever suffers from under nourishment;"
4. "That does not have prompt and efficient medical inspection;"
5. "That does not receive primary instruction in the elements of hygiene and good health;"
6. "That has not the complete birth right of a sound mind in a sound body;"
7. "That has not the encouragement to express in fullest measure the spirit within which is the final endowment of every human being."
MORE ABOUT VITAMINS

Since the discovery, a few years ago, of the substances in food called vitamins there has been more intensive study of diet and its relation to health than in any past period of the world's history. Some of the foremost authorities on the questions of dietetics and food chemistry are constantly employing their time and talents to the utmost in the discovery of more practical information to pass along to the public concerning these recognized but undefined substances.

We have called attention in these columns for many years, with a clocklike regularity, to the necessity for every individual who would expect sound health, that the diet must at all times be varied and comprehensive. In the reported laboratory experiments with food elements and the effects of various restrictions in the diet such animals as rats have been more largely utilized than any other type. We shall continue to follow our established rule of giving to our readers the best and most reliable information possible on this and other subjects just as rapidly as definite conclusions seem to us to warrant such procedure.

In the matter of food and its relation to health there remains a great deal of investigation before much more definite rules than we have at present can be elaborated. The world is tolerably well familiar with Dr. Goldberger's experiments in Mississippi in which he claimed to have produced pellagra in certain convicts of that state, upon which the experiment was conducted, by the simple procedure of feeding to the prisoners a restricted diet. Dr. Edward Wood informed the writer just a few weeks before his death in May of 1928 that he had occasion to visit the United States Hygienic Laboratory in Washington, where Dr. Goldberger was then carrying on more extensive experiments, and that he saw there the undoubted effect of such restricted diet on the rats used for the experiment. In other words, pellagra was definitely produced by restricting the food of the rats used for the experiment to a diet claimed to be responsible for pellagra, because such diet is deficient in certain elements necessary to the health of the animal.

How far these experiments may go and into what new fields they may lead is being rapidly surveyed by the specialists along this line in other laboratory experiments in different parts of the world. There will be undoubtedly much revision of present conclusions along many lines. For one thing, it will be necessary to make experiments on a great number of animals of different type. As an illustration: all farmers know that their horses and mules are kept for years and years in a perfectly healthy condition by feeding the old time farm ration of plain white corn and dry fodder and water, with no other food whatsoever except a little rock salt occasionally, and yet the horses and mules fed such a diet always seem to exhibit every evidence of perfect animal health. It is true that such animals sometimes get a few items of green food in the summer time, but such diet is the exception and not the rule. The farmers also know that hogs grow and fatten and make almost perfect pork on a diet confined strict-
Harris includes in the diet such items as: Strained oatmeal or shredded wheat biscuit, whole wheat bread toast, strained tomato or vegetable broth, turnip greens, spinach, string beans, mashed through a sieve, or thick puree of peas or beans. After the sixth week, McCollum's dictum should be heeded by the patient, that is, the normal person needs a pint or more of milk, at least one raw fruit and two cooked leafy green vegetables every day.

AMERICAN MEDICAL JOURNAL EDITORIAL

A leading editorial in the Journal of the American Medical Association for its issue of December first is devoted to a brief discussion on the general subject of vitamins. The editorial reviews the present tendency to look for a multiplicity of vitamins. This editorial may be said to be the latest scientific expression in print concerning some especially interesting developments in the whole vitamin question. We are taking the liberty to quote the editorial in full. The language is simple and non-technical, and any intelligent reader of the Bulletin, we are sure, will find pleasure in profit from reading it. The Journal editorial follows:

"SOME NEW FEATURES OF THE STUDY OF VITAMINS"

"While the place of the as yet undefined substances called vitamins in the human diet is being more widely recognized, their mode of action and other details of their physiologic functions continue to remain obscure. Confusing though the circumstances may be, there is nevertheless a growing and seemingly well justified tendency to postulate a multiplicity of vitamins. The antiscorbutic, the antirachitic, the antixerophthalmic, the antipellagric, the antineuritic, and other unique properties of certain foods are apparently associated with different chemical substances that assume independent roles in the body. The growing confusion need cause no more despair than the bacteriologist or his colleague the immunologist suffers over the problems of specificity of behavior on the part of the varied types of microbial enemies of man-kind.

"One of the earliest of the newly appreciated food essentially to enlist serious consideration was vitamin B. In its absence, certain well defined symptoms are likely to arise. Conspicuous among them is a form of polyniuritis such as is seen in certain manifestations of beriberi. The appetite frequently fails and, in the adolescent period, there is cessation or retardation of growth. The multiplicity of effects produced has led to repeated suggestions that more than one dietary essential may be involved, until at length it seems to be conclusively demonstrated that what was formerly designated as vitamin B comprehends at least two independent properties of food that are equally essential to well being. The designation of the factors is still a matter of considerable debate among biochemists. In Great Britain the current usage to vitamins B1 and B2; in this country there is a growing tendency to assign new letters, F and G, to the individual factors so as to avoid the implication that they are fragments of a single compound. One of them (B1, or F) unquestionably represents the long recognized antineuritic potency; the other (B2, or G) is equally essential and has been designated by several writers as the antipellagric vitamin. The appropriateness of assuming that the protein manifestation of pellagra can be averted by any single food factor may well be debated.

"In any event, the time has arrived when foods need to be re-examined with reference to their content of both F and G. Yeast contains both in considerable abundance; indeed, it has become possible to make separations of yeast fractions neither of which alone will promote well being and growth without the other, on an otherwise adequate diet. Wheat and its products are comparatively poor in the vitamin G faction; hence it may properly be supplemented with sources of the lacking factor. Corn likewise appears to be relatively poor in the antipellagric potency. According to recent studies, milk shows reverse relations. Thus, Hunt and Krauss have found at the Ohio Agricultural Experiment Station in Wooster that milk from cows under winter feeding conditions is potent in the antipellagric vitamin (vitamin G) and relatively poor in the antineuritic vitamin (vitamin F). Again
ly to dried corn and water. Many farmers have raised pigs on to the pork stage with perfect success without another single item in the diet. Our animal industry authorities, however, have long been preaching the doctrine of balanced ration for farm animals, just as the physicians and health officers have been proclaiming the necessity for a more rational diet for people.

All of these problems will be solved sometime, when the truth will become definitely known; but, like every other process in the advancement of mankind, progress must be slow and must cover a wide range of experiment and experience.

**VITAMINS FOR GASTRIC ULCER**

**Doctor William Brady**, who is one of the foremost and most reliable syndicate medical writers on personal hygiene in the country, recently had in his column, published in several North Carolina newspapers, an exceedingly interesting item concerning vitamins for gastric ulcer. Dr. Brady's articles are syndicated and the syndicate price is too high for the pocketbook of the editor of the **Bulletin**, but we feel sure that Dr. Brady and the owners of the syndicate who distribute his work will excuse us for quoting this interesting article from Dr. Brady's column in a recent issue of the **Raleigh Times**, which occurred under the aforementioned heading. Dr. Brady's article follows:

"In nine years' practice among Hymalayans, McCarrison, famous British army surgeon, performed 3,600 major operations, but never saw a case of gastric or duodenal ulcer, appendicitis or colitis among these primitive people, and he became convinced that undeniaturized food, natural foods such as raw milk, whole grains, eggs, fruits and the leafy vegetables, are accountable for this remarkable freedom from infectious conditions. He specifies vitamin B and vitamin C as the special factors that protect the digestive tract from such infectious diseases. (Infectious means caused by the invasions of the tissues or organ by germ, not necessarily contagious or communicable).

"It appears that in a great many cases of gastric or duodenal ulcer, or cases in which this lesion is suspected, patients have been urged to adhere to certain diets that have not included adequate quantities of these two vitamins, and since our knowledge of these mysterious unidentified substances in foods has been advanced by the discoveries of such scientists as McCarrison and McCollum, progressive physicians are prescribing less stringent dietary restrictions in the treatment of such patients with rather extraordinary results.

"I have repeatedly urged here that victims of mucous colitis should, as a rule, include an ample variety and quantity of the coarse fresh fruits and vegetables in the diet, that they should eat even such an 'irritating' thing as bran, or if that is not desirable, then take a few spoonfuls of whole flaxseeds every day. Some of the old-timers, both general practitioners and specialists, have hopped into print here and there to warn people against this very thing. It reminds me of the doctor who directed an insomnia patient to take no food after 6 p.m., and a few weeks later, apparently unmindful of her former visit, he advised her to lay in a good lunch before retiring. He appealed to the lady's mystification by assuring her that medicine is making rapid strides these days.

"Diets commonly prescribed for gastric or duodenal ulcer patients (note I do not say for gastric or duodenal ulcer, for that can't be done intelligently) usually contain vitamin A, which is present in cream, milk and butter fat.

"Whole wheat bread, fresh fruits and fresh vegetables contain vitamin B and vitamin C should be included in the diet of the gastric ulcer patient, not necessarily every day but regardless of the patient's condition, but in the ordinary diet. Raw fruits and raw vegetables are the best source of vitamin B, and also of vitamin C.

"Here is a specimen diet as prescribed by Dr. Seale Harris for the third day of treatment of a case of gastric ulcer:"

"Every hour from 7 a.m. to 7 p.m. inclusive, 1-2 ounce of a mixture of 1-2 ounces of cream and 12 ounces of strained milk. One and one-half ounces of strained orange juice after the milk and cream at 7, 1 and 7."

"In the fifth week of treatment Dr.
DENGUE TRANSMITTED BY A MOSQUITO

Dengue, known also as "break-bone fever" and "dandy fever," which is an infectious, eruptive, febrile disease, coming on suddenly, and marked by severe pains in the head, eyes, muscles, joints, sore throat," and other symptoms, including painful swelling in muscles or other parts involved, is a disease which is spread by a particular kind of mosquito.

It seems to us that this might be called the age of insects. It is probably true that insects were for long centuries the first inhabitants of the earth, but the increasing number of discoveries made almost annually, in which disease outbreaks are traced to mosquitoes or other insects as the transmitting cause would seem to indicate that the insect question is more troublesome today than ever before in the history of medicine. It has been established that a certain gnat is the transmitting cause of a very dangerous disease in South America. The particular gnat causing the disease is active only at night, similar to our malaria bearing mosquitoes. Outside of the realm of medicine it is well known among horticulturists and farmers and gardeners everywhere that the insect pests are becoming harder and harder to combat, and that every year they seem to make greater inroads in their ravages on crops and orchards.

Dengue or break-bone fever has been endemic in the United States for a long time; that is, it has been present in isolated localities somewhere nearly all the time. It is possible that an outbreak from this disease may occur in epidemic proportions or, what is much worse, pandemic proportions in this country. The non-partisan association representing the League of Nations, with headquarters in New York City, recently issued to the newspapers of the country, a brief report summarizing the discussions which took place at the thirteenth session of the League of Nations Health Committee, held in Geneva from October 24 to 31, 1928. The League heard a definite report concerning the terrible epidemic of dengue which had been present in Greece the past year. On account of the ever present danger in North Carolina of an outbreak of this disease, we here-with quote in full the paragraph from the report concerning the Greek epidemic which caused the illness of nearly one million people. Following is the League Association report:

"One of the most interesting reports was that by Dr. M. D. MacKenzie, of the Health Section of the League Secretariat, on the recent epidemic of dengue in Greece, to which country he had been sent at the request of the Greek Government. To date there have been more than 850,000 cases and 1,372 deaths, and Dr. MacKenzie described the measures taken by the Greek Government to deal with the epidemic which had caused Greece heavy economic loss, but which now appears to be coming to an end. He concluded by reading a letter from the Greek Under-Secretary of State for Hygiene, expressing the gratitude of the Greek Government to the League Health Organization for the warm interest it had taken in the epidemic and asking for its collaboration in the sanitary re-organization of the country, partly by an investigation into morbidity in Greece, partly by the special instruction of personnel who might be sent abroad for the purpose, and partly by advice on the best means of undertaking a campaign for the improvement of sanitary conditions. The Health Committee declared its willingness to accede to this request subject to the approval of the Council and asked the Medical Directors to enlist the co-operation of entomologists in carrying out a mosquito survey of Mediterranean countries, in view of the importance of obtaining fuller information than is at present available on the distribution and prevalence of Aedes aegypti (the mosquito transmitting dengue) in such countries."
EXTRACTS FROM TWO INTERESTING LETTERS

The Editor of the BULLETIN is as much interested in opening his daily mail as the young farm boy and girl used to be in looking for the home paper once a week, before the days of rural free delivery, containing the concluding chapters of a continued story. Sometimes the mail is filled with routine matter that is tedious and hard but which constitutes a part of the daily work that must be done. Now and then letters of genuine interest come in with the mail.

We are herewith selecting extracts from two letters which came in a single morning's mail from widely separated sections of North Carolina. Both of these letters have to do with conditions that are of vital interest to these two families, and therefore to all the other families in North Carolina. Both these letters are encouraging to the Director of the Bureau of Health Education, who is Editor of the Bulletin. One of them encourages us by stating that the writer not only reads the Bulletin carefully each month, as expressed in his own language, "with great interest. It is of the best material, scientific, and useful to all," but when read sends it on to "friends in the North." The other, because the writer expresses full confidence in the Editor's ability and honesty in offering her advice in helping her find a specialist who will treat her father. The first writer has evidently studied carefully and intelligently the whole subject of home economics. He has gone into the question of food and its preparation with scientific care, persistence, and determination, as the following extracts from his letter will show:

"We do as our great grandmothers did. We raise wheat, get it ground at the local water grist mill, make whole wheat bread (Graham), fifteen pounds at each baking day, and feel happy with bread that costs us only two cents a pound. As to vegetables we raise the following:—beans, beets, cabbages, cantaloupes, carrots, cauliflower, corn, cucumber, eggplant, kale, lettuce, melons, mustard, onions, parsnip, peas, peppers, both kinds of potatoes, pumpkins, radish, salsify, spinach, squash, tomato, turnip, apples, etc."

In his letter the writer goes on to ask their business to know about such things, now acquit the golden rod of guilt in causing hay fever. The rag weed, a sort of poor relation which insists on living with the golden rod, is the nasty thing that causes the sneezes.
several questions about milk in order to get thoroughly safe and reliable milk, and other questions of equal interest.

We hope that all the readers of the Health Bulletin will read the extracts from the letters of these friends, and we hope that all of our readers who are in position to have a garden will pattern after this particular reader's methods, and determine to raise for home use, at least, some of the vegetables that he enumerates. Those of our readers who live in the country on farms or in smaller towns, where gardens are available, could have everything that this writer produces on his own premises; and just think in how many ways such gardening would prove beneficial to all those with enterprise enough to begin it and carry it through each year. But all that is another story.

The other letter is from a young wife whose father has been told by the family physician that a small sore on his face is cancerous. The family physician has recommended radium treatment. The family doctor also, as was his duty to do, named the specialist which he would recommend. This woman's father therefore proceeds to interview the cancer specialist recommended by the family physician, but as the writer expresses it in her letter, "daddy finds the cost, of course, is so exorbitant he cannot afford it. So, Dr. Cooper, here is what I want you to tell me about, is there any State or Federal aid to be given in treating cancer to 'poor folks'? Is there any fund or any way or any place for helping the needy cancer patients to receive this costly treatment? Or is it just the idle rich who take treatment and the others suffer? My father's condition is not in an advanced stage. I feel it could be easily cured. You know, of course, I am very anxious about him."

The only comment we have to make on the last letter is to ask ourselves the question, How long before North Carolina will have hospitals and surgical skill for its middle classes within their financial reach? When that question is answered in the affirmative in every-day practice as well as in theory, it will be a happy day for the people in this State.

THE NURSE'S PAGE

"WHAT HEALTH EDUCATION DOES"

One of the school nurses at work in western North Carolina has written us a most interesting letter. The letter was dated in January, and simply sets forth a little experience that she had had, which is so interesting that we herewith set forth the substance of the story.

In her regular work in the schools of the county in which she was assigned at that time the nurse one day visited a small one-teacher school high up on the Blue Ridge. The teacher of the school told the nurse that he had a family, including four fine children, who were pupils in the high school of another locality in a distant part of the same county in which the teacher was engaged in teaching. The teacher told the nurse that he had to stay away from home, with the exception of a week-end occasionally, for six months in the year, teaching in the small one-teacher schools of the county, but that in his section there was a fine State high school, and all of his four children were doing well in that school. The teacher said that he had been reading the Health Bulletin regularly for many years, never missing an issue. He said that he had all of his children's tonsils removed. He had kept their teeth in good shape, and he had followed the numerous suggestions in the Bulletin as to selection of diets, sleeping hours, fresh air and exercise, and so on.

This teacher told the nurse the name of the high school in that county where his children were pupils. Some days later the nurse, in her regular order of work, naturally visited that particular high school. On the day of her visit there were twenty-four pupils present in the first high school grade. The nurse said that several of the pupils out of the twenty-four were almost grown, as they were physically so well developed. The nurse asked the grade, however, how many of the families represented in the grade received the Health Bulletin.
issued by the State Board of Health at Raleigh once a month. Only one boy held up his hand. This boy said that he did, and that it had been coming to his father for several years. Upon inquiry the nurse found that the boy was the son of the teacher of the one-teacher school that she had met a few days previously.

The nurse said that 80 of the twenty-four pupils not one of them had ever heard of the sixth year molar teeth. Some of them had very bad teeth, but the boy that had been “raised on the BULLETIN” had perfect teeth. His weight and height were up to the approved standard, and he had the bearing of a first class healthy young man of thirteen years of age. The nurse turned to the superintendent of the school, who was in the room, and said: “See what health education does?”

The nurse said that the largest per cent of the pupils in that room were in bad physical shape, except the few overgrown pupils, and even those had very bad teeth, trouble with eyes, and nearly all of the pupils had bad throats.

The nurse commented that somebody has failed to do what they ought to for these people, and that at times it seems discouraging, when looking at the contrast between children of parents who have been interested in health education, who have availed themselves of the literature issued by the State Board of Health (as it is free for the asking), when compared to the larger number who have no idea about these things because they have never been told. No less an authority than Dr. Harvey W. Wiley of Washington, D. C., has recently said that the greatest need for the farmers of the United States in the way of farm aid is to be taught the simple principles of health education, and for them to have assistance rendered, when necessary, to maintain the health of their families.

The writer of these lines has been working with the State Board of Health too many years to mention, and he has had one ambition and that is for the people all over North Carolina, in isolated city streets and suburbs, and in remote neighborhoods in the mountains and in the flat country alike, to have a first-hand knowledge of the simple elemental principles of health education.

"DONE NUMB"

A nurse writing from western North Carolina expresses her gratification that she is now at work in a county that has a comparatively young superintendent of schools who is manifesting a sincere desire to aid her sympathetically in the work that she is undertaking to do among the school children of that county. She explains that she does not mean that he is such a very young man or that he lacks experience, but, while he has been in school work for several years, he has not been in the work so long as to drift into a rut and to become discouraged with any extraordinary enterprise to the extent of being “Grounded in Sin” or "Done Numb,” as Dr. McIver used to express in his stump speeches for education over the State about the beginning of the present century.

This nurse at one time was associated with Dr. McIver and his faculty in his work at the old State Normal at Greensboro. Hence she remembers many of Dr. McIver’s forceful expressions.

This particular nurse is a crusader in the work she is doing. One of her particular hobbies, if hobby it might be called, is the effort she is continually making for schoolhouses and schoolground sanitation. Naturally in this respect she has a great deal to be encouraged about. When she commenced her work ten years ago, it was the exception to find a rural schoolhouse anywhere in the State of North Carolina which was provided with any kind of sanitary toilet facilities for both sexes. At the present time, while the situation is far from ideal, many of the schoolhouses and grounds still lacking in this facility, great progress has been made. In many of the newer consolidated schools today she writes that she is finding a system of sewage disposal of a modern type, often even in remote country districts. So we can appreciate her delight when she moves into a county and finds
ELLEN LEARNS THAT FOOD DOES MATTER

BY

SUDIE E. PYATT

Ellen Howell never "got breakfast," or any other meal. She worried over them. On the morning of the double anniversary of her silver wedding, and her oldest son's twenty-fourth birthday Ellen was "worrying over breakfast and dinner." She would not allow herself the luxury of a cook, though her husband, Alex, had told her so often she knew the words by heart, that they were not wealthy, but they were able to afford a cook.

When Alex insisted that Ellen hire a cook instead of attempting to do all of the work herself, she would look at him pitiingly—he never did understand anything about housekeeping—and say:

"We'll have a cook when our house is furnished so the children won't be ashamed to have their friends visit them in their home."

Then Alex, slightly bewildered, would look about the comfortable sitting-room. "Why, Ellen, the whole house looks to me now as if it is furnished nicely enough for any of the children's friends!"

Ellen Howell did know how to arrange furniture in a room, if after twenty-five years she still did not understand the proper planning, ordering and preparation of a meal for a family of seven.

The last time Alex had showed his satisfaction at the furnishings of their home Ellen had said there was one more thing they must have—a genuine oriental rug for the living-room. Alex frowned and said he did not have the money just then for an oriental rug.

Lack of money, when she could save from her allowance for the family's food supply had never daunted Ellen. A year she had been saving for the oriental rug, as she had saved countless times before for other furnishings for the house, and wearing apparel for herself or some member of the family.

Ellen never took into consideration the fact that her husband suffered from indigestion, was thin, and always fatigued. She did not know that once he had been mentioned for a prominent executive position in the firm, where after many years of patient work he still held a minor position. The new position would have given the Howell family money enough to supply its needs and furnish its home on a much more lavish basis than Ellen had ever dared dream. Alex had lost the place because the chairman of the board of directors decided he did not look strong enough.

There was always something wrong with some member of the family. In twenty-five years the head of the house had paid out more money for doctor's bills, the causes of which were directly traceable to improper food, than all Ellen had been able to save from stinting her family's food supply, and doing her own cooking and housework.

Ellen often sighed. She did not understand why her family was so sickly when Agnes Cameron's husband and children looked like walking advertisements of good health. Agnes Cameron was Alex Howell's only sister. When Agnes had married shortly after her brother she had had a pretty definite idea of what it took to make a happy healthy home: Plenty of good food, properly cooked and served at regular hours, cleanliness, sunlight, fresh air, unfailing good humor, sympathy, love and understanding on the part of both father and mother for each other, for their children and their neighbors. The good humor, love, sympathy and understanding Agnes knew was dependent on a good digestion, which in turn depended on good food, a
clean body, mentally, physically and spiritually, fresh air and sunlight.

Cream always disappeared from the Howell's table when Ellen was saving for something. It never was a real factor in their meals. Butter was scarce, and when possible never served. Fresh fruits were seldom included in the menu, when they did appear they were invariably served in very small portions. Eggs met with a similar fate. Vegetables unless they happened to be cheap, or purchased canned, were not considered by Ellen as necessary for her family's daily diet. Meats were bought in small amounts. Frequently the meats were not the best cuts, and not carefully prepared and helped out with other foods as a lack of meat and the poorer cuts should be.

The two older Howell children, Alex, Jr., and Agnes 22, openly rebelled at their mother's food economy. They both worked downtown, and ate two of their daily meals away from home. Not having been taught to eat balanced meals at home their downtown purchases of food were often triumphs of a perverted appetite's desire. Both Alex and Agnes were underweight at that period in life when a slight overweight is considered not only safe but advisable.

Alex Howell, Sr., took his creamless coffee without a murmur. He had learned long ago that it was best not to complain to Ellen about the food she served. He ate his dry cereal with half a dozen scanty slices of banana, and skim milk as silently as he drank his creamless coffee. He was devoutly thankful for those mornings, few and far between, when Ellen provided her family with one egg, a couple of slices of bacon and toast. Ellen Howell's breakfast were perfect examples of what the proper breakfast should not be.

The younger Howell children, George, 17, a senior in high school, and Margaret, 11, irritable, underweight, would rush down to the dining-room five minutes before time to leave for school, gulp a cup of coffee, refuse to eat more than a bite or two of whatever food their mother happened to be serving, and hurry off to school.

Lillian, 13, overweight for her age, was the only stout member of the Howell family. How Lillian achieved her weight was a mystery. She was a child of happy, easy going disposition, who loved to eat. From early childhood she had learned that she could provide more satisfactory food for herself than her mother could. While the others were eating in the dining-room Lillian was foraging in the kitchen. She was very fond of sweets and starches. It was her fondness for these, and her excessive habits of overeating any food she put her hands on that caused her overweight.

On their twenty-fifth wedding anniversary, and her son's twenty-fourth birthday Ellen was presenting herself and husband, her son and the remainder of the family with the genuine oriental rug she had been wanting for so long. Fifteen hundred dollars? That was a lot of money to put into a rug, but what a beauty it was!

Ellen planned—rather "worried over"—dinner for tonight. It would have to be simple, and there could not be too much food. Since the purchase of the rug her bank account was depleted, and too much food was not good for one, anyway.

In the breakfast nook Ellen heard her husband's footsteps. Shortly he was followed by George and Margaret, Lillian was already in the kitchen. Alex had not come home the night before, and Agnes was staying in bed, enjoying the luxury of a cold.

The three in the breakfast nook ate hurriedly. While Ellen was instructing the colored girl who came in to help her clean twice a week, Alex and the children piled into the car, Alex to go to his office downtown, the children to be dropped on their way to school.

Ellen ran to the door when she heard the car starting. "Alex, be sure you get home early this evening, and you children, come straight home from school," she instructed.

"But mother," George demurred, "Aunt Agnes is having a party for Carl out at her house tonight. All of the fellows in our class are invited. I don't see how I can refuse to go."
Ellen Howell’s lips closed into a firm line. Agnes Cameron was always doing something that called for the presence of her husband and children, taking them away from her.

Alex spoke apologetically. “I promised Agnes I’d go and take Lillian and Margaret.”

“You can’t stay away from your sister’s even on our silver wedding anniversary,” Ellen spoke sternly. She had awakened with a headache, and the cup of coffee that had been her breakfast had not helped to relieve it, or make her temper any sweeter. “You’ve always thought more of your sister than you have of me. I’ve never been able to see why. Her house is as ugly as an old barn. There hasn’t been a stick of new furniture in it since she and John Cameron were married.”

“But, marm,” George broke in on his mother, “Aunt Agnes always has the best eats. You’re worrying about meals all of the time. Aunt Agnes waves a magic wand of some sort and they appear. I don’t know where she gets her wand. Goodness knows, I wish I did. I’d like to get you one.”

“Food doesn’t matter, George. It’s your duty to be here tonight. I won’t have any of you staying away tonight,” Ellen said firmly to her son. “I expect to call Agnes Cameron and tell her so. The idea of her giving a party and inviting my family on our twenty-fifth wedding anniversary.”

Alex Howell smiled dryly. We’ve never celebrated our wedding anniversaries, Ellen. It was always too much expense for food. I expect Agnes has forgotten we ever had a wedding day.?”

“Well, I’ll remind her,” Ellen snapped. “Papa, we have only five minutes to get to school,” Lillian reminded her father. “Fix things up with Agnes. Anything will be all right with me,” Alex told his wife, as he gave power to the car.

Her husband and children gone it did not take Ellen many minutes to get to the telephone and make the connection with her sister-in-law.

Agnes Cameron’s cheerful voice, as cheerful as was her comfortable, healthy presence, greeted Ellen over the wire. “By the way, I want you to come over with Alex and the children to a little dinner I’m giving for Carl and his friends tonight,” Agnes cordially invited.

For a moment Ellen saw red. “That’s just what I called you about,” she informed her sister-in-law’s waiting ear. “Agnes Cameron you’ve been trying to impress my husband and children with your perfection as a cook every since Alex and I were married. I want you to know I’m tired of it. Tonight is our twenty-fifth wedding anniversary, and Alex, Jr.’s, birthday. I’m telling you now, and I want you to listen to every word I say—”

Ellen paused for a moment to make sure Agnes was still listening. No voice came to her over the wire, but she did not hear the click of a receiver being put back into place. “I want you to call my husband and children,” Ellen went on, “and tell them you’re calling off your dinner, and that you’re sorry you planned for a party tonight.”

Agnes Cameron’s voice, as determined as it was cheerful, sounded in the receiver at Ellen’s ear. “Ellen Howell, I shall do nothing of the kind, but I am coming over to see you just as soon as I can get around there. You might as well get ready to hear some things you are not going to like, because I’m going to tell you a thing or two I’ve been wanting to say to you for twenty-five years.”

There was no more. Ellen heard the unmistakable sound of a telephone receiver being placed on its hook. Agnes told her something she had been wanting to tell her for twenty-five years? She had no idea what it was, but she would be ready for her. She would like to tell that scut sister-in-law of hers a thing or two herself. That disreputable old house of hers with its ugly furniture was a disgrace to the family.

Ellen turned from the telephone to the opened half-way door. Walton’s truck, the firm from whom she had purchased the genuine oriental rug, was stopping in front of her house.

The man from Walton’s had brought in the rug and laid it precisely as Ellen had
directed when Agnes Cameron came into her sister-in-law’s sitting-room without the formality of a ring.

The two women faced each other across the rich expanse of the oriental rug. The man from Walton’s edged out. He did not know what the trouble was going to be, but trouble there would be he was sure.

“You think I’m going to congratulate you on your new rug, and tell you how pretty it is,” Agnes broke the antagonistic silence.

“I’m not. I’m going to tell you what a fool you’ve been to literally starve your family for this rug, and all of the other things you’ve bought from money that should have gone to buy food for your family for twenty-five years.”

Ellen caught her breath at the beginning of Agnes’ onslaught, let it out slowly and prepared to return as good as was being given her when her relative-in-law stopped speaking. “And what business of yours is it how I secure pretty things for my home? I suppose you’d like to have some new furniture for that old museum of yours if you were smart enough to work and save for it.”

Agnes Cameron’s full, rosy cheeks paled. “Don’t you suppose I know my furniture is old,” Agnes’ voice was dealy in its steadiness. “But I’ve got the satisfaction of knowing that I haven’t starved my family to buy new furniture. My husband is well and happy, and my children aren’t peevish, irritable, underweight, always sick as yours are. They’re always glad to come home, and invite their friends to come with them. Yours aren’t. If they like to come to my house because you never have a dozen decent meals a year do you think I’m going to tell them not to come just because their mother is jealous of my cooking? If you had sense enough to know that good food is the basis of good health and a happy home your husband and children would be happier than all the oriental rugs in the world can ever make them.”

Ellen was shaking. No one had ever before talked to her like this, a grown woman with a son twenty-four years old. She certainly was not going to stand for her sister-in-law, of all people, to stand in her own home and talk to her like that. She pointed toward the hall door, her eyes blazing.

“Agnes Cameron you go home! I never want to see you again, or ever hear of my husband and children going to your house. If I do I’ll see you for alienation of my husband and children’s affections if it’s the last thing I ever do.”

“Ellen, Agnes, What is this?”

Both women turned at the sound of Alex Howell’s voice.

Agnes flung out her large, capable hands in a hopeless gesture toward the oriental rug. “I’ve just told Ellen she starved her family to buy that rug. She doesn’t believe it, but—” Agnes paused defiantly, “She has! Why, Alex you never get a decent meal unless you come to my house, or buy it ready prepared somewhere.”

Ellen caught her husband’s puzzled glance, which went from his sister to his wife. Alex loved his only sister. Ellen supposed he would side with her. That was the way men were. Never grateful to women for what they did. She had furnished their home much more nicely than Agnes had hers, and Alex’s salary had always been less than Agnes’ husband’s.

To Ellen’s surprise Alex came across the oriental rug and put his arms about her. Strangely the way he did it reminded her of the way he had first held her in his arms after their wedding ceremony twenty-five years before. Ellen choked. She was no longer belligerent. Alex was so thin and tired looking. He had been thin, patient and uncomplaining for so long she never thought of him as ever being any other way. Why he had not been like that when she had married him. He had been one of the handsomest, healthiest young men in the city. Maybe Agnes was right. Perhaps her family would be happier and healthier, and love her and their home more if they had better food. The food she gave them was often skimpy and not prepared as well as it might be.

“Alex, I’m sorry,” Ellen managed to say, “that I have not given you and the children better food.”

“Ellen, Ellen,” Alex was distressed, “who has complained about food? If I hadn’t cared more for you than for food don’t
you know I would have left you long ago?"

"But how much happier you both would have been if you had always had plenty of good food," Agnes said.

Her husband's arm about her Ellen spoke to her sister-in-law. "Agnes, you are right. I haven't done the right thing by my family in the matter of food. I'm going to call Walton's at once and send this rug back. Then I'm going to show you, my husband and my children that I do know how to get a real meal."

Walton's informed that Mrs. Alex Howell wanted them to call for an unsatisfactory oriental rug, Ellen humbly asked her sister-in-law to go marketing with her.

"I'll have Carl and his friends come over here, and we'll get dinner together," Agnes cheerfully offered.

"Fine!" Ellen said happily, as her daughter, Agnes, appeared in the living-room doorway.

"Hello, Aunt Aggie," the girl called.

"Going to take me out to your house for a real feed. I'm starving. Mother won't mind. She'll be glad to get rid of me."

A painful flush spread over Ellen's face. Why had she been blind all of these years to Agnes' attraction for her family?

"I won't be at home, Agnes," Mrs. Cameron explained. "I'm staying here with your mother, helping her plan a dinner she's going to give for our two families and some of our friends tonight. You run on out to the kitchen and tell the girl to fix you some breakfast, then call up Milton and ask him out to dinner."

Agnes looked at her mother in surprise. Ellen slowly nodded her head in agreement with Mrs. Cameron's plans.

"Goody!" Agnes, the younger, cried.

"I've been wanting to ask Milton over to a meal for ages, but I've been afraid to even mention it to mother."

On the way downtown to market Ellen and Agnes 'stopped to tell Alex, Jr., to invite any of his friends that he wished out to dinner at his home that night.

"Gee, mother, this is great!" Alex cried, hugging Ellen. "I've often wished you'd have spreads that we could invite our friends to, as Aunt Aggie has."

Ellen Howell swallowed several times in rapid succession to keep the little knot that kept rising in her throat from choking her—with happiness. All of these years she had been saving to buy furniture for their home, so her children would not be ashamed to have their friends visit them there. What they had wanted had not been oriental rugs and Louis XIV furniture, but good eats. Agnes' and Alex's enthusiasm over the dinner had already repaid her for giving up the oriental rug.

Marketing for the dinner with her sister-in-law Ellen did not recall ever having had a better time. Agnes Cameron was an experienced food shopper, and she opened Ellen's eyes to the possibilities of the city's markets. It was as interesting—more so—than shopping for oriental rugs.

They bought plump country chickens, ready dressed, fresh butter, vegetables, eggs, fruits and staples: flour, lard, sugar, salt, coffee, spices, flavorings. Of staples Agnes ordered lavishly. Ellen started to protest, but Agnes quickly silenced her. "It's the best way to buy staples, in bulk," she explained.

Before leaving her house Ellen had arranged for the colored girl to remain and help with the dinner. Not only was she to remain for the dinner, but beginning in the morning she was going to work as a full-time cook for the Howell family. Ellen would plan, purchase and supervise the "getting" of the meals, but the drudgery of "meal getting" would be lifted from her shoulders.

The younger Agnes, her cold well enough to allow her to be out of bed, as well as the older Agnes, helped with the dinner. When the dinner was finally finished, everything ready for serving, the colored maid in black dress, and spotless white cap and apron ready to serve, Ellen slipped out to the refrigerator on the back porch.

In the refrigerator were fresh eggs enough for two—and some over—for each member of the family, bacon, oranges, a couple of dozen, oatmeal for cooking and fresh butter. The milkman had been told to begin leaving two quarts of whole milk and an extra pint of thick cream at the Howell's home each morning. The re-
Irregular's contents were to be the Howell's first breakfast on the morning following their twenty-five wedding anniversary dinner. Breakfasts to follow were to be as good or better.

It had taken Ellen Howell twenty-five years to learn, but she knew at last that plenty of good food, properly cooked and served, is one of the first factors in the making of a happy home.

**PREPARING THE CHILD FOR ADOLESCENCE**

By

H. M. TIEBOUT, M. D., Institute for Child Guidance, New York City

Adolescence is frequently conceived as the stormy passage between childhood and maturity. It is as though there are two separate and distinct countries, quite foreign one from the other in thought, custom and behavior, separated by a turbulent stream which offers a rough trip to all travelers. The child is held to be the happy sojourner in childhood until puberty comes along and disrupts his happy existence, forcing him, willy-nilly, to make the passage to the land of adult life. The journey between the two lands is viewed with dismay by adults because they see so many children failing to reach the other side or succeeding in doing so only after a long and painful journey. While it is now generally recognized that the events in childhood determine how the passage through adolescence will be met, this knowledge is not particularly enlightening to parents or other interested adults, because they still have no clue to how they shall so influence their children's lives that they will be able to meet the test of adolescence successfully. A consideration of several factors may be helpful in giving suggestions for the guidance of adults in their handling of their children.

Guidance demands a goal. Of major importance, therefore, seems first some knowledge and understanding of the nature of the adaptation which the child is to make when he reaches the other side of the stream and achieves his maturity. To be considered adult, grown-up, mature, the individual must find his place in the world about him. He must know his environment and master it so that he can accept reality and then in all independence work with it. If he attains this result, he has reached the goal toward which he set out in infancy.

But how does he reach this goal? What is the nature of the steps taken to insure maturity? The answer is growth—growth and development of the individual. In the beginning, as an infant, he was quite helpless, able to perform only a few vital functions like breathing and sucking. With him all the time, physical growth of one sort or another was taking place. Development of nerve and nerve cell connections was occurring and in time crawling, walking, talking, etc., became possible. Now the psychological counterpart of these new capacities was also growth—growth of a two-fold sort; not only did they produce an increase in capacity to react independently of his environment—e.g., through walking he could get from one place to another unaided, or through talking he could make known his wants, but they also opened up for him a whole new field for investigation of the world about him. For instance, after learning to walk, his parents soon realized his increased powers and began to complain, "Bobby is into everything," whereas in truth the youngster was very busy exploring the new world uncovered by his recently developed ability. As a matter of fact, one merely had to observe a child industriously "hoeing out" a drawer full of clothes to appreciate the absorption with which he applied himself to this task and to appreciate also that for the time being he was acting in a wholly independent manner, quite free from any adult help. Yet this apparently aimless activity had a very definite value to him, for some time
later he surprised and pleased his mother with a sudden display of his smartness when he hauled out his hat from the drawer and came to her with an insistent "out, out." In other words he had come to know reality and to use and to master for his own purposes that specific part of his environment. He knew that in the drawer was the hat, and that with the hat he could achieve that desirable goal, going out-doors to play.

With the development of any capacity (such as walking), there is not only the opportunity for finding out about the world around, but also a distinct compulsion to do so, for the very fact of walking brings the child into contact with new things, new events, new realities. This element makes for difficulty, since the child only learns by experience what he can and what he cannot do. Not until the infant stands and reaches can he know that the gas oven is hot, and similarly, not until he stands and reaches can he know that pulling mother's work basket off the table is fraught with certain unpleasant consequences in the way of scolding or slapping. Yet that sort of experience typifies human development. A capacity crops out, and the individual goes around trying to find out just how and in what way he can use it. He learns to stand, is able to reach, and begins to explore as an outlet for his energy.

As a part of this discovering process, the child develops an attitude about his environment in relation to himself. He may either feel adequate to handle his environment or inadequate. He may feel that he can secure things for his own satisfactions or he may feel that he is unequal to the task. He builds up his attitude from the results of his previous contacts with the world around him. For example, as an infant, when he reaches the hot stove he learns something unpleasant about the world and, when he pulled the work basket off the table and was reprimanded, he learned something else unpleasant about the world. Further efforts at trying to find out were to that extent discouraged. However, when he pulled the hat out of the drawer and brought it to his mother he was rewarded with a smile of frank approval and he found that pleasant. He had achieved something; he had been successful. He had handled a small segment of the world for his own purposes. He was apt to try again. Now it is the balance of the pleasant and encouraging relations with the environment against the unpleasant and discouraging ones which governs the individual's attitude toward making further contacts. If the unpleasant predominates, the individual will feel the world a difficult, disagreeable place in which to live and he will tend to avoid further ventures and contacts.

The development of any capacity means that a certain stage in the progress of the child has been attained. There must be, then, the period of organization, while this capacity is being fitted into the individual's scheme of things and its contribution to his general feelings of competence is being made. He is learning where and when and how he can utilize his newly established power. Growth to maturity is, in fact, a series of stages, each stage starting with its recently achieved ability and continuing while that ability is adapting itself to reality. Viewed from another angle, then, it might be said that childhood is a series of adolescent periods, using the word "adolescent" in its derivative sense of "growing up," without reference to any particular point in that growing up. Custom has decreed that the word "adolescence" refers to the pubertal period; logically it might with equal force refer to the readjustment and the "growing up" around the time when the child begins to walk or talk or read, or any one of the numerous abilities the child develops. True, the stages in early childhood often overlap and at times are most difficult, single out and distinguish; nevertheless each capacity must in its own way find its own utility for the life purpose of the individual.

Puberty, then, is just another stage—a step on the way to maturity. Essentially the same sequence of events takes place as occurs following the acquiring of bodily new power. Owing to a series of bodily changes, the reproductive capacity becomes
fully established, and the individual then looks around for some way to use it. He must find an outlet for the tensions arising just as he did when he learned to walk and talk.

Childhood itself gives the pattern for meeting the problems of puberty. The successes and failures which the child experiences in learning to walk or talk, or any of the numerous capacities which in time become a part of his adult equipment are forerunners of his attitudes in meeting the test of puberty. The transition from childhood through adolescence to maturity is not (as adults are wont to think) a blind crossing of an uncharted stream, a passage from one country to another and utterly strange one. Instead the change is entered upon with many years of training and experience in meeting situations which have many elements similar to the problems of adolescence. Actually there have been many streams to pass over, none perhaps as turbulent as the pubertal journey, but all causing similar sorts of problems and demanding similar sorts of adjustment. The parent's job is to see that the child successfully traverses each of the earlier streams so that he will have the equipment and the confidence to conquer the final crossing into his adult existence.

In the passage of each of the earlier streams the parents can do much to insure triumph. For instance, in learning to talk, the parent by precept and example exerts an enormous influence on the way a child develops the use of language. Inflection, idiom, grammar, lisping, baby talk, stuttering, all find their roots in the way the parents talk. It is well recognized that much of the baby talk results from the ill-advised efforts of the parents to get down to the level of their children, thus giving the child the wrong pattern to follow. Similarly, stuttering frequently comes from the tensions arising because the parents have urged the child too soon and have made him discouraged and unhappy over his inability to meet their requirements. A kindly, tolerant attitude on the part of the parent is necessary, no laughing at the mistakes, no meticulous criticism of pronunciation, grammar or meaning, no forcing of opinions. Instead a rather matter-of-fact acceptance of all the child says, with no open expression of pleased surprise at his use of ever big-

A meadow at the foot of a mountain in Yancey County. The mountain sides in the background embrace some fine bluegrass pastures. The friend who sends the photograph says that once in awhile a cow falls out of the pasture and breaks her neck.
ger words. With this sort or an attitude, it is possible to say to the child after he has stumbled on the use of a word, "I don't think I quite understand you. Perhaps you mean this"—supplying the word which he has been trying to use but has misheard and therefore has not been able to report accurately. In this small way you have given him a new word for use, you have added to his language store and have increased, in this way, his grasp on reality. In other words, by one small act you have aided in his learning to talk and in his adjustment, insofar as language is concerned, to the world about him, and you have done this without minimizing his ego. His final success in learning to talk up to the level of his innate capacities will depend on whether each situation as it comes up is handled in the same constructive fashion.

If so, then the child will succeed in learning to talk well. Furthermore, his success in this endeavor will lend confidence to his endeavor in later stages of his development when he is once more confronted with the necessity of adjusting new impulses and desires to his environment. All child training of a positive sort must keep in mind that the ultimate aim is maturity, and that maturity represents adequate adjustment in the world at large. Training, which makes reality both real and acceptable, is the ideal. It is done by slow and careful processes. The more successfully it is done at each crossing into the land of just beyond, the more successfully will each subsequent crossing be performed. There is nothing spectacular or mysterious about it, just a slow growth of the willingness to meet issues, regardless of whether these issues may be the proper way to pronounce words, or the proper way to hold a fork, or the proper way to meet one's fellow man.

Growth to maturity, then, may be represented as a series of developmental stages, each increasing the capacity of the individual to act, and each increasing the individual's contacts with his environment. Adolescence may be considered as a stage similar to the others insofar as nature and outcome are concerned. Child train-

ing must concern itself with seeing that each step is made possible and successful so that subsequent stages up to and through adolescence are faced squarely and confidently.

Seen in the light of its being the final step on the path to maturity, adolescence loses much of its distressing proportions. It is not a unique thing, utterly unprecedented; in other, though very different, phase of his growth processes, the child has already tested himself out in terms of new adaptations. As the parents have learned to help the child to develop to the fullest extent such powers as walking or talking, so will the same parents have profited when they meet the problem of the child's adolescence. They will be willing to permit the child contacts with reality; they will welcome his flair for independence, his desire to be his own boss. They will even interpret too great a tendency to remain under home covers as a sign that their boy is not making the final step in its entirety and therefore will view it askance. They will urge the companionship of both sexes, the development of widespread interests and ambitions, the doing of many things both in the home and away from it because, in so doing, they will recognize the adult goal they hope their child will attain and the means by which he is to reach it. If, on the way up, they have not developed in the child real faith in his own abilities to go ahead, they have made his last steps more difficult, but they will have changed neither the goal he is to reach nor the means of attaining it. It will mean a longer and stormier struggle before maturity is achieved, but the same processes must be gone through if a successful and satisfactory adjustment is to result. It is much easier and simpler to begin with the infant and build up the readiness to face existence. Preparing for adolescence starts early. If the passage through the previous stages has been successfully accomplished, adolescence need not be the period of stress it so often is—Mental Hygiene Bulletin.

Vaccinate the children against diphtheria and have the whole family protected from smallpox.
WHAT WE ASK OF MEDICAL SCIENCE

The very great reduction in the death rate during the last fifty years often leads us to overlook the fact that medical science still fails to help us in dealing with a number of important causes of death. A brief survey of the chief unsolved problems may not only be of interest, but may be of value in arousing attention to the need of concerted efforts toward their solution.

Cancer: This now constitutes one of the most important problems demanding attention. Despite a vast amount of research, medical science has as yet given us little to prevent or cure this disease, whose death-toll amounts to over 7,000 lives annually in the City of New York, and appears to be increasing.

Bright's Disease: Though less frequent as a cause of death than formerly, in this city Bright's disease is still charged annually with between 3,000 and 4,000 deaths. Medical science has not yet disclosed the cause of the condition, nor has it provided any specific cure or preventive.

Chronic Heart Disease: Steadily increasing as the recorded cause of death, chronic heart disease is charged with over 15,000 deaths in this city annually. Medical science has made but little headway in disclosing the cause and nature of this disease, and has failed to provide any cure or even an effective preventive. As a matter of fact chronic heart disease, Bright's disease and arterio-sclerosis, should be considered as one problem, for they constitute a group conveniently designated as the "degenerative diseases" which embraces about one-quarter of the deaths from all causes.

Diabetes: The work of Allen and Banting has helped greatly in managing cases of diabetes, but medical science still needs to furnish an effective preventive and a real cure of the disease. Diabetes causes about 1,400 deaths annually in this city.

Tuberculosis: A disease regularly responsible for about 5,000 deaths in this city annually cannot be said to be under control. Medical science has as yet devised no specific cure for the disease. It is to be hoped that Calmette's method of immunizing young infants will stand the test of time and prove a safe and effective means to prevent the development of infection.

Pneumonia: This disease claims nearly 10,000 deaths as its yearly toll in New York City. The advances made in serum therapy hold out the hope that some of these deaths may be prevented. Medical science should attempt to devise a method of immunizing against this infection, but the prospects along this line are poor. Chemotherapy has not fulfilled the high hopes once held out for it in the treatment of this disease.

Streptococcus Infection: These infections are still a serious health problem. What has been said under pneumonia is largely applicable here.

Influenza: We know nothing as to the essential cause of this infection and have no effective methods of prevention or cure. It is a most important problem for medical science. Let us hope that its solution will not be long postponed, for the number of deaths charged to influenza in this city

Charges of one of the Wake County Public Health Nurses. A fine clean healthy outfit. Triplets and two older children.
ranges between 600 and 1,200 annually. During the epidemic of 1918 they numbered 12,562.

Measles: Regularly, almost every alternate year, some 700 children die in this city because of measles. Medical science must devise an effective method of immunizing against this infection, for other prophylactic measures are of little aid in dealing with the disease. A therapeutic agent, to cure the infection and prevent the development of pneumonia, would be a great help.

Whooping Cough: This disease causes between 200 and 300 deaths annually in New York City. It is not readily amenable to ordinary control methods and therefore demands of medical science an efficient method of immunizing young children, and also an effective method of treating the infection.

Scarlet Fever: Although apparently growing milder from year to year, scarlet fever still causes about 100 deaths a year in this city. It is possible that the recent work on the hemolytic streptococci will furnish the means of treating and preventing the disease.

Diphtheria: In this disease we must admit that medical science has given us all that is necessary to wipe it out completely. That there are still some 15,000 cases and over 700 deaths annually in the City of New York is due entirely to the failure to apply the wealth of information at our disposal. We must immunize all young children with toxin-antitoxin and make this practice as general as smallpox vaccination is now.

Epidemic Meningitis: The specific serum for this disease reduces the case fatality considerably, but even cases so treated show a fatality-rate of about 30 per cent. Medical science has still much to do before this disease can be satisfactorily controlled.

Epidemic Encephalitis: This is a virgin field for medical science. It must discover the nature of the disease, its cause, prevention and cure. At present we are helpless in dealing with the condition.

Poliomyelitis: This, too, may be considered virgin soil. Despite intensive studies in all parts of the world, we are still ignorant of the cause of the infection or its mode of spread. We have no effective preventive or cure.

Syphilis: Our failure completely to eradicate syphilis cannot be charged to any failure on the part of medical science. It has furnished us with exact information regarding the infecting agent, its mode of spread, the diagnosis of the infection, and an effective method of prevention and treatment. Much has already been accomplished, but much still remains to be done.

Gonorrhea: In this disease we look to medical science for effective methods of treating the infection, or what would be still better, some method of bringing about immunity to infection. Gonorrhea is one of the most important problems confronting us. It is the cause of a large amount of sterility both in men and women, is responsible for about 75 per cent of all gynecological operations, and produces a large amount of invalidism, especially in women.

Typhoid Fever: This disease has been very largely controlled by sanitary measures directed against water supplies, milk and shellfish. However, medical science must still find a way to deal effectively with bacillus carriers. The disease is responsible for about 100 to 150 deaths in New York City annually.—New York City Health Bulletin.

SOMETHING MORE THAN KNOWLEDGE NEEDED

The State Board of Health warns against eating any rabbit that cannot run fast, as the possibility is that the weakness is suffering from tularemia, a disease that is "catching" and sometimes proves fatal. Any person selling such a rabbit commits a grave offense against the health of the consumer, but it is difficult to guard against such sales, as a goodly part of the rabbits sold are caught by boys who know nothing of the disease. Buyers should warn the sellers. But when it is stated that a Chatham County farmer killed and sold a diseased hog not long since, it is evident that more than knowledge is required for the thorough protection of the people.—The Chatham Record.
MRS. JOHNSON MAKES RECOMMENDATIONS FOR CONDUCTING COUNTY HOMES

The State Board of Charities and Public Welfare, working to improve conditions in county homes, is recommending:

1. District County Homes in areas where the population is sparse in order that overhead expense may be reduced and administration improved.
2. The selection of a superintendent on a basis of intelligence, kindliness and morality. He should be paid an adequate salary for his services and everything raised on the farm should be used for the inmates or turned over to the county.
3. Adequate medical and nursing service. A large per cent of county inmates are mentally and physically incapacitated and the county homes should evolve into the county-hospital-home in order to provide adequate care for the type of people generally found in county homes.—Mrs. Kate Burr Johnson, in Public Welfare Progress.

FOOT TROUBLES INCREASE WITH SPIKE HEELS

Corns, calluses, warts and bunions are nature's protest against shoe insult, asserts Dr. S. Elizabeth Van Duyne in the January issue of *Hygeia*. From a study of feet of students at Goucher College Dr. Van Duyne presents the following general conclusions:

1. Many thickenings and calluses not previously observed have been noted at the back of the heel since spike heels have been worn. In a few cases it was found that the heel tendon had contracted and the wearing of low heels caused discomfort or pain.
2. The large number of lowered anterior arches seem to indicate that even the wearing of spike heels for dress occasions may be followed by damage to these arches.
3. Backache is likely to be increased by the wearing of high heels.
4. The danger of injuries from falls is unquestionably greater in high heels.
5. Fatigue, irritability and nervous conditions appeared to be associated with the wearing of high heels.
6. Pain during monthly periods seemed to be increased in those who wore high heels more than half the time and probably in many who wore high heels only for dress occasions.—*From Hygeia*.

FOUNDATION FOR MENTAL HYGIENE

The establishment of the American Foundation for Mental Hygiene, Inc., was announced, November 8, during the annual meeting of the National Committee for Mental Hygiene, New York. It is to be a philanthropic foundation. It comes into existence without an endowment of its own but is confident that the necessary funds will be forthcoming. The foundation already has been made the beneficiary of a gift of $50,000 from the estate of the late Mrs. John I. Kane, and has an additional pledge of a still larger gift toward its first $1,000,000. The exclusive purpose of the foundation is said to be to perform "work that will enable men, women and children to live happier, healthier and more efficient lives through a better understanding and management of the processes of their minds and of the controlling forces in human behavior." The presiding officer at the meeting at which the foundation was announced, Dr. Bernard Sachs, New York, vice-president of the National Committee for Mental Hygiene, said that the work of the foundation should appeal to nonmedical as well as to medical interests; that it will have the advantage of being in a position to modify its program from decade to decade, and that the subject of mental hygiene will undoubtedly become more important as the "decades and generations move on. It is so broad that it covers human needs which will always exist and, therefore, calls for permanent provision. Those who give to it now will be the pioneers whose names will long be remembered."—*The Journal of the American Medical Association*. 
UNIVERSAL STATES CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission announces the following open competitive examinations:

PHYSICIAN, $3,800 A YEAR
ASSOCIATE PHYSICIAN, $3,200 A YEAR

Applications for the above-named positions must be on file with the Civil Service Commission at Washington, D.C., not later than June 29.

The examinations are to fill vacancies in hospitals of the Veterans' Bureau for duty throughout the United States.

The entrance salaries are as indicated above. Higher-salaried positions are filled through promotion.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

On account of the needs of the service, papers will be rated as received and certification made as the needs of the service require.

Full information may be obtained from the United States Civil Service Commission, Washington, D.C., or from the secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city.

MORE "CANCER CURES"

A newspaper friend in eastern North Carolina sends a clipping from a weekly newspaper, published in southwestern North Carolina, carrying a ten inch double column advertisement headed, "A Sure Cure for Cancer." The variation in this instance is that the advertisement has a picture of an old negro woman with head bowed down and a great irregular bald spot showing in the middle of the scalp.

This advertisement is interesting to the extent that it names an unusually large number of doctors who have pronounced it a cancer and said that it could not be cured. To begin with, the family doctor had advised the old woman to take the radium treatment, as she had a cancer. This advice was tendered, according to the advertisement, several years ago, well in advance of the customary radium treatment in this State. The advertisement states that she took the radium treatment "four different times," under "four different doctors," and after that "four other doctors looked at her head," including "two northern doctors," and they all said that it could never be cured. The advertisement states that just before she was ready to die, about a year ago, that somehow they heard of this wonderful cancer cure, got some of it, put it on the place, with the advertised result that the cancer is rapidly getting well, all due to this wonderful medicine.

There is a statute law in North Carolina which prohibits the advertisement of any method or medicine as a sure cure for cancer, for the simple reason that scientific medicine the world over has so far failed to learn of any sure cure for cancer in its later stages. The American Society for the Control of Cancer in New York has been advertising for about one year that they have a fund of one hundred thousand dollars, we believe it is, to award to any individual, doctor, layman, drug manufacturer, or whatnot who will come before the committee of that association, selected for the purpose, and establish the fact that any procedure or remedy can be demonstrated to be a sure cure for cancer. So far their award has not been made, because no claims have been justified.

In the face of these facts these fraudulent concerns—cancer cures, quacks, and fakers of different stripes—continue to advertise sure cures for this baffling condition. It is well known in the medical profession that an early diagnosis of cancer or a precancerous condition is sometimes hard to make. Doctors and surgeons known to be first class, reliable members of their profession have many times failed in making a diagnosis. All of them at all times are on the side of safety to the patient, and when they are in any doubt whatever about a condition being cancer they inform the patient that this condition may
be a precancerous condition, or that it may indicate cancer, and advise early scientific treatment, thus giving the patient the benefit of the doubt in having correct treatment applied early.

The advertisement aforementioned is similar in kind to advertisements frequently occurring in the form of testimonials appearing in newspapers which will carry such stuff in the advertising columns all about over the country. The only variation generally is the signatures placed to the testimonials. Investigators have proved time and again that about 50 per cent of the signers of testimonials have died and were buried from the disease they are testifying favorably about, but their signed statements go on interminably from newspaper to newspaper about over the country.

The advice this Board has to offer to patients who are in any way susceptible to cancer, is to confide their fears and suspicions at the earliest possible moment to a reliable physician practicing medicine in their own community, and follow his advice as to going to a specialist or surgeon for further treatment in order to prevent inevitable death, which always follows neglected genuine cancers, unless scientific treatment is applied at a very early stage in the development of such conditions.

### RAW PORK DISEASE

In the December, 1927, issue of the Bulletin it will be recalled that we had an article entitled “Cook Your Pork.” The reason, as described in that chapter, was on account of the disease known as Trichinosis. Trichinosis is a disease caused by eating pork raw or insufficiently cooked to kill the parasite which infects some hogs. The parasite is microscopic in size; that is, it cannot be seen by the naked eye without the aid of a microscope in the hands of a bacteriologist. Therefore any food inspection of ordinary market pork, unless it includes a microscopic examination of the muscular tissues, would offer no protection against this infection. So the only safeguard is thoroughly cooking the pork before eating it.

We are calling attention to this disease again at this time because, with the advent of cold weather, the consumption of pork, of course, becomes a more common and every-day occurrence. The Ohio State Health News in its issue of July 15 reported five deaths occurring in one family from eating raw pork, the father and four of his children, the children ranging in age from eight years down to one, dying, and the mother and two remaining children being seriously infected. But at the time of their report these latter three were thought to be recovering. According to the report in the Ohio bulletin this particular father had been repeatedly warned of the danger of the habit he had of eating raw pork and allowing his family to do the same. His answer was said to be, “Raw meat never hurt anyone. I have eaten raw pork all my life and it never got me.” Of course the poor fellow paid with his life for his ignorance and stubbornness, but it does seem hard that his four small innocent children should also have to be victims of such a terrible disease which could have been so easily prevented all on account of their father being a fool.

In the beginning of the disease the condition very much resembles typhoid fever and often, especially in the initial stages, may be mistaken for typhoid. It is very seldom that the disease is contracted, and it is certainly a fortunate thing for our people that it is a comparatively rare condition. The Agricultural Department at Washington estimates that about two per cent of all hogs in the country are infected with this parasite. The parasite gets into the muscles of the hog and lives for a long time. Thorough cooking of all pork and meat products destroys the parasite and makes the pork perfectly safe to eat from this standpoint. Not only trichina (that is the name of the parasite which produces this disease), but tape worm cysts are also sometimes carried in raw meat. It is therefore very important that raw pork especially should never be eaten.

The writer in the Ohio Health Bulletin previously quoted points out that it is not necessary to cook pork to a brown crisp
in order to destroy these parasites but that they are killed at low cooking temperature, for example, 137 degrees F. We have an article elsewhere in this issue stating that on the authority of the United States Public Health Service experimenters at Washington that 133 degrees F. is sufficient to kill the parasite causing tularemia. (that is the disease infecting rabbits sometimes.) When it is recalled that the boiling temperature is 212 degrees F., people can easily understand how easy it is to cook their pork and rabbits sufficiently to destroy such dangerous organisms in order to make the product perfectly safe as heretofore for food.

In the Ohio family whose deaths were described in the foregoing, it is said that it was about two weeks after eating the meat before symptoms appeared. While people get their infection of this trouble from eating raw pork; that is, from the hog, the hog itself may gain its infection by eating rats or meat of other hogs. The veterinary experts explain that the rats eat the scraps of meat around slaughterhouses and thus become infected, the hogs subsequently eating the rats or the meats of other hogs which have become infected. In this way the infection is continued.

The purpose in writing this notice in the language of the headline of the article in the December, 1927, BULLETIN is to advise people to cook pork, and never to eat raw meat of any kind.

VENEREAL DISEASE IN MASSACHUSETTS

Beginning in 1925, syphilis and gonorrhea were made reportable to the local boards of health in Massachusetts rather than to the State Department of Public Health as formerly. Almost immediately both syphilis and gonorrhea began to “disappear” from several communities. Twenty cities of from fifteen to sixty thousand population have shown remarkable reductions in syphilis and thirty-one cities of from ten to sixty thousand population have begun to “wipe out” gonorrhea. We are tempted to publish our findings under the catchy title “A New Method for the Eradication of Syphilis and Gonorrhea.”

WHY WITH OPEN EYES WELCOME DISEASE WE COULD PREVENT?

A little imagination makes of a brief item printed Thursday in Looking Backward, fifty years ago, a bit of drama on the side of terror which in real life must have been as tragic as any of the imaginings of Edgar Allen Poe.

From Grenada, Mississippi, under date August 14, 1928, Governor Vance received the following telegram, which for expression of sheer horror it were hard to equal:

“Our town is a graveyard. Two-thirds of our citizens are down with a fever. The mayor is dying and all the aldermen are sick. I am the only officer in the town. We need money to pay nurses and bury the dead. This town is composed of North Carolinians. Help us. E. A. Milton, City Marshal.”

Think of the plight of this little city, which was but one of scores that year after year lived in constant dread of the recurrence of a plague which came no one knew whence, did its terrifying and fatal work against all precautions, and then quit as mysteriously as it began. It was as though an evil Genie were venting himself in malicious caprice. Death with invisible
fingers went about here and there touching indiscriminately the young and the old, the strong, and the weak. Those who remained to face the peril died or escaped, and those who fled as likely as not succumbed on their journey. Refugees from stricken districts were frequently denied entrance to immune communities, and armed men herded them in their cars. The plague broke out at this point and that, like boils on a body. Ports as far north as New York harbored cases. The quarantine was vigorously enforced in North Carolina ports, and at interior points Beaufort, Wilmington and New Bern were under suspicion.

Walter Reed, James Carroll, Aristide Agramonte and Jesse W. Lazear, the four volunteers who relieved humanity of a great dread by exposing the cause of the mystery, make all these old time terrors and precautions seem crude, timid, ignorant, superstitious.

Yet what shall we say of North Carolina people who in the Twentieth Century still persist in suffering from typhoid fever—the cause of which is as well known as the disease it is the peculiar function of stegomyia fasciata to transmit and the prevention of which is even more simple and easy?—The Raleigh Times.

HOW COMMUNICABLE IS SCARLET FEVER?

Is scarlet fever a slightly, moderately, or highly communicable disease? Figures which have been published in the past indicate that not over 20 per cent of child contacts (children under 16 years of age), will contract scarlet fever when exposed to it and when they remain in the house with the case. During 1927 in Detroit there were 1140 primary cases of scarlet fever where the family contacts remained in the house with the patient. There were 1562 contacts under 16 years of age of whom 309 or 19.78 per cent contracted the disease. From these figures we are apt to conclude that scarlet fever is not a highly communicable disease, basing our conclusion on the premise that a high percentage of children under 16 years of age is susceptible.

During 1927 Dick Tests were made of 1076 children under 16 years of age who had not previously had scarlet fever. Of this number only 291 or 27.04 per cent proved to be susceptible. Assuming that this percentage held true among scarlet fever contacts in general, this would mean that of the 1562 contacts only 422 were susceptible. There were 309 secondary cases among these 422 susceptibles or 73.22 per cent. Thus 73 per cent of those who were exposed and were likewise susceptible contracted the disease, which leads us to believe that scarlet fever is a rather highly communicable condition.—Detroit Health Review.

THE SAVING OUNCE

Dr. Charles W. Herty, the chemist, has gone into American sick reports on a dollar basis. He estimates that this country's sick loss is about $9,000,000,000 a year. People spend about $1,000,000,000 for repair service to their bodies that could have been avoided if they had driven their flesh as carefully as they drive their cars. While laid up for repairs, they lose about $2,000,000,000 in wages. The unused earning capacity of lives cut short by death from preventable disease runs to $6,000,000,000 a year.

The noblest fight for the improvement of human welfare is now being made in the field of medical research. The doctors have added about nine years to the average span of life. They have cut the death rate from some dread diseases as much as 80 per cent. Among a large proportion of the people it is as much a social disgrace to have certain easily preventable diseases as to go unshorn and unwashed.

Throughout a large part of the country the season of common colds and frozen automobile radiators is approaching. One is as easy to prevent as the other, yet ten to one will be the ratio of knockout colds
to icebound radiators. Good health is too cheap and plentiful. It will never be fully appreciated and conserved by every easily available means until educators swing in with the medical research masters and drive home the idea that as a matter of actual fact man is largely his own shepherd.—Collier's Weekly.

WANTS BOARD OF HEALTH TO PETITION LEGISLATURE TO LENGTHEN THE GIRLS' SKIRTS AND SLEEVES

As a rule we never pay any attention to anonymous communications. We are, however, making an exception in the case of a communication received some time ago, and which we are publishing below. This is evidently from a school teacher who is fearful of her job, should her identity become known.

The reason we are publishing this is because of its significance as a practical question which is producing considerable controversy among very eminent authorities on the subject of tuberculosis at least. One of the most distinguished physicians in New York City, and an international authority on the subject of tuberculosis, is staunch in his opinion that the lack of adequate dressing on the part of young girls and women is a cause of tuberculosis. Other physicians as eminent in the profession have disputed his position, and hold that the nearer to nature mankind gets, or in this case womankind, the more immune they become to attacks from various diseases, especially diseases of a respiratory character. The matter being controversial, we simply explain that it is controversial, and publish this anonymous letter as it is.

The question is one that is evidently discussed very frequently in the average home. We cannot help adding that in our opinion (the Editor of the Bulletin, not the Board of Health) abbreviated dresses and exposed knees of young children, both boys and girls, is much better than the old styles of bundling them up in all sorts of wraps and dressings and long stockings. We believe that the children so clothed, provided their bodies are well protected with warm clothing, are really healthier and freer from respiratory diseases. On the other hand, it is also our opinion that some older girls and women do not wear sufficient clothing to protect them against extreme changes in the weather. Whether or not this insufficient clothing has any bearing on disease incidence we will leave to the specialists to thresh out. Anyhow, the suggestion of our correspondent, that the State Board of Health petition the legislature to take a hand, is something new, and so we give it to our readers as it is:

"I enjoy reading your Health Bulletin. There is very good advice in it. I wish you Drs. would petition the legislature for it to be made a law, that no girl was allowed to go out unless the dress was below the knees and had sleeves. "Some of the young mothers ought to be told how injurious it is to the health for little girls to go with their knees naked during winter months.

"I have been in the school room and had to think how thin the little girls were clad and just a few were strong looking.

"I will withhold my name.

"I hope to see the time when the girls and young mothers of our land will wear longer clothing."

A study of 5,000 negro school children from 6 to 14 years of age in a southern city, showed that negro girls after the age of eight or nine years are taller than negro boys up through the 14th year. Well, what's to be done about it?—Monroe Journal.

Notice that a conference for the education of parents has been in session in Raleigh and that a hundred and fifty persons were present. Deducing the officials, the spinsters and bachelors, and maybe a few others, about half were no doubt parents present or prospective. We note with interest this effort, for at the rate that the movement gets off it is certain that all the parents are soon to have good educations.—Monroe Journal.
"In public health the discoveries of science have opened a new era. Many sections of our country and many groups of our citizens suffer from diseases the eradication of which are mere matters of administration and moderate expenditure."

"Public health service should be as fully organized and as universally incorporated in our governmental system as is public education. The returns are a thousand fold in economic benefits and immeasurably more in reduction of suffering and promotion of human happiness."

"Inauguration of our fellow public health service."
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may interested.

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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

- Prenatal Care (by Mrs. Max West)
- Infant Care (by Mrs. Max West)
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- Save Your Baby
- Hints to North Carolina Mothers Who Want Better Babies
- Table of Heights and Weights (pamphlet for children from 2 to 6 years of age)
- Baby’s Daily Time Cards: Under 5 months; 5 to 6 months; 6 to 12 months; 1 year to 12 months; 1 year to 2 years
- Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 18 months; 18 to 21 months; 21 to 24 months
- Necessity of Dental Care for the Child from Three to Six
- Eyesight Fakers
- In Our Family We’ll Examine and Know
- Lumbago
- Kills the Cats to Save the Birds
- Glittin’ More Lu’ Niggers
- Take No Chances They Say
- Swift Advance of Public Health
PELLAGRA

Elsewhere in this issue we are publishing an article prepared by the Editor of the Health Bulletin and presented to the Wake County Medical Society at a recent meeting. This editorial is for the purpose of calling attention particularly to some of the information imparted in that paper.

We would like to first draw attention to the tables which set forth in detail some specific information about the occurrence of pellagra in North Carolina. A study of these tables will enable a reader to know the distribution of the disease for the last ten years or more; that is, where the deaths occurred in the State, what counties have rather high rates, and the counties that, on the other hand, have shown a low mortality from the disease. It will be noted that the counties of Wake, Wayne, and Burke, in which the State hospitals for the insane are located, recorded more deaths over the period than any other three counties. At the same time, by studying some of the other tables, it will be found that in 1927, for example, only a very small percentage of the total deaths which occurred in the State took place in all the hospitals, including the State hospitals for the insane. This fact indicates that the disease is present in the homes of the people, and that the overwhelming percentages of deaths occurred at home, under the care of the family physician. Other tables will show the distribution by occupation, sex, race, and ages of the people whose deaths occurred in 1927.

One other item which we would like to emphasize, by requesting all of our readers to carefully look over, is the concluding chapter of the paper on "Prevention and Treatment of Pellagra," which was quoted from a bulletin by the late Dr. Joseph Goldberger, the foremost authority on the subject in this country.

In a masterly article, published in the September 1927 Bulletin, by the late Dr. Edward J. Wood of Wilmington, the writer specifically stated that there was no reason why a patient should have a recurrence of pellagra in the spring of the year, when the disease has once been brought under control, except that the patient failed to continue the careful, selected diet necessary at all times to hold the disease in abeyance. Dr. Wood pointed out that so many people who recovered from the disease had the habit of falling back into the old mistakes of a deficiency diet on the same principle that the Biblical writer had in mind when he described the returning of the sow to her wallow.

The January reports coming into the State Board of Health revealed the distressing information that seventy-eight deaths occurred in that month, showing that there has been little abatement in the winter months. If that figure is maintained throughout the year plus the usual increase in the summer months, the death rate will be appalling in this present year. For last year it was four and one-half times as high as the rate from typhoid fever, and pellagra is just as easily prevented as typhoid.

In 1926 the State Board of Health sponsored a county-wide effort in Bladen County and the slogan which was carried to every home in that county during the summer was: "A Garden and Milk Cow and Chickens for Every Family." If farmers could be encouraged to still greater ef-
forts in diversified crops, increasing the area devoted to garden products and to gardening all through the year, and if poultry raising for individual family use could be encouraged and extended, and if the family dairying industry could be better promoted throughout the State, we would soon see a precipitate decline in the number of people suffering from pellagra in North Carolina.

PEARL MAXINE NEAL
ITS ERADICATION A MEDICAL PROBLEM

By GEORGE M. COOPER, M. D.
(Paper read before the Wake County Medical Society, Raleigh, February 14, 1929)

In the year 1928 eight hundred and forty-seven citizens of North Carolina died from pellagra. That number represented an increase of more than twenty-three per cent over the preceding year. It was more than four and one-half times as many casualties as typhoid fever caused during the same period. The disease is not reportable, so there is no way of estimating the extent of its prevalence except through the mortality statistics, which of course are reliable. But judging from the expressions of practicing physicians about over the State it is safe to say that there are thousands of patients suffering from it at any given moment. Goldberger has placed the estimate of twenty persons actually ill with the disease to every death attributed to it. In my judgement the eradication of this disease constitutes one of the chief problems before the medical profession in North Carolina.

The disease has been proved to be preventable, proved beyond any question of doubt, and yet we are burying each year an increasing number of people because of its presence. It is preventable, but there is no disease entity which requires that more accurate or exact information about prevention be disseminated than pellagra. That is why I say that its eradication is largely a medical problem. It is a medical problem first, because the practicing physician is the first to be informed about any illness among his patrons which may turn out to be pellagra. The physician can get this information at the very beginning of any variation from normal health. He thus gets it when it is easy to circumvent the appearance at all of the later and more serious conditions of neglected cases. Second, the physician can impart exact and accurate information to the families of his patients about the necessity for proper diet. Many newspapers are full of menus, recipes and so on for each meal of the day every day in the week all of it is orne of this stuff is rotten, misleading and a considerable part of it would be actually a menace to health if followed in detail. A physician need not undertake to carry in his head or pocket a detailed list of vitamin this or that, how many calories in a bakery cracker, or what the difference might be in the fat content of milk from country-bred or town-bred cows. But the physician does know that the basic requirement of all life is food. And he knows that success in maintaining good health lies primarily in daily intelligent food selection. Furthermore when the family physician speaks on a matter in which people trust him, his words mean something.

PELLAGRA A DEFICIENCY DISEASE

It has been sufficiently demonstrated that pellagra is a deficiency disease. It has been produced artificially in healthy men, women, children and rats by the simple
process of eliminating certain food from the diet long enough. It has been cured when the proper diet was restored. The condition so produced has invariably been true pellagra and not simply scurvy as some have charged.

I am fully aware of the fact that many able men whose opinion we all respect, still maintain that there is some exciting, or predisposing cause of pellagra which becomes active and dangerous when the diet deficiency provides the proper body conditions for such activity.

These people hold that there is a germ involved which gets in its deadly work in a manner similar to the bacillus of tuberculosis. They remind us that tuberculosis is also a disease which occurs in the poorly nourished individual. Therefore tuberculosis itself must be contemplated in part as a nutritional disease. However we know there is a world of difference. Tuberculosis often attacks and kills the apparently well nourished individual. We know that the nutritional disturbance most often follows instead of preceding the initial disturbance. Most important of all efforts to restore nutritional balance in tuberculosis, especially in many of its forms, even in the early stages sometimes fail. Such is rarely if ever the case in pellagra when efforts are instituted in time.

Many writers still undertake to group the occurrence of pellagra as incident to poor sanitation, bad housing and living conditions, on the germ cause principle. It is easy to understand that invariably crowded filthy living conditions mean poor food and nearly always insufficient food.

**A Kitchen Clinic**

But all of the foregoing need not concern us in the practical problem of eliminating pellagra, the killer, from this State. It can be done permanently in one way and one way alone and that is a kitchen clinic in every household that needs it. Food and food alone will accomplish its removal. It is easy to believe that eventually some drug, possibly yeast, alone will cure the disease. The same may be said concerning tuberculosis. But even when that happy day arrives we will find that the poorly nourished individual will just as easily fall prey to some other disease.

As I have mentioned yeast it might be well enough to record just here the conclusions reached by a very thoughtful investigator in the United States Public Health Service, and recently included in one of their published reports. The Service writer says first that "The nutritive and health promoting qualities of yeast is recognized, but other products fill the pur-
pose better." Further that, "eventually the status of yeast as a food and as a medicine will be more exactly known. The entire subject of diet and nutrition is at this time in a state of very active evolution. When the yeast controversy is finally settled, it is believed that any medicinal value found to exist in yeast will operate more as a corrective of faulty diet than as a strictly medical agent."

The important idea in the foregoing statement is that while yeast is justly recognized as an important aid in the treatment of pellagra there is danger of its value being gravely overestimated. The same old story of expecting to get something for nothing. Also the plain statement that the whole question of diet and nutrition is undergoing daily almost lightning like changes is one for physicians to ponder very carefully. It is why I think that the trained physician ought to make himself the dependable authority on the subject, because a physician only is capable of fully understanding "the fact of disease." The only other kind of professional worker equipped for such a grasp of the subject of nutrition is the trained chemist, and the chemist must be almost as much of an authority on physiology if he is to thoroughly grasp the question.

COOKING SCHOOLS FOR PHYSICIANS

The English medical schools, so I have been informed, have long required every candidate for medical license to take a rather complete course in practical cooking. Sometime ago the announcement went out from Johns Hopkins that they were instituting a course in cooking for medical students. A good physician certainly ought to be a good cook. He surely ought to be thoroughly familiar with the selection and preparation of proper food. I am ashamed to this day when I think of the number of times, while practicing medicine, I calmly told patients "not to eat meat" or what is worse "take a soft diet" or "light diet." It never means a thing to the average family to receive any such learned advice.

MISUSE OF FRYING PAN ONE CAUSE OF PELLAGRA

One morning nearly two years ago I received the following letter from the late Dr. E. J. Wood of Wilmington. The letter was dated May 27, 1927, and is in part as follows:

"The recent report of the State Board of Health (reference is to an article I wrote for the April, 1927, issue of the Bulletin) regarding the reappearance of pellagra has prompted me to make a detailed study of it." Then followed a request for morbidity and mortality records, etc., with the following concluding paragraph: "The demands on me for information regarding the treatment of pellagra have been so numerous lately that it becomes necessary for me to incorporate as complete a history as possible of its course in North Carolina."

The result of that request, after considerable subsequent correspondence, was the submission by Dr. Wood of a masterly article which we published in the September, 1927, issue of the Health Bulletin. I think it will stand for a long time as the most valuable contribution to public health literature in this State.

When I read the concluding paragraph of Dr. Wood's Letter that morning in May, my mind ran back to a visit I made to Dr. Wood in his office one Sunday morning in the summer of 1916. I was on my way to Bladen County where the people were thoroughly alarmed about the increasing havoc from pellagra. I found Dr. Wood in a state of what somebody has called "righteous indignation." Before he even stopped to say "good morning" he burst out with the statement that it "ought to be against the law to sell a frying pan." His point was that the cooking equipment so many people consisted of a frying pan which was used to fry western salted ham to eat with the same western salted meal, and that it was playing the mischief with the health of numbers of people in southeastern North Carolina.

In the very same month that we issued the Wood article the U. S. Public Health Service published one of Dr. Joseph Goldberger's most valuable contributions on the subject. I refer to Reprint No. 1174 of the Public Health Reports copied from the

If that pamphlet and Dr. Wood's article published in the Health Bulletin at the same time could be placed in the hands of every person in this State who could read, and if they would read and study these two documents and make a serious effort to order their daily lives in accordance with the facts therein recorded we could soon say farewell to the disease.

**Doctor Wood Makes Some Investigation in North Carolina in 1927**

On September 9, 1927, I received a letter from Dr. Wood written on his return to Wilmington from a vacation in Mitchell County. While up there he had conferred with several physicians whom he had found able and well informed. All were concerned about the increasing prevalence of the disease. Dr. Wood concluded his letter with these interesting comments: "The vital part of this inquiry reveals the fact that a farmer while he remains at home and works his own crop protects his family from pellagra. However, when this farmer leaves his crop unplanted and goes to work in the saw mill or on the road construction or otherwise earns his living 'by the day', the disease appears in his family and usually not one but several members become affected. It seems that while he remains at home he grows his own corn and carries it to the country grist mill and has it ground for home consumption. He is prone to feed his family on what he makes on the farm and this seems to protect them. When he works for wages and ceases to function as a grower of any food crop his family food supply is purchased from the commissary or from the country store where commercial corn meal and self-rising flour alone may be purchased.

"This finding is so striking and so important that I would hope to get it to the people of the State in any way you may select. It is in the fastnesses of our mountains where we must look for new epidemiological data of this sort at this time for it is least more nearly so than any other part of the State.

"What an indictment that the richest agricultural State in the Union and the most progressive State in the South should be cursed with pellagra when Italy has abolished it! If it were not so certainly preventable, as I see it, there might be some excuse for such a state of things."

**Two Decades of Pellagra**

On January 25, 1928, I received a long letter from Dr. Wood beginning with the following paragraph which I hope I may be pardoned for quoting:

"This year marks the end of two decades of pellagra in the United States. It forms one of the most important and interesting as well as fascinating records of American medicine. As you know I was in at the start and have followed it these twenty years with unflagging interest. It seems now that the time is ripe for a report on the whole subject. I am writing to invite you to join me in the authorship of such a work."

---

*Fine Wake County boy aged eight, with his sister two, enjoying some "good old summer" sunshine.*
On my rather reluctant acceptance of Dr. Wood's invitation we both set to work putting in every available moment last spring and summer. My part of course was compiling the epidemiological data which was completed and sent to Dr. Wood June 27, 1928.

After Dr. Wood received this material and went over it he wrote me as follows on July 6, 1928: "That was an amazing achievement: the material you sent me and I want to congratulate you and your subordinates in being able to assemble such a wealth of invaluable data."

Dr. Wood was in the midst of his part of this work when his death, September 16, 1928, ended the enterprise. He was having the Italian translations made, describing how that country has eradicated pellagra during the last five years. Italy it is easy to recall had so many sufferers from the disease twenty-five years ago (estimated at 70,000 bedridden patients by Osler) that the government built 50 large hospitals similar to our hospitals for the treatment of tuberculosis. In 1927 they had only 40 deaths in a population of 40,000,000.

Dr. Wood was also translating much important data from the experiences in Roumania which are somewhat similar to Italy.

**Chronological and Geographical Distribution of Pellagra in North Carolina**

All conceivable kinds of estimates about the occurrence of pellagra have been made. Nearly all of it guess work. For example we have been informed that it is largely a disease of the farm tenants; that it is a curse of the cotton mills; that it is confined for the most part to the sections having factories, especially cotton and tobacco factories; that it is a disease of the poor people in the cities and towns; that the west has been exempt on account of climate and health conditions; that nearly all of it has occurred in the eastern sections of the State; that nearly all deaths are women; that most of them are men; that a majority are old people; that it occurs only in the young and middle aged; and so on.

To get at the plain truth of the whole situation I set out last year in collaboration with Dr. Wood to dig out all the facts from all available records in the Vital Statistics Department. The result is an amazing and illuminating record. It should be of prime interest to every physician in North Carolina. The course of the disease in this State during the last twenty years it must be thoroughly understood before it can be eradicated.

I am presenting here as concisely as possible some of the more interesting and important tabulations. These tables represent facts without the coloration of anybody's opinion.

**TABLE I**

**Deaths from Pellagra in North Carolina by Months Years 1917 to 1927 Inclusive**

<table>
<thead>
<tr>
<th>Year</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
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<th>Sept</th>
<th>Oct</th>
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<td>435</td>
<td>388</td>
<td>414</td>
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</table>

**Total**
It will be seen by studying the above table that July leads as the month of greatest average mortality, with August next in importance.

TABLE II

TOTAL DEATHS FROM PELLAGRA IN NORTH CAROLINA BY COUNTIES. THIRTEEN YEAR PERIOD, 1915 TO 1927 INCLUSIVE

<table>
<thead>
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<th>County</th>
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<td>Bertie</td>
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<td>Pitt</td>
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<td>Polk</td>
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<td>Yadkin</td>
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<tr>
<td>Yancey</td>
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By studying table two one may see facts answering many allegations.

A SPECIAL SURVEY OF DEATHS REPORTED FROM PELLAGRA IN NORTH CAROLINA DURING THE YEAR 1927

With Especial Reference to Age, Sex, Color, Occupation, Marital Relation, Monthly Distribution, Whether Occurring in Hospital, Rural or Urban. Also names of Twelve Counties Reporting Greatest Number of Deaths, and Eight Counties in Which No Deaths Occurred.

Total number of deaths from pellagra reported in North Carolina in 1927 712

Total death rate per 100,000 population (census, 2,897,660) 24.5

Death certificates were properly signed by attending physicians for the following

White 497
Colored 289
Indian 5
Total 791

Occupation of decedents was indicated on only 481 certificates:

White 262
Colored 215
Indian 4
Total 481

Deaths According to Race

White 413
Colored 294
Indian 712
Total 712
## Deaths According to Sex

<table>
<thead>
<tr>
<th></th>
<th>White, Males</th>
<th>White, Females</th>
<th>Negro, Males</th>
<th>Negro, Females</th>
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## Deaths by Ages

### White

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Deaths</th>
</tr>
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<tbody>
<tr>
<td>Under 20 years</td>
<td>16</td>
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<tr>
<td>Under 30 years</td>
<td>78</td>
</tr>
<tr>
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<tr>
<td>Over 70 years</td>
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<tr>
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### Colored

<table>
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<th>Age Group</th>
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<tr>
<td>Over 70 years</td>
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### Indian

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## Deaths by Months

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<td>May</td>
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<tr>
<td>June</td>
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### Colored

<table>
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<tr>
<td>February</td>
<td>75</td>
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<tr>
<td>March</td>
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<tr>
<td>May</td>
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<tr>
<td>June</td>
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### Indian

<table>
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<td>May</td>
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## Total

### Deaths by Ages

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<tbody>
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## Deaths by Months

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</thead>
<tbody>
<tr>
<td>Total</td>
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## Rural and Urban Deaths

(As indicated by township and municipal reports)

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<table>
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</thead>
<tbody>
<tr>
<td>City</td>
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## Marital Relations

### White

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## Deaths Occurring in Hospitals

(Including State Hospitals for Insane)

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## Occupation of Decedents

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<tr>
<td>Midwife</td>
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April, 1929

Auto Industry
Railroad
Farmer

THE HEALTH BULLETIN

DISEASE CONDITIONS LISTED AS

<table>
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<tr>
<td>Diabetes</td>
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<td>Paralysis</td>
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<tr>
<td>General Debility</td>
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</tr>
<tr>
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<td>Emaciation</td>
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CONTRIBUTING CAUSE OF DEATH

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COUNTIES REPORTING LARGEST NUMBER OF DEATHS

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PELLAGRA, A DISEASE OF HARD TIMES

Commissioner of Agriculture Graham very kindly provided us a table giving the average price of cotton on the open market in North Carolina, by months for the period 1915 to 1927 inclusive. By a study of his figures it is clearly indicated that when a period of falling prices obtained during the months of September to January, the period when the poor man markets his crop, especially when coupled with a comparative small crop production for the State, the following year marks an increase in pellagra. It is easy to understand the reason for the increase in pellagra because of the increased demand for food from the southern States and the need for food due to the fall in cotton prices.

Whatever the reason we have it and to a dangerous degree and getting rid of it is the practical question before us now. We can do more theorizing after our people stop dying from it.

PREVENTION AND TREATMENT

We can do no better than to let the lamented Goldberger write this chapter. His language is plain and easy to understand. His simple summing up of what it is necessary to do in order to prevent the disease clearly set forth in the Public Health Reports, under the above heading constitutes a valuable contribution to current literature on the subject.

Doctor Goldberger's article was written primarily for circulation among physicians, health officers and "Nutritionists," and not intended for "self-doctorers" "home treatment" and so on. The best advice the State Board of Health can offer any person who suspects the presence of any symptom of pellagra is for such person to consult a physician without delay. It is just as necessary in case of any kind of serious illness for a physician to prescribe...
diet as it is for him to prescribe medicine.
The following from a United States Public Health Service Bulletin by Dr. Goldberger is valuable information:

"The pellagra-preventing vitamin is believed to be present in nearly, if not quite, all natural foods except the oils and fats, but in very greatly varying amounts. Thus there is very little in corn meal, white flour, or rice; somewhat more in wheat middlings, and a great deal in lean meat and powdered yeast. Unfortunately, it is not yet known just how much each food contains nor how much the body must have for the maintenance of health. In considering prevention and treatment it is, therefore, necessary to proceed on general principles, guided by such knowledge of relative values as we already have.

"Milk.—Although not rich in the pellagra-preventing vitamin, milk, whether as sweet milk or buttermilk, is one of the most valuable single foods for the prevention and cure of pellagra. But when lean meat, powdered yeast, vegetables, and fruits are not included in the diet or only infrequently, or in small amounts, it must be taken in liberal quantities—at least three of four glassfuls (about 2 pints) daily—in order to insure an adequate preventive effect.

"Ownership of a good milk cow is a valuable means of insuring an adequate supply of milk for the family and thus of preventing pellagra, and should be encouraged to the utmost.

"Lean meat (beef, mutton, pork, fish, fowl, etc.)—Lean beef has been found to be quite rich in the pellagra-preventing vitamin. The same is very probably true of such other lean animal flesh foods as those of mutton, pork (ham, shoulder, liver, kidneys), fresh or canned fish (as, for example, salmon), and poultry. For pellagra-preventive purposes, when it is the main reliance, an adult will need nearly half a pound of a lean meat a day.

"Powdered yeast.—Dried pure yeast is the richest 'P-P' containing food at present known. It is also very rich in protein and in the beriberi-preventing vitamin, so that it should rate high as a food. This yeast is a microscopic plant cell used in baking and brewing. For use as a food the yeast plant should preferably be dead. In the home it may readily be killed by stirring the dry powder into some water and then boiling for about one minute. In the adult, 1 ounce a day (or two teaspoonfuls three times a day) of the pure powdered yeast will of itself suffice to prevent pellagra. It may be taken in any way that is most convenient as, for example, in water, in milk, in tomato juice, in syrup or molasses, etc.

This young lady lives in Spring Hope, Nash County. She is 18 months old, 6 bit overweight, sleeps from 6 P. M. to 6 A. M. with an hour more in middle of day, takes sun bath regularly, wears no heavier clothing in winter than in summer except extra wraps when going out, has not had a "bad cold," walked at 11 months and had a full set of primary teeth at 14 months. The secret: Being raised by her parents under the expert care of the family physician instead of on the advice of the neighbors.
The valuable dietary properties of powdered yeast suggest the importance of its consideration for general inclusion in the diet.

Eggs.—There is reason to believe that eggs contain the pellagra-preventing vitamin which is probably present exclusively in the yolk. As a preventive food, eggs are probably inferior to lean meat.

Vegetables and fruits.—There is reason to believe that all vegetables—potatoes, turnips, string beans, tomatoes, cabbage, collards, turnip greens, spinach—and the fruits contain the pellagra-preventing vitamin, but, probably like milk, in small amounts. Thus, it probably requires nearly 2 pounds of tomatoes (about 1 quart of canned tomato juice) to produce about the same preventive effect as a quart of butter-milk or as about half a pound of lean meat, or as 1 ounce of powdered yeast. Notwithstanding this, however, the vegetables are valuable foods for balancing the diet, but must be eaten in liberal amounts.

The cultivation of more and better gardens in the area of pellagra endemicty would be very helpful in the prevention and eradication of pellagra and should be encouraged in all possible ways.

The foods that have preventive action have, of course, also curative value; but in the face of an actual or impending attack of pellagra, it is manifestly advantageous to begin the treatment with foods that are rich in the P-P vitamin and that at the same time are within the digestive capacity of the patient. With these considerations in mind, powdered yeast, milk (sweet or buttermilk), lean meat (fresh meat juice, scraped beef), egg yolk, tomato juice (fresh or canned tomatoes) should be given preference.

The foods of first choice, in suitable quantities, should be given at regular intervals just as is done with medicine. Indeed, for the prevention and cure of pellagra the only medicine we have is food. There is no drug known that actually serves any useful purpose in this disease unless it is to mitigate or relieve painful or disturbing symptoms.

"Care must be taken to see that the food prescribed is actually eaten. It is to be borne in mind that some individuals must be educated or re-educated to proper food habits. Unsatisfactory results from treatment are frequently attributable to a failure to bear this in mind and to take precautions accordingly.

"Of the powdered yeast, 1 ounce a day will ordinarily be enough for an adult, or half of this for a child under 12 years of age. More may be given in cases of exceptional gravity. It may be advantageously administered (one or two teaspoonsfuls three to six times a day) in milk, tomato juice, fruit juice, or sirup. Where yeast happens not to be available, and in cases where solid food can not for any reason be taken, milk and tomato juice may be depended on. The juice pressed from fresh beef, or raw egg yolk, or both, may, and if practicable should, be given in addition to milk and the tomato juice. A bean or pea soup (puree), with or without milk or meat juice, may be used as a palatable and valuable addition to the liquid diet.

"As the ability to take solid food returns, scraped or finely minced beef or other lean meat may be included in the feeding. The diet should be increased as rapidly as the digestive ability of the patient permits. In the average case the patient, if carefully fed, will be fully convalescent in from six to twelve weeks."

As we have mentioned in another article, this State reached another high peak in the number of deaths which were recorded in 1928 from pellagra. In that year eight hundred and forty-seven people died from pellagra. This figure represents an increase over the previous year, which in turn recorded a much larger increase than the year before that, and so on.

Dietary experts, food economists, and most of the physicians everywhere and all the time are doing their best to get across to the public the idea that a variety of diet, and enough of the right kind of food,
is an absolute necessity, if good health is to be enjoyed.

Pellagra is a deficiency disease. The disease occurs as the result of deliberate neglect of the proper diet, or as a result of a necessarily deficient diet. Whether or not a person fails to eat the proper kind of food because his appetite is erratic or because he fails to eat the necessary food on account of the fact that he does not have it, the results are one and the same. Therefore pellagra victims are found among the well-to-do as well as the poorer people. But as the deficiency of diet is most common among the poorer people, because they do not have the proper food, and often when they do have it fail to prepare it properly, a majority of pellagra victims are found among the more unfortunate classes of the population.

On a recent morning there came to our desk two items of peculiar interest to us in a consideration of the increasing death rate from pellagra. The first item we shall mention was a boxed paragraph in the University News Letter. The headline over the article was: "Foodless Farms," and we will quote it in full.

"FOODLESS FARMS"

"That live-at-home farming needs to be emphasized in North Carolina is revealed by the 1925 Census of Agriculture. The Census reports that out of 283,482 farms, 139,901 did not have a milk cow, 224,432 raised no beef cattle, and 111,328 did not have a hog on the farm. There were 179,415 farms that produced no hay or forage during 1924, 216,107 grew no Irish potatoes, and 193,700 grew no sweet potatoes. There are approximately 150,000 farms in the State operated by tenants. These tenants are chiefly engaged in producing cotton and tobacco, which are ideal tenant crops, and give little attention to providing the necessary food and feed supplies. The 1925 Census of Agriculture does not indicate that live-at-home farming has made any headway in North Carolina, certainly not in the eastern section."

Right along by the side of the above was a comment in the Raleigh News and Observer quoting a statement made by Senator Makepeace of Lee County, who was in Raleigh the day before. There was no headline over the News and Observer interview of Senator Makepeace; so we herewith take pleasure in writing the headline for it. Our headline therefore is: "Fool Farmers and Selfish Commercial Interests." Now go on and read what Senator Makepeace said, and you can understand why we think the above headline is appropriate.

"FOOL FARMERS AND SELFISH COMMERCIAL INTERESTS"

"They're doing the same thing again this year, planting nothing but tobacco," said Senator Makepeace of Lee, who has recently been through various eastern North Carolina counties. "These tobacco towns are encouraging the farmers to plant more and more tobacco and they haven't got any better sense than to do it. Naturally, they have to buy all their corn and vegetables and milk and meat. The other day one of these one-crop farmers came into a time merchant's store and asked about the price of corn. 'A dollar a bushel,' said the merchant. 'Gosh, a farmer can't pay a dollar a bushel for corn,' said the man. 'He don't have to,' said the merchant, 'a real farmer doesn't buy corn, he sells it.'"

If the reader will carefully consider the statements made in the two quoted items above, he can readily understand a good many reasons why the death rate from pellagra is constantly going up at present in this State, why we have an undoubted large proportion of malnourished children, why our infant death rate is among the highest in the country, and why we still have too many deaths from tuberculosis and other diseases of a like character.

The question of prime importance is for all the citizens of the State who know these facts to get out and do their level best to do something about correcting such a serious state of affairs.

"A laugh is just like music, It freshens up the day, It tips the peaks of life with light And drives the clouds away."
GOOD HEALTH

(By Dr. C. R. Hudson, State Agent, Co-operative Extension Work. Circular written for use in meetings and elsewhere during National Negro Health Week, March 31-April 7, inclusive.)

Good health may be considered the basis of long life and happiness. Every normal person desires these things. Good health, moreover, promotes strength and vigor so that we can perform more labor and be more efficient in every undertaking. Barring accidents and ignorance, every person can attain good health, at least to a considerable degree, by proper attention to the following things, which are essential to successful living:

Eating: Eat regularly and moderately, at fixed hours, three times per day. Never over-eat. A good garden may be considered the basis of meal planning, because vegetables may be produced cheaply, are wholesome, and add bulk to the diet. Leafy vegetables especially contain much vitamins (vital things) not found in other foodstuffs. Poultry and eggs, milk and butter, and sound, well-ripened fruits (either raw or cooked) should form a large part of the diet. Eat sparingly of pork, cake, candy and other sweets.

Drinking: Drink plenty of pure water at meal times and between meals. Drink one or two pints of milk (either sweet or butter milk or both) every day, if available. Many folks drink too little water. Children, especially, and young people, generally, should avoid coffee, tea, cocoa, tea, alcoholic and other stimulants (and cigarettes.)

Sleeping: Have regular hours for quiet sleep, and let nothing prevent your observing them. Sleep one in a bed if practicable, but never more than two. Children require from 8 to 10 hours sleep per day, and should have it. Adults require from 6 to 8 hours, according to individual make-up. Have plenty of cover for comfort in winter. Use very little, or none, in hot weather.

Bathing: Two baths per week, hot, cold, or tepid, according to preference, are sufficient for winter-time, but three or four per week, or one every day in hot weather, are not too many. Wash the hands before each meal, and at other times when necessary. It pays to use plenty of good soap. Keep the teeth clean by brushing well morning and night. Clean the teeth carefully after each meal.

Breathing: Always breathe deeply, day and night. Keep the head erect, shoulders thrown back, and the chest expanded. See that enough windows or doors are open at night to give good ventilation, but not too much draft. Let sunlight into all the rooms when possible. Never over-heat either the living room or the sleeping quarters. Have plenty of clothing for comfort in winter.

Clothing: Dress sensibly, using enough clothing to be comfortable, but not enough to become too warm, or not so little as to

The father of this fine Winston-Salem youngster is one of Forsyth's representatives in the Legislature this year. You can see that when this photograph was made the boy was busy listening to the most recent report of legislative activities.
become chilled. Avoid high-heeled, tight-fitting shoes, or uncomfortable clothing of any kind. Consider comfort and health rather than style.

Work: Few people over-work if well fed, but many do not take sufficient exercise regularly. The larger muscles should have daily exercise. This keeps the body toned up and helps to prevent constipation and other troubles.

Diseases: Avoid exposure to colds, coughs, sore throat, measles, mumps, whooping cough, and other contagious diseases. Stay in bed yourself and rest when really sick. Have a health and teeth examination once or twice per year. Correct whatever is found to be abnormal.

Avoid quack advice and patent medicines. If sick, consult a good physician and follow his advice.

Recreation: All people need recreation, that is, a change from regular business. It may take the form of actual play and games, reading, social contacts, public gatherings of various kinds, hunting, fishing, golfing, and other out-door sports that take the attention away from the main avocation. Not only should children learn to play more, but adults as well.

Be cheerful. Think wholesome thoughts. Don't worry. See the best there is in others rather than the reverse. Look for the pleasant things of life. Determine, and try, to live a hundred years.

THE SIXTH TOOTH

By Edna McKee, R. N.

"I wonder if there is a boy or girl in this room who could tell me why the bear has a short tail?" Hands waved. "That's just fine, Son, come right up here and stand by me and tell all these others why the bear has a short tail." The story is finished, and as a reward something is slipped into the pocket, a loving pat on the shoulder, and the boy is told that he is a fine man. "Now little folks, that's just what I wanted to know. I knew if you could get up here and tell me why the bear has a short tail, you could go home and tell mother what I am going to tell you this morning.

"I wonder how many of you have little brothers and sisters at home. That's fine, and do you know how many teeth he has? That's just what I want to tell you about. Now let's draw a line right down the middle of our faces between these two big front teeth. With your right finger count with me; one, two, three, four, five. Now the left; one, two, three, four, five. Right hand count the upper jaw; one, two, three, four, five. Left hand count one, two, three, four, five. Now see, we have ten baby teeth in the lower jaw, and ten baby teeth in the upper jaw. A good way to remember is this: We have five toes on our right foot, and we have five teeth in this right lower jaw, five toes on our left foot and five teeth in our left lower jaw.

On our right hand we have five fingers and in the right upper jaw we have five teeth. We have five fingers on our left hand and five teeth in the left upper jaw. So don't forget to tell mother that baby has just as many teeth in the lower jaw as he has toes and just as many teeth in the upper jaw as he has fingers.

"All right now, when little boys and girls get 5 or 5½ years of age they find another tooth. Let's count again; one, two, three, four, five, SIX. See! Now that tooth is a permanent one, and that's the one we want to talk about. Did you ever play like? Ever go to grandma's and crawl under the house and play like you're going to have a tea party and make mud pies, and you boys play like you were building a railroad track? Now that's fine, and we will play like we're going to saw that sixth tooth right down the middle, and see what is on the inside of it. See this top part? Now that's the enamel part of the tooth. You knew all trees had bark didn't you? So we will call this the bark on our tooth, and to be healthy it must be real hard. Did you know..."
that this bark is the hardest substance in your body? To have the enamel nice and hard you must drink 'lots and lots' of milk, eat lots of vegetables and fruits. Don't forget that you must eat some raw vegetables every day. There is celery, lettuce, cabbage, onions, potatoes, raw peanuts and best of all collard stalks. Everybody down here can get collard stalks for they grow almost wild in this part of the country. Then I want you to eat fruits instead of candy like these old jaw breakers, all day suckers, and taffy. Run the candy man, in your school out of business, and ask the fruit man to open up. If you do these things, then you will have nice, hard bark on your teeth. Now we will draw the next layer. That is yellow and soft and is right under the enamel. I wonder if you know what this red part is? Well, that is the nerve. See, it runs right out the bottom of the tooth through a hole about the size of a hair. Now run your tongue over your back teeth. Feel that ditch back there across them? Well, when you eat candy you fill up this ditch, and you don't clean it out, and the next day you eat more, and pack in a new supply. Then the milk sugar in the candy changes the acid in your mouth to lactic acid, and it dissolves the enamel. Gradually this hole goes through to the second layer and that is so soft that it decays very fast. One day you bite something hard, or it breaks a hole through the tooth to the nerve, and mother has to put a piece of cotton soaked with clove oil or Sloan's liniment in it every day before you go to school. One night it hurts so bad, and the next morning you have a great big knot on your jaw, Mother knows now that she must take you to the dentist, for she had done all she can. When the dentist looks in your mouth he says he can't do anything for it has a bad abscess at the root of it and will have to be taken out. He also tells mother that, that is the SIXTH TOOTH and it is a permanent one, and you won't ever have another to take its place. Poor mother, didn't know it was a permanent tooth, and thought you would soon shed it like the other baby teeth. She is sorry, but she just didn't know. Now won't you go home, and tell her to count your teeth and when she has found the sixth one, see if there is a spot on it, and tell her that it is the SIXTH TOOTH and you must go to the dentist, and have it fixed for you won't ever have another one to take its place, if you lose it. Now which tooth is it? That's right, the SIXTH TOOTH. We have had a good time together talking about the sixth tooth, so don't forget, for I am coming to see you again some day."

This story of the SIXTH TOOTH was delivered by Dr. Ernest Branch, Director of Oral Hygiene, of the State Board of
Health, in 23 schools in Pitt County, to approximately 7,500 school children.

From the very first lectures on Monday morning, March 4th, through Friday afternoon of the same week, he was enthusiastically received by these school children. Since decaying teeth are the most common defects among our children and the SIXTH TOOTH is the most important one, and that much work along this line is badly needed, we are deeply grateful to Dr. Branch for this “Gospel of the SIXTH TOOTH.”

Reaction following these lectures has not been slow in taking place. Four little fellows in one school immediately had the sixth tooth checked on. One teacher on returning to her grade after the lecture found several children at the blackboard and the others excitedly talking. She said, “What are those things you are drawing, second grade?” Without halting they replied, “They are the sixth teeth Dr. Branch told us about”, and then crowding around her they said: “Please look at my sixth tooth, and see if it has a spot on it.”

This teacher being one with a clear vision, and seeing that much could be accomplished at this period, decided to let them select the topic for seat and language work. Of course they selected “The Sixth Tooth”. The story would be too long if I tried to tell you all that those thirty-eight children learned about that tooth.

One mother attended the night lecture illustrated by the Stereoptican slides, and was so deeply impressed by the picture of the girl with terribly irregular teeth and mouth caused by diseased tonsils and adenoids, that she immediately carried her young son and daughter to a specialist and had them both operated on. This mother had been advised to have this done several times, but had just put it off. What a blessing that illustrated lecture was to those children!

At the time of this writing, four days have elapsed since these lectures were given. In a very few days I hope to be able to visit these schools again and see how “The Sixth Tooth” is doing.

Truly Dr. Branch is a great preacher to have presented this message in such an attractive way that even the tiny beginners grasped it. While in the county he visited three negro schools. I can not say how very grateful these people were for his talks. Because his time was limited, we could not get in any more visits, but I sincerely hope sometime in the near future he will be able to come back and visit more of these schools.

Due to the heavy rains on Monday and Tuesday nights of the week of lectures, we were unable to get audiences in two schools, but Wednesday night down at the Winterville Parent-Teachers’ Association the High School auditorium was filled with the most attentive and enthusiastic audience. From the very beginning to the end, the lecturer held the undivided attention of this group. Because of his deep interest in the work and their splendid attention, he talked longer than usual.

At this time we are very fortunate in having Dr. Guy Pigford, one of the State dentists in our county working. It is needless to say how interested he is. To help spread the news of the night lectures, he told every child that came to his clinic to tell their parents to be sure to come out to hear Dr. Branch. His visit to our county is a very fitting climax to Dr. Branch’s lectures.

**WHAT TO EAT IN THE SPRING**

No, gentle reader, we are not going to undertake to tell you all the things you ought to eat in the spring months, but we simply propose to enumerate some of the things that you ought to eat, especially in the spring, and for that matter every other month in the year.

The other day we had a letter from a friend who is somewhat of a dietician herself. Being well educated and having knocked around the world long enough to observe a good many things, she concluded her letter with this statement, question, or possibly it may be considered a command, at least a demand, to wit:

“Why do not some of you write an article for the Health Bulletin about the value of our native greens, especially turnip...
sallet (note the spelling), and collards? You ought to stress the value of these products more and lay off the spinach a little bit. Where I was raised, in one of the glorious counties of this State, spinach was not known. Turnip sallet and collards were the stand-bys all the winter months. This diet was supplemented only by the plentiful supply of cabbage and collard kraut, which was stored away in the late summer for the purpose. Back in those days all the children and young adolescents who had been fortunate enough to escape typhoid fever or colitis during the summer and autumn months thrived on the foregoing diet. You know as well as I do that turnips, turnip greens and collards contain large amounts of mineral elements and vitamins that are necessary to growth and good health. You know as well as I do that these products are just as much conducive to good health as the imported blanched Michigan celery or Florida lettuce."

Along about the same time that we received this letter we noted a clipping from the Chicago Daily News, written by Dr. Herman N. Bundesen, former health officer of Chicago, calling attention to the report of investigators connected with the Michigan State College, comparing the vitamin and mineral value in the pure green vegetables as against the blanched and whitened varieties. Bundesen said that the Michigan report indicated that vegetables that had undergone the blanching process suffered the destruction of vitamin A in certain vegetables. This especially applied to asparagus.

As we have said several times before, we do not care to go on record with a dogmatic statement about anything concerning diet and nutrition at this particular time. "The whole matter," in the language of the United States Public Health Service, "is in a state of rapid evolution at this time." The discovery of all the vitamins has been recent. A conclusion reached and declared as a fact today may be ancient history or completely exploded by tomorrow. Our opinion is that the articles of food that have stood the test of time as valuable to the human economy will stand all of the analyzing and testing scientists now or in the future may be able to apply to such articles of food.

The old time intelligent farmer could not be divorced from the idea that green corn fodder pulled and properly dried was one of the best articles of food for his stock that he could get until the comparatively modern practice of saving food in a silo on the principle of making kraut for the people proved its value.

The Michigan experiments emphasized the points that green vegetables, containing

A nurse in the Buncombe County Health Department sends in this photograph of a young mother's league class. Beginning in this way we can some time give our high infant death rate a mighty knock-out.
plenty of vitamins, are the vegetables that grow in the open and absorb plenty of sunshine, and that the outer green leafy part of vegetables is the one that is richest in the valuable food constituent called vitamins. Thus, it has been definitely established that the outside leaves of lettuce and cabbage are richer in food value than the inner or blanched leaves; that is, if the Michigan experimenters, as quoted by Dr. Bundesen, have the dope on right. As we just said, we have no intention of making a dogmatic statement on the subject.

Now to go back to the demands of our friend about the turnip greens and collards. Down in Sampson County, where this writer first became acquainted with this world of trouble some half century ago, the two great stand-bys for food during the months of March and April for high and low, village resident, plantation owner or tenant farmer, was turnip greens and corn bread. And now that a nutrition expert announced the other day in an important national magazine the desirability of sassafras root tea as an early spring beverage, we can afford to tell the world that sassafras tea and “crackling bread was an important adjunct to the spring beverage, we can afford to tell the people of every garden of the village and of the farms alike was set aside and thoroughly prepared and planted in turnips. Some of these turnips were the large root variety, which afforded good food for people and stock during the late fall and early winter months; but the most important part of the turnip patch was to be of the spring variety, which would begin to “run up” late in January and afford fine fresh turnip greens for the table every day until the early spring planted vegetables came on.

This turnip “sallet,” to quote our friend again, cooked as they could cook it then, and served with hot corn bread ground in the local neighborhood grist mill, water turned grist mill, from clean selected white corn, the bread cooked as the expert cooks could get it done in those days, and eaten with the turnip greens simply supplied the vitamins, minerals, and other food ingredients so necessary to good health that pelagra was unknown and unheard of in this State at the time. A dietary deficiency disease of any description was practically unknown unless the patient had some organic trouble responsible for it.

Doubtless thousands of families of the State at the present time enjoy the same good turnip greens that were available to the old-timer, but not many of them have the kind of corn bread that they could make then, and there are other thousands of the population of the State that do not have either. A “back to the turnip patch” movement on the part of the industrial and white collar class of the people in North Carolina would deal a severe blow to pelagra as well as other health hazards and financial deficiencies with us at this time.

We are going to send a marked copy of this issue of the Bulletin to our friend in the hope that she will be satisfied with our efforts to reinstate turnip greens to its wanted position on the menu for all the folks.

NECESSITY OF DENTAL CARE FOR THE CHILD FROM THREE TO SIX

By C. E. Abernethy, D. D. S., Wake County School Dentist

Today, one could hardly find a well informed family who would question the importance of looking after the mouths of school children. The wise mother knows that the teeth of her child have a great deal to do with its general health and that its general health determines to a great extent the alertness of its mind and perfection of its school work. For it is a well known fact that the big percentage of failures in the lower school grades is due to time lost from school because of illness or

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to little minds made listless because their supporting bodies are in poor health. Much of this can be attributed to lack of proper physical preparation before entering school.

While some good is being accomplished in the saving of children's teeth in the preschool age clinics, yet in too many instances it is found that a child has one or more teeth already damaged beyond repair. Numbers of these children come from families whose mothers are aware of the seriousness of the neglect of school children's teeth and in whose homes the brushing of teeth is zealously attended to before the departure for school in the morning. But it is not enough to associate the idea of care of teeth with the entrance of the child into school or the reaching of school age. If the majority of children are to retain their baby teeth until the normal time for their shedding then care must be started at an early age and their examination at least by the third year or as soon as all their first teeth are in place.

Let us suppose that at this age your baby's teeth are sound and strong. They are well built because you, his mother, by being careful of your health and diet furnished the proper materials for building them before his birth. They are pretty, even and well shaped and you, of course, want him to keep them that way until his second teeth are ready to erupt. What more then does he need to insure his keeping these strong baby teeth—and his permanent teeth, formed but not yet erupted—in a healthy condition?

Well, his little mouth needs constant watching on your part and this includes a number of things. He should now be supplied with a small brush, with which you shall twice daily brush his teeth thoroughly, letting him grasp the handle of the brush himself sometimes to become acquainted with it and to believe that he is helping to do the brushing. Thus the habit will be inculcated in his mind at this early age, far easier than if left till a few years later. The kind of tooth-paste makes but little difference. If you use any paste at all get one with a flavor agreeable to

Now the good habit of brushing reminds us of some bad habits which should be early recognized and corrected, such as thumb sucking, lip sucking, mouth breathing or pillowing, that is, sleeping with his fist, hand, arm or elbow beneath his face or jaw. Any one of these habits may cause an irregularity of the teeth or an unsightly facial deformity that even the skilled orthodontist (a dentist who corrects irregularities of the teeth) cannot correct with his regulating appliances. Mouth breathing, usually caused by enlarged tonsils or adenoids, cannot be corrected until these bad throat conditions are attended to. Thumb sucking can often be stopped by means of this simple device: around the thumb wrap some adhesive tape with the adhesive side out as well as stuck on thumb, double. On top of this, parallel with the thumb, place five or six small sticks of wood, like match sticks, about an inch long, then wrap more of the tape

A little descendant of some of Sampson County's best, now making a fine start in the poultry business in Georgia.
tightly around these sticks to hold the two layers of tape apart and to hold the sticks in place. Now when he puts that thumb in his mouth and draws on it he gets nothing but a mouthful of air and the pleasure or comfort of the suction being eliminated he soon gives up in disgust.

[If this device is tried the mother should be exceedingly careful to watch carefully so that the baby does not accidentally swallow a piece of stick which might work loose—Editor.]

Probably the greatest cause of tooth decay during these years is the eating of too many sweets. Not only do carbohydrates left in the crevices of the teeth cause a fermentation which eventually dissolves the enamel thereby starting a cavity, but an excess of sweets takes away the appetite for coarse and substantial foods that he ought to have. He needs foods that require a lot of chewing to make his little jaws grow in order to prepare room for the larger permanent teeth which follow these baby ones. The craving of sweets while human is not always a natural craving and can most always be controlled by substituting fruits for the candy.

Now finally it is necessary that your child's teeth be examined by the dentist, say two or three times a year if he is health.

EYESIGHT FAKEERS

We find it necessary from time to time to warn the readers of the Health Bulletin to beware of traveling “eyesight specialists,” so-called.

For several years one pair (they always travel in pairs) has been robbing helpless individuals, generally old people, of large amounts of cash. They claim to have special treatment such as radium and so on. They spot some helpless old person through inquiry made of neighbors, who is suffering with some incurable form of eye disease. They promise immediate improvement, go through some moves faking an “operation” on the eyes and so on. They operate all right but it is on the victim's purse. They demand and get large amounts of cash. In the past few years they have victimized people in Caswell and Stanly and other counties. They generally select some county that does not have an organized live health department for their activities. If asked for credentials they promptly give fictitious names and addresses. For example the pair of fakers who fleeced a number of people in Caswell County gave names common in Raleigh together with an address on a street in Raleigh which happened to be about two blocks distant from the end of the street. The same outfit about a year later worked Stanly changing their names somewhat and giving their residential address in Raleigh on the block covered entirely by one of the city schools.

For some reason they have never left sufficient evidence behind them to reveal
their true identity and so have never been arrested.

They are fakers and exploiters of the most contemptible kind. We cannot warn people too emphatically to let all such traveling fakers alone. Reputable physicians never carry on their practice in any such manner. We hope all our readers will repeat this warning so that it will reach the most isolated sections.

An account of the latest exploit is described by the Monroe Journal in its issue of February 26th, 1929. We are reproducing the Journal article below as it gives a brief and comprehensive description of their methods. The Journal article also illustrates the fact that the fakers are such plausible talkers that they often take in people who are otherwise cautious and wary. A pair operating last fall in New York State in like manner were trapped and later arrested because one sharp eyed individual took down the motor number of their car (the license tag which was also recorded, it developed had been stolen). With the foregoing information in hand the New York authorities finally located and arrested the scoundrels. They are now serving a ten year sentence in the New York penitentiary. Let us continue to hope that some wide-awake sheriff in North Carolina will soon round up this pair.

The Journal article follows:

"Old Couple Are Imposed Upon By Two Strange Men"

"Men claiming to be eye specialists visited Mr. and Mrs. J. W. Haywood and get large sum of money for alleged operation.

"Last Friday Mr. and Mrs. J. W. Haywood of Vance township were visited by two 'nice looking men' who told them stories of being specialists in the treatment of eyes and of being connected with great hospitals, and being out doing a little work on the side.

"They got $27 in cash, a bank deposit certificate for one hundred dollars, and a check for $300, for an operation on the eyes of Mrs. Haywood. The checks were on the first National Bank of Monroe.

"On Saturday Mr. Haywood came to town and told the story around, already having become afraid that he had been duped, and Mr. Verne Honeycutt told Sheriff Fowler, who notified the bank not to pay the checks should they turn up. They have not yet been presented to the bank. Had it not been for the fact that all banks were closed last Friday the visitors would no doubt have attempted to get their checks cashed before Mr. Haywood became suspicious.

"When the strangers presented themselves and said that they could cure Mrs. Haywood, Mr. Haywood wanted to know what it would cost. He says that they told him that they could not tell until the work was done as they had to use radium and did not know how much it would take. They went through some kind of perform-

This young lady employee of the State Board of Health has a roomful of gold and silver cups for expert horsemanship. Physical education means much more to her than simply sending out advice to other folks about it."
A sequel to the above story

Since writing the foregoing, the latest exploits of at least one of these pairs of fakers have been duly chronicled in the newspapers of Greensboro and Winston-Salem. A faker giving his name as W. Anderson and his fictitious home address as Los Angeles, California, in the early days of March blew into the upper part of Forsyth County and extracted six hundred dollars, before the victim could say Barnum, from a man named Marshall.

In this case Mr. Marshall reported to the authorities that he was ashamed to have been buncoed, but having had some trouble with his eyes and being somewhat worried, this pair drove up, nicely dressed, and with a beautiful line of talk proceeded to inform him that they were eyesight specialists traveling in the interest of research work; they would like to take a look at his eyes, hearing that he had had trouble. They immediately told him that he was going blind; that there would be no hope for him except the radium water treatment, which they were prepared to administer that minute. They told him that they would only have to drop some of the material into his eyes, and in a few weeks he would be entirely well; otherwise he would be blind in a short time.

They were evidently hypnotists. They scared him practically to death, removing all capacity to reason and apply his common sense to the matter. They were able to make it out so bad for him until he forgot everything else but the one fact that he was going blind, and these emissaries from heaven were right there, prepared to save him—for six hundred dollars in cash.

These fakers always know who has cash in the bank, and they never bother the very poor people. They informed him that the treatment was so very expensive that the six drops used in his eyes would cost him about one hundred dollars a drop. They, of course, were giving their services for the sake of humanity and research advancement. They stipulated, however, that he would have to go to the bank and get the money and get it safely deposited in their pockets before they could spare the precious drops. All of this was properly attended to without the farmer having presence of mind enough to inquire of his banker or his doctor or any reliable person as to the possibility of his being humbugged.

To make the story short, he got the cash out of the bank, they got it in their pockets; they put the drops, which later was discovered to be rain water, in his eyes, supplied him with a pair of spectacles which they had purchased at a dime store, considered it a good day's work and drove back from Forsyth County to Greensboro, where they were domiciled at the King Cotton Hotel.

Such fakers as these always live at the best hotels, and always have their alleged wives along with them. This pair had several.
lected the territory in Rockingham, Stokes and Forsyth County for their particular territory at this time. They were careful, however, to live in Greensboro while the humbugging was going on. The alleged wife of one of them remained at the King Cotton Hotel, living in fine style.

The two fakers left their expensive limousine carefully stored in a Greensboro garage and hired a car from the Ford-U-Drive-It system. They, of course, put up the necessary cash to insure the return of the hired car. So no names or credentials were required. The reader will note that this little matter of precaution left little fear for them in case some of their victims should awaken from the trance in which they left them, sufficient to have sense enough to get the number of the car and anything more of the identification marks, then report the matter to the proper authorities.

In this case, however, the sheriff of Forsyth County happened to get wind of what had happened, and was sufficiently active enough to put a deputy on the job. This deputy, being a good detective, traced the fakers to Greensboro and to the King Cotton Hotel, where he arrested one of them just as he had checked out and was preparing to depart for Charlotte or Asheville in order to continue their activities in new territory. On the way to the station the faker tried to bribe the deputy, offering him five hundred dollars cash and the six hundred dollars for old man Marshall, if he would let him go and call it quits. The deputy, be it said to his credit, told him to tell it to the judge.

The court, however, in Winston-Salem did not quite measure up to the standard established by the deputy. The judge, did require a rather large bond for a six hundred dollar fake deal, and so demanded a two thousand dollar cash bond, which, of course, was promptly provided by the faker from the roll in his pocket belonging to some of the farmers in the territory aforementioned. This bond was to guarantee his appearance at court two days later.

It is hardly necessary for us to add that this Raleigh baby makes its first acquaintance with snow. The interesting thing to us is that the little one's parents know that such "exposure" can never of itself cause a "cold."
tivities, and we have requested the authorities everywhere to arrest them on sight and hold them for full investigation, when witnesses from other sections could be produced. The action of this Forsyth deputy in apprehending one of them is the first one that has been located by a civil authority, and it is discouraging to us to know that they let him slip away so easily.

without any further efforts to apprehend the balance of the crew and to put the whole outfit in the penitentiary, which could have been done easily on any one of a dozen counts. It seems useless to continue warning the public to beware of such fakers, because it appears that so few of the people pay any attention to our efforts in trying to get them to protect themselves.

IN OUR FAMILY WE'LL EXAMINE AND KNOW

By SUDIE E. PYATT

Love and pride shining in her blue eyes, pretty Katie Blair watched her tall, bronzed young husband come swinging down the walk in the cold spring rain. The rain had stopped Charlie Blair and his crew of men from their work of re-building the electric power lines in Barden. But Katie didn't mind the rain. It would give Charlie to her for the whole afternoon. She ran to open the door for him. Before it was scarcely opened her blonde daintiness was swallowed up in her tall young husband's arms. After an eternity of bliss they both shared Katie drew herself back in his arms.

"Oh honey, you're all wet, and you're coughing as if you had tuber..."

Katie's voice trailed off into a whisper. She couldn't say tuberculosis. There was a long history of tuberculosis in Charlie's family. It went back for just how far she didn't know, but to the third or fourth generation she was sure. His younger sister, Mary, had been cured in the State Sanatorium. Katie's and Charlie's wedding had been postponed a long, dreary year in order that Charlie might pay the expenses of the sister in the Sanatorium. Katie knew from experience what tuberculosis was. If Charlie should develop it—any disease that would separate them—she felt that she couldn't bear it. Then there was her family. They hadn't wanted her to marry Charlie in the first place, and they had pointed out his tuberculosis history to her more than once.

Even when he didn't have a cold Charlie had a mean little cough that certainly did sound suspicious.

"Sweetheart, come over to the fire and get your wet clothes off," Katie insisted, helping her husband strip off his coat as she spoke.

Charlie smiled indulgently at his wife. "Every time I cough you think I have tuberculosis don't you, kitten-cat?" (Kitten or kitten-cat was his favorite pet name for her.)

"Don't joke about it, Charlie. It's no joking matter," Katie said, feeling his arms and shoulders to see if his shirt was wet. It was, and had been so for hours. It had rained all morning. There was a job Charlie felt he must do rain or no rain. His men did not feel the same way about it. Charlie hadn't insisted that they work in the rain. With one helper Charlie had toiled all morning in the storm.

"Wet to the skin," Katie moaned.

"Well, I'm neither sugar nor salt," Charlie laughed.

"No but—" Katie choked. Again she couldn't say tuberculosis.

"Say, kitten, if you keep worrying about my developing tuberculosis, I'm going to do what Mary wants me to. Go to a doctor and have a thorough physical examination including my chest. Maybe an X-ray wouldn't be out of the way. The company doctor says I'm all right, but it has been a year since he gave me an examination. Mary says every one ought to have an examination once a year to see if
the generators in the main plant are working as they should be, and check up on the distribution. See if the lines that carry the power out all over the body are open to do their best work.”

Katie turned pale. “But suppose, dear, the doctor found that you had tuberculosis?”

“Why I’d go up to the Sanatorium for a couple of months and cure, same way Sis did,” Charlie said cheerfully.

His wife refused to see anything cheerful about it. “And leave me for six months or a year. It was bad enough for us to be separated during our engagement. I’ll be ten times worse now.”

And Katie became a woebegone little heap of blue silk dress, flesh hose, black patent leather pumps, pink skin and golden hair in the big rocker they often shared.

She looked so tiny there in the big chair. Charlie was distressed. “Why kitten,” he touched her heaving shoulders, “don’t cry like that.”

“I’d—I’d rather not have you examined, and keep on thinking you are all right, than have you examined and know you had tuberculosis, or something as bad,” Katie said brokenly.

“But, dear, if I have tuberculosis the earlier it is found the more likely I’ll be to get well,” Charlie remonstrated tenderly.

“People don’t get well of TB!” Katie said vehemently.

“But, Katie, they do!” The young husband spoke in pained surprise. “Mary is well, and looks better than she ever did in her life. The doctors at Sanatorium say she’ll be able to go to a general hospital and work for her R. N. degree when she finishes her two years’ tuberculosis nurses’ training at Sanatorium. She would have to be in good physical condition, or they wouldn’t let her do that.”

“Just the same I don’t want you examined for tuberculosis, or anything. I want you just as you are,” Katie said.

Charlie Blair ran his blunt electrician’s fingers perplexedly through his brown hair. He loved Katie more than he did life itself, but for the life of him he couldn’t understand her at times. Here she was worried to death for fear he had tuberculosis, and at the same time pitting all her wifely strength against his having an examination, and discovering whether or not he had the disease, or some other trouble.

“All right, Katie,” Charlie said in an approved husbandly manner, “if your thumbs are down on an examination I just won’t have one.”

Charlie was content to give his wife a reassuring kiss along with his promise not to be examined, and to settle down in the warm, cozy room for the remainder of the afternoon. There wasn’t anything wrong with him anyway. That cough was probably caused by cigarettes. Just because there had been tuberculosis in his family there was no reason why he should have it, too. Tuberculosis wasn’t inherited as some people thought.

With morning Charlie had a genuine cold, sore throat, cough, fever. He insisted on dressing to go to his work. Katie prepared a hot breakfast, all of the things she knew Charlie would like. She kept consoling herself with the thought that colds never did last long, while all of the time there was that ghastly spectre of tuberculosis lurking in the shadows ready to jump on Charlie and take him away from her.

The rain was not pouring down this morning as it had been last night, but it was still cloudy, dreary and damp.

Fortified with an aspirin tablet and a cup of hot coffee—he had hardly touched the dainty food his wife had prepared—Charlie went to work. Before noon he came home in Dr. Hampton Brown’s car. Feeling more miserable as the day wore on Charlie had gone to the doctor for something for a cold. The doctor had looked him over, put a stethoscope on his chest, wrote a prescription, which he filled himself at the drugstore, and to see that Charlie obeyed his instructions to go to bed, took the electrician home himself. The doctor helped Charlie into the house and to bed.

“Mrs. Blair, I don’t think it is anything worse than a bad cold,” the doctor said when Charlie was resting comfortably, “but I don’t like the sounds I get from the apex of his left lung. I’m going to tele-
phone the State Sanatorium clinic today for an appointment for him to have an examination. As soon as he's able to be out of bed with this cold I want him to go up there and let those doctors give him a thorough chest examination, and make an X-ray of his chest."

Katie's great blue eyes were wells of tragedy as she listened to the doctor. When he stopped talking she said: "I'd rather go on thinking he didn't have tuberculosis than to have him examined and find out that he did."

"Nonsense, Mrs. Blair," Dr. Brown spoke briskly, "with all of the methods we have for curing tuberculosis today it is foolish of you to feel like that. As a matter of fact I don't believe your husband has tuberculosis, but I believe it is better to be safe than sorry. It will be better for both of you for him to go to Sanatorium and receive a definite verdict, either tuberculosis or not tuberculosis, than for both of you to go on fearing that he does have the disease, but not knowing of a certainty."

"But I'd rather not know," Katie said wearily.

The doctor looked at her shrewdly. "Mr. Blair has a sister who had tuberculosis, hasn't he?"

"Yes," Katie breathed.

"Your wedding was postponed because of her illness, wasn't it?"

Katie nodded her head in affirmation.

"You're more afraid of being separated from your husband than you are that he will have tuberculosis," Dr. Brown stated. "If he does have tuberculosis, and it is not discovered in time you will be separated from him for a much longer time than it takes to cure incipient tuberculosis."

"Oh-h!" Katie's blue eyes filled with tears.

The doctor was moved to sympathy. I didn't mean to hurt you, Mrs. Blair, but the thing for you to do is to buck up and take this thing like a woman, not like a spoiled child as you're doing."

"Yes-s," Katie choked, "I'm—I'm taking it like a woman."

And Katie did. Not once through all the next five days of caring for sick hus-

band did Katie mention one thing that would lead her husband to believe that she did not want him to have the examination Dr. Brown had arranged for at the State Sanatorium.

In her own soul Katie suffered. There was no slightest act that she performed for her husband that she did not vision some white-capped nurse at the Sanatorium doing the same thing for him—when he was discovered tuberculous and had to go there on the cure. She saw herself back at home while Charlie was curing, her people triumphing over her, "I told you so."

Finally she saw Charlie, tall, handsome, bronzed Charlie, a hopeless tuberculous invalid—dead!

Charlie grew better under the care of his wife and Dr. Brown. His cold cleared up, but he did not feel so well, and the cough hung on. More reason for him to have the examination.

On Dr. Brown's Thursday visit he said that if Mrs. Blair could drive the car they might go to Sanatorium the next day for Charlie's examination.

Katie met the doctor's eyes unalteringly, "Yes, I'll drive," she said.

Katie kept up her courage. In fact, she was almost gay until they had reached the Sanatorium, and the clinic nurse had sent Charlie to the physician for his examination. It was a huddled, sobbing bit of femininity that Mary Blair found on the couch in the clinic waiting-room. Mary had been summoned from duty in another part of the building when the superintendent nurse had learned her brother and sister-in-law were at Sanatorium.

"Katie! Katie!" Mary called, alarmed, as sob after sob shook her sister-in-law's slender shoulders.

"Oh-h—I—I—can't—bear it—I know he has—tuberculosis!" Katie was working herself into a beautiful hysteria.

Mary, the clinic nurse, and a doctor who was not busy with another case at the moment, had their hands full to keep her in a fairly sane and conscious condition.

"I—I know he has tuberculosis," she moaned over and over. The assurance and sympathy the two nurses and the doctor tried to give her, only made matters worse.
Mary was glad that the examination did not take more than half an hour, though it seemed to her like an eternity. There was a knock on the clinic room door. The clinic nurse hurried to open it.

Charlie Blair and the doctor, who had examined him, stood in the doorway, a broad grin on both their faces. The doctor slapped Charlie on his broad shoulders.

"Young fellow's in fine condition. Only an old lesion in the apex of his left lung. A lesion that has healed so well there's no chance of its ever becoming active. He has some bad tonsils in his throat. They are the cause of his cough. He wants to have them taken out as early as possible. Then he'll be in first-class condition."

The doctor stopped. He was conscious that he was speaking only to the backs of the two nurses, who were looking away from the tender scene that Katie and Charlie were enacting in each other's arms. Katie drew away from her husband long enough to thank the doctor for his verdict.

"You see," the doctor said, "you allowed yourself to worry too soon. When anyone has suspicious symptoms of any disease it is always best to have a thorough examination and know for sure that you have or have not the disease than it is to go on worrying, for fear you or some loved one does have a dreaded disease."

Charlie nodded his head in agreement with the doctor, and Katie clutched Charlie closer to her, signifying that she agreed with Charlie if not with the doctor. The clinic nurse was busy with the next case. Mary waited to take her brother and sister to her room, where they could freshen up for dinner. They were to take dinner with Mary in the nurses' dining-room.

Dinner over Katie and Charlie started on their drive back to Barden. Charlie drove on the return trip. Katie sat quietly, very close to her husband, her head resting against his comfortable shoulder. She was so happy now. Happy that her young husband's lungs were all right. The satisfaction of knowing that his lungs were sound and well was so gratifying she wondered how she ever could have objected to an examination for him. Only his tonsils were bad. What a relief to know they were the only trouble? It would be fun to nurse him through a tonsil operation. They wouldn't have to be separated for that, not even for the operation.

"Why so quiet, kitten?" Charlie asked after awhile.

Katie smiled. "I was thinking that here after in our family no matter what the trouble is we'll examine and know, and not worry and doubt."

Charlie guided the car by a heavily laden truck. "I always knew you were a wise kitten," he observed, when they were safely past the truck.

A friend in Wilmington writes the Editor of the Bulletin that he has been suffering from an attack of lumbago which has kept him flax on his back in bed as immovable as a vice for about ten days. He quotes another friend as saying that everybody should have lumbago once at least, because it is so different from anything they ever had before. Our friend writes us that his fellow sufferer told him that as good as he loved money, if he had been knee deep in twenty dollar gold pieces, he would not have even tried to pick up a fellow feeling for our correspondent.

"LUMBAGO"

Sometime more than a year ago this writer suffered an attack which he will be a long time forgetting. Talk about not trying to pick up twenty dollar gold pieces, if the lumbago our friends have been having is the kind we had, they couldn't.

Myalgia is a term generally used to describe a painful condition anywhere in the muscular regions of the body. It is what the laity call "muscular rheumatism." It belongs to a class of diseases and conditions that up to this time have constituted a very unsatisfactory understanding at the hands of medical writers. A site for its most frequent attack is the lower mus-
cles of the back; hence the name lumbago. The symptoms may arise suddenly. The patient may awake at night suffering intense agony, and this condition may last for several days or even weeks. Treatment of any kind is unsatisfactory. As to whether or not the muscle tissue itself is the seat of the involvement, or as to whether it is due to disturbance of the smaller sensory nerves supplying the muscles, is not definitely known. But anybody suffering an attack has no trouble to know that something sure enough ails him.

This condition is frequently associated with arthritis and other forms of joint involvement, so that the underlying causes or conditions bringing on an attack may sometimes be very similar. Unless there is some other definite cause which precipitates an attack, it is safe to say that a sudden attack coming on without warning is generally due to some focal infection. The seat of this infection may be in the teeth (abcessed teeth being one of the causes frequently recognized by physicians in individual cases), infected and diseased tonsils, and infection in the appendix, or, in fact, in any region of the body which may harbor the infective agents. Sometimes the intercostal muscles are involved along with the large muscles of the back in the lumbar region. Such cases are very severe and intensely painful. But when the intercostal muscles are involved along with the lumbar muscles, the pain is, as a rule, symmetrical, and in this way it is comparatively easy to differentiate from pleurisy. However, respiration is just as difficult and painful as in genuine pleurisy.

The accurate diagnosis of lumbago, however, is not always easy to make. It is frequently hard to differentiate it from several other conditions allied with joint involvements in the part, but generally within a few days the trouble may be definitely differentiated from the more serious and more chronic forms of joint involvement. There is one reassuring feature of the attack and that is ordinarily the general health is not involved except to the extent by which intense pain and suffering and the disability as to movement produces detrimental effects.

The treatment to advise is certainly one for a first class physician to settle for each individual patient. In the first place, a physician only is able to make a correct diagnosis. The physician alone can detect complications and the presence of other diseased conditions. In conclusion, the physician is the one man able to prescribe the sedatives for the relief of pain, and certainly as a friend of the family should be able to offer hope and encouragement as well as to alleviate the pain.

KILLS THE CATS TO SAVE THE BIRDS

We take pleasure in quoting the following paragraph from a letter written to the Chapel Hill Weekly by Mr. J. W. Bailey of Raleigh. The letter was on the general subject of song birds, but this paragraph is particularly interesting and appropriate.

In addition to the destruction of birds by cats, which Mr. Bailey so graphically describes, we might add that cats are purveyors or conveyors of numerous diseases which are equally as destructive to infants and young children. It is also pertinent to add that cats are subject to rabies, as is the case with dogs.

Following is the paragraph:

"Moreover, I try to kill out the cats every spring, and hereby bodily commend my example to others. Cats hide in the hedges and leap out in the early morning and catch the birds feeding in the grass. The vireo is the most frequent victim. The English sparrow is never surprised. Bad enough; but the worst is that the young birds have little chance, once they touch the ground. They can not dodge, run or fly. My judgment is that fully seventy-five per cent of young birds fall victim to cats wherever there are cats. So victim to cats wherever there are cats. When I am accused of cruelty for shooting cats, I defend on the ground that I am saving hundreds of birds; and one bird is more to me than millions of cats."
GITTIN' MORE LA'K NIGGERS

Some time ago there was a lot of talk about companionate marriages, all of it coming from a suggestion of Judge Ben Lindsey, the famous juvenile court judge of Denver, Colo. The judge had suggested that there ought to be some way whereby couples might test their fitness and adaptability to each other, so that if a mistake had been made there would be a chance to start over.

There is a story that a colored woman asked a Monroe lady for whom she cooked what was the meaning of all this talk about white folks getting married and not being married. The lady explained to her Judge Lindsey's theory, telling her that it meant that the husband or wife could dissolve the marriage relation at any time without going to the trouble of getting a divorce in the prescribed way, and at once could enter into the marriage relation with another. The old negro woman comprehended fully the meaning of the new marriage, and exclaimed, "For de Lord, white folks are gittin' more like niggers ever' day!"—Monroe Journal.

TAKE NO CHANCES THEY SAY

There was a time when people took castor oil for bellyache. Sometimes in days gone by, deaths occurred from what was known to laymen as "cramp colic," and such like complaints. Now physicians advise against the administration of a purgative in case of severe pain in the abdo-

CHILD'S FIRST TEETH REQUIRE GOOD CARE

Many parents believe that because children's temporary teeth are soon to come out it is not necessary to keep them in good repair. Decay of the temporary teeth is of utmost importance because if these teeth are lost prematurely they fail to hold the spaces needed for the permanent teeth, Dr. F. H. Richardson explains in an article on the teeth of the runabout child in Hygeia.

Especially is this true of the first permanent or six year molar, If spaces for these important teeth are not held or if after they come in they are allowed to decay and to go untreated under the impression that they are temporary rather than per-

SWIFT ADVANCE OF PUBLIC HEALTH

When I was five and had a cold,
By great and small I was consoled,
And all the teachers cuddled me
With tender sympathy.

But now that I am almost eight,
The sight of me with colds they hate.
"Go right back home," they simply shriek,
"And stay away a week."
Another Sign Of Spring

GREAT GUNS, MARTHY, BRING THE SWATTER
The above photograph of a twelve months old Raleigh baby girl is one of the most interesting ever published in the Health Bulletin. Her father says that when he secured this remarkable snapshot she was traveling at the rate of about three miles an hour, presumably toward Washington to interview the Smithsonian anthropologist who is especially interested in making the acquaintance of all such fine babies.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may interested.

Adenoids and Tonsils  Fly Placards  Sanitary Privies
Cancer          German Measles  Scarlet Fever
Catarrh          Hookworm Disease  Smallpox
Care of the Baby  Infantile Paralysis  Teeth
Constipation    Indigestion
Colds           Influenza
Clean-up Placards  Malaria
Chickenpox      Measles
Diphtheria      Pellegra
Don't Spit Placards  Public Health Laws
Eyes           Prenatal Care
Flies

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)  Table of Heights and Weights
Infant Care (by Mrs. Max West)  The Runabouts in the House of Health (pamphlet for children from 2 to 6 years of age)
Prenatal Letters (series of nine monthly letters)  Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11 and 12 months; 1 year to 19 months; 20 months to 2 years.
Minimum Standards of Prenatal Care  Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 4 years.
What Builds Babies?  Better Babies
Breast Feeding  Hints to North Carolina Mothers Who Want
Sunlight for Babies  a Better Baby
Save Your Baby
Hints to North Carolina Mothers Who Want Better Babies

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SOME OF THE ISSUES BEHIND THE HIGH INFANT DEATH RATE IN NORTH CAROLINA

Very nearly all the world knows by this time judging from the latest available comparative reports, that the infant death rate in North Carolina is higher than any state in the registration area of the United States except Arizona, Maine, and Maryland. This is by no means a complimentary situation in which we find ourselves.

We have for many years had a well organized State Board of Health. One of the first county health organizations in the country was established in North Carolina. Only one or two other states at present have more organized active whole time county health departments. Only four or five other states have been spending as much or more per capita on public health as has been expended by the North Carolina State Board of Health for several years. We do not have as large negro population, speaking in percentages, as Mississippi, Georgia, Arkansas, and other Southern States in the registration area which make a much better showing in regard to infant death rate.

The question is being propounded to us from many quarters, inside the State and out, "Why such a position? Why such a high infant death rate?"

As just stated, we cannot assign our large negro population, with its bad housing and its high death rate as the sole reason for this unenviable position. We cannot assign the large per cent of inefficient, dirty midwives as the reason for this high rate. The fact is, the midwife situation is no worse in this State than many others, and it is probably better than many of them. In any event, the midwife practice, where careful surveys and tests have been made, indicates that it has little to do with the infant death rate.

We can assign a scarcity of physicians in rural sections as one reason, making the accessibility of competent medical advice both in the prenatal period and in the early months of the infant's life a large contributing cause toward the high rate. In this connection it might be well to mention the fact that there are fewer doctors per thousand population in North Carolina than in any of the other states, with possibly three or four exceptions. We cannot assign the scarcity of hospitals, especially for the rural sections, as the reason for the high infant death rate, because, again, where careful statistics have been compiled, the death rate of infants born in hospitals or treated for illness in hospitals is just as high as where they have been dependent for treatment by the family physician in their homes.

There can be no doubt that one of the chief reasons for the high rate is the high birth rate. For at least ten years North Carolina has had a higher birth rate per thousand population than any state or city in the registration area of the United States. Naturally where the most babies are born, everything else being equal, the greatest hazards will prevail. We feel that if our high birth rate was lowered to the same percentages that exist in other states of like population, climatic, and geographical conditions, that our infant death rate would be no higher than that which prevails in those states. Even if that were the case, we would still have a greater loss of infant lives than we ought to have, and than which obtains in many of the states.
We herewith present the opinion that one of the chief causes of our high infant death rate is due to the poverty of the average inhabitant of North Carolina. We make this statement because the question has been specifically directed to us from innumerable quarters recently. The average question comes something like this: "Why does North Carolina have such a high infant death rate in view of the fact that it pays more Federal taxes to the United States Government than any state now except New York, indicating enormous wealth?"

The foregoing question has but one answer and that is that even so North Carolina does pay into the Federal Treasury more money in taxes than any other state in the Union except New York, this money comes from a few large corporations. It is in no way an index to the wealth of the average person in North Carolina. The average per capita wealth in North Carolina is very low. We do not have at hand the exact figure, but the State ranks below 40 in the scale of states in per capita wealth.

Where you have poverty and a high birth rate, a high infant death rate must naturally follow. In this complex and fast moving life of the present time, conditions are harder on the average infant than at any previous time, notwithstanding the infant whose parents have means can command the services of better specialists, better medical advice, nursing facilities, proper food, and other necessities for a baby's safety than ever before. These things are not, however, within the reach of the average family. Owing to widespread travel and visiting to and fro, neighboring boundary lines, even county lines are the easier over-stepped, making for the rapid spread of communicable diseases which are especially disastrous to infants during the first year of life. Safe milk, well-screened houses, pure water, and other facilities are not within the reach of many of the families of the State, and the babies are the first to suffer.

As stated previously in this article, North Carolina ranks very low in per capita distribution of wealth, and what this means can be better understood if we quote the United States Secretary of Labor, James I. Davis, in a recent statement of his along this line. Mr. Davis makes the flat declaration that 86 per cent of American people are poor. If that percentage applies to America as a whole, we can easily understand that considerably more than 86 per cent of the people of North Carolina are poor. To state the proposition another way, 86 per cent of the people in the United States have no tangible wealth of any description, either in cash, stocks, bonds, or real estate. That large percentage will embrace the laboring classes, clerks in the stores that rent their homes and work for their daily upkeep, and tenants on the farms. The Federal Trade Commission has stated in one of its reports that one per cent of the people of the United States own 59 per cent of all the money and property in the country, and that 13 per cent own 90 per cent of everything.

In our opinion these statements describing existing conditions constitute the chief reason for the high infant death rate in North Carolina. We quote below the statement of Secretary of Labor Davis to a British newspaper, and which was recently published in the Literary Digest. The Davis statement follows:

"Here and there has been for many years a
contributing to the health of the children and the wealth of the farmers of North Carolina."
FORTIFYING AGAINST DYSENTERY
BY
ALBERT SMEDES ROOT, M. D.

Mothers are looking anxiously towards the season when so many of their babies will become ill—many of them seriously so. The reason for this is because they know that in this State alone over 1,000 babies under two years of age die each year of dysentery (colitis). It has been so for generations past and we may expect this sad experience again and again until mothers learn more about the care, management and feeding of their young infants.

The day may come when some specific treatment—as vaccines or some serum will be discovered to prevent or arrest dysentery, but science has not yet—after all these years—found any such method which is of the slightest help.

Our line of defence against this scourge must be formed by:
(1) Keeping the baby in the best physical condition at all times.
(2) Sterilizing the baby's milk and water.
(3) Instituting sanitary measures in and about the house—especially in screening and guarding against flies.

(4) Isolating children with dysentery from all others.

Keeping the baby well. The death rate among those babies who have been properly fed from birth and who are of normal weight is very low. (This does not include the fat babies who are fed upon condensed milk or some of the other patent baby foods.)

Through proper feeding, by which means they secure the proper milk mixture, mineral salts and vitamins—these infants acquire a resistance against this, as well as any other kind of infection. As a result they are not nearly as susceptible, and if they do acquire the disease they are able to overcome it in the vast majority of cases.

Only the more important facts that mothers should know about keeping their babies well can be discussed in this short paper. First. Every mother should nurse her baby if possible for the first few months of life, without complementary feedings. Breast milk is the natural food for the young—it is sterile, that is free from germs, it contains the proper elements.
in the proper proportions, and it is the most digestible form of food. The phrase "my breast milk disagrees with the baby" should never be spoken or written; and no baby should be robbed of its birthright by being denied its mother’s milk, no matter through whom this advice comes.

It cannot be repeated too often that an infant who is gaining at the rate of about an ounce a day during the first months, is thriving, in spite of crying, spitting up the milk, having loose or frequent stools. Such symptoms may be disregarded absolutely if the infant is gaining as he should. Any or all of these symptoms will probably be helped or corrected completely by nursing the baby every 4 hours, and not so frequently as he has been. Medicines and drugs are entirely out of place in an attempt to correct these uncomfortable symptoms. They simply make the baby worse. Remember—the baby is safe on the breast. Weighing the baby each week is the only means of telling whether or not he is getting enough nourishment. The breast fed baby must gain normally to keep well even though artificial food must be given. In such a case the additional food should be given immediately after the breast feedings.

The best food to give is clean cow’s milk which has been boiled for at least three minutes, and keep in a refrigerator or ice box. We used to think that cow’s milk mixtures had to be much diluted for very young babies, but this is not true. Most of them will take well and digest whole cow’s milk—to which it is well to add a little sugar—about a tablespoonful to the pint. The child can be allowed to take as much of this as he will every 4 hours after the breast. But boil the milk.

For children who tend to have a poor digestion or who are much underweight or who have diarrhoea, lactic acid milk is a better food. This is made by boiling a quart of milk for 3 minutes, cooling it, (about the temperature of well water) then adding drop by drop and stirring, 80-90 drops of lactic acid (U.S. P.). To this add 4 tablespoonfuls of Blue Lable Karo Syrup, which has been mixed with 4 tablespoonsfuls of water. This is kept cold. As much is given as the baby will take every 4 hours. Perhaps a better and safer way of making lactic milk is by using evaporated milk (not sweetened condensed milk), especially where good cows’ milk from tuberculin tested cows cannot be conveniently had. It is made this way:

To a pint of evaporated milk add a pint of this mixture:

Brown Karo syrup........2 or 3 ounces
Lactic acid (U.S. P.).......80 to 90 drops
Water to make a pint. This mixture is kept cold.

There is no objection to keeping babies upon lactic acid milk for long periods of time. In ordinary cases where good clean

An up and coming Durham citizen who may add his name to the long list of millionaires claimed by that county. He possesses one of the chief requisites for beginning the quest—Perfect Health.
cows milk from tuberculin tested cows is not available, then one of the reliable dry milks may be used.

It is desirable that the baby take some breast milk until 9 months of age. At the age of 5 months cereals should be added. Even infants who are exclusively breast fed and are making the correct gain in weight should have cereal with an ounce or two of boiled milk on it. They should begin to acquire the taste of cow's milk at this age, for the reason that after 6 to 7 months old many babies refuse it, and often it becomes a serious problem to make them take it where it has become necessary for them to do so.

At the age of 6 months an ounce of vegetable soup should be given at one of the feedings. This should be strained and the fat skimmed off. Vegetable soup is rich in iron and since at this age there is practically no iron in the food, a baby will become pale before he is a year old without it. At 8 or 9 months some of the vegetables should be mashed through a fine sieve. Strained carrots or spinach may be substituted for this at this age.

Babies who are nursed too long without additional food invariably are undernourished and invariably have rickets. The death rate from dysentery here is always high. Most babies should be weaned completely at 9 months of age. After this age the breast milk does not adequately nourish the child and prevents his taking enough cow's milk to enable him to gain and develop as he should. If the mother cannot nurse her baby and he must be fed artificially, strained orange juice or tomato juice must be given from the second month of age—2 or 3 teaspoons, at 6 months, a tablespoonful
and at 9 months an ounce. This should be diluted with about equal parts of water. The orange juice and tomato juice contain a ferment which is present in breast milk but which is not contained in boiled cow’s milk. Without it the baby stands a good chance of developing a disease called scurvy. All artificially fed babies and all babies who have complementary feedings should have cod liver oil throughout the winter months, and sun baths through the summer. This is to prevent the most common of all diseases—rickets.

The plain cod liver oil may conveniently be given in the milk—10 drops in each bottle at 3 months—20 drops in each bottle at 6 months—and 3 or 4 teaspoonfuls daily at 12 months of age. A good reliable brand of cod liver oil must be had. During the summer it is best not to give it as it may upset the digestion. Sun baths are even more effective against rickets. The baby is stripped and put out in the direct rays of the sun; first for a few minutes on the front and on the back and gradually increasing the exposure 20 minutes to one-half hour in front and behind. The eyes of course are protected. On very warm days it is better to give them their sun baths early in the morning. The skin should gradually become well tanned all over the body.

STERILIZING THE MILK AND WATER

Dysentery is caused by the dysentery germ which is swallowed. The most frequent source is unclean or improperly kept cow’s milk. The very cleanest cow’s milk which can be bought from the most expensive dairies anywhere contain 5,000 to 10,000 bacteria (germs) in each 15 drops of milk. Of course all of these are not disease-producing germs. It is not uncommon to find milk which comes from carelessly kept dairies a million germs in each 15 drops of milk. Boiling the milk for 3 minutes kills these germs. Any mother who gives her baby unboiled milk under 2 years of age, especially in the summer, is risking her baby’s life.

Unless there are systematic and frequent analyses of the water as found in most of the large cities, the water should be boiled.

SANITARY MEASURES

Another source of dysentery is through the food. This is often contaminated by flies who may carry the dysentery germs on their feet and legs and convey it to the food. No one will ever know how many babies contract dysentery as a result of the pacifier. Flies deposit germs upon these and the baby is stricken down with a very serious illness. Every house, whether in town or country, should be screened against flies—and the pacifier thrown away forever. Any thing which attracts flies about the premises, as open garbage cans, etc., should be corrected. A prize offered the older children for the greatest number of flies “swatted” in the house is a good investment.

ISOLATING CASES OF DYSENTERY

Finally, a common source of dysentery is the little patient. Dysentery, like typhoid fever, is an infectious disease and
may be conveyed to the other children or even adults, without proper precautions. The child should be kept in a room to himself and no close contact with the others in the house allowed. He should have separate bottles and nipples or drinking glass, spoon, dishes, etc. The soiled diapers should immediately be placed in an antiseptic solution in a covered vessel. The hands of the mother or nurse attending the baby should be washed in a mild antiseptic solution every time she changes the baby’s diaper, and before caring for the other children. After the illness the pillows and mattress should be thoroughly sunned.

THE CHILD PAYS

In 1919 when the General Assembly of North Carolina had up for discussion in that body a law requiring the physical examination of school children of the State at periodic intervals, an advanced stand was taken by several members of both houses of the legislature. The bill under discussion was a revival of a law which had been enacted in 1917 along the same line. The 1919 revival was simply a strengthening and an elaboration of the 1917 law, after it had been in force for two years under the direction of the State Board of Health.

The law, as introduced, had already passed the House of Representatives almost without opposition, scarcely a dozen votes being cast against the bill in either of the three readings. When the bill went over to the Senate from the House for consideration by the upper body, one of the Senators from an eastern district, representing a handful of one of the cults who are always opposed to everything, was very active in opposition to the section of the law which made it mandatory upon the parents to have their children examined under the revision of the law. The State Board of Health officials who were sponsors for the bill readily agreed to an amendment of the section making it permissible on the part of the parents by substituting the word “may” for “shall” in the law. On this modification the objections Senator withdrew his objection, and the bill was passed.

The amendment, however, required that an objecting parent must make his objection known in writing and presented before the time for the proposed examination. Thus a veritable tempest in a teapot was averted, as the cohorts, few in numbers but abundant in noise, were getting ready to gather and storm the Legislature in typical fashion as a protest against any restriction in their liberty to do as they pleased about rearing their children with handicaps and all.

When the objection raised by the cult in question was accepted by sponsors of the law and the Senate, the possibility of “martyrdom and opposition,” with its very desirable publicity being eliminated, the cult naturally lost interest in the bill, and today, after more than ten years of service under that law, during which time representatives of the State Board of Health have examined more than a million school children, we have received less than one-half dozen written objections to the execution of the law.

The Senate that year, be it said to its credit, was overwhelmingly in favor of enacting the law as received from the House, but the State Board of Health official who was sponsoring the bill realized the fuel that a little so-called opposition could feed to the flames of prejudice and ignorance, and simply requested the friends of the bill to accept the amendment. As just stated, the wisdom of that course has been more than justified.

The point that we wish to emphasize by recalling the above history is a remark that was made by Honorable John E. Tucker, a Representative in the House from Caswell County, upon being informed by this writer of the Senate action. Mr. Tucker raised his hand and brought his fist down upon his desk with the exclamation that it was a mistake, that the Senate ought not to have concurred in any such objection, because the child would pay. He said that of his own knowledge and acquaintance he knew of
numbers of children who were suffering at that particular moment on account of the ignorance and prejudice of their parents in refusing to have necessary medical and surgical services performed, and he held that the parent under any such circumstances should not have any predominant right in the premises, because such a right meant the sentencing of children under such circumstances to a life of hardship and inequality in the struggle for a living.

Mr. Tucker was undoubtedly right, and much progress has been made during the last ten years in emphasizing these questions. Much progress has been made in overcoming such objections as were so unceasingly argued on the floor of the Senate by the representative of organized ignorance and prejudice on that March day in 1919, when the bill was up for final passage.

There remains yet a great deal to be done, and by way of illustration we are publishing two communications which emphasize this statement with clarity and force. We first quote verbatim a letter received sometime ago by one of the nurses working under the medical inspection law of 1919. This letter explains itself and needs no comment from us. Read it and form your own conclusions. By way of explanation it may be said that this parent's reaction was on account of having received a notice from the nurse that it, in her opinion, might be wise for him to have a dentist and a physician examine into the condition of his child's teeth and her throat with a view to have the dentist and physician advise more expertly what was best to be done for the child. Read the letter.

"Receiving a slip from you stating that my child had to have an Operation for her Tonsils and Adenoids; all so Teeth it has not been but A short time since she had her Teeth cleaned by A Dentist, and over halled and he said that Nature would take care of her teeth for the next Twelve Months, and that is what I am going to stand by. and as for having her Tonsils and Adenoids taken out I am Absolutely against that and am not going to have it dun. Twas the Hand of A sepear GOD; that put them there and as long as she remains my Child I am not going to have them out; She has lived Seven Years and they have never given her one bit of trouble. and why should I go to the ex­penses of having them taken out. and against Nature; because you said that they needed to come out."

The illustration we wish to quote is from Mr. R. R. Clark's Daily Column, published on the editorial page of the Greensboro Daily News.

Before quoting Mr. Clark's comment we might state for the benefit of any reader who had not seen the reference to the welfare department case which he mentioned, that the representatives of the welfare department at Raleigh, after much persuasion, had induced a parent to take his child to a competent surgeon for a very necessary operation. The ignorant parent, just as the child was ready to be operated upon, casually announced that if anything went wrong with the child he...
would sue the surgeon. Naturally there are too many risks about any kind of an operation for a surgeon to be fool enough to deliberately invite trouble, and, of course, this particular surgeon was right then and there done with the whole procedure. The child, of course, in the language of Mr. Tucker, "pays" and pays an enormous price for the ignorance of his parent.

Mr. Clark's interesting comment follows:

"CHILD VICTIMS OF IGNORANCE AND SUPERSTITION"

"Prior to the time when social welfare activities as they are now recognized took hold on the public conscience, before it dawned on the public mind that the rights of the people as a whole were superior to the rights of the individual, previously paramounted, the authority of parents over their offspring was practically unquestioned. Parents could deny children almost any privilege provided by society of the state. They could subject them to the harshest treatment, condemn them by neglect to a life of misery, and so long as they didn't murder them outright, although the killing might be done indirectly, there was no authorized intervention. Compulsory education laws were violently opposed by many of our most prominent leaders as an undue interference with individual rights. If the ignorant parent willed that his children should grow up even as he was, no hand was reached to save the helpless ones from that condition. Incidentally we are as yet none too enthusiastic in the matter of compulsory schooling. We have made some progress in social welfare but we have yet a far piece to go. Two instances recently made public are glaring examples.

"A news story coming out of Raleigh related that a 4-year-old child with a hare lip and cleft palate had almost reached the operating table in a Raleigh hospital when the father interfered and refused to permit the operation. He would not allow the doctors to experiment on his child, he said, and besides it was the wrong time in the moon. The surgeon who in his love for humanity had offered to perform the operation without cost was threatened with a damage suit if he proceeded. Good women of the state board of charities and public welfare, who were instrumental in bringing the child to the hospital, were told that they were being paid to secure subjects for the doctors' experimentation. This man, it is said, is the father of 14 children, 11 of them living, or enduring a bare existence. That breed is most prolific. One child had died after an operation for appendicitis, and the father held that due to the doctors' experimenting. It being unlawful to kill the brute they had to stand by and let him take the harelip child away.

"In another North Carolina town members of the Kiwanis club, interesting themselves in underprivileged children, wanted to take a little boy with club feet to the orthopaedic hospital at Gastonia. The father didn't believe in interfering with the Lord's work and finally threatened violence to the persistent Kiwanians. The Kiwanians didn't weary in well doing. They kept on until they got the child and his parents to the hospital. Then the parents, like the one in Raleigh, weakened after reaching the institution and took the
boy away without the operation. But the Kiwanians didn't quit. After three years' frustrated effort they finally prevailed and a successful operation was performed.

"There are more parents like that than we think—ignorant, superstitious, stubborn, mean. They are themselves the victims of underprivilege. Only the spread of intelligence, education, can gradually eliminate their kind. With that situation—and notwithstanding it may be limited it is very real where it exists—the people who talk of "too much schooling" and who knowingly and willfully do anything to curtail, or prevent the extension of educational opportunities, share the guilt of the ignorant parents in the sins against the children. Yes, they are greater sinners. They know better. The parents are victims of others who denied them the privileges to which they were entitled.

"Meantime legal authority should be provided to rescue children in such instances as those named. It is monstrous to permit ignorance and superstition to reproduce themselves by subjecting the helpless little ones to such cruelty."

The action of the Kiwanis Club, described by Mr. Clark in the case he mentions above, is most encouraging because it represents the mass opinion of a fine body of men throughout the State who are becoming more and more interested in such questions. These men compose the different fellowship clubs, such as Kiwanis and Rotarians, and can do more to break down such barriers of prejudice and ignorance than all the welfare workers and health officers in creation. These men themselves are a part of the general public, and they are not interested professionally in any of these enterprises, but their interest is strictly an unselfish and humanitarian concern.

RESPONSIBILITY FOR HUMAN DEATHS FROM RABIES

We are publishing in this issue a photograph first appearing in the February 4th issue of New York State Board of Health News. The title of the photograph is "Scarred for Life." The photograph was loaned to us by Dr. Richard Slee, one of the district state health officers of Poughkeepsie, New York. Dr. Slee is in charge of four of the thickly populated counties of that section of New York State, under the general direction of the New York State Board of Health at Albany. This photograph clearly illustrates the danger to children on account of roving dogs who are loose in the roads and the city streets without muzzles. This little girl was bitten by one of these ferocious and despicable German police dogs. Fortunately the dog did not have rabies, and so the child has recovered.

About a year ago a little child playing in its own front yard in an eastern North Carolina town was dangerously bitten by one of these same breed of dogs who jumped over the fence into the yard from the street and attacked the child without provocation whatever. These dogs are nearly as large as young horses, and are many times more dangerous roving around than a lion, a bear, or a tiger, set down loose in any of our towns from the middle of the jungles of Africa.

All dogs are dangerous, but the German police dogs are more dangerous than any other kind, because of their huge size and ferocity. They always attack children who are helpless. They attack their victims without provocation, and they generally bite in the face.

The New York State Health News, in speaking of the little girl whose photograph we are publishing, says that "This little girl, living in the city of White Plains, was bitten by an unmuzzled police dog during the first week in January. Fortunately the dog was not rabid, for if he had been it is probable that the girl's life could not have been saved even with use of the intensive method of Pasteur inoculations. In face bit cases the rabies virus usually reaches the brain before immunity can be developed.

"According to the White Plains Reporter for January 5, $9000 was spent by that municipality in an attempt to enforce the dog muzzling ordinances. About 1500 unmuzzled dogs were picked up in the city.
last year, but 419 were redeemed, in most cases without penalty.

"Dr. Ramsdell, city health officer, is quoted as saying:

"Unfortunately, so far as the public is concerned, the dog quarantine is the most unpopular work our department has ever undertaken. It seems too bad that human life must be sacrificed before the public can be aroused to the dog menace. Dogs know no boundary lines and enforcement must be county-wide."

Doctor Slee states in one of his bulletins, issued on January 2, that on November 23 a three and one-half year old child was found in front of its home with eleven face wounds, and being licked by a strange dog. Anti-rabic started November 24, but the child died from rabies on December 11 in Mount Sinai hospital in New York City.

Only a short time ago there occurred in Johnston County, this State, the death of a little negro child from rabies. The
North Carolina State Laboratory of Hygiene records and those of the Vital Statistics department show that there have been quite a few deaths from this disease in the last two or three years in the State of North Carolina.

Rabies is one of the most horrible afflictions that man or beast can suffer. It would be one of the easiest conditions, also, to stamp out completely if a little common sense could supplant some of the false sentimentality about the dog question. If a farmer in this State were to let one of his cows, or sheep, or hogs, or goats, or horses get out in the road and roam around in the roads and fields of other people, get over into the yard where children were playing, although no damage whatever was done to the children, the whole neighborhood would be up in arms and condemn him. The sheriff would probably be out with a warrant, and the farmer would be arrested and would be fined and otherwise man-handled. Everybody would be indignant, and the poor farmer would have a time of it. But the same farmer or city dweller or so-called sportsman is privileged to own twenty-five or thirty police dogs as large as cows. They can be turned loose to roam over the communities at will, committing numerous kinds of depredations, and if any parent of a helpless child is courageous enough to make a protest, he is promptly cussed out by the same farmer or dog owner and by all the (professional) friends of dogs. Some old maid who owns forty or fifty cats (in addition to several dogs), who are almost as dangerous as the dogs from the same disease, will probably begin to recite Senator Vest's great eulogy on the dog as man's best friend.

The writer of this article is not a dog hater; in fact, he likes dogs, the right sort of dogs, but likes dogs in their own environment, under the strict supervision of their owners.

A simple muzzling ordinance properly and efficiently enforced in this State for two or three years at least would eliminate the danger from rabies among stray curs or mongrels, and such an ordinance, applicable all the time for the large sized German police dogs and other vicious beasts of like character, when off of their owners' premises, unless led about on a leash in the hands of their owners, would do away with these terrible accidents which are frequently occurring all about. An effort has been made at a number of sessions of the State Legislature to require such an ordinance, but to no avail.

The muzzling of a dog could not possibly interfere with its breathing or its liberty in any way, but it would protect helpless children from the vicious bites and ensuing deaths which occur without it. This writer is discouraged enough, however, to believe that it would be easier to enforce a corn bread diet or a fast for forty days on every fat man and fat woman in North Carolina every year than it would be to get such a law enacted and enforced.

Nobody seems to think of the helpless children who are exposed in unlimited numbers in every county of the State every day in the year to the large number

This sensible Wake county mother is encouraging the adoption of much cleaner and safer pets for her children than the usual dogs and cats.
of vicious dogs, but everybody seems to think that the dogs must have their liberty and the neighbor who has children and protests must be frowned upon by the privileged owners of dangerous dogs.

As it seems impossible to remove the danger, on account of the reckless and irresponsible dog owners of the State who are in such a vast majority and who seem bent on exercising their prerogatives under the law right on to the end of time, the only thing we can do as health officers and physicians is to advise people what to do when their children are unmercifully chewed up by vicious dogs.

**Some Things Necessary Which Can Be Done To Help Protect The Children When Bitten**

The first thing a parent or guardian should do, when a child is bitten by a dog of any kind or description, is to catch the particular dog and lock it up carefully, feeding it and watching it for a period of fourteen days. If by the end of that period the dog does not show any symptoms of illness or peculiarities of any kind, it may be safely concluded that the dog is not rabid. This may be done if the child is bitten on the lower extremities or hands, and it would be safe to commence the Pasteur treatment at the end of this so-called quarantine period for the dog in case it developed rabies. If the bite should happen to be on the face or neck or shoulders or the upper part of the body, the Pasteur treatment should be commenced at once. The dog, however, should be confined, and it would be safe to discontinue the Pasteur treatment before it is completed, provided the dog shows no indications of having rabies.

When a child who is bitten is taken to the doctor, the first thing, of course, necessary is to thoroughly cauterize the wound or wounds with fuming nitric acid. This is not diluted nitric acid, but what is known in medical terms as "fuming nitric acid." Every drug store in North Carolina should have this in the form of a reliable product. Every clerk in the store should know where it is kept, and what it is for, and it should be immediately available on any doctor's hurried call for it. Every minute of delay in the case of a bite from a rabid dog, especially on the face or upper extremities, means that much greater danger of death to the child. The wound should be thoroughly cauterized, and in case of extensive wounds, the child should be given an anaesthetic, so that the work may be thoroughly done. Then the proper surgical dressings, which the doctor knows how to apply, should be used.

If the custom of killing the dog is followed, for the purpose of sending the head of the dog to the State Laboratory for examination, the head should be severed from the shoulders well down close to the shoulders of the dog, and its head or back of its neck should not be mutilated in any way. The head should be immediately packed in a box with plenty of ice, winter or summer, and sent by express or parcel post to the State Laboratory, having the package plainly marked "Dog Head for Examination for Rabies" on the outside of the package. If the dog's head is mutilated, the Laboratory may be unable to ascertain the presence of the infection when it examines the dog's brain.

The Pasteur treatment at this time is supplied to any health officer or physician in the State instantly on call to the Laboratory. This means the saving of a great deal of time and expensive trips to Raleigh which used to be necessary.

It is hardly necessary to say that every

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*These Currituck county twins weighed 5 and 5½ lbs. respectively at birth. Look at them now in their home-made "baby pen."*
hospital in the State should keep a supply of fuming nitric acid for instant use. A hospital that does not have the Pasteur treatment available immediately and does not keep a supply of fuming nitric acid on hand, may be compared to a health officer who does not keep plenty of fresh vaccine at his elbow all the time. The reader may think that we are going into unnecessary details, but we know better. The lack of attention to careful details on somebody's part frequently results in death to some helpless innocent individual. These suggestions can do no harm, and the doctor and the hospital who is fully equipped with this material can smile and pass over this paragraph, and the doctor and the hospital who may not be fully equipped for this emergency can take the hint and lay in a supply and keep it renewed.

It is probably no use to offer such a request, but we cannot conclude this article any better than to appeal to all responsible owners of dogs, especially of the large and vicious species like the German police dogs, to keep them on their own premises all the time, unless the dogs go out with the owners and are under full control of the owner at all times when away from his own back yard. If this policy is followed, and all the strays and mongrels are promptly disposed of, and the highways and premises kept clear of this nuisance, the casualties from the horrible disease of human rabies can be gradually brought under control.

AN INVESTMENT THAT PAYS BIG DIVIDENDS

BY

SUDIE E. PYATT

Monte Vista dairy farm nestled at the foot of green forest-clad mountains at the head of beautiful Cherry Creek Valley. Visitors to the farm always spoke in rapturous terms of the view of the mountains and the valley, and told attractive, young Mrs. Wood, the wife of the dairy farm owner, that they envied her in her country home amid such wonderful surroundings.

At first Sarah Wood had flushed prettily, as became a fond bride, and thanked the visitors for their compliments. As two years of battling flies in the screenless, six-room house, doing without running water, a bathtub, toilet, lavatory and lights, the eager flush faded from her cheeks and she forgot to thank the visitors for the nice things they said about the view.

And envy her? Sarah envied them, their tightly screened homes, running water, baths, sanitary toilets and electric lights.

Sarah and Sylvester hadn't been married long before Sarah asked her husband in a shy, sweet young bride way if they could not have the house screened, and a sanitary toilet, according to the state regulations, built. She didn't dare to go so far as to ask for electric lights and running water—not yet! She felt if she could get the screens and the sanitary toilet that her housekeeping in the house that Sylvester's father had built of logs brought down from the mountain and sawed at the valley mill, would be bearable.

"Why, honey!" Sylvester was shocked. "Mother kept house here for fifteen years before she died without a screen, and I never recollect hearing her make any complaint about flies. If you keep things clean flies won't bother you."

Sarah's cheeks flushed a dull red. She had graduated from the home economics department of a good junior college. She ought to know how to keep house as well as Sylvester's mother had. Sarah knew no woman alive could keep a house on a farm or anywhere else for that matter, spottless enough to keep flies out.

And about the privy? Sylvester didn't even consider that of enough importance to discuss.

Sarah again asked Sylvester to screen the house, and build a sanitary toilet.
won't cost much to install the screens and build the toilet," she pleaded.

"I know, Sarah, but right now I'm trying to build the herd up, and I need a new silo. Every cent I can get won't be too much to invest in these. By the time I buy the materials at their present high cost and pay a workman, I could buy a cow for what it would cost to do what you want done. I haven't any money to spend on the house now."

"Well, if you aren't going to put in the screens, or build a privy we'd both better go to the Health Department the next time we're in town and take the typhoid fever treatments. We should take them anyway, but as the house isn't screened and we don't have a sanitary toilet they'll be the best protection we can secure," Sarah said, wisely planning for her own and her husband's health.

"Take the typhoid fever treatments? Why girl, I haven't time to bother with them!" Sylvester was surprised that his wife would even suggest such a thing. "Our water comes from the spring up on the mountain, and there's nothing around to contaminate it. There's no danger of our having typhoid fever out here. Besides people don't die of typhoid as they used to."

"Why don't they die of it, as they used to?" Sarah asked, and answered her own question. "Because people live under better sanitary conditions than they did with screened houses and clean toilets that aren't breeding places for flies, and take the typhoid fever treatments."

The next time Sarah and Sylvester went into town Sarah visited the Health Department for the typhoid fever treatment. Sylvester stuck to his belief that he couldn't have typhoid, and wouldn't have the treatments.

After Sylvester persistently refused to put in screens or build a sanitary privy, Sarah stopped bothering him, and combated the flies with traps, poison, swatters, anything that happened to be at hand, and made out with the old type, unsanitary privy as best she could.

It was not until the day she was absolutely sure that she and Sylvester were going to have a baby that she resorted to makeshift sanitary measures. Never in the world would it do to attempt to raise a baby in that fly-infested house. If she told Sylvester that she could not care for their expected baby in a screenless house, he would laugh at her, and say he just had to have another cow. Anyway his mother had raised six children—which she had, two of whom had died in babyhood—without success.
Sarah figured out just how much the screens and privy would cost. Not so much, but more money than she had to spend. It didn’t occur to her that Sylvester would be angry if she went ahead and had the screens installed and the privy built. But that is just what it did. Pig-headed man that he was. She didn’t have the money for a thorough screening of the house, so she bought cheesecloth, tacked it over the lower portion of all the windows, and with her own hands made and hung rough frames for cheesecloth screen doors.

For the privy she purchased two large covered garbage cans, intending to throw lime into them, and have the farm hired man empty them, burying the contents when they were filled.

The purchase of the cheesecloth and the two garbage cans exhausted Sarah’s small store of cash, but she was happy in installing these small sanitary aids at Monte Vista farm house.

Sylvester was away visiting a dairy farm, where he intended buying another Jersey cow, the day Sarah and the hired man put up the screens. He didn’t get home until late that night.

“Sarah, what in the world have you been doing to the doors and windows?” was his greeting to his sleepy wife.

“Uh?” Sarah asked, not fully awake.

“Oh! It is uh!” Sylvester said scornfully. “Why, you’ve got the house looking like it was dressed for a ghosts’ meeting with that white stuff on the doors and windows.”

“It’s mosquito netting screens to keep the flies out,” Sarah explained.

“Huh?” Sylvester’s voice was disdainful. “Didn’t I tell you if you kept the house clean flies wouldn’t bother you. Mother kept house here for fifteen years, and her house was the envy of every woman in the valley, she kept it so well.”

Sarah made no response to her husband’s statement. She had the mosquito netting screens, and she felt satisfied for a time.

The baby came, a great, big healthy boy, of whom Sylvester was very proud. One of Sarah’s first thoughts when she held the little mite in her arms was that the mosquito netting screens with other aids to the destruction of flies had proven fairly effective. She wouldn’t have to stand the torture of seeing, and the risk to her baby’s health, of having flies crawl all over its tiny face and hands, and even get into its nostrils, its eyes and mouth as flies will on an unprotected, helpless babe.

One morning when the baby was about three months old Sylvester came into the kitchen with an armful of wood. In opening the mosquito netting screened kitchen door, one of the pieces of wood caught in the netting. When Sylvester fretfully tried to untangle the wood from the netting before a great rent in it, lost his balance on the steps and tumbled down them, bruising his knee and scattering the wood.

Sylvester hadn’t been feeling well for several days, and his business wasn’t going just as he wished. So when the mosquito netting screen, of which he had never approved, caused him a painful accident he was angry. If Sylvester had been well, perhaps things wouldn’t have happened just as they did.

Before noon he had the hired man take

Note the fine pose of this nine months old baby of North Carolina parents now temporarily sojourning in Alabama.
May, 1929

THE HEALTH BULLETIN

down the netting screens on both doors, and at all of the windows. He had been wanting an excuse to take them down for a long time. The neighbors had all laughed at them for having such screens on their house. He wasn't going to run any more risks of having a broken leg, losing all of the time and money it would cause.

One word led to another, and Sylvester and Sarah had the first, real big quarrel of their two years of married life. That night Sarah caught the bus at the valley store to go to her mother.

"There were flies everywhere!" Sarah sobbed, as her mother held her in her arms in the next little home that she and Sarah's father lived in.

The house was small, only four rooms and an entrance hall, but it was well screened. There was running water in the house that came from a force pump, and lights from the small farm's own lighting plant.

"I-I-never could—get him to understand," Sarah said brokenly. "He said his mother never had any flies, and insinuated I wasn't a good housekeeper, or I wouldn't have any either. This morning when he had the mosquito netting screens I'd put up taken down, for the baby's sake, I couldn't stand it any longer."

"Sh-h! Honey, you mustn't take on like that," Mrs. More smoothed her daughter's tumbled hair. "It's not good for you or the baby."

At the mention of the baby, Sarah bit her lip. "I'm sorry I gave my baby such a cross, cranky father as Sylvester is."

"Now, dear," Mrs. More soothed, "you go to sleep here in your old room. By tomorrow you'll be feeling better. If Sylvester isn't over here right away I'll have papa drive me over to see him. I'll have a long talk with him, and fix up things all right."

Sylvester wasn't over the next day, the next, nor the next.

"He can stay away all his life if he wants to," Sarah said on the first day. On the second day she made her statement a bit softer. By the third day she wasn't saying anything.

After breakfast on the fourth day Mrs. More said: "Papa, you get the car out, and get ready to drive me and Sarah over to Monte Vista."

"Sarah don't want to go to Monte Vista," Mr. More said looking at his daughter, who only raised great, sad grey eyes to her father's kindly inquiring ones.

"The car's not in such good running order, but I guess it'll take us," Mr. More said, as he got up from breakfast, and Sarah breathed a short prayer of thanks for two such understanding parents as hers were.

Perhaps that was why she had found living with Sylvester so hard. Her parents understood everything, and he didn't seem to understand anything.

Arrived at Monte Vista there didn't appear to be anyone in the house, or about the yard. Shag, the farm collie, barked belligerently at the car and its occupants until Sarah with the baby in her arms got

An experienced nurse is demonstrating to a Knott's Island mother how to give her baby a needed daily sun-bath prescribed by the physician. This is the last lesson as such extensive exposure at first would be dangerous.
out of the car. Then he came toward her waving his plummy tail in happy greeting.

"Shag, old fellow, where's your master?" Sarah asked. In answer the dog only waved his tail faster, and ran off toward the house.

"Sylvester must be at the barn, or perhaps he's gone to town," Sarah said as she led her father and mother to the house.

"We'll go in through the kitchen. The back door will be the one most likely to be unlocked."

There was a pail of garbage on the kitchen steps, over which an army of flies buzzed. There was another army about the unscreened door, and when Sarah opened it a buzzing of thousands of flies greeted her from the untidy kitchen, where it appeared no dishes had been washed since she had left three days before. A can of milk on a table was the center of a fly gathering, and kept drawing the winged, black insect pests, though dozens of drowned and struggling flies floated on its surface.

Sarah pointed to the milk can in disgust. It was an eloquent witness, and with the buzzing of the flies not altogether a silent one, of all she had told her parents of her trials in her husband's screenless home.

"I could get along without lights, water and a bathroom if the house was only screened, and there was a sanitary privy," Sarah said.

"Come in my room, mother, and take off your hat and coat, and I'll get busy and see if I can't clean up the kitchen and get rid of some of the flies?"

Sarah led the way to the bedroom. She opened the door, then stopped dead in her tracks. Sylvester was lying on the bed, around which hundreds of flies made a merry, singing buzz, a very sick man, if Sarah was any judge of sick men.

"What is the matter, Sylvester?" Sarah cried, hurrying to the side of the husband from whom she had run away three days before.

"Doctor says it's typhoid fever," Sylvester answered.

Sarah fanned a couple of flies from her husband's forehead.

"I know you'll say it's the flies, and my not taking the typhoid treatment," Sylvester said, "and you're right. Doctor Johnson came to see me last night. He says my hired man's a 'carrier', had typhoid fever a number of years ago, and still excretes the germs in his bowel movements. Flies carried the germs from that old open privy to some food I ate. I hadn't taken the typhoid treatments, and here I am, laid up with a genuine case of typhoid fever, and the sale of my milk stopped because I've got it.

"Sylvester, if you'd only screened the house and built the sanitary privy as I begged you to," Sarah chided, gently. "We'll lose more money on your doctor's bill, and the loss from the sale of the milk than the screens and privy would have cost."

"I knew you'd say that, but mama and papa lived here for fifteen years without a case of typhoid," Sylvester defended himself.

Sarah's lips formed into a straight, firm line. "Even if you are a sick man, Sylvester..."
ter Wood, and my husband, you've got the least sense of any man I ever knew.

Almost from the hour Sarah returned Sylvester grew worse. It took all of her skill, and the doctor's to turn the tide of the fever that threatened to destroy him. Sarah felt very thankful that she, herself, had received the typhoid treatments, and that she knew enough to nurse her husband in his illness and protect herself and others from possible infection with the germs of his disease.

Mrs. More stayed with her daughter to help with the baby and the housekeeping.

Gradually Sylvester grew better. Sarah had her hands full with the nursing of her husband, but they were not too full to order first-class heavy wire screens for every door and window in the house, and secure a good carpenter to install them. The screens attended to she found another carpenter to set about building a sanitary privy without any loss of time. The privy, she told the carpenter, must follow the most approved plans prepared by the State Board of Health for the erection of sanitary privies. Plans for it she secured from the County Health Department.

The matter of the cost of the screens and privy, and her husband's approval of what she was doing Sarah gave no thought. Sylvester was a very ill man, and she had taken the management of their affairs into her own hands. When he got well if he didn't like the way she'd spent the money, he'd just have to dislike it.

The sale of Monte Vista milk had been stopped as soon as it was learned that Sylvester had typhoid. With no income Monte Vista would soon be in desperate financial condition, as Sylvester had said all spring, that they were operating on a very small margin, making scarcely any profits.

Sarah called the County Health Department by telephone from the valley store, and learned from the Health Officer that if the hired man who had been proven a "carrier" had been discharged, a sanitary privy built, and in use, the house screened and all refuse from the sick man's body disposed of by burning and the use of proper disinfectants, there would be no danger to anyone in buying Monte Vista milk, providing she, who nursed her husband did not come in contact with the cows or milk that was for sale.

Sarah replied that all of these conditions had been met with. That she was nursing Mr. Wood, but went nowhere about the cows or milk. The Health Officer came out to see if he considered everything safe, then kindly offered to see the manager of the creamery that bought their milk, and state that Monte Vista milk would be of no danger to anyone. He did so, and the next day the milk began selling again.

Under Sarah's faithful care Sylvester grew slowly better.

Four weeks after she had returned to Monte Vista Sarah brought Sylvester a check for $500, for the sale for slaughter of some of the farm's poor milk producers.

"Sylvester Wood," Sarah said. "I'm going to take this $500 and have a gravity water line run to that spring up on the mountain, a bathroom fitted up with tub, lavatory and toilet and a sink placed in the kitchen."

Sarah's husband said that the money was his, and she had no right to spend it that way without his consent, Sylvester's wife
told him the money wasn't his. If it hadn't been for her arrangements he would have lost more than $500 from the sale of milk while he had been ill.

Then Sylvester told his wife she was a great girl, and he certainly was proud he'd married her. It was all right about her spending the money for running water into the house. Just before he had gotten sick he had seen the power company and arranged to have them put in a line to Monte Vista. He saw that she'd had the house screened. It was a good thing. He was glad that she had done it.

The water, lights and screens would cost money, but they were a worthwhile investment from any viewpoint. If they ever wanted to sell the place they could get enough additional for it because of the installation of the improvements to more than pay for the cost of putting them in. Then there was the matter of health. Never again, Sylvester told his wife, would he say that a screenless house could be kept rid of flies.

"If it hadn't been for what you did about the milk we'd have lost more money from the sale of the milk alone, than the first installation of the lights and water would cost. From now on I'm marking it down in my bank book that money spent for anything that will aid our family to secure and retain good health is an investment that will pay big dividends."

Out in the kitchen, after her talk with her husband, Sarah told her mother that Sylvester was a darling, and she was happy that she had given her baby such a sweet, understanding father.

Mrs. More smiled fondly at her daughter, while she neatly swatted a fly that had somehow gotten into the immaculate screened kitchen. She didn't remind her daughter that once she had said something very different about the father of her son. Mrs. More had lived long enough to know that with young married couples, and others, too, it is best to let by-gones be by-gones.

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EPIDEMIC MENINGITIS

During the past year epidemic meningitis, which is caused by germs known as meningococci, has been unduly prevalent in many parts of the country, especially the northeastern states, including New York and more recently in the states of California and Texas. The larger cities and centers of population have suffered more than the rural districts.

This is a terrible disease, and may be spread by carriers just like typhoid. The carriers may be persons recovering from acute attacks, or, as in the case of typhoid, they may be healthy carriers. The disease, of course, may be spread by contact with other cases. The disease is not as highly communicable as measles and many other contagious diseases, but it is sufficiently communicable to afford a serious menace to any community in which it appears. It is one of the most dangerous of the communicable diseases and has a very high death rate per case. While children, it very young people have it occasionally, it is more prevalent in young adults than in probably any other class. It is the disease that attacks most often the healthy young...
DISCOVERIES ABOUT DIET IMPROVE HEALTH

From a purely selfish and commercial standpoint the discoveries that have been made about the selection of food and its preparation, and food values, and diet in general during the last generation have benefited the people of North Carolina immensely. During the last generation there have been more discoveries as to the importance of certain elements which go to constitute the proper food for human beings to eat in order to maintain good health than have ever been made before in any period of the world’s history.

As we have had occasion to repeat in these columns many times, notwithstanding the great industrial expansion in North Carolina, the State remains largely an agricultural people. Numbers of counties in the State have no manufacturing of any character whatever, the sole occupation of the people being agriculture, with the exception of the small item of public construction, such as roads, and the few people who are engaged in the lumber industry.

The discoveries about food have centered the attention of the world upon the importance and desirability from the standpoint of good health of every family and individual consuming every day fresh vegetables, dairy products, and fruit. As certain classes of these foods can and are produced abundantly in this State, we not only have the best available food at our doors, which only requires our own efforts to produce, but it affords a market in our industrial areas for the products of the vegetable garden and the farm to a greater extent than ever before.

People now in their fifties and sixties can easily remember when the emphasis was beginning to be placed on calories. A diet to be proper should be a diet balanced by the proper number of calories, meaning in its last analysis heat units. This, of course, is on the principle that the body is a furnace, and that body heat must be kept up through the proper fuel, meaning the foods necessary to keep the machine going.

From time to time scientists about over the world, experimenting in this field, would discover the importance of different food elements required for good health. Nowadays the calorie question is secondary, and only the very fat folks who want to reduce their weight are extraordinarily interested in the calorie question. This is because of the discoveries of certain vital forces or vital elements in food which have been designated as vitamins. These discoveries are of comparatively recent origin.

As many people in North Carolina have suffered illness and death during the last few years from the one disease known as pellagra, which is a diet deficiency disease, we may better illustrate the importance of vitamins in the diet by stating that this disease is now known to be prevented through what is known as a pellagra preventing vitamin in the diet. This discovery has not been chemically isolated yet,
great deal. As in the case with diphtheria and some other severe diseases, one attack does not confer immunity. The disease occurs any time, anywhere, among any class of the population. No place on the earth’s surface, where people congregate, has been found to be immune from attack, and no class of people, old or young, rich or poor, has any reason to expect immunity. One of the chief modes of prevention is to avoid thickly congegrated crowds of people in hot rooms, and to avoid the barrage from coughs and sneezes, or from loud talking persons who insist on getting their faces close to yours while they are spreading this barrage.
but it has been located definitely as being present in certain foods. A person who partakes of sufficient quantities of the foods known to contain the pellagra preventing vitamins will not have that disease, and those who do not partake of foods containing this vital principle may have the disease; in fact, many thousands of them have had it, and many hundreds of them have died in North Carolina as a consequence.

Only a few years ago specialists in the diseases of children commenced to urge the parents of their little patients to supplement the milk diet, even of breast-fed children, and especially of children fed on modified cow’s milk, with a certain quantity of orange juice or tomato juice each day. The reason for that was that they found out that there was something in these two products which would prevent scurvy and similar ailments of babies. They found out only a few years ago, acting on the same principles, that there is something in cod liver oil which prevents rickets developing in growing children, and even when rickets had developed, if the stage of development was not too advanced, a sufficient quantity of cod liver oil, when assimilated by the child’s system, would overcome the effect of the rickets. The same kind of principle is present to a lesser extent in good cow’s butter, also in the yolk of eggs.

Many authorities think that vitamins in food are really not substances which can be isolated in chemical fashion at all, but think that these principles constitute a kind of vital action or energy, so to speak. The late Dr. Goldberger definitely stated that in his opinion these principles were actually chemical substances, and for this reason would sooner or later be isolated, so that doctors treating patients or giving preventive treatment for certain diseases would be able to prescribe these principles in chemical form.

It is sufficient for us to know that if the food we eat every day embraces a sufficient quantity of fresh vegetables and fresh fruits, some cooked and uncooked, of each class of foods, together with a reasonable quantity of milk and butter, some meats, and with other concomitants of good palatable food, that we are protecting ourselves against deficiency diseases. It is necessary for the diet to not only comprise these different kind of foods, but they must be prepared, when cooked, properly, and when served in the raw state, they must be served in a palatable manner, and in such a clean state as to avoid the contraction of certain diseases that might be contracted from eating raw foods.

Instead of placing the emphasis on a certain kind of food—for example, as the packers would on the necessity of meat in the diet, or as fruit growers, of the necessity of fruits in the diet—we should place the emphasis on a variable balanced diet containing the essential principles of all the elements necessary in food to maintain good health. With the single exception of oranges and grape fruit we have all these essential food elements as native products right here in our own State. While we do not produce cod liver oil as a commercial product, good first class butter is the next best thing to it, and we do produce that, and should produce a great deal more of it than we do. In place of oranges and grape fruit we have tomatoes, which we could produce in the fresh and canned state in sufficient quantities to supply our entire population; and tomato juice is a substitute of approved quality for the essentials for which orange or grape fruit is recommended.

For the information of those of our readers who may not have tables at hand when they read in the papers about vitamins so and so contained in such and such a food, it will not be amiss for us to enumerate some of the vitamins contained in certain foods. The list of vitamins is by no means complete, but at present the four first discovered vitamins—A, B, C and D—comprise the bulk of the interest in the subject among home dieticians.

First, Vitamin A. That is called a growth-promoting vitamin. This vitamin also helps to prevent rickets. (Everybody
has a different list. Let us get together the ones they all agree on. This vitamin is present in the green leaves of vegetables, in cod liver oil, and in certain other liver oils; in butter, eggs, whole milk; and in addition to the green leafy vegetables it is contained to some extent in sweet potatoes, and in string beans.

Vitamin B. This vitamin is called an antineuritic vitamin. It also promotes growth and prevents many dietary deficiency diseases. This vitamin is present also in the green leaves of vegetables, present in grain, in meat foods of different kinds, in yeast, and also to some extent in eggs and whole milk.

Vitamin C. This is known as the antiscorbutic vitamin. It is present in the green leaves of growing vegetables. It is present in abundance in citrus fruits and in tomatoes, and along with vitamin B it is present in such fruit as apples. It is present in white potatoes and strawberries, as well as in the citrus fruits.

Vitamin D is called the antirachitic vitamin. This vitamin is present, of course, in cod liver oil, as well as various other liver oils, and is so abundantly present in cod liver oil as to account for its being regarded as a specific against rickets. This vitamin is also present in the yolk of eggs.

The principles of disease prevention exemplified in this particular vitamin are also present in sunshine and the ultraviolet ray produced artificially, and certain foods, when subject to these radiations, are said to be richer in this vitamin than otherwise. In giving cod liver oil for a disease like rickets abundant exposure to natural sunlight is always advised as a part of the treatment, for the reason that one supplements the action of the other in preventing and curing that condition.

There are other vitamins, but the foregoing have been more definitely located in the foods mentioned, and therefore it may be said with more assurance of truth that they represent things that have been fairly well agreed upon as foods.

RELATIONSHIP OF FAMILY DOCTOR TO PRE-SCHOOL CHILDREN

By

J. BUREN SIDBURY, M. D., Wilmington, N. C.

(Address made at State Health Officers Meeting, Greensboro, April 15, 1929)

The responsibility of the family physician for the pre-school child begins with the prenatal period and not at the so-called pre-school period—that between 2 and 6 years. For the work along this line to be most productive of good the family doctor must give the best advice and care during the prenatal period in order that the baby may have a good start in the world with all possible handicaps removed.

It is sometimes advisable to give an expectant mother cod-liver oil, or exposure to Quartz Light, to avoid rickets in the infant. Milk and fresh vegetables are essential in the mother's diet, to the proper development of teeth and bone in the unborn baby.

When we are told that one out of every 9 to 12 babies born alive dies before he is one month of age; and that 50 per cent of all deaths that occur in the first year of life occur in the first month; when we are told later, that 20 to 25 per cent of all school children are under the normal weight for their age and that 70 per cent of all school children have more or less physical defects, we must realize the stupendousness of the problem. We were shocked, indeed, when the statistics of the Surgeon General's office in the late war showed us that one-third of our youth of today was unfit for military service. To meet conditions, we must assume our responsibility for the pre-school child. If these conditions are discovered and remedied in this age period, much permanent good can be accomplish-
ed. How shall we proceed with this undertaking? It can only be accomplished by periodic examination of the well child from infancy to school age.

It is an acknowledged fact that the age from 2 to 6 years is probably the most neglected period in the life of the child and is the most productive of good or bad in his whole physical life. The child's future may be made or marred in proportion to how well this age period is protected.

The public is well educated to the importance of the proper medical supervision of the infant. Probably the greatest advance in medicine in recent years is in the care and feeding of infants. Our steadily decreasing infant death rate is the result, in part at least, of our knowledge of infant feeding. To Dr. McKim Marriott, of St. Louis, should be given a great share of credit for reduced infant mortality in gastro-intestinal disorders in North Carolina and the South, by his efforts to popularize the use of Lactic-acid milk.

In this period of infancy, the mother has been trained to the importance of seeking professional advice for the proper food and health habits of the baby. She is given specific instructions about the kind of food, the amount to be given and the hours. Every hour of the day is accounted for in the little patient's schedule.

Unfortunately, this is not true with the pre-school child. When we think of it, it seems rather strange that we should be so particular in one period and so lax in another, when these periods are so closely related. We so frequently see a most painstaking mother relax her vigilance over her infant when he reaches the age of 18 months or 2 years. He is allowed, to a greater or less extent, to choose his own food, partake of sweets and drinks at irregular hours, and, as a result faulty food and health habits are acquired, which so often lead to that common picture, "Malnutrition". Too little attention is paid to the daily nap. The pre-school child is not required to continue the daily nap and the natural consequences of over-fatigue, loss of appetite and loss of weight ensue. This, in turn, produces a cranky, irritable child, who becomes more susceptible to the ordinary infections of childhood.

We must teach the mothers of our little patients that it will be necessary to see the baby at regular intervals, after he is 2 years of age, if we expect to keep him in good physical condition. It will be necessary to see him at least twice each year, to check upon any disease condition, that might not be apparent to her inexperienced eye.

**Physical Defects**

It is in this period that physical defects are most common and are productive of the greatest damage to the growing child.

Naso-pharyngeal obstruction is probably the most common cause of malnutrition in the pre-school child, and should be attended to promptly, if permanent injury to the child is to be avoided. Enlarged and infected adenoids and tonsils rank first as offenders in this group and seem to be most difficult to get properly treated.

So often do I have mothers come to...
me with the history of repeated head
colds. The mother says the child has
had a cold all winter and has an attack
of fever and vomiting every month. She
admits that her doctor says he has en-
larged, infected tonsils, but she has been
told that they should not be taken out
until he is 6 years old. Now there is just
as much logic in keeping those tonsils in
that child as it would be to tell that
mother that her boy has acute appendicitis,
or acute osteomyelitis, but she should wait
until he is older to have him operated
on, for he might stand the anaesthetic
better at 10 years, and he might get over
this attack or "outgrow it". If this infant,
or child, is young enough to have infection
in his tonsils, which he does not throw off,
he is old enough to have them removed.
Age has nothing, whatever, to do with
the indications for removal of infected
tonsils. If the child, or infant, has in-
fected adenoids or tonsils which are giving
symptoms, they should be removed at
once. Only three months ago, I had an
infant's adenoids and tonsils removed at
8 months. For three or four months she
had recurring attacks of head colds, tons-
ilitis and abcessed ears. Her appetite was
very poor and her weight was stationary.
As soon as her tonsils and adenoids were
removed she began to eat well, has gained
four pounds in two months and has taken
all feedings eagerly since then.

Another child was seen first at 14 months,
with a history of repeated attacks of fever
since 3 months of age. Each attack
would last 10 to 21 days. She would
show a red throat and pus in her urine
and ran a temperature of 101 to 105.
Her tonsils were removed at 14 months
and she has been well for the past ten
months. She returned four days ago with
a history of fever, 103, for three weeks,
with pus in her urine. An X-ray of her
chest was negative, but her right maxil-
lar sinus was filled with pus. This is
one of the complications of naso-phary-
genal obstruction, which occur when al-

dowed to go untreated.

Vital statistics tell us that 90 per cent
of all cases of whooping cough and measles
occur under the age of 5 years, and that
95 per cent of the deaths of these diseases
occur under 5 years. More than 50,000
children die from diphtheria and scarlet
fever annually in America, and 70 per cent
of this number die before they reach 5
years (Emerson). According to Frederick
Crum, "One-fourth of all deaths occur
before the end of the fifth year, or six
times as many as in the next 10 years
of life."

Complications

Complications following the contagious
and infectious diseases are often more
serious than the diseases. These take more
lives and cause more damage than the
diseases themselves. How often can we
trace causes of malnutrition to some
previous attack of whooping-cough, scarlet
fever or diphtheria? The malnourished
child is especially susceptible to infection
and it is most important to keep the
weight of the pre-school child up to par.
Infections, and their sequelae, lower the
resistance of the child and retard both
mental and physical development. The
impression that children have to have
these diseases and the "earlier they have
and get rid of them the better", is
dangerous teaching. My contention is "the
longer the child can put off having these

Sunshine and shadows. Propheitic of
days to come. But happy now.
contagious and infectious diseases, the better. The older the child is the better they withstand these infections. It is not necessary that they should have them all. It is our duty to avoid any and all infections when possible.

**DENTAL CARIES**

Dental caries rank very high as physical defects in the school child as well as in the pre-school child. Each child should be required to visit a good dentist every four months. The teeth should be cleaned and any decays attended to. If the decay is so large that the pulp of the tooth has been entered only extraction will suffice. It will invariably become infected and be a source of infection to the child. Many dentists will advise letting these decayed teeth alone. They tell the mother "they will soon come out anyway." This is bad advice and will not be given by the best dentists. Most dentists give this advice because they do not want to work on children's teeth, because "most children make bad patients". A "gum boil" or abscessed tooth is a potential focus of infection and frequently causes pyelitis. Gum boils should be promptly and properly treated.

It is our duty as family doctors to take more interest in the well child. We should impress upon the mother the importance of periodic physical examinations of the so-called well child, as a preventive measure. We must impress upon the mother the dangers of the common head cold. It is the forerunner of otitis media, mastoiditis, sinusitis, pneumonia and many other diseases. We must stress the importance of keeping the pre-school child from exposure to contagious diseases. Whenever possible the child should be rendered immune to these diseases. We must preach the gospel of the Schick Test and toxinantitoxin as a preventative of diphtheria and urge all mothers to give the toxinantitoxin as a preventative of diphtheria 9 months of age. We should insist that every child, who enters school for the first time, shall have a certificate of successful vaccination against diphtheria and smallpox. Typhoid fever, diphtheria and smallpox can be eliminated by vaccination and we should urge all our patients to take advantage of it.

Whenever there is an epidemic in the town, or country, all pre-school children should be kept at home and protected from exposure. They withstand these diseases much better after 5 years.

Tuberculosis was once considered a fatal disease for infants and children. Now we know that tuberculosis in children occurs more often than we once thought. We also know that it can be cured if an early diagnosis is made and proper treatment is given.

We, as physicians, must first recognize the fact that tuberculosis in children is usually not pulmonary, but granular, and that it cannot be detected by the stethoscope. It can be detected rather simply by the use of the skin test and the X-ray, in combination with clinical symptoms such as fever, loss in weight, night sweats, loss of appetite. This combination is positive evidence of the disease. All of these signs may be present without any signs in the lung. This is the usual picture. If these cases are diagnosed early, they can be cured and pulmonary tuberculosis prevented in adult life.

Another, and as important a duty, as a diagnosis of the case, is our duty to find the source of the infection. This can only be found out by having every adult, who comes in direct contact with the child, examined for T. B. It is often a parent, a grandparent or servant, who has had "cough for years". The location and treatment of this infected person are important steps in the treatment of the disease.

Only 10 months ago I had a case of tuberculosis-meningitis in an infant of 1 year, who contracted the disease from the father. He stated that he was perfectly well. He later said that he had had "flu" 6 months before and had had a slight cough "in the early morning" since then. He was examined and found to be an open case of pulmonary tuberculosis. His sputum was loaded with Tubercle Bacilli. The baby died. The father is now in the N. C. State Sanatorium and Dr. McCain says he is going to get well.
Again let me emphasize the importance of periodic examination of all ages. We must keep in touch with the child from infancy to old age, if we expect to reduce our infant child mortality. It can be done if the family doctors will take the responsibility of carrying this message to their patients. We must pay more attention to the malnourished child. The malnourished child is not a well child and should be carefully studied and the cause of his malnutrition determined and corrected.

It should be our ambition to have every child, who enters school for the first time, physically up to par.

It is an economic problem as well. It has been shown that some 20 per cent of all children in school are repeaters. It is estimated that it costs New Hanover County $88,958.70 in 1925 for duplicate teaching, “teaching the repeaters.” All of these repeaters have some physical handicaps, which may be remedied.

Emerson says, “No child should be admitted, even to the kindergarten, until every effort has been made to bring him up to normal weight. When the malnourished child is not given such care during the pre-school period, the added strain of school life makes it increasingly difficult to regain the ground lost, and he risks the danger of falling farther and farther below his normal standards of growth and health.”

If this problem is to be met effectively, we must adopt some systematic physical examination for all ages.

During the first year the well infant should be seen by his physician twice each month for the first 6 months and once each month for the second six months of his life. During the second year he should be seen at least once every two months. From 2 to 3 years the baby should be seen every four months and from 3 years to 12 years the child should be seen twice each year.

It will be only through systematic periodic examinations that our incidence of disease will be reduced, our span of life lengthened and tuberculosis, heart disease, and kidney disease of the adults reduced to the minimum.

### COLIC

**By**

NEWTON G. WILSON, M. D.

Colic is usually defined as a pain, occurring in a hollow viscus. Any pain of moderate or severe intensity occurring in any part of the abdomen is designated colic, when symptoms are being related to the doctor.

In adults colic is not so frequent as in infancy and childhood but its import is apt to be more serious. Colicky pains of different degrees of severity are an initial symptom in appendicitis, pancreatitis, peritonitis, intussusception, salpingitis, gastric or duodenal ulcer, gallstones, kidney stones and flatulence. It is also a symptom in some forms of ovarian and uterine disease, ectopic pregnancy, cancer of the stomach and intestines, tape worm, hookworm and round worm, dysentery, typhoid fever, diarrhea and other less common diseases.

In the opinions of our grandmothers all babies had colic as a natural part of growth and development. It was expected just the same as teething. In fact it was supposed to be a part of the process necessary in cutting teeth. Some babies would have the six months colic. Mothers would not be alarmed about it. The baby would get over it after the six months was passed and be all right.

Some of the babies did. Some of them did not, but became victims of dysentery and filled an early grave. Throughout the ages ignorance has paid its toll in sickness and death. Happily most mothers of today realize that when baby has colic something is wrong. It may be the beginning of an acute illness, such as diarrhea, dysen-
tery or typhoid fever. It may be due to worms or indiscretions in diet.

There are so many things that will cause colic in an infant that even discriminating mothers are often puzzled to learn the cause. If feeding is irregular the baby is apt to have colic. When feeding time passes without the baby being fed the digestive juices have been prepared to digest the meal that is not there. These digestive stomach secretions containing hydrochloric acid, in an empty stomach may cause a spastic type of colic by its irritation to the mucous membrane of the intestine. If this does not occur the baby may be fed more than his stomach can accommodate and colic pains result from an overfilled stomach. The baby will naturally be hungrier and harder to satisfy if he does not get his meal on time. It is dangerous to overfeed him however.

Again colic may result from improper food or from correct food that has been improperly prepared. No known formula for infant feeding will contain the various food elements in just the proper proportion and in the right condition to be easily digested by every baby. The baby's doctor knows exactly how many grams of protein, fats and carbohydrates that will be necessary for the health and growth of the baby but he does not know the individual idiosyncracies of each baby. Most babies will thrive on an ideal formula but some cannot live on it. There are certain chemical substances needed in a growing infant that are provided for in feeding formulas. If there is a lack of some of these there may be a tendency toward spastic colic.

Colic is a symptom and not a disease.

Most mothers know when the baby has the colic. They certainly know when older children and adults have it. It is a symptom that something is wrong whether it is in an infant, older child or adult. That something may be serious or may be due to any one of many minor causes. If the patient has fever with its colic it is usually more serious than where there is no fever. However this is not invariably true.

Not so many years ago there was a type of colic designated "Cramp colic". We do not recognize any such term today because there are several distinct causes of the condition then known as "cramp colic". Appendicitis, gallstone colic, kidney colic, intussusception, peritonitis and ovarian disease as well as infection of the uterus and tubes may give rise to the type of colic formerly known as, "cramp colic." All of these are serious surgical conditions that imperatively demand professional care.

The neighbors usually have pet remedies for all acute conditions and are anxious to prove how efficacious they are. They are very solicitous. "Tommy was just this way and we had him all right in a few hours." The neighbors however are not skilled diagnosticians and their undoubted kind intentions are often misplaced. A few hours delay in some cases is disastrous. Whenever the baby, the older child or adult has the colic, the first thing to do is find the cause. If a doctor is needed to determine the cause do not delay getting him.

The doctor in many cases cannot say positively what is the cause, but he will have an idea whether the condition is serious or not. He will know whether or not it is safe to give a laxative. He will also know what steps to take to definitely determine what is the cause. When the di-
agnosis is made he will know what should be done.

Many lives have been lost by giving purgatives in cases of colic which were due to appendicitis, peritonitis or some other acute surgical condition. Colic is so frequent a symptom of some minor condition that we are apt to forget that it is also a symptom of several very dangerous conditions. As colic is a symptom and not a disease the cause must be known before a definite line of treatment can be instituted.

Treatment of colic as well as other conditions is spoken of by physicians as, prophylactic or preventive, palliative and curative, divided into medical and surgical.

In all cases of colic due to errors of diet, irregularity of eating, incorrect methods of preparing the food or insufficient intake of fluid the curative and prophylactic treatment will be the same, the correction of the cause. However palliative treatment or relief from the pain is a most important thing in all cases of colic. The patient who has to suffer for hours while someone is trying to find out the cause of his pain will not feel kindly toward those upon whom he is depending for relief.

In the home some relief by members of the family can usually be given by applying hot turpentine stupes, or heavy towels wrung out of hot water, by hot water bottles, and by administering a few drops of spirits of camphor by mouth. If the pain is severe the only palliative treatment that will be effective will be a hypodermic by the doctor.

Curative treatment will depend on whether the colic is due to an acute infectious disease such as diarrhea, dysentery and typhoid fever or to an acute or chronic surgical condition such as appendicitis, gall bladder disease and peritonitis.

Colic is probably the most common subjective symptom of infancy and childhood and one among the most prevalent in adulthood. Its causes are so numerous that physicians find it difficult to determine the cause in many cases. It may be a symptom of such serious conditions as to demand professional attention.

**TWO ENCOURAGING EVENTS**

Sometime ago the newspapers of North Carolina carried two very significant news items. One was that Mrs. Edward Benjamin of New Orleans, who is the sole survivor and heir of the immediate family of the late Mr. and Mrs. E. Sternberger of Greensboro, had donated to the city of Greensboro the palatial residence of the late Mr. Sternberger, to be fully equipped and endowed, as a permanent babies' hospital for that city. This hospital is to be a memorial to her father and mother and sister. It is to be modern in every respect, and it is not necessary to say will meet an important need in that city.

The other newspaper item was that the heirs of the late Richard H. Wright, the noted Durham capitalist who died not long ago, announced their determination to continue the maintenance of a home in Durham known as the Wright Refuge, which is an institution for homeless children. Mr. Wright had established this home and maintained it with an endowment since making his final will in 1921. As some of the securities with which he had endowed it had decreased in value, the home had incurred a small debt, as well as running behind in keeping up his work for homeless children. The Wright family are liquidating that debt, and they assure the people of Durham that this home will be maintained, and will continue to fill the important place it has so well done in the care of homeless or orphan children.

These two items are significant in noting the trend of faithful and generous people toward meeting the responsibilities which rest on the general public in taking ample care for the unfortunates of our population, especially the unfortunate children.

Dr. Goldberger discovered that pellagra, a disease of humans, and black tongue, a disease of dogs, are both due to the same kind of dietary deficiencies.
This little Iredell County farm girl is named Mary and her mother writes that in hot weather she revels in her daily sanitary bath which she takes herself out in the yard followed by a genuine sun-bath as shown in the picture below.
SHELL POINT, HARKER'S ISLAND

This is the extreme eastern end of the island off the Carteret county coast. This pile of shells covers at least one half acre. Colonel Fred Olds says this is a "Kitchen Midden" of the Indians, indicating that New England had no monopoly of aboriginal banqueting. Thousands of bushels of shells left by the Indians at this place have been used for surfacing the sandy roads of the island. From this point the great Diamond Shoals lighthouse tower at Cape Lookout can be seen.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may interested.

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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.: Prenatal Care (by Mrs. Max West) Infant Care (by Mrs. Max West) Prenatal Letters (series of nine monthly letters) Minimum Standards of Prenatal Care What Builds Babies? Breast Feeding Sunlight for Babies Save Your Baby Hints to North Carolina Mothers Who Want Better Babies

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Many of us have fallen into the habit of comparing the present habits and customs and conditions with those of twenty-five, fifty, or even a hundred years ago. So thoroughly established is this habit, and the interest so widespread, that most of the daily papers carry an interesting page setting forth in parallel columns extracts from the files of ten, twenty-five, and fifty years previous. The Raleigh Times has for a long time conducted such a column. We noted with interest not long ago the following paragraph, quoted from the files of a Raleigh paper of fifty years ago. In this instance we cannot report as much progress as we certainly ought to be able to, and the comparison furnishes us very little satisfaction. Following is the paragraph:

"The Dairy—For some weeks past it has been difficult to get fine Northern butter, the supply of fine fall-made butter having been sold down very close, and new butter not yet offered. About this time, however, the New York and Pennsylvania dairymen begin to bring forward some new butter, and hereafter we shall be better supplied."

Now the comment we have to offer is to suggest that every citizen of North Carolina in general, and Raleigh in particular, when getting ready to laugh at the citizens of Raleigh of fifty years ago who complained so bitterly about the difficulty of getting enough good "Northern butter" to supply the demand, consider what would happen if all the grocery stores at present doing business in this State were for any reason to run short of their supply of "Northern butter." At the

of his grocery shopping, he has a choice between two grades of butter. One is sold by a Michigan concern, and the other by a concern doing business in Wisconsin. In other words, we have absolutely no choice but to take one or the other of these grades of "Northern butter."

The country bred boys and girls in this State who were privileged to live on farms that kept their own cows and made their own butter developed a taste for good native North Carolina butter, but here in Raleigh at least, if this taste is to be satisfied, the general public has only one recourse, and that is to crowd around the city curb market on Saturday afternoon and take pot luck in purchasing some of the dirty looking stuff displayed around there. When such a gamble is indulged in, nine times out of ten the butter is old, improperly made, and otherwise not fit to eat. It does seem that the grocersmen in Raleigh and other cities of this State could develop a regular dependable source of supply of good homemade butter that would be first class in every particular, enough to suit the demands at least of us old-timers who long for the good country butter which it now seems impossible for most of us to procure.

In this connection, as an illustration to this article, we would like to mention an article recently appearing in the Progressive Farmer by Professor C. L. Newman. The article was short, but to the writer of these lines it was one of the most interesting chapters that we have ever read. The title of the article was "How Causey Made His Gullies Run With Gold." In brief, the article described the develop-
We have noticed that one or two of our children, who have never been able to get much of the good butter that could be made in this section, have developed at appetite which prefers the rapid package butter made in Michigan and Wisconsin and shipped to this section. The reason is that the children have had to eat it do without butter.

This package stuff takes the place of the old time "firkin" butter, described in our newspaper quotation as "fall-made butter," and which the grocers of this section fifty years ago, and even more recently, sold to the customers from open tubs, received by freight and placed on the grocery store shelves to absorb all the dust of the store sweepings, and to be dug out in whatever quantity the customer called for, the profit, of course, going to New York, Michigan, Wisconsin, etc., and through enriching some corporations, and through them the farmers of the aforementioned sections in the North, while our people get poorer and poorer trying to make cotton and tobacco, and trying to raise children on dairy products from Northern states, instead of enriching our own farmers and improving our own health and keeping our money at home by raising better products right here at our doors.

IMMUNE TO TRUTH, BUT SUSCEPTIBLE TO FAKERY

Sometime ago a magazine writer gave voice to an old truth by saying that "Man-kind in general seems more resistant to truth than to humbuggery." The epigram is particularly appropriate at this time. Never before in the history of the world has pure and unmitigated quackery been so predominantly in evidence. A popular book of the last generation was the novel by Charles Major, "When Knighthood Was in Flower." There can be no doubt but that some future writer will became famous by writing a book about this period with a similar title, viz: "When Quackery Flourished Greatest."

The advance in popular sciences, such as chemistry and physics and others, has made it easy for quacks to blossom as pseudoscientists. It is human nature, plain perverse human nature, to prefer to listen to the fellow with an imaginary story about miraculous cures than it is to go through with the careful processes of a true scientist in dealing with one's pet disease. We are all skeptical at heart. All of us will laugh at Thomas, and then insist on feeling the print of the mails with our own fingers. A competent physician may tell us that we have incipient pulmonary tuberculosis and that there is, only one way to back to good health. He may tell us that it is the way is carefully marked. That it is rather long and tedious, and that it will require much sacrifice of pleasures on our part. But he will tell us that in the end if we do our part we will succeed in regaining our health. On the other hand the neighbors, or some of the them, will tell us that all that effort is not necessary. The careful living, the regular habits, the rest
in bed and all of it. They themselves have "been down with the same thing and sixteen bottles of Dr. Quack's Silver Chemical Discovery, together with a dozen or so pulls on the big toe by "Dr." What's His Name who runs page advertisements in the local Sunday daily paper cured them." The trouble is that we do not take the trouble to inform ourselves that our neighbor's trouble has been diagnosed by other neighbors knowing no more about the subject than the neighbor so freely advising us, and so on ad infinitum. But the magic of it is a promise of quick relief—a short cut back to health without any self denial on our part. We all have a kind of subconscious aversion toward any one who gives us bad news or unwelcome information of any kind. We just as unreasonably and unintelligently warm toward the person who flatters us by telling us what we wish were true. What more natural then for us to do than turn up our noses at the doctor and science in general and decide to give the quacks a trial.

Much of the patronage of quacks comes from people of means, often cultured and educated. That is, educated in some respects. Such people are financially able to feel independent. Their education however is likely to be a one-sided affair. They are often skilled in some particular line, more than apt to be specialists in money making and prosperous in business. In short they are "go-getters." They have little patience with the thorough-going, systematic, but often slow methods of the truly scientific physician. Hence their proclivity to take the apparently easiest and quickest cuts to gain their objective—health. These kind of educated people have not been grounded in true scientific measures. They have failed to keep informed about the rapid achievements in medical progress. Their lump of prejudice is always very large. They are generally 'again' everything. Whatever is, is all wrong. They resist truth with all the zeal at their command but they are susceptible in a marked degree to the wiles of the quack and cultist. The only protection the public can ever have against the insidious danger of quackery and humbuggery is in a better all round education for the masses. The teaching in practical habits of healthy living must be thorough and complete. They must be taught the truth about the structures and functions of the body. They must also be taught the simple facts about how disease is spread and what the average per-

On the road to Grandfather in Watauga. Petty cares and jealousies and worries left far in the valley behind and below.
MAIL ORDER QUACKERY

Sometime ago a very intelligent reader of the Bulletin in Craven County sent us an inquiry concerning a purported remedy for so-called rheumatism, sold by an enterprising individual located in the village of Hallowell, Maine. The inquiry from the Craven citizen was very interesting, and along with his inquiry he sent the first elaborate proposition from the Maine mail order "lay doctor."

On inquiry, directed to the Bureau of Investigation of the American Medical Association, we find that this outfit was investigated by the aforementioned bureau and the results of that investigation published in the Journal of the American Medical Association of December 18, 1926. As the investigation and the resulting adverse publicity do not seem to have interfered to any great extent with the activity of the Maine gentleman doing business in North Carolina, we think it best, in order to protect the interests of the citizens of North Carolina, to publish this information in full in the present issue of the Bulletin.

Quacks of various kinds find it easier to get their advertisements for treatment for so-called rheumatism in the newspapers than they do for some other classes of alleged remedies. Why this is so we cannot say, but, as many people frequently have aches and pains, which they have classified so long under the general term rheumatism, the quacks are probably willing to pay higher advertising rates in order to get more bites from more suckers.

It is rather funny that, after two years of Journal of American Medical Association publicity exposing this man and his remedy, he should continue the same system just as happily as if no exposure had been made. He evidently knows that there is available competent information on all such enterprises. One of the funniest stunts described in the Journal article is the fact that he has some new photographs made and sends them along as part of his follow-up propaganda, when once he gets the name of a citizen on his list. The friend from Craven County, on the last day of January, 1929, sends in a handsome photograph of the Maine quack, with the identical letter, and couched in the same language that was exposed in the Journal article more than two years ago.

It will be noted that the chief ingredient of this great remedy is ordinary chalk, together with a little bit of laxative medicine, and some rather powerful and dangerous drugs.

The secret of the prosperity of this particular business, located in the village up in Maine, is the same secret that affords the motive power and success behind 90 per cent of all such enterprises. That secret is clearly set forth in the Journal article, to wit every sucker who bites and sends in an order with some good hard money for some of this so-called treatment soon after receives a proposition to act as local agent, receiving more than half of the proceeds for all of the stuff sold.

Dear Reader, can't you see how that works? When your friend or neighbor next time suggests to you that you order a wonderful remedy from Maine or New Mexico or some far-away place for a so-called disease, we would suggest that you ask that friend or neighbor how much he or she is getting on each order that you place. It is human nature for all of us to feel better over any situation which promises us rather liberal compensation in the way of solid cash. Good hard dollars certainly do talk and talk in a language that everybody can understand, and the more dollars that are coming, when better much is the matter noahow, the better all of us are inclined to feel, and the more cheerful would be our recommendations about anything.

The Journal article follows:

son can and should do to prevent its spread. The fact that health once lost is hard to recover must also be thoroughly taught. All of the foregoing must be done in the formative years of life. Resistance to the teaching of truth is too well established to expect to do much in the way of teaching "old dogs new tricks."
H. P. Clearwater — Quack
“A Medical Mail-Order Fakery
in Hallowell, Maine.

“In the village of Hallowell, Maine, there has been conducted for some years a piece of mail-order quackery by one H. P. Clearwater, a man without medical training. Clearwater has a somewhat extensive line of nostrums, some of which are sold exclusively on the mail-order plan, while, in the sale of others, Clearwater splits profits with drug stores. His line comprises:

“Clearwater’s Rheumatic Treatment”
(Mail-order).
“Joint Ease”—For rheumatism (A drug store product).
“Vitola”—To increase nerve force, vitality and power.
“Cardex”—For the heart.
“Kidney and Bladder Remedy.”
“Diatone”—For “stomach troubles.”
“Venox”—For piles.
“Kamnar”—For pain.
“Cold and Grippe Tablets.”
“Salatox”—For constipation.
“Laxative Liver Pills.”
“Lanex Ointment” — The “new skin treatment.”

“Clearwater’s methods of doing business are not original—in fact a study of mail-order quackery convinces one that originality in this field is unnecessary. Those who would treat themselves with medicines about which they know nothing, sent out by persons about whom they know less, are easily caught by the conventional follow-ups that are the stock-in-trade of the medical mail-order faker.

“To make his contact it is necessary, of course for Clearwater to advertise in those cheap magazines that act a “go-between” in bringing the mail-order quack and his victim together. Today Clearwater usually advertises his “Rheumatic Treatment.” He has probably found that he can get these advertisements accepted more easily than those, for instance, of his “cure” for heart disease, his “kidney and bladder remedy,” or his “pile cure.” Whoever answers one of his “rheumatism cure” advertisements, however, receives, before Clearwater gets through with him, persuasive advertising urging him to buy one or more of the other nostrums that this quack has for sale.

“Some years ago Clearwater was running, as side lines, two other mail-order fakes called, respectively, the “Heart Cure Company” and the “Associated Specialists.” The form letters that were sent out to those who answered these advertisements were signed, “Directing Specialist Clearwater.” The scare stuff that was sent out to persons who supposedly had heart disease could be counted on to make a victim willing to sell all that he had in order to receive the “cures” that were offered.

“Under the name of the Heart Cure Company, Clearwater sold what he called “Dr. Fuller’s Heart and Nerve Tablets,” which contained, in addition to a small amount of cascara sagrada, such potent drugs as digitalis, nitroglycerin, strychnine sulphate and hyoscyamus. Of course,

A perfect specimen of physical and mental health at the mature age of 3½ months. His father is a Thomasville dentist who has no teething worries in his family.
the purchasers were given no hint as to the presence of these powerful ingredients.

"Those who wrote to the Heart Cure Company received, in due course, the regular series of follow-up letters. If no purchase was made, the victim, some time later, received a letter from the "Associated Specialists" offering a "free trial treatment."

"The Heart Cure Company and the Associated Specialists do not seem to have been functioning under those names for some time. Clearwater does, however, seem to have adopted another trade name, "Pope Laboratories," under which he has sold several of his nostrums.

Clearwater's mail-order activities at the present time are mainly with his alleged cure for rheumatism. Those who answer his advertisements receive a typical form-letter in imitation of typewriting and a cheaply prepared booklet, described as "A Treatise on Rheumatism." The inside front cover of the booklet contains a full-page picture of H. P. Clearwater; the letterhead also bears a picture of Clearwater as does, too, a four page circular that comes with the "treatise." In fact, one gets the impression that H. P. Clearwater, like the milkmaid of the nursery rhyme, may think that his face is his fortune.

"Should the recipient send in the $5 necessary for a "treatment," he gets another form-letter (the first page of which bears a picture of Clearwater) and also gets some additional advertising matter dealing with Clearwater's other nostrums. A day or two after the package appears, the purchaser gets an envelope in which there is a sheet of social stationary, bearing the name, "H. P. Clearwater, Ph. D." and the brief statement:

"My dear Friend: I have just had some new photographs finished and am thinking perhaps you may care to have one. With my best wishes always, H. P. C."

"What actually comes in the envelope is not a photograph but a halftone reproduction of a photograph—showing Mr. Clearwater in all the pristine glory of a white waistcoat and a Masonic emblem. The picture is identical with that which adorns the stationary and other printed matter.

"In the form-letter that comes to the victim who has purchased, Clearwater adds a postscript asking whether the recipient may not be interested in taking the local agency for the sale of his various remedies, and offering a very "attractive proposition." If the person who receives this offer writes for further information, back comes another form-letter from Clearwater (with the inevitable picture on the front sheet) which explains how easy it is to make money selling the Clearwater remedies. There is a complete set of advertising matter dealing with the various nostrums and also an order blank, together with a sheet containing "Special Confidential" prices. From this price sheet it seems that those who take the agency for Clearwater's stuff make a profit of $24.50 on every $47 worth that is sold.

"One complete 45 days treatment" (price $5) of Clearwater's rheumatism nostrum was ordered, and the material turned over to the A. M. A. Chemical Laboratory. The Laboratory reported as follows:

"Laboratory Report"

"Two original packages of "Clearwater's Scientific Rheumatic Treatment" (H. P. Clearwater, Ph. D., Hallowell, Maine) was submitted to the A. M. A. Chemical Laboratory for examination. Each box contained 45 red coated tablets and a small package of white tablets.

"Red Tablets—These were coated with what, qualitative tests indicated, was essentially calcium carbonate (chalk), starch, sugar and a dye, cosin. The medicinal portion of the tablet had an average weight of 0.5 gm. (seven and one-half grains). Qualitative tests indicated sodium, calcium, carbonate, iodide, emetidium-bearing (laxative) drug and exciipients. The Microscopic examination indicated that the laxative drug was cascara sagrada. The aqueous extract was decidedly alkaline to phenolphthalein. Alkaloids, calcium carbonate, anthraquinones (such as salicylates, anthracene, etc.), arsenic compounds, etc., were found.

"The vinegar extract was slightly alkaline to phenolphthalein. Alkaloids, calcium carbonate, anthraquinones (such as salicylates, etc.), arsenic compounds, etc., were found.

"The hydrochloric acid extract was slightly alkaline to phenolphthalein. Alkaloids, calcium carbonate, anthraquinones (such as salicylates, etc.), arsenic compounds, etc., were found.

"The hydrochloric acid extract was slightly alkaline to phenolphthalein. Alkaloids, calcium carbonate, anthraquinones (such as salicylates, etc.), arsenic compounds, etc., were found."
rates, acetates, nitrates were not found. The ash from the medicinal portion was 66 per cent. Quantitative estimations on the medicinal portion of the tablets yielded the following:

"Loss at 100 c. (moisture) - 13.5 per cent
"Water insoluble material - 13.7 per cent
"Sodium (Na\(^{+}\)) __________ 24.5 per cent
"Carbonate (CO\(_{3}\)) __________ 29.4 per cent
"Iodide (I\(^{-}\)) __________ 3.1 per cent
"Sugar, emodin-bearing extract, etc., by difference __________ 15.8 per cent

"From the foregoing it may be concluded that the tablets contain essentially 3.7 per cent sodium iodide and 64 per cent of sodium carbonate U. S. P. This is equivalent to 0.02 gram (2/10 grain) sodium iodide and 0.32 gram (5 grains) of sodium carbonate in each tablet.

"White Tablets—The white tablets are labeled as laxative. Qualitative tests indicated that the tablets contain an emodin-bearing (laxative) drug, while microscopic examination also indicated the presence of gentian.

From this, then, it seems that "Clearwater's Scientific Treatment" for rheumatism consists of two kinds of laxative tablets, one of which has in addition:

"Sodium iodide _______ one-third grain
"Sodium carbonate _______ 5 grains.

"What the public is pleased to call "rheumatism" is a splendid field for the nostrum maker and the mail-order quack. Any ill-defined pain almost anywhere in the body, but especially in the muscles or the joints, is commonly dubbed "rheumatism." Such pains, as a rule, are not long continued and tend to disappear spontaneously, especially if elimination is favored by a more rational diet or the occasional use of a laxative. Let a person with such ill-defined symptoms take an alleged cure for rheumatism and when, in a few days' time, he finds himself free from discomfort he immediately jumps to the conclusion that what he has been taking is responsible for his improved condition.

"The altogether inadequate amount of the alkaline sodium carbonate, would be practically valueless in any cases of true arthritis. In those few cases in which the Clearwater "treatment" results in greater comfort to the patient, the results would, undoubtedly, be due to the laxative action of the pills and to following the suggestion that plenty of water be consumed."

SEX EDUCATION

That thorny and difficult subject of sex education has been engaging the attention of the British Social Hygiene Council. We hope they may make some progress in clarifying a situation which presents itself so differently to persons of equal knowledge, integrity, and common sense. We have, on the one hand, those who after much consideration and experience still sincerely adhere, or even desire to return, to the older view that knowledge of sex and sex relationships is best picked up anyhow—"in the gutter" as Dr. Clendening would say. And their opinion is, we understand, to some extent supported by experience of the attempt to teach young and youngish children the truth about sex; the process has not every place proved as beneficial or as helpful as of course, that it is quite impossible to get any real understanding of sex into those who have never experienced its consequences. The facts and mechanism of generation can be made the subject of instruction, but to try to explain what passion is to those who have had no chance of knowing for themselves, or what falling in love means to those who have never had the luck to do it, is likely to be as unprofitable as expounding Rembrandt to the blind or Beethoven to the deaf. A knowledge of the anatomy and physiology of males and females is a trivial part of the sexual problem; whether it will help people to solve the really important matters of sexual relationships is on the whole doubtful, and anything it may do in this direction is negligibly small and possibly more than counter-balanced by the evil of rousing a curiosity which may well be left dormant as long as may be. Such,
briefly, are some of the considerations put forward by those who would deal with sex education along the border lines of teaching reticence, restraint, and self-respect. On the other hand is another body of equally sincere and knowledgable opinion, more vocal because it is less conservative, which believes and preaches that the solution of the troubles which wait on sexual maturity lies in frank discussion and knowledge as complete as it may be made. It is, indeed, difficult to say why such a proposal, axiomatic for most human activities, should cease to be properly applicable in this field alone, and it is easy to understand why, made in general terms, it obtains so much assent as it does. But it is evidently felt that this way of looking at the sex question would be immensely strengthened if there were some objective experience in its favor. The way towards such a trial has been prepared already to a considerable extent. Young adults of both sexes are now often willing, and sometimes anxious, to discuss the sex relationships of men and women with a frankness and freedom which may well make any older people who happen to be present wish they were out of the room. It remains to be seen whether, armed with so much forethought and foreknowledge, they make a better job of it than their Victorian ancestors. They seem to have a better chance; it will be extraordinarily interesting to see the result. It is tempting to suggest that some sort of experiment might be made by making something of a specialty of sex education at some colleges and having none at all at others, and then seeing how the two groups of students turned out in later life. But it is very difficult to simplify the variables to an extent which would justify the experimental method and give an unequivocal answer. Pastors and masters are always apt to forget that their pupils learn at least as much from one another as from their formal instructors, and we are bound to doubt whether any such trial would be really worth making, except under conditions of complete institutional seclusion. Meanwhile we hope that most young children nowadays learn the facts about generation and pregnancy as they learn what happens to the food they eat and how their blood goes round their body. But what best to do with adolescents and young adults is a speculative problem; they will probably go very much their own way whatever wisdom experience holds out to them.

—London Lancet

SEX CONSIDERATIONS RUNNING WILD

The thoughtful students of public health issues as well as thinking people of all classes have realized for sometime that the question of sex discussion, so-called sex problems, and allied interests are running rampant throughout the earth at the present time. This morbid interest, we are tempted to call it, probably follows in the wake of the disgusting sex novels that have been flooding the markets during the last few years. Our fathers were greatly concerned a generation ago about the effect the dime novels would have on the morals of the young folks of that day. It is possible that some of the dirtier publications of that time broke ground for the flood of obscene and morbid literature which has overrun the country during the last few years.

One morning not long ago the Editor of the Health Bulletin received in his morning's mail two requests for literature from widely separate areas. The first request was from a married woman in Porto Rico, requesting literature on all phases of sex hygiene, and, believe it or not, birth control; the other letter was from a college girl in a university situated in the state of Illinois. The letter of the college girl is so naive and so representative of the kind of teaching that seems to be majoring in the colleges and universities of the Middle West, that we herewith publish it in full:

"Kindly send me all information concerning the sex instruction of children in N. C. I am a member of a committee of a Child Welfare Class at ______ University investigating this particular problem.

"We are interested in learning the pre-
sent methods used in reaching parents, teachers, physicians, ministers, and community organizations, regarding the proper instruction. We are also attempting to find out the scientific procedure through an integration of sex knowledge with all other subjects."

This request, coming from this Illinois college, closely following the furor raised in Missouri, with the subsequent suspension of the head of one of the departments and several of his associates, on account of their circulation of a fool questionnaire asking all kinds of silly and inadvertent questions of young college boys and girls, that it seems to us that it is more significant of what is going on in some parts of the country.

We are probably at the opposite extreme of a circle which emphasized the suppression of all such questions some hundred years or more ago. It will be recalled that the Puritans of New England publicly beat, we believe, or at least severely punished, husbands for having the temerity to kiss their wives on Sundays, but that state of public conscience was no whit more foolish, and certainly not as dangerous to the public morals, as the present emphasis being placed on everything concerning sex, and doing it under the sacred guise of education.

It is important that young people be given sex instruction by their parents, or their family physicians, or by other sane, level-headed individuals in whom they have confidence, and whose lives exemplify the practice that they are teaching. This is necessary in order to protect the young people from indiscretions which have always, since the dawn of history, brought trouble and disgrace to any individual who ignorantly or otherwise violated certain sexual laws.

It is necessary that instruction be given frequently and frankly on the subject of the menace of venereal diseases. This should also be done by people who know what they are talking about, by people who confine their statements to facts, and all the discussions and all the publications should be thoroughly stripped of all elements of mystery and secrecy as well as the tendency to excite morbid or latent desires.

Some very sensible writers have a tendency to question the emphasis placed by colleges, in this section at least, on athletics. But in our opinion a sensible course of athletic training in every high school and college, applying to every one of the students, and not over-accentuating the great spectacular intercollegiate football contests and so on, is one of the finest influences to counteract the tendency to over-emphasize the questions of so-called sex hygiene or sex education.

We hope that the educational leaders of the State of North Carolina will keep a continual and intelligent guard on the watchtowers of all our institutions in order to keep out these vicious and fool projects. We hope that the officials who arrange the curricula of our high schools and colleges will take a regular inventory and clean out of their departments all of these onesided and hypocritical purveyors of all such mess. The college and school physician of every institution, the county and city health officers of every city and county in the State, and practicing physicians of ability should be called upon for regular talks to the high school boys and high school girls, to the college boys and the college girls on these questions, which may be done in decency and in order, with good taste, and for the sole purpose of imparting necessary information.
DOROTHY DIX DISCOVERS A NEW ORGANIZATION

Dorothy Dix, known to newspaper readers everywhere, and whose writing is copyrighted and syndicated to all the world by the Philadelphia Public Ledger, has discovered a new organization.

It seemed to us that the limit in organization had been reached a long time ago, as everything and everybody, everywhere seems to be organized into some kind of an association, society, or what not. It is our opinion, however, that Miss Dix has discovered one more organization that is bound to grow in rapidly increasing numbers until it accomplishes its purpose. In short, we believe that this new organization is going to accomplish more than all the combined nutrition specialists in the whole world have been able to do. If you do not believe it, kindly read the following announcement and question propounded to Miss Dix by one of her correspondents, and published in her daily column together with her answer.

"Dear Miss Dix—Why do girls starve themselves in order to get thin? I belong to a club of boys who have vowed to be old bachelors unless girls fatten up. We have pledged ourselves not to marry until we can get girls who are an armful.—Bub.

"Answer:

"You tell 'em, Bub. They won't listen to me, but the only reason girls are living skeletons is because they think boys like them that way.

"Let them find out that the young men are going in for the Oriental standards where fat is considered an evidence of beauty instead of a disgrace, and where the more there is of a girl the better they like her, and we will have more curves and dimples in the feminine form instead of angles you can hang your hat on.

"More power to your organization, May its numbers increase. It will save a lot of young women from T. B. —Dorothy Dix."

CITIES LIABLE FOR DAMAGES WHEN A POLLUTED WATER SUPPLY CAUSES TYPHOID FEVER

We have often called attention to the fact that the courts in North Carolina, as well as other states in the Union, are always scrupulously careful when rendering decisions in what might be called borderline actions in safeguarding the public health.

During the last two or three years there have been a few suits brought in different sections of the country against cities where typhoid fever resulted from drinking polluted water, on account of leaks from the sewage into the water mains or other lapses causing pollution of the public water supply. About two years ago a man in Albany, New York, brought suit against that city, and the jury awarded him damages to the extent of two thousand dollars on behalf of himself and one thousand for a minor child, which had contracted typhoid fever as a result of polluted water from the sewage system of that city. The New York State Board of Health has recently published a statement in their bulletin, Health News, that the Supreme Court of that state has upheld this verdict, as awarded in the lower court.

One of the most interesting phases of this decision is the fact that it confirms decisions in line with the action of the courts in two or three other states, at least in emphasizing that it is not necessary for a plaintiff to establish beyond a doubt that the typhoid infection resulted from drinking the city water and from no other source. This is a common-sense decision, and it is well that the courts are emphasizing that fact, because it would be impossible to establish any such proof. But the court in New York, as elsewhere, has established the fact that if the preponderance of evidence points directly to the polluted water as the source of infection, then the decision shall stand and the defendant is charged with the responsibility for causing the infection. Naturally if a leaking sewage pipe or defective valve in a water supply line allows the seepage of a water supply line allows the seepage to pollute the drinking water supply of a city and somebody contracts ty-
phoid fever following drinking of the water and dies, it is natural to assume that there is where the infection was incurred.

There is one thing necessary as the New York court pointed out, and that is that the plaintiff, in suing for damages, must establish reasonable proof that other sources of infection might be excluded. Everybody would admit that if a person eats any kind of food he might contract typhoid fever from some of it, but the fact that no one else did so and that proof could not be produced that such source of food was infected is sufficient for establishing the fact that the infection was due to the polluted water. Another thing that is considered as corroborative evidence, and which helps establish the liability of any city, is the fact that other cases occur in more or less epidemic form about the same time and which point to the polluted water as the source of infection.

The New York State Board of Health News quotes a New York City newspaper as emphasizing the liability of the government when going into business in any capacity, just like an individual or other corporation has to assume under similar circumstances. The quotation follows:

"A number of actions have been brought in New York State against municipalities in the water business and the doctrine described is well established here. When a State goes into business common fairness requires that it should be responsible to its patrons just as a private corporation is responsible to its patrons. It should not be permitted to take refuge behind its sovereignty and the courts are not likely to permit it to. This is a fact a great many advocates of putting the Government into business overlook."

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**VILE AND FILTHY JAILS**

In its issue of March 9 the Literary Digest had an article entitled "The Jail as a Crime-Breeder." This article quoted freely from a report of the National Crime Commission previously published in the New York Times. The article also quotes freely from the comments made by the Times concerning the contents of the report. The most discouraging feature of the report is the universal bad showing made by local jails in practically every state in the Union. The article properly calls the facts revealed in the report "A social sore spot in this country." Former Governor Lowden of Illinois was the chairman of this commission, and he approves the report. They quote conditions contained in the report from eleven states picked at random in order to show how universally bad conditions are everywhere. As might have been expected, North Carolina was one of the states included in this random selection. The report goes on to say with reference to all of the findings concerning all the states that there is a deplorable condition of "overcrowding, filth, disease, lack of sanitary facilities, no segregation of the sexes, no matrons, inadequate feeding, cold and damp quarters, sewer gas, lack of bathing facilities, vermin of various kinds, bad ventilation, lack of hospital provisions, no isolation from communicable disease, and the indiscriminate mixing of women and boys with habitual criminals." These castigations apply, of course, to local convict camps as well as to local jails, all of which were included in investigation.

All of us know that Governor Lowden is a practical, hard headed, common sense individual, a man who has been successful in politics as well as in business affairs, and...
therefore a man who is not a radical or a fanatic on any subject. All of us know, further, that the report sets forth a record of facts concerning many jails and convict camps that we still have within our midst in North Carolina. It is needless to say that conditions are greatly improved over what they were a few years ago, but it is also needless to say that, with the exceptions of the larger cities and counties of North Carolina where cleanliness and sanitation is the vogue, many of the conditions prevailing in this report exist in an aggravated degree.

The State Board of Health of North Carolina has been charged with the responsibility now for about ten years of the execution of laws enacted in 1919, which were devised to rid the State of all of the insanitary conditions at least complained of in this report. For the past several years the law has been administered under the active direction of a man who is capable and honest, and under his tactful insistence conditions have greatly improved. But this inspector, who has visited all the jails and convict camps of the State during the last few years, is the first man to admit that conditions are far from satisfactory in many of the jails and convict camps at this time.

The writer of these lines was elected to the position of county physician in a North Carolina county twenty years ago the first of May. In the previous fall election that county had elected a Scotchman as sheriff, and immediately after the writer assumed the responsibility of the public health of that county his first official act was to visit the sheriff and ask him how about the jail. The old Scotch farmer sheriff's reply was that "it is in a mess. Whatever you say is necessary to clean it up we will have done."

Briefly speaking, an inspection of the jail revealed a terrible situation. Vermin and filth were everywhere in evidence. At the time there happened to be only one inmate of the jail. He was given a bath, clean clothing was supplied him, and he was taken out under guard of a deputy, and the sheriff and this writer together with a crew of negro scavengers spent two days cleaning that jail. Every item of bedded bed clothing, and so on was taken out and burned. The jail was scrubbed from attic to basement with soap and hot water. It was thoroughly aired, and at the conclusion of this work about fifty pounds of sulphur was burned in the small jail, after it had been sealed up tight. It is needless to say that all vermin were destroyed. This sheriff and the writer then and there with the assist and cooperation of a prince of a man who happened to be chairman of the board of county commissioners at the time formed themselves into a committee to see that every incoming inmate had a bath and clean clothing; and brought in no bugs of any description. This principle was carefully observed in every case for the following six years that this writer and that sheriff together with the chairman of the board of commissioners had responsibility for that jail. It may be said in fairness, however, that there was no such crime prevalence at that time as at present, and the jail was very seldom overcrowded, although court sessions were few and far between.

It is safe to say that what was done for a period of six years in that county, with the meager means at hand, can be done in any other county consistently and permanently. It simply requires the will and determination and the necessary industry and conscience to see that it is a permanent fact. Any physician who assumes the duties of county physician on a part time basis, or the position of whole time health officer, in which case he may be responsible for the sanitation of the jail and convict camps, who allows gross insanitation in connection with the conduct of jails and convict camps in his jurisdiction is besmirching himself and is bringing no credit on the medical profession as a whole. He should either have the conditions cleaned up or resign his office stating his reasons publicly. We know full well that is is impossible for the smaller counties to have a matron to look after the occasional woman who is confined, but in such cases the jailer's wife or some female member of his family can act in lieu of a regularly employed matron, etc.
tainly to the extent of seeing that the conditions are at least livable and reasonably clean.

In conclusion, the Literary Digest in connection with its article aforementioned has a boxed paragraph under the title, "What Is a Jail?" The paragraph follows:

"WHAT IS A JAIL?"

"Joseph Fishman, former inspector of prisons for the United States Government, is thus quoted in the report of the National Crime Commission:

"Jail: An unbelievably filthy institution in which are confined men and women serving sentence for misdemeanors and crimes, and men and women not under sentence who are simply awaiting trial. With few exceptions, having no segregation of the unconvicted from the convicted, the well from the diseased, the youngest and most impressionable from the most degraded and hardened. Usually swarming with bedbugs, roaches, lice, and other vermin; has an odor of disinfectant and filth which is appallingly supports in complete idleness countless thousands of able-bodied men and women, and generally affords ample time and opportunity to assure inmates of complete course in every kind of viciousness and crime. A melting-pot in which the worst elements of the raw material in the criminal world are brought forth blended and turned out in absolute perfection."

A nurse sends this photograph in with the caption "One of my precious little Halifax County patients." Little brother just couldn't help getting into the picture, too.

SHOES AND HEALTH

Several months ago we published an editorial on the subject of "High Heel Shoes Impair Health." Our observations at that time elicited considerable favorable comment. A year or two previous to the publication of that editorial we had a request from a reader of the Bulletin in Connecticut, requesting us to publish in detail an article about orthopaedic troubles, some of which are acquired sometimes by the wearing of improperly fitting shoes. We immediately appealed to a well known orthopaedic surgeon of Raleigh and he promised us a conclusive article, illustrated with photographs which would be very interesting and helpful to numbers of readers. We are still waiting for that article, and every now and then we remind our friend, the surgeon, of his promise, and we hope that sometime soon he will find the time to favor us with the article.

A most interesting newspaper story on this subject appeared in the New York Times of Sunday, May 5. As the victim of so-called rheumatism in this case happened to be no less an individual than the famous General Hindenburg, President of the German Republic, the story attracted more than passing interest. We herewith take pleasure in sending the story along to our readers. One of the most interesting features connected with the article is that the headline writer of the Times puts the word "rheumatism" in partial quotation marks. This indicates that the most discerning newspaper people at the present time are learning the fact that the word "rheumatism" may mean almost anything. Following is the article:
"SHOEMAKER CURES HINDENBURG'S 'RHEUMATISM' AFTER $25-A-VISIT GERMAN
MESMERIST FAILS

'Berlin, May 2.—Evidence now appears to support the German theory that rheumatism is often caused by flat feet. A few weeks ago President von Hindenburg, recovering from a recent illness, complained of severe "rheumatism" in his knee. Doctors and masseurs were called in, but they brought no relief, and electric treatment also proved useless.

"Finally, Willy Sachs, well-known mesmerist, was summoned. Daily he performed his magic on the ailing member and went away, first collecting a fee of $25. Fifteen times he called, each time collecting his fee, but each time giving the Reich's President temporary relief.

"Finally the President opined that even this was useless, as after a few hours the pain returned and also he thought $15 sufficient to lay out on such an experiment. Resigned to his fate, he received next day a call from a modest bootmaker who had executed a commission to design and manufacture a new pair of Presidential boots.

"When studying the Presidential foot the bootmaker had decided that the new boots needed arches, and they were so equipped. President von Hindenburg tried them on, and, after long reflection, decided to walk across the room. The miracle had happened. The swelling in his knee had vanished. The walk was continued in the Presidential garden and a communiqué issued to the effect that the period of convalescence was at an end."

HOMES FOR THE AGED

Those of our readers who keep up with the subjects discussed in the Bulletin month by month will recall that our December issue was devoted almost solely to questions concerning the happiness and health and comfort of old people. Our January issue, which followed, was devoted primarily to a consideration of the far-reaching questions grouped, for convenience, under the general term "Mental Hygiene."

We have received responses and reactions from various quarters and in many ways concerning those two issues of the Bulletin. In the January issue the point was made in one of the articles that the State Hospitals for the Insane are frequently crowded by the admittances of old people who are off mentally to some extent but who could be better cared for at home, provided they had children or other relatives who could properly care for them; that is, they are in no way dangerous to themselves or others and that they simply require care. To shift this burden the families often get them admitted to the State Hospitals simply to relieve themselves from the necessary exertion to look after them. This situation is not much better than the savage habit of killing the old and decrepit. It really shows a disposition and a nature just as cruel and brutal. The difference is that they have the Stag as an excuse on which to shift the burden.

After reading an interesting statement in the January issue of the Bulletin a reader from a small village in one of the eastern counties writes us in order to tell us how much she had appreciated the fact that she had taken care of her aged father, who died a few years ago at seventy-seven and left her mother, who died last January at the age of eighty-five, upon her, the writer, as sole caretaker. She writes that she had performed this duty, even though in bad health herself, with no other relative to assist, and on reading the foregoing lines in the Bulletin she thanks God and takes courage.

The writer of the letter just mentioned also goes further in discussing some of these problems of old people. She proposes to donate a tiny bit of real estate she has left in her village for the establishment, if somebody else who has the money will bear the expenses of the erection of a home for old people. Some of our readers will recall that we quoted Arthur Brisbane in the December issue of the Bulletin to the effect that a truly civilized people will not only in the future
provide for their old people houses with every comfort and convenience necessary for their happiness and well being in their declining years, but that the government itself will pension such old people who have served their day and generation well. Such must be the idea back in the mind of this writer from the village mentioned.

A long time ago it must have been in the minds of our forebears who established what was called “County Homes,” utilizing the county as the unit of government, to take care of the aged and infirm. It was not long, however, before these homes were designated as “Poorhouses.” All kind of criminals or semi-criminals, insane and the derelicts of society of every description found havens in these homes. The management in most of the cases was allotted to some petty political ward healer as a payment for political services rendered, and in many cases the term “Pesthouses” would have been more appropriate than even “Poorhouses,” to say nothing of “Homes.” The idea in the beginning, notwithstanding, was evidently designed to make happy the old people who were helpless and left without relatives, and to assure their proper care after they could no longer help themselves.

We had in mind these very questions when we printed on our front cover for December the picture of the Saint Luke’s Home for old women in the city of Raleigh. This home has for several years been a model of comfort for its inmates who have been fortunate enough to find haven there. Every city and large town and county in the State should have some such place provided for the care of its helpless old people. This service should be free as air and water when there is no relative left who is able to bear the expenses.

After all, however, the proper place to care for old people is in the homes of their children or their near relatives, and they should be made to feel that, instead of being a burden to their dependents, the dependents consider it in every way a privilege and an opportunity to repay some of the things they owe to the old people.

APPRECIATES THE HEALTH BULLETIN

“We thank you for favoring a family of "Tar Heels" away from home for a while, with that delightful breath from the Old North State. Here's to her Health and her Health Bulletin. Please change our address from 114 Howe St. to 9 University Place in this city, New Haven, Conn.

Cordially,
Rev. & Mrs. R. E. McClure.”

In the more than fourteen years the Editor of The Health Bulletin has been a member of the Executive Staff of the State Board of Health he has received few official communications more pleasing than the one quoted above.

The Bulletin wishes for the McClures long life, health, happiness, prosperity and an early return to our Happy Land.

The rocks on this Yancey County road smile at the traveler like flowers in a tropical setting.
A LITTLE BIT ABOUT BRITISH MEDICAL PRACTICE IN 1847

The Book Review Section of the New York Times for February 10 published a cartoon with the caption: “Carlyle’s Wife Gives the Doctors a Piece of Her Mind.”

The reference is to the wife of Carlyle, the great English writer, and pictures Mrs. Carlyle seated in one of the old style top buggy chairs before an open fireplace reading a lecture to the bewhiskered doctor, who is rather fat but who seems to be putting up a valiant defense. The horrified nurse is standing over in the corner, with gaping mouth, and seems to be about to spill some of the hot drink which has evidently been prescribed for the patient.

According to the Times caption writer, here is what it is all about: “When Jane Welsh Carlyle had influenza during the great epidemic of 1847, she said to her doctor: “Medical men have entered into a tacit agreement to call all sorts of ailments people have in cold weather by the same name, so that one sort of treatment may serve for all and their practice be greatly simplified.”

The foregoing is a rather short story for us to publish in the Bulletin, but for practicing physicians in 1929 in North Carolina, just the same as it had for practicing physicians in England in 1847, the story has a mighty kick. That is probably sufficient comment for this writer.

AUTOMOBILE KILLINGS

We are publishing below a report from the National Safety Council, with headquarters in Chicago, on “Motor Vehicle Fatalities by States.” This report covers the years 1927 and 1928.

As the Safety Council points out, there was an increase of 5-10 per cent in killings for 1928 as compared with 1927. The report covers 28 states and the District of Columbia. Twenty states are not yet included in their tabulation.

The proposed driver’s license law might or might not help to control this large menace to life and limb in North Carolina. It will depend entirely on how much time and how much common sense is put into the examination for requirement for driver’s license. If a reputation for character, carefulness, and responsibility in the community is the first requisite, a large percentage of these accidents can be eliminated. If the applicants for license, however, are subjected to an unreasonable theoretical test without rigid requirements for certification of character by responsible individuals who are well known in the community, the matter will not be helped at all. Many persons who are careful drivers of long experience might be denied the privilege of operating automobiles, and your careless, reckless, hoodlums, who imperil everybody’s lives on the road, could easily pass any ordinary driver’s test for license. We hope that sometime proper adjustments and requirements may be made.

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Road going “to the Westward” on Harker’s Island
### MOTOR VEHICLE FATALITIES, BY STATES, 1927 AND 1928
(as reported to the National Safety Council by Feb. 8, 1929)

<table>
<thead>
<tr>
<th>State</th>
<th>Type of Accident Included</th>
<th>Period Covered</th>
<th>1928</th>
<th>1927</th>
<th>Source of Information</th>
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<tr>
<td>Indiana</td>
<td>All</td>
<td>12 months</td>
<td>962</td>
<td>861</td>
<td>State Health Department.</td>
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<td>All</td>
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<td>72</td>
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<td>District of Columbia</td>
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<td>596</td>
<td>568</td>
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<td>All</td>
<td>10 months</td>
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<td>1,342</td>
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<td>All</td>
<td>Dec. 1, 1927 to Dec. 1, 1928</td>
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<td>All</td>
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<td>68</td>
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<td>1,234</td>
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<td>376</td>
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<td>All</td>
<td>12 months</td>
<td>73</td>
<td>68</td>
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<td>Wyoming</td>
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<td>12 months</td>
<td>54</td>
<td>55</td>
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<td>255</td>
<td>284</td>
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<tr>
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<td>All</td>
<td>12 months</td>
<td>1,056</td>
<td>1,027</td>
<td>State Health Department.</td>
</tr>
<tr>
<td>Maine</td>
<td>All</td>
<td>12 months</td>
<td>122</td>
<td>123</td>
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<tr>
<td>Arkansas</td>
<td>All</td>
<td>12 months</td>
<td>165</td>
<td>166</td>
<td>State Health Department.</td>
</tr>
<tr>
<td>Montana</td>
<td>All</td>
<td>12 months</td>
<td>138</td>
<td>79</td>
<td>State Health Department.</td>
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<tr>
<td>Nebraska</td>
<td>All</td>
<td>11 months</td>
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<td>not reported</td>
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Habit, what a delightfully fascinating subject. Enough material in this one little word for a whole book. In this article many angles of the subject cannot be discussed, but the application of correct health habits to our own lives will be touched upon briefly.

The formation of habit, in its broader sense, begins of course with the beginning of the species, and in its more restricted sense begins with birth.

The psychologists tell us that every conscious or unconscious act is a reaction to a stimulus and that through habit we respond to stimuli unconsciously. Also that through failure consciously to respond to certain stimuli we form a habit of non response and then unconsciously fail to respond to the same stimuli.

If this is true—and we do not doubt it—infancy and childhood should be carefully guarded, against pernicious habits and just as carefully guided toward correct habits. It is during infancy and childhood that the habits which will mould the character of the adult are formed.

The first habit that a baby should be taught, is of course that of nursing at regular intervals. If the baby is wakened and fed at regular intervals for the first three weeks of its life it gets the habit and calls for its nourishment just as regularly thereafter. If it is allowed to lie quietly in its bed between nursing periods this also becomes habitual. But if when the baby frets it is taken up and fondled it acquires a different kind of habit. It has learned to associate crying with being fondled and when it wants to be fondled it will cry. A few repetitions eventuate in a habit that will undermine the stability of the child's nervous system and retard its growth and vigor.

Most of us realize too late in life that habit is our master and that we are but bond slaves in his service. There are fortunate ones however who have moulded their habits to their own wills and habit performs prodigious tasks subconsciously while the conscious mind is planning new deeds for the future.

The good habits or the bad habits are being formed every day, especially in infancy and childhood. If we have normal intelligence we cannot escape habit forming. Eventually many of these habits become a part of our subconscious selves. They may be so much submerged that we do not realize their existence but they are there nevertheless, a result of habit.

Bad habits are often spoken of, but rarely do we hear of good habits. By a little effort of will and perseverance good habits may be formed that will be a blessing to us in later life. The expression, "Habit ridden," is descriptive truly. Everyone is habit ridden or habit driven. We have good habits or bad habits. They are a result of the sum of inheritance, environment, precept and our own wills.

Childhood is the formative period, and habits are being formed from birth to adolescence more readily and more ineradicably than during any other period. Habits of truthfulness, punctuality, perseverance, self-reliance, industry, kindness, tolerance, charity and unselfishness may be taught to all children of normal intelligence. If these habits are not formed in childhood the habits of untruthfulness, unreliability, indolence, idleness, cruelty, bigotry, stinginess and selfishness will be formed instead.

Health habits are being taught in school and in many cases successfully taught. The stress however is placed upon health and not upon habit. Habit should be stressed in the home and in the school. When a thing is done until it becomes a habit we will continue to do that thing subconsciously and leave our conscious minds free for the formation of other thought
processes. If health habits are learned in early childhood a sound mind in a sound body will be the result.

We cannot escape the force of habit. There is no conscious day during childhood and young adulthood but that habits are being formed. Some of them are so truly subconscious that we do not even recognize them as habits. In eating when our fork or spoon approaches the mouth it opens habitually to receive the food. This habit was formed so early in life that it is entirely a subconscious act. The earlier our habits are formed the more our conscious minds are relieved of the thought process involved and the more ineradicable are the habits.

The human body functions through a complex system of organs which are influenced by an autonomic nervous system, and the secretions from numerous glands, ductless and otherwise. Habit is inherent in this complex organism but it is nevertheless much influenced by conscious habits or lack of them. If our meals are eaten about the same hour of the day, every day, it becomes a habit and the secretions from the glands will be ready with their portion of the work of digestion without any least bit of upset in their function. There will also be perfect harmony of action on the part of the autonomic nervous system. The various systems of the body function in perfect harmony only when there is no sudden interference with the natural course of events.

Regular habits of eating, sleeping, working, resting and playing contribute toward good health more than everything else. Irregular habits of this kind contribute inevitably toward nervousness, indigestion and poor health. Since it is a fact that habit is inherent in the complex functions of our sympathetic nervous system and bodily organs, our conscious habits of life should be regular.

If we expect harmony and rhythm within the bodies that God has given us we must introduce harmony through regular habits of daily living. This means of course that we must not overeat nor drink to excess. That we must not work for too long hours nor retire too late. Regular hours for rising, eating, working, playing and retiring, together with proper food and drink in proper quantities will go a long way toward giving to the body a zestfulness that will sing in harmony with the world about it.

The inherent habits of our complex bodily functions are a part of the immutable laws of God and in so much as they are transgressed by indiscretions and bad habits in just such proportion will our lives lose the perfection for which they were created.

**FEDERAL DEPARTMENT OF AGRICULTURE URGES ENLARGED PROGRAMS OF HEALTH WORK IN RURAL SECTIONS**

It is no longer necessary to say that the most popular subject today among more classes of people than any other is the subject of health. This writer sometimes thinks that we are almost on the point of making a fetish of the matter. We mean by that that there is danger of the public getting the idea that there is magic power available through the simple expedient of unreasoning advocacy of multiplying methods and enterprises under the popular name of health. At the same time it is pleasing to those of us who have been engaged in pioneering in the field of public health for many years to note the widespread interest in public and scientific and governmental circles in the matter of better health for all the people.

For some years past all of the larger cities in the country have been reporting a lower death rate than most of the rural areas, and at this time many of the governmental agencies responsible for scientific progress in rural sections are arousing themselves, and we may confidently expect at an early date a reduction in the morbidity and mortality rates of most of the strictly rural areas in the United States. The United States Daily, published at Washington and devoted largely to the activities of governmental agencies, recently reported a radio address
by the Secretary of Agriculture, Mr. Arthur M. Hyde. The subject of the address was "The Country Child," and we herewith quote the interesting article as published in the aforementioned publication:

"Full time employment by health workers in rural communities was recommended by the Secretary of Agriculture, Arthur M. Hyde, in a radio address on the "Country Child" over the system of the National Broadcasting Company. The full text of Secretary Hyde's address follows:

"The ideals set forth in the President's proclamation of Child Health Day challenge every American. Our country's future depends upon and is in the keeping of the coming generation. Every child in sound body, mind and spirit—is surely this a lofty national goal.

"Country children get tremendous health benefits just because they are country children. Environment in most cities must to some extent be overcome by parents. In the country, environment is to a large extent working with the parent.

"ARMY STATISTICS CITED"

"Army draft statistics did not overthrow the general tradition that country life is healthful. Investigations of country school children, it is true, show the presence of minor physical defects, especially of the eyes, throat, nose and teeth. But these are entirely preventable by good medical care, and do not throw any doubt upon the fundamentally healthful quality of the country child's environment. The fact is that a life in sunshine, in fresh air, in zones of quiet, in plenty of space, in contact with Nature, simply cannot be matched for basic health.

"All this the country child has as his birthright. He lives, too, in a healthful family system based on work for all members of the home group; the farm provides grades of work adapted to the tender years of children. Farm boys and girls are educated not only in the school, but in actual apprenticeship of life. Their apprenticeship is under the direct homely tutelage of the father or mother. Such intimate family contacts in approaching the problems of life are of inestimable value.

If balanced by recreation, work makes poise, for common sense, for a sound mind and spirit as well as for a sound body.

"From the abundance of wholesome food on the farm, the parents' job is to choose a balanced diet for their children. Proper clothing and shelter are also necessary to physical wellbeing. Your Federal and State scientists and extension workers stand ready to advise. The scientists search out the principles of diet, clothing and hygiene. Extension workers bring these facts to the home. In my judgment, one of the finest new branches of home demonstration work is instruction in child care and training inaugurated in recent years by some of the States. Health is one of the four foundation stones of the 4-H Club system. More than 100,000 boys and girls last year embarked on the 4-H Club health project, and every one of the 664,000 4-H Club members received instruction.

"IMPORTANCE OF MENTAL HEALTH"

"Mental health is fully as important as physical health. Its foundations are laid in the childhood years. Numerous agencies are finding the facts of mental health and teaching the principles of child psychology to rural as well as city parents.

"People of the open country are striving to give children healthful homes and training. More is needed however. Probably the point in the Child's Bill of Rights most often and most flagrantly violated so far as country children are concerned, is that of prompt and efficient medical attention and inspection.

"Two things must be done to secure this right to rural children. One is to provide full-time health workers in rural counties. On January 1, 1929, but 414 of the United 2,900 farming counties in the United States had such health officers. The second item is the establishment of rural medical centers—hospitals, clinics, and outpatient departments. This will do more than anything else to replenish the thinning ranks of country doctors. Rural medical graduate the tools of his profession—bacteriological laboratories, X-ray equipment.
ment et cetera—without which he is lost and for lack of which he is forced from the country post even though he desires to take it. Farm organizations have spoken out straight-forwardly on these points and I need discuss them no further.

CHANCE FOR RECREATION

"Finally, we need on this Child Health Day to meet the President's challenge to give each country child, along with each city child, a chance for real play in the right amount, of the right kind, and in the right place.

"We have the right place, the open country. People still find their most profound enjoyment out-of-doors. What we will be wise to do is to identify our country side with pleasure, in the minds of our people. We need the feel of the home-land, of identity of our whole life with our own soil. The idea that the city with its community recreation centers, parks, forest plats, picnic grounds, and athletic fields is the best place for play is an error.

"Here, then, are the chief challenges of this Child Health Day to the countryman: That he makes his own home healthful, that he help his community make provision for health supervision, for medical centers to meet the exigencies of accident and disease, for play places to give full vent to the spirit and sociability of the growing child."

When the dogwoods bloom in Franklin

"IT'S SO HOT"

By

SUDIE E. PYATT

"It's so hot!" Della Coffey fanned her perspiring red face with the tail of her soiled, brown gingham apron. "I'm glad Lyle's vacation starts tomorrow. It's so hot I don't see how I can stay in the city another day, and it gets hotter."

Mildred Kirkwood, cool and dainty in a white house dress, snapped in to small bits the long green bean she held in her fingers. "Will and I haven't found it so hot in the city this summer. Will gets his vacation the first of August, too, but we're planning to spend the first week here at home."

Mildred transferred the snaps from the pan in her lap to a saucepan on the table at her elbow. "Will and I were discussing it at breakfast this morning. He said he'd never seen a duplex built as much like twins as this one is."

"If they're so much alike I can't understand why your side is always ten or fifteen degrees cooler than mine." Delia stooped, and pulled the shabby rosette from the toe of the once-pink satin bedroom slipper she wore. "This porch certainly isn't like ours. Your screens are all shiny and new. Not a fly can get in, and the inside has been painted so it doesn't look anything like the back-door dump we have."

Mildred protested. "Will and I are going to get in, and the inside has been painted so it doesn't look anything like the back-door dump we have."

Mildred transferred the snaps from the pan in her lap to a saucepan on the table at her elbow. "Will and I spent our money and our own time screening and painting the porch," she said quietly, as she poured fresh water into the beans and placed the
saucelpan over the blue flame of one of the burners of the oil stove that stood back against the wall by the porch door.

"Do you like to cook on an oil stove? I never could get satisfactory results." Delia chose to ignore the screens and paint, and the all too plain implication in her neighbor's voice that they, too could have a spic and span back porch if they did not mind spending a little money, and expending a bit of labor.

"For summer an oil stove has the advantage of being easy to move. One can take them wherever it is coolest and get the meal at that spot," Mildred responded. "Since June I've done practically all of my cooking out here on the back porch on my oil stove. I haven't gotten really hot in preparing a single meal. In fact I've gotten more enjoyment out of my cooking than I did inside during the winter and spring."

"I don't cook much in summer," Delia said. "Some canned vegetables, pork chops, rice, steak, fried potatoes, coffee. Something like that is what Lyle likes. We eat our suppers as hurriedly as we can in the dining-room, and get out in the car to the country where it's cool."

"O, Will and I enjoy our summer meals, especially our cold suppers out here on the back porch," Mildred stooped to adjust the flame under a pot, the contents of which were threatening to boil over. "About 7:30 we can see the full moon rise over the hills and if we listen we can hear a late bird sing. It is really delightful."

From the front of the house there came a baby's cry. Mildred dropped the fork she held, and asking her guest to excuse her hurried out front. In a moment she came back rolling a happily cooking baby girl of eleven months, wearing only a diaper in a kiddie koop.

"Now, precious, you stay right here and be mama's sugar lamb until she can get papa's dinner," Mildred instructed as she rolled the happy baby to the side of the porch farthest from where preparations for the mid-day meal were going ahead.

"You don't put clothes on her?" Delia asked.

"Not when the weather is like this, "Mildred turned away from her cooking off-spring.

"I leave off Junior's clothes sometimes too," Delia said, partially agreeing with her neighbor's hot weather baby dressing ideas, "but even then he gets awfully warm and cries when I keep him in the kitchen where I'm working."

"I should think so." Mildred gave a sheep rattler to her adventurous daughter, who was reaching vainly for the toy at the foot of her bed. "With that cold range going full blast I don't see how you stand it, much-the-less Junior."

The baby happy with her rattler Mildred turned back to her dinner.

"You give Will cold suppers, don't you?" Delia asked.

"Yes, and he likes them in warm weather."

"I wish, "Delia sighed, "I could get Lyle to eat cold meals in hot weather."

"Perhaps the trouble is in what you serve," Mildred suggested tactfully. "Some foods are better served cold than hot. Of course, I never serve any foods cold that are supposed to be served hot. I think that's one reason why Will really prefers cold meals to hot ones these warm days."

"My husband just won't eat cold food," Delia stated, and arose. "I have to be going home and getting him some dinner. This will be the last meal I'll have to get for two weeks. We're leaving in the morning for his mother's home in the mountains. I expect to be cool when I get there for the first time since this hot weather started."

As Mildred Kirkwood deftly beat the eggs for a frozen custard on her cool back porch, where she did all of her cooking during the warm summer months she wondered how far Delia had allowed her complaints against her husband's refusal to eat cold meals to keep her from making more serious accusations.

The walls of the duplex house the Kirkwoods and Coffeys lived in were not sound proof. As the warm days of June and the warmer ones of July came and Will knew that their neighbors on the other side of the duplex were not as happy as an ordinary couple might be in a duplex)(((INFO:THE HEALTH BULLETIN June, 1929))
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The air coming from the general direction of the kitchen, kissed his wife and hurried to the bathroom to wash his hands.

He settled in his chair, and opened up his napkin. "How's baby?"

"Sleeping," Mildred passed a dish of fresh string beans to her husband just as a piercing yell came through the wall of the duplex and out on the Kirkwood's back porch.

"I'll bet she spanked him," Will said, frowning as he helped himself to the beans.

"Poor Junior!" Mildred was genuinely sympathetic. She was as sorry for Junior's heat harassed mother, and his father whom the hot weather had just about gotten as she was for the baby.

"I'm glad Lyle has his vacation now. I don't believe he could stand it in the city another month." Will set down his glass of cold milk.

"They're leaving early in the morning, Delia told me," Mildred went to the ice-box for the frozen custard.
"No, I won't go with you on your vacation, or any other vacation. I'm taking Junior and leaving this hot hole as soon as I can pack!" Delia Coffey's high pitched, hysterical voice broke the calm peace of the Kirkwood's noon day meal.

Will and Mildred looked at each other with perfect understanding. It was what they had both feared. They were neither of them any more imaginative than the ordinary young man or woman is, but it did not take a great amount of imagination to visualize what had happened on the other side of the duplex.

Lyle Coffey, his nerves already strained to the breaking point, had come home feeling that for two weeks he could relax. Delia had met him at the hot kitchen door, a black smudge on her nose, her body dripping with perspiration from standing over the coal stove in the little kitchen.

"You'll have to go to the grocery down on the corner for a loaf of bread before we can have dinner. It was so hot I forgot to order bread, and I didn't cook any," was Delia's greeting to her husband.

"Great gun! Can't a man ever come home without having to help get a meal? Don't you think I'm hot, too?" Lyle stormed.

Junior cried and Delia hurried to him. It was warm in the close room and the baby was hot and cross. He did not yield to his mother's entreaties to stop crying, and Delia cross and hot herself, spanked him. Junior yelled. Lyle who had not departed for the bread came running.

The climax of the quarrel came when Delia's voice pierced through the walls of the double house and Will and Mildred heard it over their frozen custard.

Lyle left his wife with her baby and went with heavy steps to the front door of his home. He did not know whether he was going for bread or not, but he was going to get out of the humid place that was his home.

Will hearing the front door of his neighbor's house close left his partly finished dessert and hurried for the front of his house, while his wife went as quickly to the back door of her neighbor's home.

Two hours later Will Kirkwood and his wife sat down to complete the eating of their delayed desert with two guests for dinner. It had not been easy for Mildred to persuade Delia to take a bath and put on a thin summer frock. With Delia in the bathroom Mildred had surreptitiously crammed the hot, soiled, greedy smelling black satin into a laundry bag where Delia could not find it at once.

"Three fourths of keeping cool in the summertime is not a cool climate, the mountains or the seashore," Mildred had said to Delia just out of her bath, "but dressing, working, eating and sleeping as to keep cool."

"You don't think that I've been trying to keep cool, do you Mildred?" Delia asked, ruefully as she tied the loops on the side of the dainty pink and white dress she had donned.

"No, Delia," Mildred admitted, "I don't. You have complained all summer about how hot your side of the duplex was. As a matter of fact you have the north side, which is the coolest side. The difference was Will and I planned and arranged our rooms to make them as cool as possible for the summer days and you didn't."

"Go on," Delia ordered as Mildred stopped talking, "say all you've got to say."

"You've worn old hot dark silk dresses and talked about the meagre two weeks you and Lyle would have in the mountains. You didn't seem to think that you could bring a large part of the pleasant cool of the mountains right here to your own home for you and Lyle and the baby to enjoy the entire summer, rather than to try to escape from it for two weeks only. It takes some time, money and a little work and thought, but if you and yourself and family cool and comfortable through the summer days."

Delia's brown eyes snapped. "Your back porch cooking, your white house dresses, and cold supper I suppose is what you mean, isn't it?"

"Patrition," Mildred admitted, and to her surprise Delia said, "This dress certainly is cooler than that old black satin. It may make laundry bills higher, but I suppose..."
you are right, Mildred. If it makes me feel so much cooler and better it’s worth the extra cost.”

Lyle Coffey came with reluctance to the Kirkwood’s re-laid dinner table. He had not seen his wife look better all summer, and she was going to leave him. Never coming back to him, she had said.

Will was talking in that natural, genial way of his over a fresh serving of frozen custard.

“I’m going to be at home all next week, Delia. It will be no trouble at all for me to supervise the workmen while they screen your back porch and paint it.”

Lyle watched his wife eagerly. What would she say to Will’s offer? If she said yes, he would know that she meant to come back when vacation was over. If she did not agree, O, Lord, what would he do without her and Junior.

“Fine!” was Delia’s response to Will’s offer.

To her husband she said: “Lyle, won’t you leave Mildred a check to pay for an oil stove just like hers. When we get back we’ll have everything fixed for genuine hot weather comfort in our own home.”

“You bet I will!”

“Lyle and I are going out to the lake swimming. Want to come along?” Will invited the two women when dinner was finished.

“The babies!” Delia made excuse at once.

“O, my mother will be delighted to take care of the babies for the afternoon.”

Mildred dismissed the problem of her own and her neighbor’s baby as easy as that.

“Does ‘em good for their mothers to leave ‘em once in awhile.”

“It has been so hot!” Delia remarked as the couples rode out to the lake.

“Sh-h!” Mildred quieted her. “Mustn’t talk about the weather. If you do it might hear you and think it important. Then it might get hot, hotter, hottest.”

Delia subsided into silence. She was learning how to be cool though the weather was hot. Mildred Kirkwood was a bossy person, but she supposed she could excuse her bossiness when she considered that Will and Mildred had turned hers and Lyle’s worst quarrel into a reconciliation with their queer philosophy of living the whole summer through as if one were cool all the time.

The funny part about it, Delia thought as she got into her bathing suit, was that Will and Mildred really were cool. Delia dived straight into the cold water.

“O-oh!” She was cool, too, now.

CONCERNING HEALTH TALKS

By LUCY CHERRY CRISP

Today I have heard—and seen—something I never expected to hear, certainly never expected to see. That is, a Health Talk that was not only “good for you” but actually entertaining. And since seeing and hearing this one, I am more than ever disgruntled at all the dull, droning ones I have had to sit through in the past, at the thought of all the stilted, meaningless ones I may have to endure in the future.

Arriving at the school for a regular weekly visit, I could see that preparations were being made for an assembly in the auditorium.

“Health Talk,” was the explanation offered to relieve my curiosity. “A specialist is coming to talk on something about care of the teeth, I believe the letter said.”

“Well…..that was that.” And with no plausible avenue of escape open, I would have to go on in with the others and put on as bona fide appearance of intelligent listening as possible under the circumstances, then let thoughts wander at their
own sweet will among more pleasant pastures than teeth. And that was just where I received one of those surprises of a lifetime.

The specialist was a Dr. Branch from the State Board of Health’s school staff. I might have known he would be different when I saw the red tie he wore. It was not the kind of tie that the usual health talk person would wear. Yet I suspected nothing until he began by calling a little lad up on the stage to tell the story of How Bre’r Bear lost his Long Tail.

The boy told the story well, and brought down from the stage in his pocket something the doctor had placed there. I don’t know what it was, but intuition offers a strong suggestion that it was something highly acceptable, something exchangeable for chewing gum and candy, most likely.

“No,” said the doctor, “you heard him tell me that story. I want you to go home and tell your mothers something I’m going to tell you this morning. Will you boys and girls do this for me?”

And so natural and friendly was the atmosphere that had been created by this time, that scores of little treble voices answered in eager promise, “Yes, sir.”

Then the teeth came in of course, but so interestingly one scarcely knew they were there. He had a black board up there on the stage, and as he talked a huge tooth appeared on it—not magically, but drawn with colored chalk held in the doctor’s fingers. I don’t know how the others felt, but, as for me, when the tooth began to decay right there before our very eyes, I felt a distinct twinge of pain. And when at last the growing black spot in the tooth reached its climax, I nearly had toothache myself.—News and Observer.

RELATION OF EXPLOSIVE SYMPTOMS IN CHILDREN TO FAINTING AND HEADACHE IN PARENTS

The frequency of periodic headache in groups of apparently normal women in five communities, according to Levy and Patrick, was as high as 40.2 per cent. These headaches likely were largely migraine. Classified on the basis of time taken out of work, however, the majority of periodic headaches caused slight incapacity. The frequency of fainting in apparently normal women was 28 per cent. Parents who fainted or who had periodic headaches were more likely to have children who had infantile convulsions, temper with head-banging or breath-holding, and other re-

current attacks, especially spells of vomiting and fainting. Parents who fainted were more likely to have such children than parents who had periodic headache but remained free from fainting. Parents who had frequent periodic headaches were infrequent. The same was true of fainting.

Conversely, children who had “explosive headache symptoms”—infantile convulsions, temper with breath-holding and temper with head-banging—were in close relation with each other and with fainting and periodic headache in the parents. —Mind and Body.

CHILD HEALTH IN OTHER LANDS

Health activities for mothers and children in countries of northern Europe, are described by Dr. J. H. M. Knox, Jr., Chief of the State Bureau of Child Hygiene, in a recent report to the State Board of Health, in connection with a report of the proceedings of the International Congress for the Protection of Infancy, held in Paris in July, which Dr. Knox attended as a representative of the American Red Cross and the American Child Health Association.

Commenting on some of the outstanding developments in public health in France, since the World War, Dr. Knox said “One of the most noticeable changes was the increase in public health nurses. During the war, this activity was almost unknown. Now, there are 1,800 full-time public health nurses the majority of whom have had training based upon that given in our own country. Another noticeable advance was in the increase in full-time health service. Of the 89 Departments in France, 52 now have full-time health officers. The government has also undertaken numerous child health projects and has
made appropriations to many private agencies, such as maternity homes, day nurseries, vacation colonies and preventoria, the latter for the benefit of children threatened with tuberculosis.

"There is a growing interest in open air schools, for both underweight and for normal children and schools of this sort are spreading rapidly throughout Europe. Reports presented at the Congress showed that children were in better health, learned more rapidly and lost fewer days from illness when attending schools of this sort.

"Going on to Holland, we visited the child health stations provided by the city, in Amsterdam. Each station is conducted by a physician, several nurses, a midwife and a social worker. Cases requiring treatment are referred either to the family physician, or, if unable to pay, to the city health department. Instruction in personal hygiene and the prevention of disease forms an important part of the plan and this educational work is largely responsible for the high standard of health noticeable among the children.

"In Denmark we found that so-called breastfeeding stations have been maintained in Copenhagen for twenty years. They receive only the infants who are wholly or in part breast fed. These babies are brought back at frequent intervals, are weighed and examined and the mothers instructed. Each mother is given an allowance of milk daily for her own use, as long as she complies with the rules. Bottle fed babies are not received.

"In 1925 a comprehensive law, called the Child Welfare Act was passed for the purpose of providing, on a nation-wide scale for the needs of children. Under this law, every parish in Denmark constitutes a child welfare district. There is a child welfare council in each district which is responsible for the care of dependent or abused children in that section, many of whom are cared for in supervised foster homes. A large proportion of Denmark's population belongs to insurance societies with sick benefits. These include care before, during and after childbirth.

"Sweden is divided into about 2,000 sanitary districts. In each of these is a children's committee on which the local physician, minister, school teacher and some selected citizens serve. The local physician, usually a part-time health officer, is the acting head. The child health of the community and the supervision of dependent and problem children are under the charge of this committee.

"Sweden has given special attention to the control of infectious diseases. The infectious disease hospital in Stockholm is a model of its kind. I was told that everyone in Sweden with an infectious disease is expected to go to a hospital. The government is partly supporting 7,000 beds in the hospitals in the larger cities and rural districts, practically one bed for every thousand people.

"Norway has a similar system of sanitary districts with a sanitary council presided over by a medical officer, usually a practitioner appointed by the state. This officer has charge of all public health activities, including the control of epidemics, medical assistance to those unable to pay for it, care of the insane, etc. For care in childbirth the country is divided into a thousand districts each with its official midwife.

"In general, the public willingly supports the sanitary administration. In 1926, out of a total appropriation by the state of approximately $218,000,000 for all purposes, nearly one-thirtieth of the whole sum, or about $7,000,000 was given to the department of health."—Maryland Health Bulletin.
How can Health Departments interest boys and girls in establishing good health habits and realize that it is a duty they owe themselves and the community to keep well?

This question confronted the Wilson Health Department and the cooperation of the Junior Red Cross was sought when the work was first organized in February, 1928.

After the boys and girls had taken the Junior Red Cross Pledge a Council Member was chosen from each grade by the pupils themselves under the direction of the teacher and the principal. These Council Members met and decided on the health work they felt most important to start first. After they had read carefully the Modern Health Crusade Chores they selected just the simplest Health Chores which they honestly felt that every child in school could keep and check up on every day in the year. The following were the chores the children themselves decided upon:

1. I washed my hands before breakfast and supper yesterday.
2. I cleaned my finger nails yesterday.
3. I brushed my teeth yesterday.
4. I drank four glasses of water yesterday.
5. I was in bed ten hours last night.
6. I ate one or more green vegetables yesterday.

In the First and Second Grades the teachers let the pupils who kept those chores be the builders of a Fairy Health House. They were permitted to color a brick, shingle of some part of house sketched on a wall poster.

In the other grades the boys and girls were marked by the Council Members each morning for the first part of the year and then later Health Chore Cards were distributed to each member who marked his own record each day.

The school Superintendent considered this work of such importance that he directed a credit of five points each month be given for every perfect score.

When we help in a real, practical way to establish good health habits, we believe we are helping to make better citizens.

The Junior Red Cross in each school in Wilson Township gave at least one Good Health Program this past session. Some were miscellaneous programs and others give health plays. The Junior Red Cross Headquarters at Washington, D. C. furnished these plays and they are also prepared to furnish many others on request.

The Junior Red Cross Chairman has had the assistance of some of the members in preparing a fully equipped Marionette stage and three figures to represent the Good Health Clown, the Red Cross School Nurse and a Junior Red Cross Council Member. With this equipment the Health Department is proposing to help “put across” many health projects through the various schools of the county.

The Educational Secretary of the Health Department in Wilson conducts a Junior Red Cross Story Hour once a month. Here she interests all who come, not only in her stories, but Junior Red Cross news, taking up the health activities and giving each one who attends special health bulletins to take home. The following month at Story Hour she asks questions on the literature given out previously.

In the Pre-school Clinic conducted by the Health Officer and the Red Cross School Nurse, the Junior Red Cross Council Members helped invite both parents and children to attend the Clinics in the various schools. Considering this was the first year Wilson County ever attempted a Pre-School Clinic the results were encouraging.

Next year this Health Department will continue to cooperate fully with the Junior Red Cross and we have every reason to believe that the results will justify the effort.
CANNOT FORETELL CHARACTER IN YOUTH

It is not safe to prophesy the future personality of a child until he has passed the adolescent age, says Dr. Charles W. Burr, who writes of mental disease in young people in Hygeia for October.

The precocious boy, who is defined as one developing rapidly and one-sidedly, often becomes eccentric and not infrequently breaks during adolescence.

The boy of whom a normal, healthy future, barring the accident of brain disease, can be foretold, is he whose emotional reflexes respond healthily, who is not cruel after he is old enough to know what cruelty means, who accepts the school boy's code of honor, lies but seldom and always with a motive, steals not at all or only incidentally as an episode of adolescence, and who develops intellectually evenly. — Hygeia.

THEY DO NOT

About nine o'clock last night the meditations of Rev. E. C. Snyder, sitting in his home out on "Bloody Curve," were disturbed by a thunderous crash that sounded like a skyscraper falling. He was not excited for there are too many crashes at that particular point of the road to be disturbing, but he strolled out to inspect the damage.

A little old Ford runabout was lying sprawled across the road smashed pretty near flat as a pancake. The seat was about the only thing left intact, except the driver, who occupied it without a scratch. He continued to occupy it till the cops got there and arrested him on a charge of driving while under the influence of drink and without a license.

The little Ford had struck a large bus coming into town and had been thrown off like a horsefly flecked away by old Dobbin's tail.—The Monroe Journal

CAT AND DOG HOOKWORM HARMFUL TO MAN

Anchyllostoma Braziliense, a hookworm variety that lives in the intestines of Florida cats and dogs has been shown to cause CREEPING ERUPTION in man. If animals infested with this parasite contaminate your grounds with their excrement you are likely to get creeping eruption from contact with the soil, and people who have had creeping eruption say it is terrible. A word to the wise ought to be sufficient. If you don't want to have creeping eruption, get your cats and dogs treated or get rid of them.—Florida Health Bulletin.

WANTED

Extraordinary demands for copies of the April, 1929, issues of the Health Bulletin absorbed all available copies. We would be grateful to any friends who do not keep a file of the Bulletin if they would Mail any copies back to the State Board of Health when ready to discard.
Children that have been neglected by their parents.

What a harvest, what a harvest!

Deaths of children many caused by negligent parents.

How swiftly the little feet patter by—

Take the proper care of your children and the death rate will subside.
At a preschool child examination held recently in Ansonville the above twins carried off the honors. They are apparently exactly alike in every respect. Same height and weight, color of hair, eyes and so on. Both were found to be as near perfect physically as it is possible for a human to be. They were normal on all points tested.

A nurse from the State Board of Health assisted the county welfare officer in conducting several such clinics in the county.
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FREE HEALTH LITERATURE
The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

- Adenoids and Tonsils
- Cancer
- Catarrh
- Care of the Baby
- Constipation
- Cold
- Clean-up Placards
- Chickenpox
- Diphtheria
- Don't Spit Placards
- Eyes
- Fly Placards
- German Measles
- Hookworm Disease
- Infantile Paralysis
- Indigestion
- Influenza
- Malaria
- Measles
- Malaria
- Public Health Laws
- Prenatal Care
- Sanitary Privies
- Scarlet Fever
- Smallpox
- Teeth
- Tuberculosis
- Tuberculosis Placards
- Typhoid Fever
- Typhoid Placards
- Venereal Diseases
- Water Supplies
- Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY
The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

- Prenatal Care (by Mrs. Max West)
- Infant Care (by Mrs. Max West)
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- Save Your Baby
- Hints to North Carolina Mothers Who Want Better Babies
- Table of Heights and Weights
- The Runabouts in the House of Health
- Baby's daily Time Cards: Under 6 months: 3 to 6 months, 7, 8, and 9 months; 10, 11, and 12 months; 13 months to 18 months; 19 months to 2 years, 2 years to 3 years; 3 to 6 years.
- Diet Lists: 3 to 12 months, 12 to 15 months, 15 to 24 months, 2 to 3 years, 3 to 6 years.

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A few days ago we received a letter from a woman in a rural section of North Carolina. The letter was brief and to the point, to-wit:

"I am writing you about worms. My three-year-old child passed a worm yesterday about 5 inches long, and it was a big one. Will you please send me some medicine for her, and also some for my other children, ages 13, 9, and 5, respectively."

Practicing physicians all know that numbers of children, especially in the summer months, are infected with various kinds of parasites. The prevalence is mostly rural, because children in the country spend more time going barefoot, and the soil is more infested, on account of the presence of large numbers of animals, and the conditions surrounding hog pens, stables, and so on afford ideal conditions for the spread of the eggs of intestinal parasites. There is no section of the world safe from parasitic infection. Ever since people have known much about anything such things as worms in children have been a familiar topic, north, south, east, and west. Naturally in the south, the summers being longer, climate much milder, the children outdoors, in contact with the soil more, the opportunity for infection is greater.

Naturally the State Board of Health could not send any treatment to this writer for several reasons, some of which may be enumerated as follows: The diagnosis and treatment of disease of any kind is specifically a matter for a practicing physician. A physician cannot make a diagnosis of any condition until after he has made a careful examination of the patient, utilizing all his knowledge and training along this line. Medical treatment of any kind, to be effective, must be precise. Instructions to the patient must be definite and must be carried out to the letter. Another reason in this particular case is that medicine used for the elimination of parasites of any kind in the human intestinal tract is dangerous and should be prescribed with minute precision.

Every doctor who has practiced medicine any length of time can run back in his memory and recall numbers of children who have been given proprietary worm medicine and who have died as a result. Fortunately, for the most part the various patent or proprietary medicines advertised as vermifuges or worm medicine do not contain enough of the dangerous drug to do much damage. Of course, the effect is very near nil, and the pulling power of such drugs seems to reside in the fact that parents so frequently decide that their children have worms, when, as a matter of fact, such is not the case. A dose of a patent "worm killer" generally produces a slight laxative action with satisfactory results all around, but chiefly to the promulgators of the so-called medicine. Every doctor also knows that mothers will call him up over the phone, come to his office, or send for him, with the statement that
her child has been gritting his teeth at night in his sleep, or sleeping on his stomach, and giving other fish-wives' symptoms of worms. Ninety-nine times out of a hundred such a child manifesting such symptoms does not have any parasitic infection. In that class of patients naturally the "patent worm medicine" serves chiefly on account of its mental action on the mother when she gives it to the child.

In his column in Good Housekeeping last November Dr. Harvey W. Wiley has the following interesting introduction to a very fine article on the subject of Parasitic Infection:

**Doctor Wiley Discusses Parasitic Infection**

"The battle against preventable diseases is often waged in a peculiarly silent way. Diseases which are not deadly do not attract the attention which attaches to those that are threatening health and life.

"Every one is more or less interested in the story of the ravages of pneumonia, tuberculosis, cancer, heart disease, and similar troubles, but few people know of the wide extent of living animal parasites in this country. They have little or no knowledge of the ravages they make, the vast number of people afflicted, and the economic disturbance which they produce. They seem to be satisfied with the fact that the presence of animal parasites is annoying, but seldom deadly.

"One reason that living parasites—in the home language, worms—are not so well distributed. When children go to school wearing shoes, as they do in most towns, and where the area of infected soils is restricted as it is in cities and in small villages, there is no spectacular exhibition of the evils of wide parasitic infection. Generally, either the presence of these parasites is unknown, or it is not considered good form to talk about it. This threat belongs to a class of diseases which is general in its nature, and includes all forms of infection by animal organisms.

"The old-fashioned mother was aware of them and took such steps as she knew to avoid them. They are not regional, because this infection of various kinds has been a pest to mothers north and south for ages. It is true that the farther south you go, the more kinds of worms you meet. Nevertheless, all kinds of infection with living organisms are found in all parts of the country, and the campaign against them is of interest to all mothers.

"Living organisms are of two kinds, namely, the animal and the vegetable. In so far as I know, there are no animal parasites that are useful. All are objectionable. There are, however, useful bacteria and other organic bodies that are called digestive ferments, without which the digestive processes can not go on. At the same
time, there are dangerous vegetable substances, known as 'pathogenic bacteria,' which are threatening to health and life and should be excluded, as far as possible, from entering the body through food, drink, and air.

"One of the most deadly of these infections is the bacillus botulinus. Its outbreaks are always spectacular in character, and nearly always claim their toll of human life. Fortunately, the presence of botulinus infection is characterized by a very bad odor. If no bad odor is noticed, the food is safe from botulinus. If botulinus is feared in spite of the absence of odor, the food may be heated to the temperature of boiling water for ten minutes.

"On the other hand, the mother is not so alarmed when she finds her child has worms. She does not expect any fatal results therefrom. Nevertheless, the infection of the soil is undesirable, unnecessary, and always threatening. A short study of the work which has been undertaken to protect the soil from infection will show the necessity therefor."

Importance of Farm Sanitation.

The surest preventive to protect children as well as adults from any kind of parasitic infection on the farms as well as in the cities and towns is a safe sanitary environment. The construction of sanitary privies of a type approved by the State Board of Health for every farm home in the State is one of the most important preventives. When the sanitary privy is constructed, all members of the family and occupants of the farm should use it. It should be maintained in a good and clean manner, so as not to be a menace instead of a preventive. The water supply of the farm should be carefully protected against any possible infection. For the eastern section of the State, where filtered and pipe water is not available, the supply should be procured from driven or bored wells, and should be lifted with force pumps or other types of pumps, and the tops of the wells should be carefully covered and protected to prevent infection of the water.

Most of the parasitic infections take place as a result of polluted drinking water or food having the eggs of the parasites on it. All first class dietitians advise the eating of some raw vegetable foods and raw fruits every day. This is good practice, but before such food is eaten, the source should be known, and all of it should be very carefully and thoroughly washed. Raw cabbage and raw lettuce may be mentioned as two of the most common articles of food on the table of both city dweller and country resident throughout most of the year. Unless the source of this food is definitely known to be procured from a soil absolutely free from infected fertilizing materials or otherwise polluted soil, such food should be thoroughly washed. As a matter of fact, all such items should be thoroughly washed anyhow as a matter of general safety. It is known that the peeling of fruits like apples, or vegetables like Irish potatoes, before cooking destroys some of the food value. In the case of the Irish potato this may be overcome by thoroughly washing of the potato before boiling, and when the potato is boiled it should be eaten skin and all to get the full food value. Fruits like strawberries, which are in contact with the soil and which are often fertilized by the use of stable manure, should be very thoroughly washed before being eaten. Naturally such fruits are more palatable and more desirable when eaten raw than when cooked, and for that reason one should be doubly careful in thoroughly washing before serving. If all of our food were thoroughly cooked before being eaten, and our drinking water all pure, it is likely that there would be no more parasitic infection, with the exception of such infection as hookworm, or the differ-
ent infections causing fever like malaria, which is transmitted by the bite of mosquitoes.

Buying Shoes for the Children

At a North Carolina medical society meeting about twenty years ago, when Dr. Stiles and other celebrated authorities had participated in a long discussion of hookworm infection, an unpretentious country doctor from eastern North Carolina stood up in the meeting and stated that in his opinion if the million dollars which Mr. Rockefeller had just appropriated for combating hookworm infection in the South could be expended in the purchase of shoes for all of the country children, and if such children could be forced to wear them all the time, hookworm infection would be eradicated very much earlier. This statement, of course, by the doctor was based on the fact that hookworm infection is often contracted by children going barefoot in soils polluted with hookworm eggs. The parasites set up a skin irritation generally known as ground itch, and enter through such abrasions and gain access to the blood stream and thence to the intestinal tract, all of which is familiar matters with physicians and many other people. Naturally the infection would be just as easily carried on such fruit as plums and apples picked up by the children and eaten without thorough washing, but the country doctor’s point was that such infection was only a very small proportion when compared to the immensely greater numbers in which infection occurred as a result of soil pollution through foot itch. It is doubtful that the benefits obtained by children going barefoot in the summer time would not more than compensate for the risk of incurring hookworm infection. For this reason the sanitary privy, the proper disposal of all fertilizing material on the farms, and pure drinking water supply are measures which reduce such

risks to a minimum. Then there is also the important economic consideration when thinking of the advisability of all children in the country having to wear shoes throughout the summer time. The fact is, we do not believe it will ever be done, even if such were desirable and absolutely necessary to eliminate hookworm or other infections which sometimes occur as a result of going barefoot.

Different Kinds of Parasitic Infection

Generally speaking, there are two divisions or types of worms which are parasitic in human beings. One is the flat kind, which includes such parasites as the tapeworm. The other is the round worm. The hookworm belongs to the latter class and so does the large round worms such as the mother describes in her letter quoted at the beginning of this article. It is better for us not to undertake to describe any symptoms which the patient usually has when any of these parasitic infections are present. In the first place it is often hard for a physician to make a definite diagnosis; and in the second place the treatment for most of them differs. For example, tapeworm infection often taxes the resources of both physician and patient to eradicate. The round worms including hookworm are easier to deal with, but require specific and drastic treatment which can only be given with safety by a physician. In no field of medical practice is it more important for the patient “To let the doctor decide” than in dealing with parasitic infections.

Microscopic Test

Our advice to every mother who suspects that her child may have worms or any kind of parasitic infection is to consult at once her family physician. Many of the symptoms that are present, and may indicate parasitic infections, are frequently present in other conditions when there is no parasitic infection. There is not a
practicing physician in North Carolina who does not have access to the State Laboratory of Hygiene for a free microscopic examination of the feces of any child in his practice whom he suspects of having parasitic infection, when other means of a positive diagnosis are lacking. In short, the one last resort and sure test for a physician when in doubt about any kind of parasitic infection is recourse to the microscope. At the present time every first class health department in North Carolina is equipped with facilities for making microscopic examinations. Many of the practicing physicians of the State are using the microscope daily in their practice. All of the hospitals of the State have facilities for microscopic examination of such specimens. For those who have not such facilities available a half ounce size clean tin box containing a tiny particle of the feces about as large as a pea, obtained fresh and mailed direct to the State Laboratory of Hygiene with the family physician’s name and address attached, so that a report may be sent to him, will settle the decision. Sometimes two or three examinations are more desirable, but this is a matter for the attending physician to decide. When the physician sends a specimen, of course, he will mention to the Laboratory what he suspects, so that the Laboratory officials may make a careful search for the eggs of that particular parasite.

Beware of “Patent Worm Killers”

We cannot too strongly urge parents to beware of the various proprietary medicines promiscuously advertised to be administered to children for the removal of worms alone. All such products as mentioned in the beginning of this article are dangerous if worth anything at all. No such drugs should be administered except by a competent physician. This writer was practicing medicine in the town of Clinton more than twenty years ago and we cannot close this story in any more effective manner than to relate the following incident.

One fine Sunday morning in late April a boy came galloping into town on a bareback horse, urging us to come about two miles out of town at once to see a child who was having convulsions. On arrival at the child’s home we walked in the door just as the child died in a violent convolution. One look at the contortions and the condition of the child, with color of skin and eyes, immediately indicated to us that the child was dy ing of santonin poison. Santonin is one of the drugs chiefly used in all such vermifuges advertised to the public. The only safety of the public lies in the fact that it is generally sold in such minute quantities that it has little if any effect. This particular child was a fine, bright two-year-old child.
who had indicated symptoms of digestive disturbances a few days before. On the day preceding, Saturday, the father had visited a drug store in Clinton, had purchased one of the commonly advertised "vermifuges," and on going home Saturday night they had given the child several large doses, with the direct result that the child was killed outright.

That was not the only incident in the practice of this writer over a period of nearly ten years, but it was one of the most lasting, on account of the utter uselessness of sacrificing the life of that child. Such drugs should not be advertised to the public under any circumstances, but as long as they are, the only recourse looking to safety the parents have is to let such things alone and to go to the family physician for advice and prescription before any such drug is administered to any helpless child.

APPLICANTS FOR PATROL JOBS FAIL TO PASS PHYSICAL EXAMINATION

On May 22 some of the newspapers of the State carried in their daily dispatches a communication from Camp Glenn at Morehead City, which in many ways constitutes one of the most significant news items published in this State since the publication of the army record stating the number of soldiers who had been turned down following physical examination after being drafted for service in the late war.

The dispatch from Morehead City stated that there were fifty-eight applicants for jobs as patrol officers under the new traffic regulation act enacted by the last legislature. Those fifty-eight applicants were put through a rigid physical examination by two physicians at Camp Glenn on the date above mentioned. Twenty-one of the fifty-eight men failed to pass this examination. The dispatch stated that nearly every one of them was under thirty years of age. The item further stated that the chief reason for failure to pass the examination was because of deficient heart action.

The item did not say whether or not all the young men were smokers, but it is probable that they were. Whether or not this had anything to do with it we do not know. We do know, however, that if an examination applied to fifty-eight young men applicants for a high class job paying a good salary and otherwise so desirable as to demand a first class type applicant, that there should be such a large percentage of failures is a serious consideration for the people of this State.

Naturally the physical examination was somewhat rigid, because these men must be in good physical shape all the time. They must have good teeth, good hearing, and their vision must be well nigh perfect. It is possible that if the Intelligence Quotient Test and the numerous other psychological tests had been applied in as rigid manner as the physical test, the number failing to pass would unquestionably have been augmented. It is hoped that all were able to pass any test for morals, habits, etc.

If the young men under thirty years of age from a selected list of the population cannot qualify on an ordinary physical examination test, it is reasonable to suppose that a test supplied to the general population would be much more unfavorable in its results. These are matters of grave concern for all the people of the State, but particularly for physicians, health officers, and school authorities.

In past generations the population of North Carolina has been largely a rural one. Life on the farms, while unfavorable to the infants, on account of disastrous diseases incident to infancy, has been conducive to the de-
development of physically strong young men and women for the most part. Life in the open air, active exercise, the good food and the monotonous quiet of farm life in the past has been one of the big favorable assets from a public health standpoint. Offsetting such advantages, of course, were the lack of control of such diseases as typhoid fever, which took a terrific toll from the young and healthy as well as other sections of the population.

About the time typhoid was reduced to a minimum, the control of tubercu-

losis was no. This rate of increase, as may be seen, is, of course, much higher than the natural rate of increase of population in the United States.

The figures given above plainly indicate that the people of the United States spend more each year for such products as chill tonics and foot ease than is spent in the whole United States by the combined federal, state, county, and city health departments of the whole country, including the Philippine Islands, Hawaii, and Porto Rico.

After subtracting all of the expenditures incurred by all these public health agencies for all the vaccines and all the serums used by the aforementioned health department officials in their work in preventing communicable diseases, and then have a large sum left over in cash. If the question is asked, What will be done about it? our answer is, Nothing. However, as long as the writing hand of this scribe is not palsied we expect to keep on telling the truth about it.

Never argue with a fool. Listeners may not know which is which.—The Healthy Home.
The wholesale killers of our people today are a very different group of diseases from those which killed our people in the past. Medical history tells us of the days when smallpox used to sweep the world, and in a single visitation to a great city like London would destroy 25% of the total population of the city. In 1798, however, Dr. Edward Jenner, a country physician of Gloucestershire, England, published his discovery of smallpox vaccination, and gave us so perfect a means of preventing that disease that we can now say that wherever a single case of smallpox exists some one has blundered. Smallpox is no longer merely a misfortune, it is a perfectly definite mistake. Even in the rare case where a vaccinated person contracts the disease, the mistake is pushed back only a step—he caught it from someone who was not vaccinated.

The oldest physicians now living can recall the days when surgical operations were a horror to doctor and patient alike, for the fear of death from infection, and most of the operations now taken as a matter of course, were absolutely unthinkable, because of the certainty of death resulting. Then Lord Lister introduced antiseptic and aseptic surgery to the world and made surgery a blessing that has saved countless lives. Those same oldest physicians now living recall the time when they had to sit repeatedly at the bedside of little children, watching them strangle to death from diphtheria, absolutely powerless to do anything. Then came antitoxin to cure the disease, and later toxin-antitoxin to prevent it, and diphtheria has joined the ranks of those diseases which are perfectly clear-cut definite mistakes. Typhoid fever caused more deaths than battle casualties in the Spanish War, and it was one of the greatest destroyers of our people only a few years ago, yet now typhoid fever is another absolutely preventable disease, another mistake. If everyone would keep protected from smallpox, typhoid, and diphtheria, the germs causing those diseases would become extinct, and would be no more likely to be redeveloped than would the mastodon or the saber-toothed tiger.

Certain other diseases are rapidly yielding to the attacks of medical science, even though we do not as yet have any well established vaccines to prevent them. The summer complaints of babies are not nearly as numerous or as deadly as a few years ago, thanks to better standards of milk production and distribution, and an increased knowledge of the principles of infant feeding. Tuberculosis, that arch-killer of our people of a generation ago, has dropped 50% in its death rate in North Carolina in the past 20 years, 40% in the last 10 years. This is largely the result of a campaign of education. Physicians have educated themselves in the early diagnosis of tuberculosis, and the public has become aroused to the need of going to the physician at the onset of the very earliest symptoms in order to get the early diagnosis necessary to the best treatment.

Meanwhile, however, another group of diseases has been making serious inroads on us, a group of chronic degenerative diseases, notably chronic
heart diseases, kidney diseases, and that terrible scourge, cancer. These diseases are definitely on the increase, and deaths from them are becoming more numerous every year. It is true that in saving more babies and young people from some of the diseases that used to be so deadly, we are allowing more persons to live to an age when they are especially susceptible to these degenerative diseases, but this is not an adequate explanation of the situation confronting us at the present time, for deaths from these diseases are reaching higher ratios in the 40 to 60 age group than they have ever shown before. They constitute at once a menace and a challenge that we must face.

These degenerative diseases present a problem that in some ways is almost the exact reverse of the tuberculosis problem. The victim of tuberculosis usually feels sick early in his disease, and the advice, "Go to your doctor the moment you feel sick" is excellent. Such advice, however, is almost worthless when applied to degenerative diseases, for, as life insurance experience teaches us every day, such diseases often creep on us unawares, without causing any symptoms of which we are aware, yet on examination, physical or laboratory signs are found that indicate that serious damage has already been done—sometimes so serious that the applicant for insurance is absolutely uninsurable.

What, then, can we do to stem this steadily rising tide of deaths from these diseases which are now the real wholesale killers of our people? Lacking any specific protective vaccine, the only thing we can do to even partially remedy the situation is to learn of the existence of these diseases before they give symptoms of which their victims are aware, or, still better, detect and remove the conditions that favor the development of these diseases, such as excessive stresses and strains of unhygienic living, chronic localized areas of infection such as bad teeth, tonsils, gall-bladders, etc., areas of chronic ulceration which may favor the later development of a cancer, etc. However, to do this, we have got to do something that we have not been doing in the past in any large way, and that is, pay as much attention and respect to our bodies as we do to our banks and our automobiles! We have them examined at intervals, and if slight defects are found, we have them corrected before they become serious, yet because of the familiarity which breeds contempt, we let our most valuable material possessions, our bodies, go on and on, without overhauling, until they break down with some incurable disease!

The history of the development of an interest in the examination of apparently healthy persons on the part of the medical profession, and in having such examinations on the part of the public, is of some interest.

The first we know of such an idea being suggested in modern times is an open letter written to the British life insurance companies in 1861 by Dr. Horace Doball. He advised that the companies give such examinations periodically to their policyholders, as a sound economic policy. He was a prophet without honor in his own country, and a half a century ahead of his time, so no one paid the slightest attention to him, so far as we know. In 1900 the first paper on the subject was written in this country, and every year since then, more interest has been taken in the matter. However, the movement grew very slowly until the World War. Since then it has grown very fast, for we learned then that about one-third of our young manhood was so defective physically as to be unfit for service. However, while certain commercial organizations, such as the life insurance companies, have been very active and have done invaluable service in educating us to the value of such work,
it is only within the last year or two that the whole country has become aroused to its importance. The North Carolina State Board of Health has been a leader in this field. North Carolina is the first state to employ a full-time man to plan and execute an educational campaign, carrying the message of the need of this work to the medical profession and the people of every county in the State. Because we are pioneers in this work, the International Health Board of the Rockefeller Foundation is cooperating with us in the work. North Carolina believes that it would be just as foolish to leave the whole tuberculosis problem to the life insurance companies as to leave the problem of degenerative diseases to them. These diseases affect the whole population—they are not limited to insurance policy holders! Therefore, the task must devolve on the whole medical profession of the state, and the people of the state must give the doctors a chance to cope with this problem by going to them for these examinations, realizing that it will pay in every sense of the word. The State Board of Health recommends that everyone go to his own physician at least once a year for a health examination. A health examination is no superficial affair—not a thing to be turned off in 10 or 15 minutes—it is a careful thorough examination, looking for all sorts of physical defects and for all sorts of defects of living that put an excessive stress and strain on the body that may tend to cause a premature breakdown. The slighter the defect searched for, the greater the care required to find it. The State Board of Health has records showing that in 436 persons who believed themselves healthy or practically so, living in all sections of the state from the seaboard to the mountains, 1,555 defects were found in health examinations—an average of 3.57 defects per person. The pooled experience of many of the largest life insurance companies teaches that in an annually examined group the annual death rate varies somewhere between 18% and 24% lower than the annual death rate in an unexamined group. We do not expect periodic health examinations to cause a 50% reduction in the death rate from degenerative diseases, because they are far more prone than tuberculosis to attack the very aged, who are going to die anyway. However, the large majority of the lives that are saved will be the lives of middle-aged people. From the public standpoint, middle life is the worst time for death to occur. It is only a difference in degree, not a difference in fundamental principle—whether we consider a graduate of a dozen universities, or some unique genius like Mr. Edison who cannot possibly be replaced when he dies, or Mr. Average Man-in-the-Street, graduate of the University of Hard Knocks.
the principle remains the same: every middle-aged person has had his own unique, peculiar training and experience, whatever it may be, and should be at the height of his powers, ready to make his own particular contribution to society; yet all too often, these degenerative diseases come along and cripple or kill the middle-aged person, and his contribution is never made. We have neglected our children in a number of ways, but there is no way in which we have neglected them more than in our failure to make a more concerted attack on these great killers of middle life that so often make orphans of our children.

It is the above considerations that have made North Carolina and the Rockefeller Foundation so interested in this matter of periodic health examinations, and in the idea that the effort to keep people well in his community should become one of the major features of the practice of medicine. Other states are interested in what we are doing. A man in New York remarked to one of our State Board of Health physicians when he heard of this work, "We knew that you had good roads down in North Carolina, but we did not know that you were so far ahead of the rest of the country in your public health work." Here is a definite challenge. New York and other states will probably follow in the trail we are blazing. Our State Board of Health believes, the Rockefeller Foundation believes, and authorities everywhere believe that this matter of widespread periodic health examinations of the people by their own physicians is destined to be the next great progressive step in preventive medicine and in the literal saving of human life wholesale, therefore let us all help ourselves and the other fellow, too, by our example, by each and every one of us going to his own physician at least once a year for a health examination, and then having the defects found corrected as far as possible.

**DOES SUNLIGHT KILL BACTERIA?**

Some of the most frequent inquiries that the State Board of Health has to answer have reference to the disinfecting power of sunlight. In other words, people about over the State in increasing numbers write in to secure directions about disinfecting rooms after the death or removal of patients suffering from tuberculosis and other diseases. They want to know whether or not exposure to sunshine will kill the germs, and if so how long it will take; whether or not this exposure for heavier wearing apparel, such as overcoats or other material that cannot be treated with hot water or other disinfecting agents, will be completely disinfected through exposure to sunlight and open air.

The importance and power of sunlight as a disinfectant has been realized for a long time, but the exact knowledge has heretofore been lacking as to how much power sunlight possesses, and how far it would do to trust to sunlight as a sole disinfecting agent. Health officers can now thank Dr. F. M. Meader of the Detroit, Michigan, City Department of Health for carrying out some exhaustive studies along this line.

Doctor Meader described his experiments in a paper read before the Wayne County Medical Society at Detroit, Michigan, more than three years ago. The Detroit City Health Bulletin for March, 1929, has republished this paper in full. The description of the experiments is too technical and too long, even if the illustrations were available, for publication in the Health Bulletin, but Dr. Meader’s summary and his conclusions make it exceedingly interesting reading, and
we herewith take pleasure in quoting from the Detroit Bulletin the exact summary and conclusions presented in Dr. Meader’s valuable paper. This is information of a high type which not only health officers and physicians but householders throughout the State will find interesting and valuable.”

“The Health Bulletin
July, 1929

“Summary

“An experiment is presented which shows that in a certain latitude, elevation, season of the year, and middle of the day, sunlight will kill staphylococcus aureus in one hour.

“Again, an experiment is presented which shows that sunlight under the conditions above mentioned, and after passing through plate glass 8 mm. thick, will kill staphylococcus aureus in 4½ hours.

“Another experiment shows that indirect sunlight such as skylight from a northern exposure under the conditions of the first experiment will kill staphylococcus in about four hours.

“An experiment is presented which shows that sunlight under the conditions of Experiment I during the latter part of March will become effective in killing staphylococcus aureus at about 9 o’clock in the morning, but has very little effect after 3 o’clock in the afternoon.

“An experiment is given which shows that when an iron arc of a certain size is used as a source of light, if this light is passed through a spectroscope, and the spectrum is spread on the surface of a bacterial culture, bactericidal effect will be first noted in that part of the spectrum which is composed of wave lengths between 2800 and 2850 Angstrom units. On longer exposure longer wave lengths are noted to be effective. No longer wave length than 3100 Angstrom units was observed to be effective even after five hours’ exposure.

“An experiment is presented which shows that at noon of April 1st at the above mentioned elevation and place, the shortest solar wave length observed was 2995 Angstrom units. At 7 o’clock in the evening the shortest wave length observed was 3100 Angstrom units. Since bactericidal properties of sunlight for staphylococcus aureus were not apparent after 3:30 p. m. it would appear that the effective rays in sunlight must be confined to those wave lengths which are apparent at noon, but not apparent in the late afternoon. These waves are between 2900 and 3100 Angstrom units in length.

“Conclusion

“What do the above experiments mean to the health officer? The health officer may, with confidence, rely on sunlight, and skylight to destroy bacteria if exposed to it for two hours during the middle of the day.

“Withdrawing the draperies and raising the shades, even if the windows are closed, if the sunlight and sky shine can enter, the destruction of bacteria will gradually be brought about.

“By means of the bleaching of acetone methylene blue, the health officer may easily determine the most active periods of the day in each season of the year when the sun and sky shine may be most useful. These periods will vary with the altitude, latitude, season of the year and condition of the atmosphere. The period of the day when sunlight has bactericidal power is shorter in winter and longer in summer.

“Washing the woodwork or parts of furniture likely to have become contaminated will break up covering matter which conceal bacteria, so that the sun light may become more effective.

“Open books, feathers, draperies, rugs, cushions may be amply disinfected by placing out in direct sunlight for two to four hours during the middle of the day. They must be so placed that the sun can have free access to their surfaces.

“Health officers should interest
themselfs in preventing a smoke screen to come over their community. A smoke screen will also deprive a community of these solar rays which stimulate nutrition in young childhood. A smokeless town will have less rickets.

"Bacteria live a long time in dark rooms, hallways, and basements when they are damp. The sun can have no effect on bacteria in these places. Hence the importance of building supervision, so that buildings shall not be erected which are not adequately lighted by sunlight. Store basements cannot rely on incandescent lamps to disinfect the air and woodwork, except only as drying is useful.

"The association of fluorescent substances to assist the longer light waves in the destruction of bacteria needs further research. The lethal effect of drying as produced by the infra-red waves is recognized as an important means of destroying bacteria."

PEPTIC ULCER

Not long ago the State Board of Health received a letter from a reader of the Bulletin asking for information about an ulcer of the duodenum. As an ulcer of the duodenum is of the same type as the ordinary peptic ulcer of the stomach, and as the whole matter is a strictly technical one, and yet one which is closely allied to the diet problems of quite a number of people, we asked Dr. Frederick R. Taylor, of the Board of Health Life Extension Bureau, to answer the letter for us. Dr. Taylor’s letter is interesting, and we feel would be so helpful to many people that we are herewith publishing it in full.

"Dr. G. M. Cooper, Director of the Bureau of Health Education of our State Board of Health, has forwarded your letter to me with the request that I reply to your inquiry regarding the treatment of duodenal ulcer.

"The treatment of duodenal ulcer is a pretty technical matter that will require that the patient be under the direction and observation of a physician. However, it is our desire, not merely to repeat a stereotyped phrase of 'go see your doctor,' but to try to show why such a procedure is necessary.

"The proper treatment of any disease must be based on as adequate a knowledge of the nature of that disease as can be obtained in the present state of the development of medical science. Let us, therefore, consider the question, 'What is duodenal ulcer?' It is a peptic ulcer located in the duodenum, which is that part of the intestine continuous with, and immediately adjoining, the stomach.

"A peptic ulcer is a peculiar type of ulcer, occurring in the stomach (gastric ulcer) or duodenum (duodenal ulcer). We do not know the direct cause of it with certainty, though many authorities believe it to be due to infection with germs carried to the wall of the stomach or duodenum by means of the blood from other infected areas, such as diseased appendix, teeth, tonsils, etc. We do have certain fairly definite ideas of what makes such ulcers as chronic as they are—or, to put the idea in another way, why they are so difficult to heal, once they are started. The best way to reach an understanding of this point, which is so important in treatment, is to ask the fundamental question, 'Why does not the stomach digest itself?' It is because certain substances called antienzymes are formed in the lining of the stomach or duodenum which protect that lining from self-digestion. These substances are probably kept in the cells of that lining; for when the lining is once broken by the formation of an ulcer, the exposed wall of the stomach or duodenum does suffer
from being digested. Thus a process is started which consists practically of an eating away of the wall of the stomach or duodenum. This would rather quickly eat a hole clear through that wall, were it not for the fact that Nature tends to build up a sort of restraining wall to prevent such a leak. Sometimes perforation does, indeed, occur, and when it does, it is a very serious thing—an emergency comparable to a bullet wound in the stomach or duodenum. This complication, however, usually occurs only after a long period, usually years, and means that the ulcer has progressed through the wall faster than that wall can be reinforced by processes of repair. A perforated ulcer always demands immediate surgery, just as any other perforation does, unless the patient is so extremely shocked that death is inevitable. Fortunately, most ulcers do not perforate, and this is especially true in those that receive careful and thorough treatment.

"The treatment of a duodenal ulcer before perforation occurs may be either medical or surgical. Which method should be pursued will depend on many factors, and the final decision can be made only by a skilled physician, and in many cases should be made after consultation between such a physician, an X ray man, and a surgeon. It is impossible to lay down any rule of thumb for treatment which will apply to all cases. The choice of treatment will depend on such considerations as the duration of symptoms, the tendency to hemorrhages (usually taking the form of blood detected chemically in the stools, in duodenal ulcer; whereas in gastric ulcer such blood may be found and also fresh blood may be vomited at times), the X ray findings, the general condition of the patient, the medical and surgical skill available, etc. X ray findings

The Home Demonstration Agent for Carteret sends us this picture with the notation that these women are fishing for food and not pleasure and that "Hope deferred maketh the heart sick."
are of great importance, for they give information about the location, size, and depth of the ulcer that can be gained in no other way, and they also give valuable information as to the result of medical treatment—such treatment may relieve all symptoms at times without actually healing the ulcer. An X ray picture taken at the beginning of a course of treatment and kept for comparison with one taken at the end of a period of treatment is a very valuable way of estimating the value of the treatment.

"It is often the case, though there are exceptions to the rule, that medical treatment is given a trial first. This treatment aims to keep the normal or excessive acid of the stomach which is necessary for the gastric juice to have, to digest anything, neutralized, so the stomach will not digest its own wall or the duodenal wall, at the site of the ulcer. Food will be digested entirely by the alkaline intestinal digestive juices farther down in the intestinal tract, and the gastric juice will be put out of commission while the treatment goes on. Alternating and frequent administration of suitable food and alkaline medicines are the main methods of keeping the acid juice neutralized. Certain other matters are considered in treatment, such as trying to relax any tendency to spasm of the stomach shown by X ray, etc. At the onset of treatment, most authorities strongly urge a few weeks of rest in bed, feeling that this is essential in starting the ulcer to healing. The details of treatment, should, however, be left to the physician. Medical treatment usually is carried out for a long time—perhaps a year—when it gives relief. However, such treatment can be arranged after the first month or two so that very frequent visits to the doctor are no longer necessary, though he should always be kept advised of the progress of the case, and be given the opportunity to supervise the case in any and every way he thinks necessary.

"Sometimes the best medical treatment fails, and then the surgeon must be consulted, even though perforation may not occur. If the ulcer shows no tendency to heal under careful prolonged medical treatment, it may have to be operated on in various ways—the different operations depending on the exact conditions found after the abdomen is opened, and the preference of the individual surgeon for one or another approved type of operation that in his judgment is fitted to the case.

"In conclusion, we might summarize the situation by stating that duodenal ulcer is very rarely fatal unless perforation occurs, which is fortunately seldom, but that it is a condition that urgently demands careful and prolonged treatment, medical, surgical or both, under the direction and observation of expert medical men, not only to avoid the danger of perforation, but to restore health and comfort. Often in the course of treatment, sources of infection elsewhere—teeth, tonsils, appendix, etc., may have to be removed or treated.

"I hope that this will be a satisfactory reply to your question, and that if you are not already under the care of a physician, that you will seek such care, and that such expert treatment may result in your complete recovery."

Bill thought his gas was getting low; He struck a match; the tank let go! Bill sailed three miles right in the air— Three miles on a pint is pretty fair. —Exchange.

"You will be able to get considerable damages," said the lawyer to the accident victim.

"Damages! I got damages enough," she responded. "What I want is repairs."—Patchwork.
MRS. MCKIMMON AND MISS THOMAS GIVING VALUABLE AID IN NUTRITION WORK

If there were such a thing as practical romancing, then Mrs. Jane McKimmon could qualify as one of the great practical romancers of this State. The story has been told at home and abroad many times and told by writers better qualified than this one to describe it. However, it will not do any harm to record just here that Mrs. McKimmon commenced some twenty years ago one of the great movements looking toward bettering the health and living conditions of numbers of people in North Carolina.

At the time this work of home demonstration agents was commenced in some of the counties of the State there was not the knowledge available as at present, and there was not the universal recognition of the importance of a balanced diet for people that there is at the present time. The stock raising people blazed the trail in their great slogan, "A Balanced Ration," for the successful production of marketable pork and beef. The home demonstration agents, for the most part practical women of good education and a sound knowledge of food, commenced their work by going into the homes of some of the citizens of the county where they were located and by actual demonstration showed the people how to select food and how to prepare it.

In the matter of dress people who had lacked the opportunity of knowing how to select and fit and wear the proper and most desirable clothing could easily observe on the streets and at the churches and in the stores the things that were necessary to enable them to improve their personal appearance through wearing better clothing. The same people who needed a knowledge of food selection and food requirements equally as bad as they needed a knowledge of dress did not have the opportunity of seeing such selection made and utilized. Therefore the home demonstration agent from the beginning filled a very important requirement for numbers of people.

In these days of economic stress, the high cost of living and so on, it is necessary to stretch income just as far as possible in the matter of food, as well as other living requirements. All of our habits and requirements now-a-days also seem geared to a much higher speed than formerly, making it even more necessary than ever to provide the proper foods in abundance to enable us to keep the pace.

Pellagra is one of the diseases known as a deficiency disease, the prevention of which requires from babyhood on a properly balanced diet consisting of a wide variety of food. A large percentage of the families that have the food are often found deficient in knowledge of how to prepare and balance their meals in order to get the most nutrition value from the least expenditure. The alarming increase of pellagra in the State, in spite of the efforts of demonstration workers, agricultural authorities, as well as physicians and health officers, has emphasized anew the necessity for sound teaching widely extended in this field.

We look upon Mrs. McKimmon and her assistant Miss Mary E. Thomas as being experts in the field of nutrition. We do not hesitate to advise the physicians of North Carolina, when called to treat patients suffering from pellagra, that it is to their own interest and to the interest of the patients and their families to freely recommend the services of Mrs. McKimmon's home demonstration agents, under the supervision of Miss Thomas, in carrying out the doctor's direction, in order to assure a daily diet.
embracing a sufficient amount of properly prepared foods. The physician in such cases is simply commanding the services of valuable, competent authorities which will prove of a great deal of assistance to his patients.

Recently Mrs. McKimmon has sent out the following circular letter to all of her agents in the home demonstration work in fifty-five counties of North Carolina:

"My dear Co-worker:

"I am enclosing an article which is self-explanatory, and I am asking you to cooperate to the extent of your ability with any family or person in your county who is suffering from pellagra.

"Miss Thomas tells me she has sent to each one of you a copy of the N. C. Health Bulletin for April, 1929, which has an excellent article on pellagra by Dr. Cooper. She has also recommended to you a bulletin sent out by the U. S. Public Health Service entitled 'Pellagra, Its Nature and Prevention' by Joseph Goldberger, Surgeon U. S. Public Health Service. This bulletin is reprint No. 1174, Public Health Reports. I hope you will make a thorough study of both these bulletins and also the diet gotten out by Miss Thomas, a copy of which I am enclosing. This is based on Dr. Goldberger's diet, and if you are called upon by people in the county this is the diet to be recommended. I hope you will look over the food situation in any family to which your attention is called and see what you can do towards establishing a better diet for the family's nutrition. I also believe you can so enlighten the family that it will be willing to plant a garden and secure both poultry and a cow if possible.

"I am leaving the procedure to your own good common sense, and I know you will exercise tact in any situation in which you find yourself. I believe it is our duty to do what we can to help the pellagra situation, and I further believe that we are in a position, with the machinery which we possess, to do a real service to the farm people who are unfortunate enough to be stricken with pellagra.

"Sincerely yours,

"JANE S. McKIMMON.

"Assistant Director of Extension."

It will be noted from Mrs. McKimmon's letter just quoted that she calls attention to a suggested sample diet sent out by Miss Thomas. There is some sound information in Miss Thomas' suggestions, and we take pleasure in quoting from Miss Thomas' introductory to her diet schedules as well as the suggested menu. Right here we want to emphasize the absolute necessity of a good physician being in charge of any patient or any suspected case of pellagra. These diet schedules and suggestions should first receive the approval of the attending physician before the patient or the family undertake to put into effect any kind of a diet prescribed by anybody.

Suggestions From Miss Thomas.

"Food that can keep us from having pellagra can also aid greatly in curing pellagra. When the disease is actually present, Dr. Goldberger says powdered yeast, sweet or buttermilk, lean meat, fresh meat juice, scraped beef, egg yolk, fresh or canned tomato juice should be given preference.

"Dried pure yeast contains more of the pellagra-preventive vitamin than any known food. For use as a food the powdered yeast should be stirred into boiling water and allowed to boil about one minute. Two tablespoonsfuls or one ounce of powdered yeast a day will ordinarily be enough for an adult. One or two teaspoonfuls may be given three to six times a day in milk, tomato juice, or fruit juices.

"Owning a good milk cow, raising poultry and eggs and a meat supply
for home consumption, and growing a year-round garden on every farm is the best assurance of an adequate food supply.

"The Home Demonstration Division is making every effort to encourage the rural people of North Carolina to produce these on the farm to conserve the surplus for use during the winter months, and to prepare all foods in such a way as to retain their greatest nutritive value.

"Dr. Goldberger's Diet for Pellagra Prevention

"With interpretation by Mary E. Thomas, Nutrition Specialist of the Division of Home Demonstration Work, State College, Raleigh.

Milk—sweet or buttermilk—2 pints daily.
Lean meat—beef, mutton, pork, fish, fowl, ¼ to ½ pound per day.
Eggs—at least one daily.
Vegetables—sweet or Irish potatoes, turnips, string beans, tomatoes, cabbage, collards, turnip greens, spinach, and other vegetables—2 servings daily in addition to starchy vegetables.
Fruits—fresh, canned or dried—2 servings daily.
Whole grain products—breakfast cereals or breads made of the whole grain—2 servings daily.
Water—6 to 8 glasses a day.

These foods may be distributed as follows:

For Breakfast:
Sweet milk daily.
Oatmeal served with milk four times a week.
Grits with meat gravy or butter three times a week.
One egg daily.
Bread or biscuit daily.
Fresh, stewed, or canned fruit daily.

For Dinner:
One meat dish, beef stew, roast, hash, steak, lean pork, boiled or roast fowl, fish every day.
Dried beans or dried peas two or three times a week.
Irish or sweet potatoes or rice every day.
One green vegetable daily—collards, turnip greens, snap beans, etc.
One other vegetable daily such as turnips, carrots, tomatoes, squash, etc.
Bread daily.
Buttermilk daily.

For Supper:
Sweet or buttermilk daily.
Biscuit or bread daily.
Butter daily.
Egg, lean meat or cheese—several times a week.
Vegetable salad several times a week.
Fruit—stewed, canned or fresh daily.
Syrup—old-fashioned cane syrup or sorghum several times a week.

LETTER FROM A PRISONER IN A COUNTY JAIL

It will be recalled by our readers that we published in the June issue of the Bulletin an article critical of some few remaining county jails in North Carolina that have not conformed fully to the law in this State with regard to the conduct of such institutions. The following letter is received from a prisoner in a jail in western North Carolina. The interesting part of this communication is that the Editor of the Bulletin about ten years ago made an inspection of that particular jail for the State Board of Health, condemned it outright, and reported it to the State Board of Health as one of the worst in the whole State. Improvement has evidently taken place, as it will be noted this prisoner speaks in almost affectionate terms of the jailer. The criticism is chiefly directed toward the
county physician of that county, who is responsible for safeguarding the health of all the prisoners. The writer suggests that we have his letter published in the News and Observer, but as we do not happen to be managing editor of that institution, nor do we run a column in it, it is probably best for us to publish this letter in our own publication. The letter follows exactly as written, spelling, construction, and all.

"I am confined to the common jail of ________ county for a term of ninety days. I probly wont need any introduction to you as I have wrote this place up before and you can feel assured that your man you sent here found things just like I had reported them. I am willing to admit I am just a prisoner like all other prisoners an dont expect to get home treatment in jail but a prisoner has nothing to regard but his health. When that is gone nothing matters to them then it is hard enough to be confined in prime condition an still harder when you are sick and get no attention there are thirteen running soars on my body an I have ask for a doctor but he dosent come to see me wont give me a Blood test atall and I have reason to believe that it is a dangerous disiese. I dont mean to be a sour face just because I am in jail but I know from self experience that this county forces men to stay together with contagious diseases an as I have read the Law on that they are subject to be in jail to. When a man comes to the chan gang hear he must go to work without a chance to see the Doctor once when I was free the Doctor told me this jail was nothing but a dam nuisance to him thats how much interists he takes in the boys who are in jail.

"I guess you Gentlemen gets many letters of this kind which proves out to be nothing but a fake. So for that reason I will not ask you to believe my statement just send a man and let him see for his self that what I say is true. One word in behalf of our jailer he is good to us an feeds us good that is all we expect of him. An I know the purser (purpose) of the state Health department it is for the good of the Whole Human race and honest to God it is needed hear. the_______ County officials has been warned several times but it dosent do any good. So if you wish to run this letter in the News an observer it would please me very much they need just something like that to make them wake up to the fact that a prisoner is Human to, publish it if you wish to I will back up every statement I have made in this letter I would write more that is honestly truth, and will thank you

The photographer is evidently telling this Raleigh baby an interesting story.
in advance for your kindness if you will take some kind of step to make Health better in this jail hope to hear real soon from my letter."

"Yes, I can give you a job. You can gather the eggs for me if you are sure you won't steal any."

"You can trust me wid anything, lady. I was manager of a bath house for fifteen years an' never took a bath."—Exchange.

DOCTOR CADMAN TO A FOLLOWER OF MRS. EDDY

Sometime ago Thomas Edison was quoted as having said that nobody in the world knows a millionth part about anything. His observation was evidently correct for about everybody in the world with one exception. The exception is Rev. Dr. S. Parkes Cadman, a great New York City preacher.

During the last few years Dr. Cadman has certainly convinced the world that he knows just about all there is to be known at present about everything. Seriously speaking, Dr. Cadman is a second Shakespeare in his versatility and the astonishing amount of knowledge he possesses concerning everything that affects mankind.

One of the finest illustrations we have seen emphasizing Dr. Cadman's peculiar knowledge of the problems of medicine and public health was brought out in his daily column a few days ago. A follower of the late Mrs. Mary Baker Eddy, who founded one of the cults which is very active in the field of theology as well as medicine, wrote to Dr. Cadman as follows:

"When the clergy and the medicalos tell their people the truth—even though it be unwelcome—that all disease is the result of sinful thought—'Not that which goes into the mouth defileth the man, but that which cometh out of the mouth'—disease will recede and ultimately vanish. 'Be ye, therefore, holy even as I am holy,' is a divine mandate, and strict obedience to it will restore man's primitive likeness to His Maker the God in whom is no sickness, no sin, no death."

"So says Mary Baker Eddy. What say you?"
in the supremacy of the spiritual element which is one of humanity’s largest assets. It is also a valuable aid to the medical profession, especially in the treatment of patients having supersensitive temperaments. The diverting of their minds from introspection and from dwelling upon their physical condition frequently results in the ‘cure’ of a disease which they sincerely believed they had, but which never actually existed organically.”

**HUNDREDS OF CHILDREN ANNUALLY CRIPPLED BY PLAYING WITH EXPLOSIVES**

The State Board of Health has received a communication from the Institute of Makers of Explosives requesting us to issue a warning about the dangers of children playing with blasting caps left within their reach by careless workmen. The letter from the officials of the institute stated that:

“About three years ago the Institute of Makers of Explosives, composed of most of the explosives manufacturers in the United States, began an effort to reduce the number of accidents to children from playing with blasting caps. This movement has taken the form of spreading information through the press, magazines, trade papers and radio of this danger. It was found as the result of a survey by the Institute that several hundred children in the United States are crippled or maimed each year by playing with these objects which are left where children can get them by careless workmen. The movement has been participated in by the Department of Agriculture, the Surgeon General of the Treasury, the Bureau of Mines, mining institutes and other departments of states, the National Safety Council, school authorities and others.”

The statement further says that the manufacturers of blasting caps for many years have placed warnings on containers of these articles telling persons that they should not be left about where children or unauthorized persons can get them.

It is said that a careful tabulation of the statistics indicates that about eighty per cent of the accidents which cripple and maim so many children every year occur in rural or semi-rural sections.

It ought not to be necessary at all to have to issue any such warning or to call attention to any such danger, but the same thing applies to the danger from ordinary household lye which every year seriously injures and actually kills numbers of children. It would seem that any adult human being having a modicum of ordinary sense of responsibility would never leave within the reach of a child such a thing as a dynamite blasting cap or a can of concentrated lye. In our opinion such adults should be held strictly accountable in the courts when such an accident happens to a helpless child as the result of any such carelessness. We hope that there will be no more accidents in this State as a result of such carelessness and negligence on the part of workmen using such material in future.

**CARNIVALS CONDEMNED AS SPREADERS OF DISEASE**

Under the above heading the West Virginia State Board of Health recently sent out an official statement concerning the spread of venereal diseases in West Virginia and Pennsyl-
ing in almost every town, or at least every county of the State, we can do no better than to quote from the West Virginia Health Bulletin as follows:

"Because the average street carnival is responsible for the spread of venereal disease, the State Health Department is warning all communities to beware of these traveling amusements.

"This is not done with a view to prohibiting amusements or regulating morals, but as a health measure, since it is a known fact that many cases of both syphilis and gonorrhea have been traced to these carnivals with lewd shows and immoral women, it was stated. Physicians from a Pennsylvania town of less than 5,000 population reported 342 venereal infections which were traceable to a traveling street carnival which had recently visited the town; while a town of some 4,000 population in a neighboring state reported 100 cases, mostly among the youth of the town, which followed as the aftermath of one of these shows.

"Health authorities everywhere are fighting the spread of the venereal diseases because of the serious results. These include softening of the brain, insanity, heart and kidney disease, rheumatism, paralysis and many other conditions. Syphilis and insanity are the two known inheritable diseases.

"The bureau of venereal disease of the State Health Department points out that while many cases of venereal infections are innocently acquired, by far the largest number are due to immorality. Because of the highly infectious nature of these diseases practically all those exposed contract the disease.

"Authorities who issue licenses to street carnivals and amusements of a like type are risking the health of the community, it was stated."

COST OF MEDICAL CARE

Discussion of the cost of medical care is continuous and occasionally—as in the recent case in Chicago—flares up into heated controversy. It would be clarified if we first posed the question: "How much is it worth to be well?"

Dr. Dublin of the Metropolitan Life Insurance Company has estimated that "the total capital value of the lives which can be saved annually by the application of modern preventive medicine and public health measures is over $6,000,000,000." This is an estimate of what might be. We should be on surer ground if we calculated the value of work actually done. What is the cash value of the fact that the average expectation of life has been increased by more than fifteen years in the last two generations? In 1910 the death rate from tuberculosis in a certain group of States was 164.7 per 100,000. By 1925 in the same States medical science had cut this rate in two—there were only 82.9 deaths from tuberculosis per 100,000. Balance the epidemics of typhoid in the Spanish War against the practical immunity from this disease in the World War. A quarter of a century ago, one out of every six babies died before its first birthday; now death takes only one in fourteen during the first year.

For such service few will haggle over price. The real problem is, Who bears the cost? At present no trustworthy figures are available. Very roughly we may say that the rich pay a great deal more for the medical care they receive than the service costs. The great mass of the people pay more than they can afford, but less than the service costs. The very poor receive expensive treatment and pay
nothing. It seems probable, although precise figures to prove it are lacking, that the amount which the American people pay out of pocket as individuals for medical care is considerably less than the actual cost of the service they receive.

The difference is made up from three sources—drafts on the tax fund for public health service, the beneficence of individuals who endow hospitals and the generosity of the medical profession. No other profession gives the public so much unpaid service.

A committee on the cost of medical care has been organized under the chairmanship of Dr. Ray Lyman Wilbur, the Secretary of the Interior. It is not so much a question of the amount as of the distribution of cost. We, as a nation, demand the best medical care available. We are rich enough to pay for it. The problem is not how much but who pays. It is to be hoped that when the committee has finished its studies it will be able to tell us how much of the cost of medical care is borne by the patients. How much is borne by the community? How much is met by philanthropy? How much is scratched off the doctors' books as bad debts? Not till we know how this cost of medical care is apportioned can we hope to solve the problem.—The New York Times.

IN HEALTH FIELDS

By

MARGARET BEATTY HERRING

(With apologies to Author of "In Flanders Field.")

In lonely hut or mansion place
On desert isle the tiny face
Of new born Life, unwilled, looks out
And cries aloud in mighty shout:

"We are the Living. We the dawn
See first upon the day we're born.
We, too, have quarrels, too toss high
A torch to those of you who die,
Unless in going from the earth,
You leave it safer for our birth.
We hold no grudge to those who call
Us into being if their all
Be sanctified, while they have breath,
While their soul goes on as dust.

To blotting out untimely death.
We are the living. We can know
The pulse in sunset’s after glow.
We must live on through dark and din,
Have you, in dying, conquered sin?
Have you, in dying, neared the Goal
Of cheating Pain its ghastly toll?"

Slaughter of Innocents! God look down
Upon the need in every town!
Teach us to count as priceless wealth
The heritage of Normal Health.

TOWN SHOULD PREVENT MOSQUITO NUISANCE

By

E. R. HARDIN, M. D.,
County Health Officer

The mosquito nuisance in many of the towns of the county each year is for the most part unnecessary. If the town officials in every town would push preventive measures at this season each year, and ask all the citizens to do their part, there would be few mosquitoes, and malaria would be a rare disease in the towns.

The average town does not hesitate to spend money for protecting its citizens against fire, robbery, etc., and yet as a rule nothing is included in the yearly budget to provide protec-
tion against mosquitoes, and the hazard of malaria. As a matter of fact, such protection can usually be given the citizens of most towns for an insignificant sum, compared to the expense required to furnish police and fire protection. There is no good reason why most any small town cannot, with the officers they have, and about two good laborers, provide adequate protection against mosquitoes. Waste oil can be secured, for nothing or at a minimum cost, from the various garages in the towns. This oil diluted with about one-fourth kerosene makes a good oil for use on stagnant water. All standing water of course should be drained when possible. When this is not possible, it should be oiled once each week, from now until October. All catch basins should be systematically oiled once each week.

The citizens should see that no water is standing in any vessels or holes on their premises, and gutter drains should be kept open. No vacant lots should be allowed to become covered with weeds, and other undergrowth, as it furnishes ideal cover for mosquitoes to hide in during the day. All ditches should be thoroughly shrubbed, and kept open.

As I have already said, the public gets what it pays for. If the towns spend nothing on mosquito prevention they will get bumper crops of mosquitoes, and some cases of malaria, which of course is expensive. —Lumberton Robesonian.

HALEY FISKE AND THE PUBLIC HEALTH

The death of Haley Fiske, President of the Metropolitan Life Insurance Company, on March 3rd last, removed a man who, by common consent, was a leader of the insurance business not only in America but throughout the world. He led not only in the application of administrative principles which had their foundation in the historic lessons of the business, but also in forging for life insurance a secure place in the movement for advancing human welfare. Under his administration, the Metropolitan grew to be not only the largest life insurance company, but the largest financial institution in the world. Comparatively few persons, however, appreciate the significance of this man's life and work to the field of social service and, more particularly, to that of public health. To those of us who were privileged to work with him during the last twenty years, his contribution appears to be of the first magnitude, and marks, we believe, a new epoch in the conservation of human life.

For, in his last years, he was even more interested in the well-being of the Company's policyholders than in the growth of his great Company. Of this, he made no secret. At every opportunity, he declared that the chief mission of the Company was the promotion of the health, the betterment of the economic condition and the prolongation of the lives of American and Canadian wage-earners. This, he held, was one of the responsibilities resting upon a Company whose everyday service reached the homes of 25,000,000 citizens of the United States and Canada. It is appropriate, therefore, that this issue of the Statistical Bulletin, which he stimulated and encouraged over its entire existence, should be dedicated to him; to put on record his achievement and to give it a proper setting in the expanding public health movement.

In 1908, he made the decision to inaugurate a health campaign for the industrial policyholders of the Company. Prior to that time, the Company had issued, on occasions, a magazine in which health items appeared, but there was no systematic plan and probably little was accomplished. But
already there were indications that the time was ripe for extending and coordinating this activity. The company was growing rapidly. It had the goodwill of its then eight million policyholders, representing a fair cross section of wage-earners' families in American and Canadian cities. They were, for the most part, poor people, industrial workers and their wives and children. They suffered from high death rates and high sickness rates, and especially from tuberculosis and the communicable diseases. The mortality of infants and of young children was especially high. At the same time, the air was full of the teachings of the public health leaders who insisted that much of this misery and death was preventable if only the necessary health instruction could be brought directly and simply to the great mass of the people. Mr. Fiske agreed to test out the premises and claims of the health workers. If anybody could reach the working people, certainly the agents of the Metropolitan, who saw them weekly in intimate relationships, would be the best medium for the carrying on of such work. If a successful campaign of education could be launched, it would have the extraordinary advantage of serving both the policyholders and the company. The work would pay for itself in reduced death claims and thus would result in a lower cost of insurance to the policyholders. In this conception was the beginning of the Welfare Division of the Company. The record of the succeeding twenty years has been a glorious page in the history of the public health movement in America.

The first step in health instruction on a large scale was the publication of the pamphlet "A War on Consumption." More than twelve million copies were distributed of this simply written and well-illustrated pamphlet on the causes and on the methods of preventing tuberculosis. This was soon followed by others on maternal and infant care and on each of the communicable diseases of childhood. In a relatively few years, an imposing library on personal hygiene in English and in the more important foreign languages had been prepared and distributed by the agency force to the wage-earning families of America. In 1928, alone, forty-eight million pamphlets on various health topics were distributed and, since 1909, total of five hundred and thirty-five million copies have been left with these families. This literature also reached the general public through health officers, the schools, parent-teachers' associations and private health agencies. This activity more than any other stimulated and directed the movement for
public health education which is now so widely extended over the United States and Canada.

In the same year, 1909, the first nursing service for sick Industrial policyholders was begun in New York City. At the very outset, the principle was laid down that this service should be without extra cost to the insured. It was to be conducted by graduate visiting nurses from existing public health nursing organizations. Where no such organizations were found, there every encouragement was to be given to develop them. This proved to be a powerful stimulus for the growth of visiting nursing associations throughout the two countries where the Company operated and helped to establish them on a sound financial basis. The high standard set, the insistence on informing, useful records, the supervision exercised and the cooperation offered, have probably been the greatest single force in bringing the public health nursing movement in America to its present enviable position.

From the beginning of the experiment, Mr. Fiske had a clear vision of its possibilities. But he realized that the development of the work would depend on proof that the welfare activities were actually reducing the mortality rate and increasing the life expectation of the insured. He, therefore, made provision for the testing of the experiment as soon as the supply of data would make it possible. Thus arose the Statistical Bureau, one of whose functions was to keep in close touch with the activities of the Welfare Division, to study the returns of the mortality and morbidity of policyholders and the vital statistics of the country and of the world and to apprise the Executive of the changes that were taking place. The health service of the Company could then be controlled in the light of actual experience. In this way, an extraordinary opportunity was made available for the study of the demography of an important cross section of the American population and to initiate a large number of investigations into the conditions of health and general well-being of the American people.

The first year covered by the statistical analysis of wage-workers' mortality was 1911 and the study has been continued since then. From the beginning, the trend of mortality of Industrial policyholders has proved favorable. While the mortality of the general population changed only slightly during the first few years of this work, the deathrate of the insured declined from a figure of 12.5 deaths per thousand policyholders in 1911 to 11.6 per 1,000 in 1917. Here was encouragement indeed. Lives could be saved. They were saved. On the basis of these results, the company's health work was rapidly extended and more and more resources made available.

Then came the years of the great influenza pandemic with its toll of more than a half million lives in the general population and a loss to the Company of twenty-seven millions of dollars in excess of what would ordinarily have been paid. The lesson was being driven home that human life had value and that its preservation justified the expenditure of funds. Mr. Fiske approved the appointment of a commission for the study of acute respiratory disease, strengthened the Framingham Demonstration for the study and control of tuberculosis, the Thetford Mines Demonstration for the control of infant mortality and initiated or made possible by his approval a number of other investigations and surveys into the health conditions of the American people. The Company had won for itself a place of leadership in the public health campaign which was everywhere waged with new energy and success. It was not a small matter that this activity should be launched by a business organization and with such telling results. Mr. Fiske reported year after
year at the Conventions of the Company's managers the ever-increasing number of lives saved which could be traced to the welfare work of the Company. By the close of 1928, the deathrate of Industrial policyholders had declined to 8.6 per thousand, or 61.2 per cent, less than the rate which prevailed seventeen years before. The rate of decline was twice as great as in the general population, and this was true not only of the total mortality but for most of the more important disease and conditions. The decline in mortality of policyholders, over and above that in the general population, was clearly a measure of the effectiveness of the efforts of the Company in health education, the nursing of the sick, and the other measures which had been instituted. Policyholders of every age and of both sexes had shared in the gains. In concrete figures, the saving was represented by 36,388 lives in the entire period since 1911, over and above that which might be expected from the mortality improvement in the Registration Area of the United States during the same period. This lowered mortality has carried with it, of course, a longer tenure of life and this is perhaps the best measure of what has happened. At the beginning of the experiment, the life expectation of Metropolitan Industrial policyholders was 46.6 years. In seventeen years, this expectation had increased to 56.4 years, or a gain of almost ten full years. In this same period, the expectation of life in the country at large had increased only about six years.

If thirty-five millions of dollars have been spent by the Company for the various welfare activities for policyholders, more than twice that amount has been saved in reduced death claims. Today, the evidence is beyond doubt that health work pays. It is in this fact that the significance of the latter activities of Mr. Fiske is to be found. In his philosophy of life, the first wealth was health. His life and work demonstrated the fundamental principle that life and health can be conserved by direct effort and at a cost entirely commensurate with the life values at stake. It costs much less to save life than to neglect it. Thanks to the demonstrations made possible by Mr. Fiske, this principle is spreading widely and has taken hold of the imagination of socially minded persons and of the agencies of organized government. Other insurance executives in the United States and abroad are following Mr. Fiske's example and large philanthropic foundations are paralleling many of the Company's activities and experiments.

But most important of all, official health agencies, encouraged by the results, are now enabled to obtain larger appropriations to extend their operations in various health fields. Again and again we hear such comment as this: "If it pays a business organization to prevent disease, how much more will it pay the community itself comprising all the people?" The results obtained by the Metropolitan have taken the element of gamble out of the health campaigns, which are now being looked upon as profitable public investments. Among other specific services to the health administrators of America may be mentioned the support given to the American Public Health Association over the years 1920 to 1928 for the study of the most effective measures for protecting the health of city populations. As a result of this work, there was established by the Association a field service for advising and assisting health officials and this has borne fruit in many cities with large populations. No one can tell how far this and other developments will go. It is clear that only the surface has been scratched in the opportunity for life saving.

Mr. Fiske was also solicitous for the well-being of the many thousand workers employed in the field and
Home Office branches of the Company's own organization. He was constantly pre-occupied with plans for increasing the satisfactions in their life and work for this Company and its policyholders. He wanted them to live happily and completely. It was his insight and driving force that made possible the establishment of the Company's sanatorium for its tuberculous employees. He provided facilities for their periodical health examination and for emergency medical care. He encouraged a programme of disability and retirement annuities for the staff, and a host of other activities which established precedents for other employers of labor. Probably more than any one of his generation, he rationalized the current movement which seeks to establish peace in industry and to develop common grounds on which employers and employees can meet for mutual assistance. He was always ready to lend the aid of the Company's technical experts for the support of every movement leading to the advancement and well-being of the common people. He was deeply concerned with the "labor problem," which he referred to as the major problem in American life. He could see no essential reason for strife in industry with its poor economy and the loosening of the forces of ill-will.

He thought he found a way by which all who worked, whether as directors or as the directed, would see their common interest and lend their strength for the common good. His was a mind and spirit constantly devoted to the upward and onward progress of mankind.

It has thus been due to Mr. Fiske's leadership, to his insight, to his love and sympathy for the wage-earners of the United States and Canada that the Metropolitan has become what Herbert Hoover has characterized "The greatest single institution dedicated to the public welfare." It is to the abiding credit of Haley Fiske that he saw his opportunity and developed it when no one else saw fit to take the initiative. His was the great vision to see that life conservation would pay in terms of greatly reduced sickness and lower mortality rates and in longer and happier lives for the great mass of the American people. The demonstration that he made on an immense scale of this idea will always be looked upon as the beginning of a new epoch in the field of social welfare. The seed he has widely and well sown. When the fruit ripens, it will be well to look back to the part this great man played in bringing about the better day.—Statistical Bulletin, Metropolitan Life Insurance Co.

PREVENTION OF CONGENITAL SYPHILIS

At the annual meeting of the American Social Hygiene Association held in New York, January 18 and 19, 1929, the following resolution was adopted unanimously:

WHEREAS, congenital syphilis is one of the most frequent causes of foetal and neonatal death, and of the greatest mental and physical disasters among those who survive, and

WHEREAS, there are medical procedures which, when properly applied to the pregnant syphilitic woman, will almost certainly prevent congenital syphilis in the child, be it therefore

RESOLVED: That the American Social Hygiene Association advocates the adoption of vigorous measures for the prevention of congenital syphilis, and especially directs its officers to promote the spread of information to the public regarding the great advantages of medical supervision early in pregnancy; to secure the cooperation of nursing, public health, and so-
official groups with the medical profession in insuring the adequate treatment of every pregnant woman, thereby preventing congenital syphilis; and, in particular, to encourage those in charge of prenatal clinics to devote attention to the discovery and treatment of syphilis among all women who are in attendance.

After publishing the above resolutions in its Weekly Bulletin the State Board of Health of New Mexico adds the following request, which is just as much in order in North Carolina as in New Mexico:

"We urge our physician readers to help us to combat congenital syphilis by inaugurating the practice of having a routine Wassermann test made of every pregnant woman under their care. In case the reaction is positive the patient should, of course, be placed under intensive antisyphilitic treatment."

DISTANCE OF FARM FAMILIES FROM MEDICAL HELP

The Children's Bureau of the United States Department of Labor at Washington in a recent news item had the following interesting paragraph relating to the average distance a certain group of farm women live from a physician or hospital. It is not known whether or not any of these farm women live in North Carolina. However, the facts would probably apply to almost any representative group of farm women in this State. The paragraph is as follows:

"Seven miles from the nearest doctor and 18 miles from the nearest hospital was the average distance for the 850 farm women who answered a questionnaire sent out last December by The Farmers' Wife. These women came from every State in the Union. The actual distances for the families represented varied from a few village blocks to 75 miles, not infrequently over bad roads and narrow mountain trails. These conditions sometimes resulted in inability to get timely aid and in such heavy costs as to cripple families financially, while others unable to pay the necessarily large fees and unwilling to accept charity went without needed medical care. Nurses were available within 12 hours for four out of five families, but nearly all were 'practical' rather than 'trained' nurses."

WHY INSURANCE COMPANIES PROMOTE HEALTH WORK

One large life insurance company reports that 42 automobile accidents and 50 other accidents cost it a total of $624,517.00 last year. That works out to be $6,788.22 per accident. Over sixty million persons in the United States are now covered by life insurance, the policy value of which approximates one hundred billion dollars.

Scarcely an adult can die without causing the payment of a substantial death claim. This explains why insurance companies have begun to tackle health problems with an enthusiasm that has rarely been observed elsewhere. When insurance companies suggest preventive and control measures to policyholders the policyholder may rest assured that the suggestion is made with the most profound sincerity of purpose for his welfare. Getting sick and dying cuts down premiums and runs up mortality claims.—Illinois health Messenger.
TYPHOID FEVER
AND HOW DISEASE GERMS ARE CARRIED

POLLU TED WATER
IMPURE MILK
UNCLEAN FOOD
UNWASHED HANDS
FLIES

BY THESE PATHS TYPHOID GERMS REACH THE MOUTH. IN EACH COMMUNITY THESE PATHS SHOULD BE BLOCKED.

"SWAT THE FLY"

THE PUPA
THE EGGS
THE ADULT FLY
THE LARVA OR MAGGOT

THE LEG AND FOOT OF A FLY AS SEEN UNDER A MICROSCOPE. ON THEIR LEGS AND FEET FLIES OFTEN CARRY THOUSANDS OF GERMS.

THE FLY AND MOSQUITO.
THE DISEASE CARRIERS.

EVERY HOME SHOULD HAVE THEIR WINDOWS AND DOORS SCREENED, BUT THE BEST WAY TO FIGHT FLIES IS TO KEEP THEM FROM BREEDING ABOUT OUR HOMES.

A DRINKING CUP THAT HAD BEEN IN A SCHOOL FOR NINE DAYS WAS EXAMINED AND WAS ESTIMATED TO HAVE ON EACH SQUARE INCH OF ITS SURFACE 100,000 BACTERIA.

Do NOT DRINK OUT OF GLASSES OR CUPS THAT OTHERS HAVE USED.

A SANITARY DRINKING FOUNTAIN.
ON THE BEACH AT CAPE LOOKOUT

"There is a rapture on the lonely shore,
There is a society where none intrudes,
By the deep sea."
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

- Adenoids and Tonsils
- Cancer
- Cataract
- Care of the Baby
- Constipation
- Colds
- Clean-up Placards
- Chickenpox
- Diphtheria
- Don’t Spit Placards
- Eyes
- Flies
- Fly Placards
- German Measles
- Hookworm Disease
- Infantile Paralysis
- Indigestion
- Influenza
- Malaria
- Measles
- Pellaqna
- Public Health Laws
- Prenatal Care
- Sanitary Privies
- Scarlet Fever
- Smallpox
- Tuberculosis
- Tuberculosis Placards
- Typhoid Fever
- Typhoid Placards
- Venereal Diseases
- Water Supplies
- Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

- Prenatal Care (by Mrs. Max West)
- Infant Care (by Mrs. Max West)
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- Save Your Baby
- Hints to North Carolina Mothers Who Want Better Babies
- Table of Heights and Weights
- The Runabouts in the House of Health (pamphlet for children from 2 to 6 years of age)
- Baby’s daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
- Diet Lists: 5 to 12 months. 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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June, July, August, and September are the four months in which summer pleasures and summer joys are at their height. It is a joyous season of the year for people who are in good health and remain so throughout the season because it is the time when people can live in the open. For adolescent children the season means vacation from school; that is, the most of the period mentioned, ending with the excitement of getting back into school in September after a fine period of rest and play. There is one class of population, however, which if it could reason and think, would view the approach of the summer season with apprehension and dismay. That class is the infants and very young children, probably three hundred thousand or four hundred thousand in number in this State. Hot weather means suffering and discomfort to many of these babies, and sickness and death to large numbers of them.

The problem for parents is to reduce the handicaps and dangers affecting this little army of children to a minimum. During hot weather every practicing physician every day in the season has many pulls on his heart strings when visiting sick children. There is nothing more depressing to a practicing physician than to be called to see a sick baby suffering from diarrhoea or other complicating summer diseases when he finds the child in a hot room infested with flies. The mothers of many such sick children must be nurse, cook, and housekeeper too. She generally has other children to care for as well as her regular household duties. The baby demands every instant of her time. It is fretful and it is suffering, and even with the best of care that she can give it the discomfort and suffering which the baby undergoes is depressing.

From years of experience in the practice of medicine and observation in many capacities we like to think of some of the following details which could be carried out in any home, and which would greatly reduce the morbidity as well as the mortality rates among the baby population of the State in the summer months.

To begin with the fly problem should be controlled from the beginning of spring right on through until the flies disappear in the autumn. This can be done by cooperative community efforts in the towns and villages through careful attention to the disposal of garbage, and by keeping the premises as clean as possible. On the farms in the country it can be done by keeping the stables and places where the stock are kept thoroughly cleaned every week, and also by preventing the accumulation of trash and garbage around the house, which afford places for flies to breed. The stables and barns should be far enough from the house so as not to be a menace. Stock such as hogs should be kept a considerable distance from the dwelling. The dishwater should not be thrown promiscuously on the ground adjacent to the kitchen, where it will soon form a sink of its own and, especially in wet
weather, become a dirty puddle, and which makes attractive places for flies and mosquitoes to swarm. Utensils such as tin buckets and pans and dishes which are used for food should be kept thoroughly washed and not be allowed to stand around to attract flies. These are precautions that every family, no matter how poor, can carry out, if all the family and all the community will work in cooperation and keep at it every day. Any family will be amazed to find out how little effort and how short a time each day will be required to keep all these things done, provided they begin in the spring and continue every day throughout the summer.

After the foregoing has been carefully attended to, the cooking and serving of food will naturally attract many flies, no matter how clean the premises nor how carefully the cooking has been done. So the next step in the procedure, which is a little more expensive, is to thoroughly screen every window to the house as well as the doors. For a family too poor to provide the wire screens and to install them, simple mosquito netting, purchased at a store, serves wonderfully well to keep out both flies and mosquitoes. This can be tacked over each window. The cost for a window is only a few cents, and the time consumed to put it up is insignificant. This obstruction only keeps out a very little bit of air, not enough to materially increase the temperature of the room, but it is effective and can be used. Even when screening of any description is thoroughly attended to, with fly-tight screens over all fire places, as flies come down the chimneys when not in use, a considerable number of flies will still gain admittance as the doors are opened and shut. For these a few good swatters used in odd moments during the day will take care of whatever flies get in in spite of all other precautions. It would be worth the effort to the comfort of the baby, even if flies did not carry any disease germs that were not a menace in that respect.

The next thing we might mention as very important to the comfort of the baby is to clothe it so that its temperature can be kept as comfortable as possible. Even though the house is situated in a hot section of town, or on the farm, by clothing the baby during the hottest hours with as little clothing as possible, simply a diaper is sufficient for several hours in the day, and then leaving the child's crib sufficiently elevated from the ground or floor, and thoroughly covered in mosquito netting, where flies and mosquitoes cannot bother, and so placed in hot weather outdoors in the shade of a tree, within view of the mother's eyes at all times, following the shadows around the house or in the coolest rooms of the house, the baby can remain comfortably nearly every day in the hottest weather. Naturally when the temperature suddenly changes, or in the late hours of the night, the baby requires more clothing, and should have it. In a word, if the clothing is adjusted to each changing of the temperature, the baby is the beneficiary. Too many people still have the notion that the baby must be swaddled up in all kinds of clothing, or it will suffer from getting too cold, even in the summer months. As a matter of fact a baby is a very warm animal, and while very susceptible to changes in the temperature, if moderate intelligence is used in its clothing and covering, it takes but little effort to keep it comfortable.

The third great requirement for the baby’s safety and comfort is, of course, food. During the summer months every item of food that goes into a baby's mouth should be scrupulously clean. The milk should be pasteurized. That simply means that milk is heated in a utensil, where the heat penetrates to every part of the vessel, to a temperature of 142 degrees F., that it must be left there steadily for thirty minutes, taken off and immedi-
ately cooled to below 50 degrees. This is a rather difficult process to do accurately, and is generally only attempted by machine process in pasteurizing plants, and is therefore not available for the families in the country or in most of the small towns. In such cases there are two safe courses. One is to boil all milk for three minutes, take it off and cool it, by placing the vessel in cold water, just as quickly as possible. This, of course, is cooked milk, but it is safe milk. The other recourse is a good safe dry milk (not condensed milk). All drinking water that the baby consumes during the summer months (this applies to children under three years of age) should be boiled for three minutes. Then it should be quickly cooled before the baby is allowed to drink it. The baby should have plenty of milk at regular intervals, and every baby up to nine months old should be breast fed when humanly possible, and it should have plenty of drinking water. When the hours are hottest, drinking water should be offered to the baby every few minutes, just as often as the adult feels like taking a drink of water. As the baby grows older and begins to take a more varied diet, the cereal thoroughly boiled, such as oatmeal, should be given for breakfast with plenty of good pasteurized or boiled top milk. Any fruits or berries given to children two or three years of age should be thoroughly cooked. Any vegetables given (and, of course, the child after two years of age should partake of some vegetables every day) should be thoroughly boiled and the vegetables strained through a proper kind of sieve in order to remove all hard particles.

This writer in thinking and writing about food for babies can never forget an experience while practicing medicine some twenty years ago. A hurried call one evening about seven o'clock to go to see a baby in convulsions near town, revealed the fact that the baby, only three weeks old,
had been fed new Irish potatoes, simply mashed up with a fork and poked into its mouth just like older children were doing. Heroic measures pulled that particular baby through, but that picture always appears before our eyes every time we see or hear of a sick baby among our acquaintance.

The feeding and care of a baby or a small child requires more exacting details and more conscientious attention to every item which surrounds it than any other occupation in the world demands. It would be nothing short of the millennium to expect every baby to have the careful attention we have described in the preceding paragraphs, and yet, when one comes to think about it, it would be easy enough to accomplish if every mother in the State knew and realized the absolute necessity for such a procedure if the baby is to have the opportunity that every baby should have, to remain in good health and to grow and to develop into manhood or womanhood. It is a matter of education for all the mothers, and the duty involves upon everybody who knows these things and has the opportunity to do so, to pass the information along where it will do the most good.

INDIGESTION

If a careful tabulation of all inquiries for information coming through the mail to the State Board of Health at Raleigh for the past twenty years had been kept, it would probably indicate that a larger per cent of inquiries were concerned with the subject of indigestion than any other single item. It is a subject that is difficult to discuss in simple, non-technical language and at the same time in language that will make the subject sufficiently clear for the reader to understand the many ramifications of the so-called subject of indigestion.

The Southern Medical Association met in Atlanta, Georgia, about the middle of November, 1926. At that meeting Drs. M. L. Graves and Ghent Graves, of Houston, Texas, presented a most interesting paper on this subject. This paper was published in the Southern Medical Journal in its issue of July, 1927. We have kept that copy of the journal at our elbow for more than a year. We have written two or three competent authorities among the medical profession of North Carolina citing them to this article and requesting a special article conveying the same information in language the layman could understand. Every one of the gentlemen so honored with a request for such an article has immediately begged to be excused. The Editor of the Bulletin could write his own opinion, based on his own information and understanding of the subject, but we do not like to get too much of the Editor and his opinion into the columns of the Bulletin. Being human and fallible we might not be right every time.

After reading the Drs. Graves article over several times we have decided to publish it in full in the columns of the Health Bulletin. With the exception of a few technical terms the moderately well educated readers of the Bulletin can easily understand the articles by the Drs. Graves. The article is just as important and just as up-to-the-minute today as it was more than two years ago, when presented at the Section on Medicine of the Southern Medical Association. Of course, the article was written by learned physicians and presented to other physicians primarily for the consideration of physicians alone. Such articles, however, have a way sometimes of proving of immense interest to comprehending readers, especially those readers concerned with such problems themselves.
At the time the Graves presented their paper, it was discussed by numerous physicians present. Before reading the article, which commences below, it would be interesting for the reader to note the comments made by Dr. J. W. Dickie of Southern Pines, North Carolina, at the time. Dr. Dickie said:

“Dr. Graves merely touched on the question of diet, which was not within the province of his paper. I should like to emphasize one point in regard to diet. It is the tendency of many physicians to advise patients to eliminate certain articles of food from their diet without giving them anything else as a substitute. A certain number of calories a day are essential to health. Yet a patient with a stomach disorder frequently goes from one physician to another, is advised to eliminate first one and then another article of food from his diet until eventually either the patient or some physician wakes up to the fact that the patient is practically starving to death.”

“THAT DIAGNOSIS INDIGESTION”

By

M. L. GRAVES, M. D.

and

GHENT GRAVES, M. D.

“Indigestion is a diagnosis frequently used and often abused. It is a cloak of ignorance to cover a group of cases sometimes also called dyspepsia, or gastritis. The anatomical designation gastritis is thus exchanged for the physiological term indigestion. Diagnostic methods and cumulative experience are separating out from this conglomerate group more definite clinical entities. The following pathological conditions have constantly associated with them indigestion:

(1) Gastric ulcer.
(2) Duodenal ulcer.
(3) Chronic cholecystitis and pericholecystitis with adhesions.
(4) Cholelithiasis.
(5) Gastric carcinoma of certain types.
(6) Chronic or recurrent appendicitis.
(7) Carcinoma of the colon.
(8) So-called spastic constipation or irritable colon.
(9) In women, who are biologically deficient, fibrocystic ovaries may cause nervous and digestive phenomena.
(10) Some displacements and lac erations and certain infections, such as salpingo-oe phoritis, endocervicitis, and endometritis.

(11) Worry psychosis with gastro-intestinal symptoms in neurotics.

“The public is accustomed to accept indigestion as a definite diagnosis. The laity and the profession should regard it instead as a symptom, and its occurrence should at once serve to initiate rather than to culminate a scientific investigation of the case. We frequently see specimens from cases of perforated gastric ulcer, coronary thrombosis, gall bladder sepsis, and perforated appendicitis on the patho-

Pines along Ward’s creek, Bettie, N. C., eight miles from Beaufort on road toward Atlantic.
logist's table, although the only diagnosis made in the case was acute indigestion. No patient dies of acute indigestion, and any physician who is satisfied with such a diagnosis is seriously neglecting his duty and his patient's welfare.

**ACUTE INDIGESTION**

"These cases usually complain of sudden onset of moderate to severe pain with or without nausea and vomiting and abdominal cramps. The condition of the bowels may vary from constipation to an active diarrhea; the temperature may range from normal or even subnormal to 104° or 105° F.; the white blood count may be normal or show leukopenia or leukocytosis. Physical examination may disclose general or local tenderness with or without spasm. In other words we may have almost any combination of symptoms. The diagnostic possibilities are: gastric or duodenal ulcer with or without perforation, gall bladder disease with or without stones, intestinal obstruction, mesenteric thrombosis, acute pancreatitis, rupture of spleen, food poisoning, acute appendicitis, inflammatory pelvic disease, ruptured ectopic pregnancy, renal, ureteral or bladder stone, Dietl's crisis, spastic colitis, certain infections, such as malaria, amebic dysentery, pellagra, even pneumonia at times, mental poisoning, atypical angina pectoris, acute alcoholism with or without hepatic cirrhosis, cerebrospinal lues, perforated typhoid ulcer, abdominal aneurysm and psychoneurosis. It is unnecessary to describe the differential diagnosis of these diseases as they may be found in any text book of diagnosis. A few cases will remain obscure even after all available methods of diagnosis have been exhausted.

"Recently the writer observed such a case in a man of 67 with acute abdominal cramps, rigors, temperature ranging from 99 to 104° F., with a normal white blood count and differential. He had a slow regular pulse (50 to 60) of good volume and tension; the urine was highly colored but otherwise negative; stool examinations were negative; physical examination revealed nothing certain except generalized arteriosclerosis; smears were negative for malaria, and the Widal reaction was negative, and there was no response to quinine therapy.

"A period of two weeks' observation after its onset, the attack exhibited another picture. The patient developed distinct jaundice and an enlarged and tender gall bladder, with muscular hypertension in the right quadrant. The white blood count rose from normal to 22,000. That day the surgeon removed a large stone, completely occluding the common duct.

"I have seen coronary thrombosis, with acute onset, nausea, vomiting, pallor, weak and thready pulse and epigastric pain, pronounced acute indigestion with grave consequences. If we critically analyze the daily press accounts and note from time to time that well known public men are suddenly and fatally stricken with so-called "acute indigestion," it is more than probable that fair percentage of them at post-mortem would reveal obstruction of the coronary artery. The recognition of these cases is simplified by careful consideration of the following diagnostic criteria:

"(1) There is sudden and severe pain over the epigastrum or cardiac region.

"(2) Ashen, white pallor, usually with clammy skin.

"(3) The condition almost always occurs in individuals over 40 years of age, predominantly men.

"(4) A low blood pressure is observed, or precipitate drop of a previously high blood pressure.

"(5) There is rapid, irregular or imperceptible pulse of small volume and low tension.

"(6) Usually an enlarged heart with weak or inaudible first sound at the apex.
"(7) Signs of fluid at the lung bases.

"(8) Perhaps a slight rise in temperature (100° to 101°).

"(9) Slight or moderate leucocytosis (10,000 to 12,000).

"(10) Pericardial friction rub may or may not be present.

"(11) Electrocardiogram, if available, will show an upward convexity of the S-T interval, other than in lead three.

"The recognition of cases of coronary occlusion is of vital importance. The chief danger lies in the fact that the day following such an accident the patient may feel relatively well and wish to get up. He may look well, but it is imperative to exercise caution, for often such an indiscretion is only a step in the direction of the grave.

"Another type of acute indigestion worthy of mention is so-called "ptomaine poisoning." It has been conclusively shown that these cases are usually due to one of two causes:

"(1) Food infection, caused by Bacillus enteriditius or organisms of the same group.

"(2) Food intoxication, caused by Bacillus botulinus.

"The symptoms of the former are gastro-intestinal, while those of the latter may be early gastro-intestinal and later referred to the central nervous system in the form of paralysis. Other intoxications of unknown character may produce a similar picture.

"A 10-year-old Texas boy, living in a small community, was first seen with sudden abdominal cramps, diarrhea, temperature (101° to 102°), and a leucocytosis of 10,000, with 34 per cent eosinophils.

"Physical examination was negative, except for abdominal tension, the urine was normal and the stools were entirely negative except for a few larval forms, which were looked upon at the time as fly larva contamination. There was no history of ingestion of sea foods or spoiled meats or milk, and no other member of the family eating with the child had been ill. In the course of ten days to two weeks he developed painful erythematous, nodular swellings in some of the muscles. A portion of the quadriceps extensor group over one of these swollen areas was excised and examined by a competent pathologist, who reported normal striated muscle. A few weeks later a small larval form was recovered from one of these nodular swellings, which was identified as Hypoderma lineatum, a species of fly larva which is at times pathologic to men in Texas and in some of the neighboring states.

"The universal history of acute appendicitis is replete with tragical..."
diagnoses of acute indigestion, even to the present day.

CHRONIC INDIGESTION

"These cases embrace a group where the history of onset is insidious and symptoms are less urgent and definite. It is, therefore, with ease and with a certain sense of relief that they are classed as chronic indigestion, stomach trouble, intestinal indigestion, and let go. There are a few common points in this large class of cases, facts which are elicited in whole or in part upon inquiry, and are worthy of careful investigation.

"(1) The condition is usually described as chronic.
"(2) There is epigastric discomfort ranging the entire gamut to severe paroxysmal attacks of pain.
"(3) Gas, distension or fullness usually is associated with belching and relief. The soda habit is quite frequent.
"(4) Nervousness, slight or extreme.
"(5) Constipation or laxative habit.
"(6) Intermittency and irregularity of symptoms over weeks or months or years.
"(7) Subjective soreness and tenderness.
"(8) Nausea and vomiting, with later, in some cases, hemorrhage from the stomach or bowel.
"(9) Insomnia.
"(10) Fatigue.
"(11) Cardiac symptoms such as palpitation, irregularity, throbbing and dyspnea.

"The physical findings may be meager and inconclusive. Ordinarily, objective tenderness and muscular hypertension may be found; hyperacidity is usual but rarely hypo-acidity is present. The latter is accounted for in two classes of cases, namely, gall stones, cholecystitis and the gastroeutes with achlorhydria.

"Happily, the newer methods of diagnosis are removing from such a category many definite clinical entities. Thus the x-ray took from it gastric and duodenal ulcers, and x-ray helps at times in the diagnosis of chronic appendicitis. Pyelographic studies have served to differentiate the diseases of the genito-urinary tract which sometimes simulate gastro-intestinal derangement. The proctoscope and sigmoidoscope, together with x-ray and stool examinations, have done much to separate the various colitis groups. The rediscovery of digital examination, with the aid of the proctoscope and x-ray, has revealed some cases formerly classed as chronic indigestion to be neoplasm or malignancy.

"The excellent work of Graham has enabled us to demonstrate gall bladder pathology in many cases hitherto classed as chronic indigestion.

"A woman in mid life, over stout, came to me with her own diagnosis of indigestion, which she had been treating for several months, and upon inquiry it developed that her only symptom was heart burn. When she was advised to have an x-ray examination of the gall bladder, she demurred because she had no pain or other symptoms. Upon my insistence, however, it was done, and the gall bladder was found to be diseased and to contain a number of gallstones. These were removed at once and the patient had no more heart burn or indigestion. If I had permitted her wishes to govern, as we too frequently do, she would still be suffering with indigestion and be dieting and taking medicine for relief.

"As we learn more of the chemistry and pathology of the body, the group of chronic indigestion cases will dwindle to extinction.

"In reviewing two hundred and sixty-two office cases recently, we found that seventy had entered the clinic with a diagnosis of indigestion, made either by themselves or by physicians whom they had consulted. It was quite interesting to note the final diagnosis in these cases. Among them we find duodenal ulcer, chronic appendicitis, pelvic abnormalities, and..."
irritable colon with bad dietetic regime. Several had been subjected to appendectomy without relief of symptoms. There was cholelithiasis; mucous colitis; syphilis of the central nervous system; worry neurosis; pulmonary tuberculosis with gastro-intestinal symptoms; obesity; cardiovascular hypertension, or Albutt's disease; excessive carbohydrate diet with fermentation and stasis; ulcerative colitis; carcinoma of the stomach, arteriosclerosis; addison's disease; postoperative complex with disordered colon after tubes were ligated, appendix removed, uterus suspended, and left ovary and hemorrhoids removed without relief.

"It is from such gastro-intestinal presentations that the forces of chronic invalidism are largely recruited. The effect of anger, anxiety and worry on the digestion is a matter of common experience, and Cannon has shown that physiological effect of these emotions is intestinal stasis. Such patients, thinking they are constipated, begin the use, or rather the abuse, of cathartics and enemas; their abdomens become sore and they enter our offices with a complaint of indigestion. Another cathartic, or the Cholnmon advice to eat fruit, will not help them.

"Many patients drag about from clinic to clinic spending all their money and are like a certain woman, reported by St. Mark, 'which had an issue of blood twelve years and had suffered many things of many physicians and spent all that she had and was nothing better, but rather grew worse.'

"After all possible definitions and earnest attempts at etiological and pathological classification have been made, there remains a large group of cases of intestinal invalids in whom no definite pathology can be demonstrated, except perhaps the almost invariable coincident pelvic disorder discovered in females, such as fibrocystic ovaries, or uterine displacements, in which surgery gives disappointing results.

"At present we are grouping these cases under the head of disordered colon. It is possible that further studies of the vegetative nervous system may illuminate that large group of nervous invalids with digestive disturbances who are known as vagotonic individuals. They present a clinical complex indicating abnormally increased function of the vagus, both in its secretory and motor functions. They may have gastric hyperacidity, excessive sweating, with cold and clammy hands and feet; cool, pale skin; low blood pressure; slow heart; contracted pupils and spastic constipation. Many cases of disordered colon are seen in the intensely emotional type of individual, the so-called asthenic type, which is not outwardly demonstrative. Barker at a recent meeting in Cleveland called attention to the fact that if this group developed mental disorder it was particularly prone to be of the dementia precox type rather than of the manic-depressive type. As we learn more of the emotional control and reflex stimuli, we shall better understand such cases.

**SUMMARY**

"(1) The term indigestion, whether acute or chronic, is undesirable both as a diagnosis and as an indication of mental attitude.

"(2) The diagnosis of acute indigestion often obscures and delays ac-
curate diagnosis and treatment in a critical condition, such as acute appendicitis, perforated ulcer, acute gall bladder and coronary occlusion.

"(3) Acute indigestion is never the cause of death.

"(4) The gall bladder, the stomach, the appendix and the colon are the four chief seats of indigestion. Careful consideration of these and other abdominal viscera by the method of exclusion will enable the careful and painstaking clinician to solve 90 per cent of his cases of chronic indigestion from abdominal cause.

"(5) The large groups of biologic deficiencies and chronic nervous exhaustions may be successfully differentiated in the same manner and many useless and injurious surgical operations may be avoided. With a more scientific investigation of the so-called nervous cases of vagotonic and sympathetic-tonic types, fewer costly errors will be made and better plans of treatment will be devised.

"(6) Indigestion should be considered merely as a symptom of disturbed secretory, sensory and motor functions of the digestive organs, always to be thoroughly investigated before diagnosis is determined.

"(7) We should educate ourselves and the public that we may earlier recognize organic and functional pathological conditions in that great arcanum of mystery, the abdomen, and inaugurate appropriate medical and surgical regimes before chronic invalidism is established."—Southern Medical Journal.

MORE OBSERVATIONS ABOUT AUTOMOBILE KILLINGS

On Friday morning, October 19, the front pages of all the big morning dailies in North Carolina carried the story from three towns, Winston-Salem, Warrenton, and Williamston, of people being instantly killed in identically the same manner in each one of these towns. One of the victims was a grown man; the other two were children. Each one of the accidents was due to the victim stepping or running from behind the cover of one automobile directly into the path of a speeding car or truck.

These are horrible accidents, and while the authorities seemed to think in all three cases the drivers were not guilty of any negligence, which is probably true under the ordinary acceptance of the term, it does seem that drivers of cars and trucks would slow up in passing automobiles standing at the curb when people, especially children, are maneuvering around them. It may be that if the policy was adopted of slowing up at all times that the congested traffic present throughout the day in all the cities and towns would be increased and that the condition would be worse and more dangerous than at present. There are many angles from which to view the situation. The problem remains, however, that unless the habit of slowing down, to the extent of having the cars and trucks under full control when passing vehicles that are standing still by the curb, these accidents and shocking deaths, especially of children, will continue to take place in increasing numbers.

These lines are written in an office on the first floor facing a paved street on which there is a large traffic in trucks, on account of the factories and freight offices and so on being contiguous to this street, and we often have shut our eyes and looked some other direction when a truck goes by the window at thirty miles an hour, heavily loaded, going down grade, passing automobiles that are parked by the roadside, seldom allowing more than two or three inches margin. School children and smaller children are often playing about on the sidewalks, and it seems only miraculous to us that there is not a casual taking place every day.

A heavily loaded truck going down
hill cannot be stopped under any circumstances short of a distance of 30 to 50 yards and more. Therefore it amounts to the same thing as being out of control entirely for the time being, so far as stopping or turning in time to prevent killing a child. Passenger cars, of course, run just as fast and faster, but the cars are more easily controlled and can be stopped within a great deal shorter distance. Even then, the danger is extreme in every place.

While it is very important to redouble our efforts in trying to train the children to constant caution, this will always remain impossible for very small children. It is perfectly natural for a small child to be so fully absorbed in play or in some single object, which sometimes happens to be across the street, that such a child is entirely oblivious to its surroundings. For the protection of small children the only safeguard that ever can be effected will be slower speed and more careful control of automobiles and trucks, especially around street intersections and when passing parked cars.

Our sympathy is always extended not only to the families of the victims of such accidents but to the drivers of the cars, who, of course, suffer remorse when such accidents happen, even though legally considered unavoidable.

EDITORIAL IN BOSTON BULLETIN REMINDS US OF HOSPITALITY WESTERN NORTH CAROLINA EXTENDED TO YELLOW FEVER REFUGEES

We are publishing elsewhere in this issue an article quoted from the Boston Monthly Health Bulletin, under the title of "Conquest of Yellow Fever—Its Lessons." This article represented the leading editorial in the Boston Health Bulletin for the month in which it appeared. The article is exceedingly interesting from a great many standpoints. It is timely because of the parallels drawn between the control of yellow fever and like diseases, and the necessity for more penetrating observations before diseases like influenza are fully controlled.

The writer's reference to malaria and the means for controlling its spread is timely and is along the line that we have realized in this State for several years. As a story about yellow fever it is also particularly interesting. In the first place, the writer mentions the fact that Atlanta had never had an epidemic of yellow fever, and always opened its doors to refugees from infected localities in other regions of the South. Such hospitality was peculiarly displayed in many regions of western North Carolina. To this day there are many summer homes owned by the descendants of people especially from the section in New Orleans and other parts of Louisiana and the region around Tampa, Florida. Nearly all other parts of the South had closed their doors and maintained shotgun quarantine against any travelers coming up from the sections just mentioned, but Hendersonville and Waynesville, North Carolina, and other sections of our mountain region welcomed these unfortunate and distracted people.

Silver Creek across R. No. 10, one mile out of Morganton, taken by a State Board of Health nurse, August 16, 1928, a day after the torrential rains which caused the flood. The submerged bridge may be seen in the middle of the picture.
treated them with every hospitality, and showed no fear concerning any possible outbreak from yellow fever. Bear in mind that this was at a time when no idea whatever concerning the cause and spread of yellow fever could be definitely maintained. Our western North Carolina people simply had not been visited in the past with the scourge, and while they knew nothing about its origin or the means of its spread, they somehow felt that they were safe from attack, and therefore through their hospitality laid the foundation for lasting friendships throughout the coming generations with the people of the affected sections in the far South and their descendants, which has made for fine social and business contact through all these years.

Another reason for publication of the article is that our chief city and seaport at that time, Wilmington, had had several visitations from the scourge of yellow fever. The United States government for a long time maintained one of its marine hospitals there. This was, as the writer in the Boston Journal points out, before the change of name to the United States Public Health Service, and it was then known as the United States Marine Hospital Service. The innate fear residing in the minds of older residents of Wilmington before the Spanish American War, and the discoveries with reference to the control of yellow fever was primarily responsible for the excellent health service required at Wilmington. Throughout all the years of its history as a large seaport town up to the present, an observing stranger visiting Wilmington for the first time is impressed with its cleanliness, which extends to every back street, alley, as well as the public square. This impression formed the basis for one of Bion H. Butler's famous articles in the News and Observer several year ago. It holds good to this day, although the dread of yellow fever has been entirely removed.

SOUTHERN PARENTHOOD INSTITUTE

Doctor Frank Howard Richardson, a noted pediatrician of Brooklyn, New York, who has for several years been operating a successful children's clinic at Black Mountain, North Carolina, in association with several distinguished physicians of Asheville and Swannanoa, has recently sent out announcement concerning the opening of this clinic for the summer season. Dr. Richardson and his group confine themselves exclusively to children.

In connection with the clinic this year Dr. Richardson announces that they will hold the first session of what he is pleased to call "The Southern Parenthood Institute" at Black Mountain, North Carolina, in connection with the children's clinic. This institute will run from August 12 to August 16 inclusive. The meetings will be given over to lectures by authorities on various phases of parenthood and child study. The afternoons will be occupied by actual observation of children in playground, nutrition class, posture class, workroom, and so on. Children may be left in the playground under observation while parents attend morning sessions. Opportunity will be given for conference over particular problems. A nominal registration fee of two dollars, to cover the actual expenses of the course, will be made, and may be included by mail to Dr. Richardson at Black Mountain, in making application for permission to attend this institute.

Doctor Richardson is a frequent contributor to Hygeia and other national health magazines. He has contributed many articles of value to the Health Bulletin and promises some more. He is author of several notable books, some of the most recent on "The Nervous Child and His Par-
THE CONQUEST OF YELLOW FEVER—ITS LESSONS

Congress has recently directed that there be published annually in the United States Army Register, as a roll of honor, the names of the members of our military establishment in Cuba in 1900 who exposed themselves to experimental infection in connection with the investigation that resulted in the discovery of the manner of transmission of yellow fever.

No such recognition has ever been given to others who have risked or even sacrificed their lives in efforts to find ways of controlling a dreaded disease.

In no other instance has the disappearance of a disease so rapidly followed the discovery of methods to control it. Within twenty-five years, the only place in the Western Hemisphere where yellow fever was to be found was a small district in Brazil.

When the Reed Commission began its work, yellow fever was known to be endemic in Cuba and in many other countries of tropical America. In other places, yellow fever was recognized so frequently that they were suspected of being endemic foci of the disease. Among such seaports were New Orleans and Key West as well as Colon and Havana.

No other disease, not even the bubonic plague, ever acquired such commercial importance as yellow fever. This is the chief reason why it disappeared so rapidly when effective methods for its control were found. Yellow fever was a constant handicap to commerce with the countries of tropical America and a block to their economic development. It was the terror of ship owners. Crews of ships would be stricken and die in tropical ports and in consequence ruinous wharfage and demurrage charges would pile up. Perishable cargoes would be lost by quarantine restrictions at ports of arrival. Whenever yellow fever appeared in places where it was not endemic and the native population not largely immune, business and commerce were paralyzed.

From time to time yellow fever spread to this country. There was an outbreak as far north as Kittery, Maine, in 1864. The disease was brought there with the U. S. S. "Esota." Both New York and Philadelphia have suffered from epidemics. In the latter city, in 1793, there was an epidemic which was attended with a frightful mortality. Our southern
states naturally suffered more frequently and more severely. The most serious epidemic in the South occurred in 1877. This was probably the first time when negroes in this country were recognized to have yellow fever. They had been regarded as naturally immune. The last epidemic in the United States was in New Orleans in 1905. The same year the disease appeared in other places along the Gulf.

In robust American men, yellow fever has always been regarded as a very fatal disease. One who has not been through with the experience cannot conceive of the panic which appearance of yellow fever produced in a southern community which knew from experience what a yellow fever epidemic really meant. The following is a typical occurrence.

One evening in 1898 a United States officer landed at Pensacola, to take the train for Washington the next day. He went to the principal hotel for the night. In the morning he found that he and one other guest were the only persons in the hotel. The day before, yellow fever, which was known to be present in Biloxi and Mobile, had been discovered in Pensacola. The officer managed to get aboard a train crowded with fugitives for Atlanta. At every station a local shot-gun quarantine guard prevented persons from leaving the train. Yellow fever had never spread in Atlanta and the city did not quarantine against it. Yellow fever was likewise unknown in Petropolis, near Rio de Janeiro, a notorious hotbed of the diseases.

Aside from its high mortality, a case of yellow fever was in itself frightful. It struck down the healthy in a mysterious way. There would be indications of recovery, then would come the portal obstruction, the horrible prostration, the turning of the patient’s color from yellow to mahogany, the black vomit and death. All was over in four or five days.

The dread of yellow fever served to encourage the unusual measures which led to the discovery of the manner of its transmission. Officers and men of our army found themselves in Cuba and confronted with the task of governing the country and protecting themselves against unfamiliar disease which was making their lives uncomfortably insecure. When the “Yellow Jack” got an American, he expected to die. As a military official once said to the writer, “You never heard of any army officer who had reached the rank of major who ever recovered from the yellow fever.”

In keeping with the commonly accepted idea that the disease was directly or indirectly related to filth, Colonel Waring, the Street Commissioner of New York, came down to Havana to eradicate yellow fever by “cleaning up the city.” He did a good job, but nobody in Havana was deceived by the published reports of his success in checking yellow fever.

Colonel Waring’s name appears on no army honor roll, but he sacrificed his life in the fight against yellow fever. On returning from his work, he was taken ill. The old-time “yellow fever experts” acquired by clinical experience an uncanny ability to recognize a case of yellow fever in its prodromal stage from what they called the “yellow fever facies.” Such an expert, Dr. Joseph H. White, of the U. S. Marine Hospital Service, as the U. S. Public Health Service was then known, was asked to see Colonel Waring. After a glance at the patient,
Dr. White did not hesitate to confirm the suspicions nor to tell us that the Colonel was doomed; that recovery in a person of his age and habit was unknown.

At times for a century at least, various persons had advanced the theory of the responsibility of mosquitoes for yellow fever with such insistence that their ideas have been recorded in medical literature. The most conspicuous exponent of this idea when Major Reed undertook his experiments was Dr. Carlos J. Finlay. The work of Ross and Manson and others had just resulted in demonstrating the mosquito transmission of malaria and had naturally created a more favorable attitude toward Doctor Finlay's views of a mosquito vector in yellow fever.

Major Reed did not concern himself with the cause of the disease. His experiments were directed to its practical control. The infective agent of yellow fever was then popularly endowed with all the elusive attributes that we are now accustomed to hear ascribed to both vitamins and filterable viruses plus the diffusibility of liquid carbon dioxide. The body of a person who had died of yellow fever was an object of horror, to be buried immediately with disinfectants and not to be disinterred. The water of Havana Harbor was believed to be capable of giving rise to yellow fever. It was regarded as dangerous to take the harbor water aboard ships even on anchor chains. To avoid anchoring, mooring buoys were placed about Havana Harbor to which vessels could make fast. That is why the ill-fated "Maine" on arrival was taken by the pilot to buoy No. 4. Fomites, articles which had been in contact with a yellow fever patient, were regarded as extremely dangerous.

Major Reed's volunteers were first put in beds and in bedding in which yellow fever patients had died. Nothing happened. Volunteers then allowed themselves to be bitten by mosquitoes which had bitten yellow fever patients. Nothing happened either. This was done repeatedly with the same negative results. The experiments barely escaped being abandoned before it was discovered that a patient is infective only during the first three days of the disease and that after securing the infective material it is about twelve days before the mosquito becomes capable of infecting a human being. There was some luck also in the selection of the right kind of mosquitoes in the experiment.

Important as the above-mentioned discoveries were in simplifying quarantine procedure, yellow fever would never have been eradicated from tropical America but for another discovery, not in pathology, but in entomology. The dangerous mosquitoes were to be found in the vicinity of their victims or prospective victims. Other habits were also discovered which were utilized in devising methods for
their destruction and protective measures against them.

It is just beginning to be realized that the practical solution of many local malarial problems is likewise dependent upon intelligently directed entomological studies of the mosquitoes involved. Spectacular and expensive oiling or spraying with poisonous dust of large areas are beyond the economic resources of most malaria-stricken communities and have perhaps nowhere justified their cost. Industrial effectiveness during the construction of the Panama Canal was due to the insistence on the use of mosquito screens and to the prompt and effective administration of quinine when malarial infection appeared and not because of the destruction of mosquito vectors of malaria and lack of opportunities for infection.

The pathological concept which underlay former methods to control yellow fever finds expression in the statutory law on which the Boston Health Department still relies for legal authority to function today. It dates from 1797 and reads as follows: “The board of health shall examine into all nuisances, sources of filth and causes of sickness within its town, or on board of vessels within the harbor of such town, which may, in its option, be injurious to the public health,” etc.

A concrete example of the application of this idea to the control of yellow fever is furnished by the advice to the public formulated by the “College of Physicians” of Philadelphia during the yellow fever epidemic in that city in 1793. It reminds us of the advice which was given to the public during the prevalence of influenza the past winter. It reads in part as follows:

“That all unnecessary intercourse should be avoided with such persons as are affected by it (yellow fever).

“To stop the tolling of bells and to bury such persons as die in as private a manner as possible.

“To place persons infected in the center of large and airy rooms, in beds without curtains, and to pay the strictest regard to cleanliness, by frequent changing of body and bed linen.

“To keep the streets and wharfs as clean as possible.

“As the contagion of the disease may be taken into the body and pass out of it without producing the fever, unless it be rendered active by some occasional cause, the following means should be attended to, to prevent the contagion being excited into action in the body.

“To avoid all fatigue of body or mind.

“To avoid standing or sitting in the sun, also in a current of air, or in the evening air.

“To accommodate the dress to the weather and to exceed in warm rather than in cool clothing.

“To avoid intemperance, but to use fermented liquors such as wine, beer and ‘cyder’ with moderation.

“The College conceive fires to be very ineffectual, if not dangerous means of checking the progress of this fever. They have reason to place more dependence upon the burning of gun powder. The benefits of vinegar and camphor are confined chiefly to infected rooms and they cannot be used too frequently upon handkerchiefs, or in smelling bottles by persons whose duty calls them to visit or attend the sick.”

Medical opinion attributed the origin of the epidemic to a pile of damaged and rotting coffee on the Arch Street Wharf.

The idea of the responsibility of the mosquito for yellow fever was long in receiving serious consideration. How could such a theory be regarded as tenable in view of evidence to the contrary of which the following are samples? In the yellow fever epidemic of 1877 Memphis suffered severely. The first recognized case in the city was of a woman who had received through the mail a lock of
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hair cut from the head of a relative who had died of yellow fever in New Orleans.

Yellow fever epidemics, like those of infantile paralysis, were expected to abate in the autumn with the appearance of frost. Frost, however, apparently might fail to destroy the virus of yellow fever. The U.S.S. "Plymouth," which had had yellow fever aboard, was brought to Boston and allowed to freeze up there for two winters. When put in commission and sent south, cases of yellow fever (?) appeared aboard as soon as she entered the tropics, although she had not touched port since leaving Boston.

Then there was the old sloop-of-war "Portsmouth," on which yellow fever always appeared when she went in the West Indies. This ship certainly had hard luck.

A young man who had contracted yellow fever in Central America in 1896, and who managed to reach his home in Biloxi, Miss., before falling sick, started an epidemic there. The Federal officers came to the aid of the state and local health officials. The young man was identified as the original case, but it was found impossible to connect him with other cases evidently concerned in starting the epidemic, on the accepted theory of contact transmission of the disease, until it was discovered that members of the families involved had sat in proximity to each other in church. The incubation period of yellow fever fitted in beautifully. In an old government report the result of this epidemiological study is embellished by a diagram, full of little circles, joined by straight lines, for which the writer is responsible, and intended to show the disastrous consequences of attending church with persons who might have a case of yellow fever in their homes. The writer had likewise personal cognizance of a case in which a soldier appropriated and slept in a blanket which, unknown to him, had been used by another soldier who had developed yellow fever. At the proper time, the man who had purloined the blanket came down himself with the disease.

As the convincing character of the testimony, of which the above are illustrations, is recalled, may it not be pardonable to entertain a suspicion that the lack of progress in the control of influenza, infantile paralysis, and other diseases which might be cited, may be attributable likewise to misinterpreted observations?

Practical benefits may follow from false hypotheses. It has occurred in connection with the practice of medicine. It happens in business and finance. The spread of yellow fever was checked by the consistent application of procedures based on the sup-

Happy August days in a Raleigh back yard.
position that the disease was caused by emanations from sick persons and fomites. The spread of yellow fever by ships was prevented by methods which came to be internationally approved. The essential features of the procedure were, on arrival of a ship from a dangerous or suspected port, to anchor the vessel well away from the shore and hold it there, fumigate it thoroughly with sulphur, and to permit nobody to leave it until the expiration of the period of incubation of yellow fever from the last conceivable opportunity for exposure. The sulphur dioxide was presumed to destroy any virus of yellow fever attached to the vessel, its personnel or cargo. Unintentionally, the mosquitoes were thus killed.

Information regarding health conditions at ports of departure was supplied by consular "bills of health," an idea which originated in somebody's brain in an Italian Republic back in the Middle Ages. We reinforced the scheme by placing medical representatives of our government at foreign ports, both with view to increasing the reliability of information regarding the local prevalence of contagious diseases and in securing the observance of certain prescribed precautions with respect to the clearance of ships for our ports.

After Congress enacted legislation in 1893, empowering the Federal Government to formulate and enforce maritime quarantine regulations, yellow fever never entered an American port except because of evasion or disregard of the requirements of these regulations. The old maritime quarantine procedure for keeping out yellow fever was efficacious, but it was an expensive and exasperating handicap to commerce and for that reason the action of local quarantine officials was sometimes determined by dictates other than those of law or of prudence.

The discoveries of the Reed Commission made it possible to put the maritime quarantine methods on a rational basis and made trade in perishable cargoes with infected tropical ports practicable. The new knowledge did not, however, prevent yellow fever from getting into this country occasionally. That happened for the same reasons as previously, and continued to do so until foci of yellow fever were eliminated from the tropics by taking advantage of entomological discoveries regarding the habits of the dangerous mosquitoes.

The Reed Commission did not discover the cause of yellow fever. We know that yellow fever is not produced by emanations from the sick nor does it come from fomites. We know that it is transmitted by a certain mosquito, but the real nature of the infective agent of yellow fever is still an interesting mystery.

For years various investigators studied the organs of yellow fever victims and infected mosquitoes under the microscope. They kept seeing about what they hoped to find, but their vision always had to be abandoned as illusory.

Finally, the Rockefeller Foundation took up the problem and after studying infective jaundice in which rats are concerned, the late Doctor Noguchi undertook research directly on yellow fever which apparently demonstrated conclusively about ten years ago that yellow fever was likewise due to an organism known to bacteriologists as a spirochete.

The correctness of this view seemed to be further confirmed by the apparent artificial immunity to yellow fever produced when persons were exposed to the disease in Central American epidemics after having been given a vaccine prepared by the laboratory cultivation of Noguchi's spirochete.

In white children in the tropics, yellow fever was usually a mild disease and often unrecognized. In negroes, also, yellow fever is so seldom a serious matter that for years they were believed to be naturally immune.
There was a very old belief that yellow fever, like hookworm disease, was brought from Africa to the Western Hemisphere with the negro slave trade. Recent studies have tended to confirm this belief and with the eradication of yellow fever in the Western Hemisphere the Rockefeller Foundation, through its International Health Division, has been directing its attention to yellow fever in Africa. Investigation has shown that, as long believed, there exists in Western Africa a disease which is indistinguishable clinically or by other tests from the yellow fever of the Western Hemisphere, except that, to express the matter briefly, it does not appear to be due to Nogouchi's spirochete, nor does Nogouchi's vaccine seem to be effective in producing immunity to the African disease. The hypotheses of modern bacteriology have thus struck another snag. Doctor Stokes, Doctor Nogouchi himself, of the Rockefeller Foundation, and Doctor Young of the British Medical Service, have lost their lives trying to find out what is wrong. Others, fully realizing the risk, are stepping in to continue their work.

Many times in the past, when bacteriological hypotheses have thus encountered inconsistent facts, the hypotheses have been elaborated to meet the new situation. Some of us who have stood on the outside and watched, thinking of yellow fever, poliomyelitis, and influenza and the meager results of a definite, unqualified character which modern bacteriology has produced, feel inclined at times to view critically the unsatisfactory, confusing conclusions of types and strains, of virulence and avirulence, of susceptibility and immunity, to which bacteriological hypotheses have led, and wonder if what is really needed to clear up the mystery of yellow fever and other diseases is not a human mind with the capacity to see some simple underlying biological principle as yet unrecognized.—Boston Health Bulletin.

A fine place to spend some of the August days.

THE VITAMIN QUESTION

A long time ago we heard a very distinguished surgeon tell a medical journal editor emphatically that he refused at that time to write an article on appendicitis because he did not care to go on record in writing as having had any opinion about the subject. His reason was that medical opinion was changing too rapidly and that by the time his article should appear in print surgeons and investigators might have moved on to new ground and his observations would make him look foolish.

We are tempted to say the same thing about vitamins. So far as we know there have been no new vitamins discovered within the last thirty.
days. We have been told in the scientific literature that certain vitamins abundant in certain foods were destroyed by the process of canning; that certain other vitamins in certain foods were not damaged. We have also been told that certain vitamins in the same foods did not have their potency damaged in the process of drying.

About the most recent bulletins issued on the vitamin subject inform us that foods rich in some of the vitamins are not damaged by commercial canning; that is, what is called a vacuum process; but that these same vitamins in these particular foods are damaged when canned at home in small quantities because of the fact that they are cooked in open pots possibly, and the oxidation process gets in its damaging effects. These recent bulletins inform us also that more of the particular vitamin content is retained in the commercial canning than exist in the same foods when cooked in the fresh vegetable form.

It is all confusing and puzzling, to say the least. We are safe, however, in one conclusion; and that is, in urging the same things we have in this bulletin for the past twenty years; and that is, that every family should partake of an abundance of milk and butter and dairy products and of a large variety of other foods, including vegetables and fruits, fresh, canned, or dried; some meats, and different kinds of breads such as whole wheat, Graham, white, and corn bread.

After all, the old fashioned well-to-do plantation diet which was provided for big house and slave quarters alike in ante bellum North Carolina, was just the ideal diet. It may be possible that they had too much molasses; but this was far overbalanced by the fact that they had no refined granulated sugar.

Like so many other things in this world, diet is a matter of common sense and intelligent effort.

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The problems which confront a surgeon change with each succeeding generation. When I began the practice of medicine the subject of appendicitis held the center of the stage. The pages of medical journals and the programs of medical meetings were almost monopolized by papers on the various questions with reference to its treatment. Was appendicitis a medical or a surgical disease? Should an operation be done after diffuse peri-
Tonyitis had developed? Should the surgeon simply drain, or should he attempt to remove the appendix in a case where a large local abscess had formed? These and many other questions have now been settled and are only of historic interest. The treatment of appendicitis has been so standardized that at present it is rarely discussed, and I sometimes wonder whether the older surgeons are adequately transmitting their dearly earned experience to the younger generation.

With the exhaustion of interest in the appendix, the surgical mind turned to the thyroid, and goiter is now the popular subject of discussion. It is true that diseases of the thyroid were recognized and described by the earliest medical writers, but their frequency and importance were not appreciated until the introduction of anesthesia and antiseptics enabled modern surgery to offer relief to its victims.

Many interesting and some dramatic contributions have been made to the knowledge of physiology and pathology of the thyroid gland, but it must be confessed there is much yet to be learned. Today, eminent authorities hold divergent views, and experienced and conscientious practitioners advocate different methods of treatment. Until the various theories are reconciled and the apparently contradictory facts are explained, the study of the gland must be continued. We are now in the same stage of evolution in our knowledge of goiter that the profession went through some thirty years ago in its knowledge of appendicitis.

The history of the pioneer work in the surgery of the thyroid gland is of great interest. The great Kocher's mortality in his first seventy cases of simple goiter was 40%, and Charles H. Mayo's mortality in his first sixteen cases of exophthalmic goiter was 25%. These and other men, with a courage that today seems marvelous, persevered in their work until they finally perfected a technique which enables the surgeon of the present day to operate with a mortality of less than 2%.

After the first enthusiasm over this surgical triumph there naturally came a reaction. Was it necessary to do a mutilating operation to lessen the bulk or reduce the physiological activity of a perverted gland? Was it not possible to shrink the gland and lessen the secretion by other less heroic treatment?

The medical measures at first employed were empirical and consisted of prolonged rest in bed, the administration of drugs such as digitalis, belladonna, and hydrobromate of quinine, the use of various sera such as the one obtained from the blood of a thyroidectomized goat, the injection of alcohol, carbolic acid and boiling water into the gland to produce a sclerosis, the application of electricity in the form of electrolysis and cathaphoresis, and radiation of the neck with X-ray, and the treatment of the gland with radium or its emanations.

While some of the above measures proved of benefit in selected cases, the final result was not satisfactory, hence the experimental method of treatment was abandoned and a scientific study of the physiology and pathology of the gland was undertaken to try to find a specific remedy for the cure of its disorders.

It has been learned that the thyroid gland has many functions, the most important of which, perhaps, being the regulation and control of metabolism or chemical changes that go on in the body. The human body may be compared to a furnace, because it consumes fuel and produces heat and energy. The process by which a furnace converts coal into heat and energy is called combustion. The process by which the human body converts food into heat and energy is called metabolism. All modern furnaces have automatic dampers or thermostats by which the degree of com-
bustion is regulated and the amount of heat produced is controlled. Owing to this fact, man has a normal temperature of about 98.6° F., and this is maintained in health with practically little variation, irrespective of the time of meals and regardless of whether he lives in the tropics or arctic regions.

It has been proved that the internal secretion of the thyroid operates this human thermostat. An increase or decrease of thyroid activity is at once shown by a corresponding increase or decrease in metabolic rate.

If thyroid secretion is excessive, the internal fires burn fiercely and the tissues are stimulated in a course of wasting dissipation. The patient in time develops tremors, sweating, rapid heart action, muscular weakness, loss of weight, and feverish mental activity. The evidence of thyroid excess suggests the entrance of tragedy into the life of its object.

If thyroid secretion is deficient, the metabolism of the body is depressed and heart production and gaseous interchange are at a low ebb. In the young, growth is lessened and the skeleton is dwarfed. The nervous system halts in development and mentality does not rise above the level of that of an infant. Physically and intellectually the victim of thyroid poverty is less a man, more a beast.

It has been learned that the thyroid is peculiarly rich in iodine, and that the amount present varies widely both in health and in disease. The thyroids of sheep and oxen fed near the sea contain twice as much iodine as do those pastured in inland regions. Iodine is increased in colloid goiter, diminished in adenomatous goiter, and may be completely absent in exophthalmic goiter.

Ever since the demonstration of the presence of iodine in the thyroid, numerous investigators have endeavored to explain the role of its physiological activity and the nature of the chemical combination in which it is held.

Starling states: “Iodine may possibly be the active principle by means of which the thyroid is able to maintain the nutrition of the body,” and Crile writes: “The study of the thyroid begins and ends with iodine.” Kendall isolated a crystalline substance from the thyroid which he called thyroxin. It contains 60% of iodine and its chemical structure is now known. It apparently possesses the same physiological action as does the gland itself.

Marine emphasized the fact that iodine is necessary for the normal function of the thyroid and that when the store of iodine falls below normal there is active hyperplasia of the gland. If when this occurs iodine is supplied artificially the hyperplasia ceases and the cells return to their resting form.

It has been demonstrated that the thyroid will become diseased, first, if it is not provided with sufficient iodine to manufacture its secretion; second, if it is overworked by an undue demand by the system for its secretion; and, a third, if it is irritated by poisons brought to it by the blood from the teeth, tonsils, or other foci of infection. An underfed or overworked or chronically poisoned thyroid usually increases in size, and this enlargement constitutes what is generally known as a goiter.

Just as mercury was used empirically in the treatment of syphilis and quinine in the treatment of malarial fever before the physiological actions of the drugs were understood, so iodine was used empirically in the treatment of diseases of the thyroid in the form of sea water, sea salt, seaweed, juices of shellfish and the ash of sea sponges before the element was known to the chemist. After the discovery of iodine and the demonstration of its presence in the thyroid in amounts that varied widely with different pathological conditions, it was only natural that its use should have been suggested as a remedial agent.
Swiss and French physicians employed it largely in the form of iodid of potassium and claimed to cure or benefit many patients. In comparatively recent years Kocher and Halsted tested the effect of iodine on a large number of patients suffering with goiter. Some of the patients with simple or quiescent goiter developed acute and dangerous symptoms, and as a result Kocher cautioned the profession against the indiscriminate use of the drug in unselected cases. This led to a careful study of goiter in order to classify diseases of the thyroid clinically and pathologically and to determine the value of the various remedies advocated in their treatment. This work has been much aided by the introduction of the basal metabolism test. As the thyroid gland regulates the general metabolism of the body an increase or decrease of its activity is accurately shown by corresponding changes in the patient's basal metabolic rate. Hence by determining the degree of metabolism it is possible to estimate thyroid activity in a given case, and to tabulate mathematically the effect of the various forms of treatment that are advocated for its abnormalities. No perfect classification of goiter has yet been evolved. The simplest and most practical to cover the cases that are most commonly met by the clinician is the following:

1. Colloid goiter.
2. Adenomatous goiter without hyperthyroidism.
3. Adenomatous goiter with hyperthyroidism.
4. Exophthalmic goiter.

Colloid goiters are soft in consistency, symmetrical in shape, and are characterized histologically by an excess of colloid in the acini of the gland. They do not cause an increase in general metabolism, and hence are not attended by constitutional symptoms. They usually develop about puberty and are much more common in girls than in boys. This type of goiter is endemic in certain sections and is then said to be a geologic deficiency disease due to lack of iodine in the organism, although the demands of physical growth, scholastic training and social pleasures must play a secondary part.

The work of Marine, Kimball and others in the prophylactic and curative treatment of colloid goiter by the use of iodine is too familiar to require detailed description. By the proper administration of iodine to the pregnant mother and to the child until it maintains its growth, colloid goiters can be prevented, and by the use of iodine and thyroid extract combined with hygienic measures many cases of colloid goiters, after they develop, can be cured.

Adenomatous goiters without hy-
perthyroidism, or simple adenomas, cause enlargements of the thyroid which are usually unequal in consistency and irregular in shape due to the presence of new growths in the substance of the gland. They do not cause an increase in general metabolism, and hence are not attended by constitutional symptoms. They usually begin in early life and grow slowly, producing deformity and sometimes discomfort from pressure. In four cases out of five, after a period which averages about sixteen years, they undergo degenerative changes that transfer them from the simple to the toxic type. This change may be precipitated by the injudicious administration of iodine.

Adenomatous goiter with hyperthyroidism, or toxic adenomas, usually develop as a result of neglect of a simple adenoma. The cause or nature of the degenerative change which takes place in the adenomatous tissue is not known.

Owing to increased functional activity of the gland, there is an excessive output of thyroxin. In addition to the nodular enlargement of the thyroid there are constitutional disturbances such as nervousness, tremors, tachycardia, loss of weight and strength, and increase in the basal metabolic rate. The symptoms develop insidiously and in time may produce degenerative changes in the heart, kidneys and liver. The patients do not have fluctuation in the intensity of symptoms or develop acute thyroid crises or have the eye changes which are characteristic of exophthalmic goitre. The administration of iodine does no good and may do harm in these cases.

Exophthalmic goiters are most common in early life, but they are sometimes seen in children and in patients of advanced age. The thyroid is moderately but symmetrically enlarged and microscopic examinations show diffuse parenchymatous hypertrophy and hyperplasia of the tissue. Chemical tests show in some a complete absence and in others a marked diminution of iodine in the gland. Owing to the pathologic changes present there is an excessive and probably abnormal thyroid secretion. The symptoms of exophthalmic goiter, unlike those of toxic adenomas, usually begin acutely and abruptly. In addition to nervousness, tremors, tachycardia, loss of weight and strength, and increase in the basal metabolic rate which are seen in toxic adenomas, there are exophthalmos, marked remissions and exacerbations in the intensity of the symptoms and a tendency to gastrointestinal crises of vomiting and diarrhea.

Until recently clinicians believed that toxic adenomas and exophthalmic goiters were merely different stages of the same disease, and as it was known that the administration of iodine was injurious in the first it was thought it was also contra-indicated in the second. It remained for Henry S. Plummer, of the Mayo Clinic, to show that toxic adenomas and exophthalmic goiters were distinct and separate diseases, and to demonstrate that iodine was of inestimable value in the control of the symptoms of true exophthalmic goiters.

The administration of iodine in these cases causes quick and marked improvement, but the effect is only temporary and the symptoms soon return. After a patient has been treated with iodine and a relapse occurs, the case will not respond satisfactorily to further treatment with the drug. Iodine, therefore, should not be used as an attempt to cure, but merely as a means to improve the patient's condition so that other methods of treatment may be employed.

From the foregoing it will be seen that iodine is indicated in the medical treatment for the prevention and cure of colloid or simple goiter. Iodine is contra-indicated in simple adenomatous goitre, as it may activate the disease and bring on a dangerous attack.
of acute hyperthyroidism. Iodine does no good and may do harm in toxic adenomatous goiter except in the rare so-called mixed cases where there is an element of exophthalmic goiter present. Iodine should not be used by the physician in the treatment of exophthalmic goiter, as its beneficial effect is only temporary and the susceptibility of the patient to its action is permanently destroyed. The drug should be reserved for the use of the surgeon in his effort to get the patient in condition for a safe operation.

At one time the injudicious use of iodine by inexperienced practitioners did much harm. The profession as a rule now knows which type of goiter is benefited and which is harmed by its administration. The result of all this labor, however, threatens to be lost, owing to the recent widespread advertisement of a brand of table salt containing iodine, which is offered to the public as a panacea not only to prevent but also to cure all forms of goiter. The indiscriminate use of unknown quantities of iodine will unquestionably do much harm, and patients with potential or actual goiter should be warned not to prescribe for themselves a potent drug obtained from the corner grocery store.

So much with reference to the indications for iodine. Now, what about the indications for surgery? They, too, will be found to be dependent on the type of goiter. I have time to state them only very briefly.

Surgery should not be resorted to in cases of colloid or simple goitre, especially the adolescent form which occurs in young girls. This type of goiter is a comparatively harmless trouble and the symptoms it causes are more imaginary than real. The enlargement of the gland usually disappears in a reasonable time with or without treatment.

Surgery is indicated in a simple adenomatous goiter if the growth causes deformity, or if it gives rise to pressure symptoms, or if it shows evidence of undergoing degenerative changes. Usually, the patient is the best judge as to when the disfigurement or discomfort is sufficient to justify an operation.

Surgery is indicated in toxic adenomatous goiter as soon as the symptoms due to chronic hyperthyroidism become marked. This type of goiter does not tend to spontaneous cure or yield to non-operative treatment, and delay leads to incurable structure changes in the heart, kidneys and other vital organs.

Surgery is indicated in exophthalmic goiter as soon as a positive diagnosis is made. It is now generally recognized that surgery is the quickest, surest and safest way to cure the disease. An early operation is attended by practically no mortality, avoids weeks of invalidism, and prevents the bulging of the eyes, which is a deformity that often cannot be corrected by a late operation.

If this golden opportunity is lost,
and medical treatment is instituted in an effort to avoid an operation, the patient eventually reaches the surgeon in a condition that makes the case a bad risk. This is especially true when iodine medication has been employed. Instead of an operation performed shortly after admission to the hospital, done comfortably under a general anesthesia and completed at one stage with closure of the wound, the patient has to undergo a more or less prolonged period of preparatory treatment, the operation has to be done under a local anesthesia, the work often has to be divided into several stages, and the wound frequently has to be left open and packed with gauze. Here, as elsewhere, early surgery is easy and safe and late surgery is difficult and dangerous.—Bulletin McGuire Clinic and St. Luke’s Hospital.

PUBLIC HEALTH SERVICE WRITES ABOUT NEPHRITIS OR BRIGHT’S DISEASE

The importance of Bright’s disease, or nephritis, is evidenced by the fact that it stands third among the causes of death in the United States. This disease was described by an English physician, Dr. Richard Bright, about a hundred years ago. The original description of Dr. Bright included a “dropsical” condition of the body and the finding of albumen in the kidney discharge associated with an inflammation of the kidneys. Today, the term “Bright’s disease” is being replaced by the term “nephritis,” and is recognized as a disease affecting both kidneys, and which leads to changes in structure and disturbances in the kidney functions.

ACUTE OR CHRONIC CASES

Bright’s disease is usually classified as acute or chronic. An acute attack as a rule manifests itself by pallor of the skin, swelling of the eyelids, feet, and sometimes the whole body, and diminution in the amount of the kidney discharge, which is usually scanty and bloody or smokey in appearance.

In chronic nephritis, the onset is gradual and insidious, though some acute cases become chronic. The symptoms which cause the patient to consult a physician are usually lassitude, headache, vomiting or loss of appetite, and nocturia or increased frequency of voiding the kidney secretion at night. In some cases, dropsy, or a watery swelling of the body, is very marked. Not infrequently dimness of vision may cause the patient to go to an eye specialist, who upon examination of the retina of the eye, finds that the underlying cause of the complaint is chronic Bright’s disease.

Many cases of chronic Bright’s disease are associated with increased

Come on boys! Who will race with me to the mill pond?
blood pressure. In some of these the disease is in no sense a disease of the kidneys alone; here the condition is part and parcel of a generalized disorder of the circulation characterized by high blood pressure and with more or less damage in the kidney.

The prevention and treatment of Bright's disease necessitates first a consideration of the factors which have to do with its cause.

**Specific Causes**

Among the causes of the acute disease are often mentioned sudden exposure to cold; chemical poisons, as carbolic acid, mercury, turpentine, and similar preparations; also extensive burns of the body. The most important among the causes is the group of acute infections, including not only scarlet fever and other general diseases, but also tonsilitis and infections about the throat and other local parts of the body. In chronic cases the cause is usually not so definite. The same infections, also syphilis, prolonged suppuration, or bacterial blood-poisoning may have a part. Alcohol, lead, and over-eating play their roles in some cases, and in some instances the disease seems to be simply a degeneration of old age. Males are more often affected than females, probably owing to the greater exposure of males to the wear and tear of life, including work, weather and worry, as well as infections and poisons.

In treatment, consideration should be given as to whether the disease is acute or chronic. In acute cases the patient should be confined to bed, and should be under the constant care of a physician. The directions of the physician regarding diet and treatment should be meticulously observed. Fortunately, most cases of acute Bright's disease end in recovery, under judicious and careful management; lacking such management, the acute stage is very likely to progress into the chronic stage.

**Difficulty of Treatment**

Chronic Bright's disease offers difficulties which require the closest cooperation between the patient and the physician, though at times the visits do not need to be frequent. Every patient afflicted with chronic Bright's disease should place himself under, and remain under, the care of a competent physician. A regimen of treatment adequate to one patient may not apply, or may be contra-indicated, in another patient. Just as in any other disease, a thorough understanding of the case is essential to intelligent treatment. In many chronic cases the drinking of fluids should be restricted; alcohol should always be forbid-
the use of salt in the diet is at times reduced with advantage; moderate mental and physical work except in severe types of the disease should be established, but controlled; habits should be so regulated as to conform with good judgment and common sense; a light diet and freedom from exposure to changeable and inclement weather are important points. It must not be assumed that all cases of chronic Bright's disease are necessarily fatal. As a matter of fact, many persons afflicted with this disease, when on a careful schedule of living, as regards diet, habits, and work, and under the supervision of a physician, live long and useful lives.

PREVENTIVE MEASURES

The prevention of Bright's disease is quite as important as the treatment. Among preventive measures the following may be considered as outstanding in importance:

1. Since many cases of Bright's disease follow the acute infections, it is important that all means be taken to control these, as regards both their prevention and cure. Preventive measures, including isolation of contagious diseases, and disinfection of the body discharges, should be used in the control of all such diseases in order to guard the health of the general public. Under the heading of preventive measures it is also essential that all throat affections and diseased teeth receive proper attention.

In the treatment of persons afflicted with contagious diseases, the patient and the patient's family should cooperate to the fullest extent with the physician in securing for the patient adequate rest in bed. No other factor in the management of acute disease is of greater importance than adequate rest in bed. Even after convalescence is established, rest in bed, either absolute or partial, should be insisted on for a reasonable period of time, to allow for the kidneys, as well as other vital organs, to be restored to normal condition.

2. The hurry and grind of modern life plays a large part in the production of Bright's disease, especially among the votaries of "wine, women, and song." Avoidance of stress and strain and excesses of all kinds is important.

FAMILY PREDISPOSITION

3. It appears that a predisposition to Bright's disease occurs in certain families. It therefore behooves members of such families to be especially vigilant regarding the application of both preventive and curative measures.

4. Periodic physical examinations, preferably yearly, of all persons are necessary to maximum security and efficiency. The detection of Bright's disease in the beginning of its stage would permit of the institution of such hygienic measures and treatment as would possibly prolong life over a long period of time.

5. It has been said that "the platter kills more than the sword." Outside of specific irritants, investigators have failed to find that one form of protein has any more irritating effect on the kidneys than any other form. However, it is known that many persons eat to excess especially in the use of meats, and it has been ascertained by physiologists that the adult body can be kept in a healthy and vigorous state and in so-called nitrogenous equilibrium, on one-half the protein diet (meats, beans, etc.) that we have been in the habit of consuming. Many people eat too little, but more of us in middle age and later would lead happier, more useful, and longer lives, if we arose from the table with our appetite not completely satisfied.—United States Public Health Service.
Hair dye will continue to be made and used just so long as human vanity exists.

The lay press as well as the medical journals have ever been replete with references to the danger of lead poisoning following the use of hair dyes, as well as the health hazard present in the manufacture of the hair dyes which have a lead compound as one of the ingredients.

Legislative action, and the adoption of local health department sanitary codes have done much to eliminate hair dye containing lead compounds from the usual sales stores; in addition, the wide publication of the harmful effects of such lead hair dyes aided in a gradual lessened demand for such dyes.

The lead compounds were gradually replaced by the so-called coal tar or aniline colors.

Paraphenylene diamine a dye intermediate was gradually introduced as a component of hair dyes. It was not long before the attention of the medical profession was called to serious dermatitis and even systemic disturbances occurring among persons following the use of hair dyes. Investigation disclosed the fact that the paraphenylene diamine in the hair dyes was the causative factor.

The number of claims made by workers in hair dressing establishments for dermatitis still further emphasized the fact that a new health hazard had been introduced in place of an old one, that is, paraphenylene diamine had replaced lead as a health hazard in hair dyes.

To students of industrial hygiene it illustrates the fact that manufacturing health hazards may not always be apparent to the investigator studying the industry alone. It is obvious that the ultimate effect of a product on the user may be the first indication that in the industry itself there has been introduced a new health hazard for an old one.—N. Y. Industrial Hygiene Bulletin.

PLAYGROUNDS DECREASE DELINQUENCY

A decrease of 20 per cent in 25 years in the number of juvenile delinquents in Milwaukee, Wis., although the population doubled during that time, has accompanied the spread of supervised playgrounds which the city started at the beginning of the period. In Dayton, Ohio, the sections of the city with adequate playground facilities show 30 per cent less delinquency than the districts which lack them. And a distinct decrease in court cases involving delinquent children has been reported as following the establishment of proper play facilities by 223 or 351 playground directors and superintendents of schools who replied to a questionnaire addressed to them by the magazine, The American City, published in New York City. The officials who did not report decreases, were mostly from small towns where the delinquency problem is less acute.

An interesting development is increased use of playgrounds after nightfall as a means of luring children from the moral and physical hazards of the city streets at night.—Children's Bureau.
The nursing mother should be careful with her diet.

If mother's milk is not available, babies should have the best and freshest cow's milk that can be obtained.

And should have a bottle with a large neck to allow easy cleaning.

Pure milk is the only single food that contains practically all the principle elements of a well balanced diet. It makes muscle, bone and blood and promotes growth.

Everyone should drink a certain quantity of milk each day.

The best of all baby foods—mother's milk.

Milk should not be regarded as a beverage—it is a food—sip it slowly, get the flavor out of it, don't use it merely to quench thirst, and don't drink it down rapidly.
This fine consolidated school in Currituck is an example of the attractive
and comfortable school buildings to be found in every county in North Carolina.
The army of school children, now nearing a million in numbers, trained in
schools like the one pictured above, will move this old commonwealth a long way
on the road of progress during the next generation.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils  Fly Placards  Sanitary Privies
Cancer  German Measles  Scarlet Fever
Catarrh  Hookworm Disease  Smallpox
Care of the Baby  Infantile Paralysis  Teeth
Constipation  Indigestion  Tuberculosis
Colds  Influenza  Tuberculosis Placards
Clean-up Placards  Malaria  Typhoid Fever
Chickenpox  Measles  Typhoid Placards
Diphtheria  Pellaera  Venereal Diseases
Don't Spit Placards  Public Health Laws  Water Supplies
Eyes  Prenatal Care  Whooping Cough
Files  

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)  The Runabouts in the House of Health
Infant Care (by Mrs. Max West)  (pamphlet for children from 2 to 6 years of age)
Prenatal Letters (series of nine monthly letters)  Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Minimum Standards of Prenatal Care  Diet Lists: 3 to 12 months. 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
What Builds Babies?  
Breast Feeding  
Sunlight for Babies  
Save Your Baby  
Hints to North Carolina Mothers Who Want Better Babies  
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A NEW ARMY MEETING OLD PROBLEMS

With few notable exceptions, all of life is simply a re-experience of ageless problems and sensations. These problems are birth, the struggle for existence, and death. As the population of the earth increases, and as the complexities of life accentuate all these problems, methods of meeting them have to be modified and improved for each generation.

In the State of North Carolina every year for the past ten years more than eighty thousand babies have been born. The infant death rate is high, and there is a considerable mortality taking place between birth and the age of six years. But a majority of all these babies will eventually reach the age of school entrance and become enrolled in the schools of the State. So every year there is a little army of fifty or sixty thousand children starting to school for the first time. Every district in the State has its quota of these little citizens. It is a new world for every one of them. Even in the poorest and most humble of homes they have been surrounded by at least some safeguards which circumscribe their world. When they enter school for the first time they tell their mothers or guardians goodbye at the door of their homes, and when they enter the schoolroom they meet what is to them an entirely new group of problems. Their problems and complexities would be no whit different were they transported from this planet to another. They meet new people. They meet new associates coming from different neighborhoods and enrolled in the school along with themselves. Within a few minutes after becoming enrolled as pupils they instinctively sense the situation and become aware of the fact that the only helping hand for them at the time is the teacher. The teacher, therefore, has an enormous responsibility, especially the teacher in the primary grade. The impressions of the first few days of school life are likely to be lasting on every child. All of us can testify from experience to that fact. The first two or three years are certainly the most important. It is unquestionably the most important from the standpoint of future educational training. If a child starts wrong and gets impressions of school life and, through the school, of the world in general, it is almost impossible to eradicate these impressions, and they will stick throughout life.

Methods of teaching change with changing conditions, like everything else, but the essential fundamental problems remain the same. If a child has been properly trained in the home —trained in habits and discipline and obedience, and especially in health habits—when he starts to school, if the teacher is wise, it will be an easy matter for him to fall in with the routine of school, and he will thus soon become a successful pupil. All of us know that large numbers of children who will start to school for the first time this month have not had the advantage of such influence at home,
and therefore the responsibility of the teacher in such cases is increased.

The first essential problem that the teacher should consider is the condition of the child's health. If a child is in normal health, has no defect of eyesight or hearing, has good teeth, is of normal weight and so on, then the teacher has no problem from that quarter except to maintain a regime that will conserve the child's health, and in no way allow it to decline. For all such normal children, with normal mentality and average intelligence, it is an easy matter to settle into the routine of school life. On the other hand, the large class of defectives, embracing those who have one or more serious health defects, ignorance of health habits, and other handicaps, even with the wise and most helpful school administration possible under present conditions, will find the experience very hard. With proper efforts at meeting their needs, however, this large class of children can, within two or three years, be trained to a point which will approximate their more fortunate fellow pupils. The teachers of first grade pupils have to take into consideration the fact that these children have been practically at large in their own back yards and on their premises for several years before entering school. And when we say teachers in this connection, we mean the whole school's administration from county or city superintendent on down, so as to include every responsible official. The children at first should be given very short hours. Their liberties should be restricted gradually, and while they should be made to feel the hand of discipline firmly enough, it should be exceedingly gentle, and nothing should be done which would be detrimental to the child's health.

At the beginning of each school year the old question of allowing children to be excused during classes comes up for a settlement before ev-

We are publishing this picture of the nine months old boy of one of the field workers of the State Board of Health to show that some of our personnel at least are practicing our health preaching. This boy is a breast-fed baby and is normal and healthy in every particular. He is already a graduate in such things as sun baths, tomato juice and so on.
every other consideration, and nothing should be permitted which would in any way be detrimental to health. The best education built on a defective physical foundation generally proves of little value despite the more or less brilliant exceptions in the persons of famous people who have always been handicapped by bad health. In such cases it would always be found that the indomitable will and perseverance of such people enable them to overcome the handicaps and to succeed in spite of such handicaps. The world, of course, has no way of knowing how much more successful such people would have become had they been blessed with normal health.

We do not believe in making a fad or a fetish of the subject of health, which, in the opinion of the writer, is always more disastrous and detrimental than tuberculosis or any other disease. Once such a fad is developed in an individual, that particular person will be sure to live miserably all the rest of his or her life. We believe in looking on the question of health in a common sense manner, and with children we believe in insisting on the establishment of health habits which will be normal and natural, and which they will therefore come to perform in a natural and unconscious manner, and not to carry on like so many movements up and down of the dumb-bells and so on.

For the little army of children who go out this month to meet the school problems many of them will meet with serious accidents in the first few weeks, as a result of which some will have to drop out permanently and many of them will be temporarily suspended from the ranks. The accidents we refer to is the contraction of communicable diseases, which they have not had before starting to school. In this connection the child who enters school in September, 1929, has a distinct advantage over the child who entered school for the first time ten years ago. The advantage lies in the fact that more is known about communicable diseases and their control than has ever been known before. There is today a sure preventive against diphtheria, smallpox, and typhoid fever, all of which diseases took their toll a few years ago. Scarlet fever is much more easily controlled, and it is hoped that before many more years better progress will be made against the ravages of whooping cough and measles. Much progress, of course, has already been made toward the control of the latter disease through convalescent serum. So we may state with assurance that there are more safeguards in the average community today, which ought to mean fewer accidents from the disease standpoint, than have been enjoyed by any similar aggregation of

Six year old Thomasville school boy.
All ready for school.
school children ever assembled in this State before. If such is not the case, we are safe in stating that somebody has neglected to do all that could be done along these lines. No child should enter school for the first time until after he or she has been successfully vaccinated against smallpox, and certainly no child should enter who has not been given the full protective treatment against diphtheria, which is available to every child at all times in this State. If not available, it should be. Thus two diseases that have interrupted school work in innumerable instances in the past should not even be a consideration in this present year.

Another thing the child should have an advantage in is the fact that the teachers manning the schools at the present day are more and more becoming qualified to teach the facts of disease prevention to all the pupils. The teachers themselves certainly should possess more information along these lines than ever before. We allow ourselves to hope that such is the case anyhow.

In conclusion, let us hope that there will be a larger percentage of children who will complete their grades this year than ever before, and a smaller number who will drop out or fall behind on account of subnormal health or the effects of communicable disease.

WAYNE COUNTY HEALTH DEPARTMENT REPORTS ON PRESCHOOL EXAMINATIONS

We are indebted to Dr. L. W. Corbett, Wayne county health officer, for some excellent photographs illustrating methods of preschool examination carried through by his department with the assistance of several of the physicians and dentists of Wayne county in the preschool examination of children who are prospective students of Wayne county in the first grades of Wayne county schools this fall. The photographs, which are printed elsewhere in this issue, illustrate several steps in the examination and the thoroughness with which such examinations should be conducted, to be worth very much to the prospective pupils.

The Goldsboro health officer and his associates together with the assistance rendered by the physicians and dentists of Goldsboro and other places in Wayne county enabled them to successfully examine the children of two of the large grade schools in Goldsboro and the children of about seventeen other places in Wayne county. They reported that a total of four hundred and forty-five children were examined in the city and county together. This represents a rather favorable response, considering the fact that these examinations have only been proposed during the last three or four years.

The work is sponsored everywhere by the Parent-Teacher Associations working in cooperation with the health departments of the different cities and counties of this State in particular. The idea, as has been explained in this Bulletin before, is to have the children examined in May or June preceding their entrance into the schools for the first time the following fall. The idea in selecting such a date is to utilize the organization of the schools in the late spring in order to get in touch with as many as possible of the prospective pupils for entrance for the first time in the fall. In addition, an examination three months before the date set for the opening of the schools in the fall enables the parents of such children as are found to be in need of treatment for the removal of any serious physical defect, to have ample time to have such attended to during
the summer months and before the schools open in the fall.

It is interesting to record that of the two city schools in Goldsboro in which the examinations were conducted one hundred and forty-three prospective pupils were brought to the round-up by their mothers and received the careful examination afforded by the health department. The results of the examination in the two Goldsboro schools may be briefly set forth as follows:

143—Examined.
27—7% underweight
24—10% underweight
2—10% overweight.
91—had diseased tonsils.
50—decayed teeth.
5—had nasal trouble.
8—had defective vision.
8—needed circumcision.
11—had already had their teeth corrected.
18—had already had their tonsils removed.

A big item: All were vaccinated against smallpox.

Of the three hundred and two children representing schools outside of Goldsboro, which were examined, one hundred and seventy-six were vaccinated against smallpox. This represents good work, and, as many of the children expressed a preference for the vaccinating to be done by their family physician, it is assumed that before schools open in September that all of the remaining children will have received successful vaccination against smallpox.

Smallpox is being gradually eliminated from the schools of many sections through the careful attention to the vaccination of children on entrance for the first time. When such a rule is voluntarily enforced, within a few years smallpox will have ceased to be a consideration in any school in North Carolina, and as most of the population at this time, when children, spend some time in school, it is easy to see that within a few years the State will have a population of vaccinated people, and smallpox will disappear from within the State.

We are glad to publish these photographs and reports from the Wayne county work at this time, because it will graphically call attention to the necessity for this work about over the State, and we hope cause it to be assigned careful consideration before the close of the present scholastic year. The examination with subsequent treatment of any child found to be in need of treatment before they enter school is naturally another step toward the more practical operation of the principles of genuine prevention.

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This fine six year old Edgecombe boy was recently examined in order to make sure of a happy and successful entrance in school this fall. The examining physician gave him a perfect health score; and stated he was up to requirements in every respect, including perfect teeth.
GASTONIA HIGH SCHOOL BOY WINS PRIZE FOR ARTICLE ON HEALTH

We are publishing elsewhere in this issue the prize winning essay by a Gastonia high school boy on the subject of “What Gastonia Is Doing to Improve My Health.” We are glad to publish this article, because, in the first place, it is a very creditable effort for an eighth grade school boy. It also is an illustration of what may be done in any high school in the State of North Carolina having a teacher interested sufficiently in such subjects to direct the activities of the boys and girls under such lines. Finally, we take peculiar pleasure in publishing this paper and describing the motives that brought about the contest, because it indicates that not all of Gastonia has been engaged in disputes of capital and labor during the past year.

Briefly speaking, along about the beginning of the spring term of school last February Miss Pearl Jones, the teacher of general science in the Gastonia high school, decided to have her pupils write on a health subject as a project in her course. Miss Jones asked Mr. Joe S. Wray, the executive secretary of the Gastonia Chamber of Commerce, to help her outline the particular subjects which should be stressed in such an effort. Mr. Wray is a former school official himself and was immediately impressed with the idea, and, being gifted with enthusiasm and enterprise in anything he undertakes, he readily assented to help her formulate the program. Mr. Wray induced Miss Jones to offer a first, second, and third prize for the three best papers submitted on the subjects, the prizes to be offered by the Merchants’ Division of the Gastonia Chamber of Commerce.

Mr. Wray and Miss Jones worked out a general outline, writing to the State Board of Health for some copies of the compilation of public health laws applying alike to the State and to the counties, and for other literature that might be used as collateral reading by the essayists. They also provided the contestants with a copy of the city ordinances of Gastonia, and the pupils entering the contest were advised to consult freely with the Chamber of Commerce and the City Health Department in securing any additional necessary information.

Mr. Wray, in writing about the result of the enterprise, states that the plan could be easily used in any school by simply making the subject to read: “What My City” or “What My Town” or “What My Community,” in case of a country district, “Is Doing to Improve or Promote the Health of Its Citizens.” This idea we hope will be adopted by many other communities in the schools this winter.

It would be interesting and helpful to others who desire to enter upon such a program to set forth briefly something of the outlined work by Mr. Wray. The first item was to single out the agencies in the city helping to make it a more healthful place in which to live. They divided the general program then into two broad questions under the head of, first, “Indirect Agencies” and, second, “Direct Agencies.” Under the “Indirect Agencies” contributing to the safety of the public health in Gastonia were enumerated waterworks and all that that implies, from protecting the watersheds to the regular State laboratory test of the water when finally drawn from the spigot by the consumer. Street cleaning, sewage disposal, and garbage disposal were some of the items listed. Under the heading of “Direct Health Work” was, of course, the organized city health department under a whole time city health officer heading this division, that including, of course, such items as school nurses,
of food and sanitary inspectors, and so on. Then came the health laws and regulations, with the important statement to begin with that the first duty of the health department is enforcing all State and county laws, as well as city ordinances relating to all public health matters and the prevention of disease. All of these items were worked out in detail, so that the students in studying and writing on the subject would have an intelligent comprehension of the whole enterprise.

The winner of the first prize was William O. Smith, a high school boy in the eighth grade. He is fourteen years of age, was born in Mt. Holly near Gastonia, and is in the first year of high school. His father's occupation is a mill overseer and farmer. We would suggest that all high school students in the State read Bill's article and see how well he presents the subject from the standpoint of a high school boy.

WHAT GASTONIA IS DOING TO IMPROVE MY HEALTH

By BILL SMITH
Student of Gastonia High School

In addition to state and county agencies the city of Gastonia has other ways to improve and maintain the health of its citizens. Gastonia has many direct and indirect agencies, which contribute in teaching how to get good health and the necessity of it for the city's prosperity, besides enforcing the laws and regulations.

The health department is at the head, and it is under the direction of the city manager and city council. The work may be classed as direct and indirect agencies. Under the direct agencies come: the health department, including city physician and nurses and the school nurse, also the meat and milk inspector and the sanitary officer, health laws and regulations, and special city laws.

The indirect agencies include water works, street cleaning, sewerage disposal, and garbage disposal.

Each of these topics will be discussed, the indirect ones being taken up first.

The water system of the city is good, being well protected and the water being well purified. The water shed is inspected regularly and heavy fines are imposed on persons putting

This is Bill Smith, of Gastonia, winner of first prize offered by Merchant's Division of the Gastonia Chamber of Commerce in a health essay writing contest. Bill is 14 years old, and was in first year of high school. His paper is published elsewhere in this issue of the Bulletin.
dead animals or any other undesirable rubbish on the water shed as this is the source of a good and pure water supply. To her system of settling basins Gastonia is adding a larger and better one, where all suspended matter settles, chemicals being used when necessary. This aids in having clear, sparkling water. From the settling basin the water is pumped to the filtering plant in the city. In order to be absolutely assured of pure water the department practices the use of both sand beds and chemicals in the filter. The use of sand is at least two fold. Besides catching the sediment, which aids in getting clear water, the sand catches the bacteria. Then to be sure to get all the germs that the sand beds do not catch chemicals are used. From the filtering plant the water is pumped throughout the city. The pipes are laid in such a way so as not to cross the sewerage mains. Every day at the plant the water is tested two or three times and every week a sample is sent in for a state laboratory test at Raleigh.

The streets in certain districts of the city are cleaned every twenty-four hours. They are usually sprinkled in advance of sweeping. Every week these streets are washed. The sweeping, sprinkling and washing of the streets also help in health conditions in the city, as they keep down dust and help get the filth up off the street and also gives a cooling effect on hot summer days. All of this work is done by the most modern machinery. The newest machines are kind of huge vacuum cleaners and are very efficient. After the sweeping the sweepings are taken out of the city. As a whole the sweeping of streets contributes much to sanitary conditions.

Gastonia also has a good sewerage disposal system. It is operated much in the same way as the water system, except the main line runs out of the city to the city farm. The lines run in the same manner, however. At the city farm the solid matter is taken out and used for fertilizer on the farm. The liquid matter is then purified with chemicals and discharged in a stream.

The garbage disposal is run on a good system. The collections are regular and frequent. The garbage is collected and taken to the city incinerator where it is burned. This is an effective and quick way to get rid of these materials.

Another very effective way for teaching children the vital facts of health is teaching health and domestic science in the public schools. We hardly look at this as a very important thing in the health of our city but it is very important. In the grammar grades the pupils are required to take health as one of their regular subjects. The girls in the upper grammar grades and high school take domestic science. This subject teaches cleanliness, best foods for the body, etc.

Now we are ready for the direct ways that the city is engaged in to better the health of its citizens. First is the health department under which all the city's health agencies are classified. The office of this department is in the east basement of the City Hall. The chief officer of this department is the City Physician who is elected by the city manager and city council. He in turn appoints two nurses as his helpers. The city doctor at this time is Dr. Mc. G. Anders and the assistant nurses are Misses Mahel Potts and Elizabeth Norfleet. There is also a city school nurse whose position is now held by Miss Lula Whitesides. This department also employs a milk and meat inspector, who at this time is Dr. R. H. Parker and a sanitary officer who is O. O. Craig. Each of these officers and his or her respective duty will now be talked about.

The first and most important duty of the health department is enforcing all state and county laws.

The city physician as head of the department has a first duty of enforce-
ing the laws and regulations. Other duties are: physical examination of school buildings once a month; look after children suspected of having a contagious disease; may fumigate school buildings if necessary; gives vaccination free of charge; makes regular inspections of sanitary conditions in the city; receives a report once a month from sanitary policemen; gives a monthly report to city council telling the sanitary conditions and the health conditions of its citizens; sees that all laws are enforced; has charge of quarantine; management of all contagious diseases; keeps record of all dangerous diseases; has charge of burial permits and health certificates; looks after the prisoners; and investigates all causes of death when a physician was not present.

The nurse helpers of the city doctor have the duty of helping the physician take care of sick people without funds and many other duties with helping the poor, etc.

The school nurse also has many duties. Her most important duty is looking after the health of the city school children. Every year the pupils are weighed, measured and their teeth and eyes examined and a report sent to their parents. This is very helpful as the parents can learn the health conditions of their children and can have it attended to.

The meat and milk inspector contributes much to the city's health. All milk sold and meat slaughtered for sale within the city limits is inspected. At least once a week an inspection of a sample of milk is made. The milk must contain at least one and one-half percent butter fat and must not exceed a limited number of bacteria a cubic centimeter and if it contains more the dairy's permit for selling milk in the city is taken away. All fresh meat offered for sale in the city must be inspected by him and cannot be sold unless it bears his stamp. Meat that is not fit to eat is then taken up by the inspector and kerosene oil is poured over it so there will be no danger of it being sold again somewhere else.

The sanitay officer, O. O. Craig, makes a regular round of bakeries, cafes, ice cream places, etc., to see if the sanitary laws of city are kept.

As has already been mentioned, the first duty of the health department is enforcing all the state, county, and city health ordinances relating to contagious diseases, sewerage disposal, handling foods, compulsory vaccination, dental clinic, instruction in tuberculosis, medical examination, and various other ordinances passed by the city.

When a contagious disease is in the city the health department has charge. They can quarantine, and give instructions regarding it. After the disease is over no milk bottles, containers, or anything in the house can be taken out of it until it has been fumigated or sterilized.

The State has control of the sewerage disposal of cities and the towns within it. No city or town can discharge their unpurified sewerage into any stream in the state if there is a point below using water from the same stream.

The handling of foods is another important factor in the city of Gastonia's health. Before laws were passed against it foods were left unprotected from dust, flies, and peoples hands. Constant fingering and being
exposed to flies and dust of the street naturally led to the foods being covered with bacteria by the time it reached the consumer. Now all foods are either wrapped, put up in packages, or kept under screens or glass to be well protected. All bread has to be wrapped and there are sanitary policemen inspecting such places as bakeries, cafes, etc., to see if the proprietors meet the requirements of the law.

Vaccination for smallpox has become compulsory for school children, teachers, policemen, etc. This vaccine is administered without charge by the city physician or his helpers. There are also free vaccinations for typhoid fever, diphtheria, and whooping cough.

As often as once in three years a state dentist conducts a clinic examining the teeth of all school children under twelve years of age. Minor defects are corrected by this dentist. This especially benefits the poor children. Serious defects and all children over twelve years old are referred to the parents with recommendation that they consult their family dentist.

Now we are ready to take up some of the different laws and ordinances of the city. There must be a medical examination of all employees in public eating places, cafe, hotels, meat markets, soda fountains, bakeries, and such places. These people are examined by a good physician or the city doctor and are given health certificates by him. If they have tuberculosis or any other disease that would endanger the people with whom they come in contact the certificate is denied. These certificates must be taken out every year and no person can hold such a position without he has one.

Another requirement of the city health department is that all barbers must sterilize their instruments after each customer and also use individual towels for each one. This is required mostly for the prevention of various skin diseases as well as the others.

There is a law against spitting on streets, in public carriers, in all public buildings. Anti-spitting placards can be obtained upon request from the state health department.

Hog pens and stables are also regulated by the city. No hog or pig pen can be located within one hundred and fifty feet of a residence or street and then they have to be cleaned out once a week, and the pigs must have an open space of sixteen square feet. Stables are regularly inspected by the sanitary officer.

Laws and regulations have also been made keeping down mosquitoes and flies, as these are very dangerous to the health of the citizens. All manure piles, rubbish, etc., is taken up as these places are the homes of flies and mosquitoes. No standing water is allowed and all barrels, etc., must be either screened or covered with oil. All garbage pails must be covered so as not to let out any undesirable odor as well as keeping out flies and mosquitoes.

As a whole the health in the city of Gastonia is good, but we still have a lot of room for improvement. What we need is not more laws and enforcement, but we need to show the need of good health in the prosperity of the city's inhabitants.

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Read Miss Hobbs' story about the "pigeon who went to school." This is a picture of some of the children in the grade which the pigeon attends.
"OLD AND NEW VERSIONS OF CHILD TRAINING"

The National Mental Hygiene Bulletin published in its June issue an article on "Old and New Versions of Child Training" which is so interesting and instructive that we are republishing it in this issue of the Health Bulletin.

The article was prepared jointly by the Division of Mental Hygiene of the Connecticut Department of Health and the National Committee for Mental Hygiene. The National Committee for Mental Hygiene will later issue this article in a special popular leaflet. The article follows:

"OLD AND NEW VERSIONS OF CHILD TRAINING"

PEOPLE USED TO THINK

1. That adults understood children because they had been children themselves.

2. That good physical care in a comfortable home was all a child needed.

3. That the child inherited traits and dispositions which no training would change.

4. That the child's education began the day he entered school.

5. That the child was not affected by the emotional states of others.

6. That children in the same family should be treated alike.

7. That respect for parents should be instilled through fear.

NOW PEOPLE ARE BEGINNING TO REALIZE

1. That the mind of the child is complex and no adult can hope to comprehend it by virtue of his own past childhood. Only by deliberate effort can grown-ups appreciate the child's point of view.

2. That good physical care is only one requisite, and does not itself insure the mental security which every child needs. Wholesome growth demands an atmosphere of understanding and affection.

3. That the child is a product of environment as well as heredity. Many of his traits and dispositions are due to imitation of his elders or result from training which he has received at their hands.

4. That the child's education is well advanced before he enters school. The preschool years are the most impressionable years of his life and the period of greatest and most rapid learning.

5. That even the very young child is sensitive to the moods of those about him and may be profoundly influenced by them.

6. That the ethics involved in training children alike should not hinder parents from seeing each child as a separate person with separate needs. Differences in make-up call for individual guidance and special opportunities.

7. That fear, although useful as a means of preserving life in the face of danger, should not be invoked in child training, because its effect on the child is too far-reaching and may cripple him for life. Respect is more successfully founded on love when inspired by parents who distinguish clearly between sympathetic understanding directed toward the child's best interests and indulgence or exacting devotion which hamper the child's development.
8. That naughtiness was intentional.

9. That "don'ts" were enough to keep a child good.

10. That the child should obey without question.

11. That "to spare the rod is to spoil the child."

12. That the child's will power must be cultivated.

13. That "children should be seen and not heard."

14. That the child's questions were meaningless and might be ignored.

15. That the child could not reason.

16. That the child should be kept in a state of innocence and know nothing of sex.

8. That what the adult calls "naughtiness" is apt to be the child's natural attempt at self-expression in conflict with the grown-up's ideas of propriety.

9. That mere "don'ts," when they represent unreasonable denials, may even provoke misbehavior if they stimulate the child to defy and deceive. The wise parent enlists the child's interest in some substitute activity which is wholesome and absorbing.

10. That implicit obedience should never be an end in itself. When it becomes so, the real reason for obedience is obscured and the child is deprived of opportunity to make choices and acquire self-reliance.

11. That corporal punishment is a negative measure at best and too often serves as an outlet for paternal anger. Punishment of a child should be undertaken calmly. The skillful parent can prevent misbehavior to a certain extent by anticipating its causes, as for example, fatigue and inferiority feelings. Discipline is a difficult matter and should be governed by the nature of the individual case.

12. That abstract "will power" is a doubtful virtue. The child should be taught to choose his goals wisely and attain them in spite of obstacles. He should learn also to restrain his impulses when they interfere with his own good or that of others.

13. That children should not be needlessly repressed. They are entitled to notice and for adults to disregard them is as damaging to their personalities as making them the center of attention.

14. That the child's questions usually indicate a need to know and deserve straightforward answers. Parents who evade or ignore them forfeit the child's confidence.

15. That the child does reason, even from limited knowledge. Parents should be tolerant of his efforts, and increase his understanding by means of explanations in keeping with his age.

16. That untroubled innocence is seldom preserved, and if parents would protect the child from false and secretly given information about sex, they must answer his questions simply, truthfully and without embarrassment.
17. That child's play was relatively unimportant and might be interrupted at will.

18. That the “teens” were time enough to grant personal freedom.

19. That parents who waited on their children even after they were grown were self-sacrificing, and that the child should return their devotion by clinging indefinitely to the home.

20. That children outgrow their bad habits.

17. That play is the child's business—his natural medium of development. Adults should not interfere with it needlessly—for example by taking the child on fatiguing trips that do not interest him, or by calling him away to entertain visitors.

18. That habits of initiative and self-reliance should be encouraged from earliest childhood so that the child may gradually acquire his full independence. The “teens” should bring an assurance of mental and emotional maturity—the ability to think, feel and act as an adult.

19. That such parents are in reality self-seeking because they are prolonging the satisfaction that they derive from the dependency of the child, and tampering with his right to grow up. The ideal parent-child relationship contains loyalty and affection, but leaves both sides free to live independently and pursue separate interests.

20. That bad habits, especially in the shape of mental attitudes, persist, if neglected, long after the individual has learned to conform outwardly to the social pattern. Often they prove lifelong personality handicaps. Childhood is the time to eliminate them. “Childhood is the golden period for mental hygiene.”
HOW ANN CONQUERED HER INFERIORITY COMPLEX

By

Sudie E. Pyatt

"Hello Ann, day dreaming?" Rena Monterey called in her fresh young voice as Ann Dale looked up with a start from her sophomore college English book.

"No-o!" Ann answered in those uncertain tones that always sound guilty, for she had been day dreaming. She had seen herself in an evening dress of softest coral crepe, her straight black hair softly curling about her shapely head, moving gracefully over a ball-room floor, held lightly in the arms of a handsome young man. Just who the young gentleman was Ann was not sure, for he was a sort of magic Prince Charming, but his features were chiefly those of Rena’s brother, Leon. In her day dream Ann was realizing her desire to wear pretty clothes, dance and be popular at parties.

"Quit your dreaming a minute and listen to me," Rena ordered playfully. "Leon’s coming home from the university today for the Easter holidays, bringing a bunch of his class fellows with him. Mother says we can have a dance out at the house tonight. I want you and Marilyn Newcom to come. If I don’t see Marilyn you tell her for me, will you. Good girl!"

And Rena skipped off just as Marilyn Newcom and Babs Turner came into the college library, their arms full of books. Rena spoke to the two girls and passed on. From the expression on their faces Ann knew Rena had not told Marilyn about the party and that Babs had not been invited. She presumed that Rena did not intend to invite Babs, and that she expected the message to Marilyn to be delivered by herself.

Rena Monterey was the daughter of one of the wealthiest men in the city in which Livingston college for young women was located. Rena at her own request went to Livingston college with the daughters of men far less wealthy and influential than her own father when she might have gone to an expensive girl’s finishing school and enjoyed the exclusive society of girls as wealthy or more so than she was.

Rena was a handsome, large blonde girl, who was a general favorite at Livingston college, as she had been in high school, not because of her father’s wealth, but for her own sake.

Ann Dale, motherless and fatherless, slender with straight blue black hair, dark dreamy eyes, and clear milk-like skin, was always among those in Rena’s inner circle. Twenty years before Rena’s and Ann’s father had started in business together. The early death of Ann’s father had cut short the partnership, but through all the years the Monterey’s had not forgotten little Ann Dale.

Just how the penniless Ann came to be such a good friend of Rena Monterey’s, and through Ann how Marilyn Newcom also enjoyed the popular, wealthy girl’s especial friendship Babs Turner could not quite understand.

Babs Turner’s father “made just scads of money in the plumbing business” Babs told all of the girls at Livingston. After giving this information Babs had attempted a friendship between herself and Rena as the two “really wealthy” Livingston girls. Rena had quietly, and courteously ignored Babs’ overtures, the consequences of which had been that Babs was always trying to make Rena appear at a disadvantage.

In the classroom, as well as elsewhere Babs affected a sophisticated
Spanish lady air that was as foreign to Babs Turner as Babs Turner was to a Spanish lady. Babs was small, dark and thin. At one time someone had asked her if she was not of Spanish origin. It was this slight physical similarity to the daughters of sunny Spain that made Babs attempt to claim kinship with them.

"I'll bet Rena Monterey gives a lot of dances during Easter," Ann heard Babs say to Marilyn. "She needn't be so snooty about her old dances. I'm going to have some Easter dances myself, and mine will be real dances, not stiff, proper affairs like hers."

Babs was jealous of Rena, Ann thought. She would not tell Marilyn about the dance tonight until Babs was gone. All of the time Babs pretended to be superior to Rena, Ann wondered if she really felt that way. It was probably an effort to hide what was a feeling of inferiority rather than superiority.

At the thought of inferiority Ann's placid brow wrinkled. If Babs did suffer from a feeling of inferiority she was sorry for her. Ann knew what those old inferiority complexes could do to one. Dr. Hackney said almost everyone at some time or other suffered from some sort of inferiority complex. It was not really a disease, but it was a thing that could make one very unhappy, and if carried to extremes it might become really dangerous to one's mental health. Ann hesitated at the thought of "mental health." Mental health? Why mental health was all right, not like "crazy." Mental health meant that your mind, your brain was healthy, just as stomach health would mean your stomach was all right.

At the very minute her inferiority complex was worrying Ann. There was the matter of dancing and playing Bridge. Ann had never learned to do either, and at Rena's parties one always had to dance or play Bridge. Doing neither Rena's dances always meant long hours filled with the most embarrassing situation for Ann. Hours in which she watched Leon, and other young men dance with lovely graceful girl after girl. When anyone approached her for a dance she had always to shake her head and say, "No."

Ann always came away from one of Rena's parties feeling very small and insignificant, as if there were so many people in the world with accomplishments so far superior to hers that it was impossible for her to ever do or be anything but plain, straight-haired Ann Dale. For Ann's beautiful, straight black hair was one of her complexes. It had never been bobbed, because Ann thought it would be uglier short than long—and it would have been. But Ann was wrong about her hair. She had lovely unusual hair that well cared for, and dressed was her greatest claim to beauty. Because nearly all of the other girls had curly, or wavy hair Ann felt that she had not been treated just right in the matter of hair. Using a curling iron on it always made it hideous. If she could have one of those wonderfully natural looking permanent waves she would be all right. But Ann sighed, Uncle Amos had said last night that with chain stores making grocers everywhere call for the lowest possible prices on goods, the wholesale grocery business was not a money making proposition any more.

Uncle Amos and Aunt Hester Dale,
with whom Ann made her home, were the two reasons why Ann did not dance. Ann's grandfather Dale had been a Methodist minister, and Aunt Hester and Uncle Amos had never gone away from the teachings of the church. It did not seem just right to them that the granddaughter of a Methodist bishop should dance and play cards, and she did not.

Outside her natural sweetness and youthful beauty Ann's one real social accomplishment was her music. She played the piano wonderfully well for a girl so young with no more musical training than she had been given.

But if Ann was at all inclined to look upon her music as an accomplishment that might offset her failure to dance and play cards she always under-rated it, though for its own sake she dearly loved her music. There were so many phonographs and radios these days no one cared for piano music in the home or at dances any more.

Marilyn left Babs looking up some references and came across the library to Ann:

"Is it true that Rena is giving a party tonight?" she asked.

"Yes, you're invited," Ann answered.

"She didn't say anything about Babs."

"No."

"Babs doesn't like it," Marilyn frowned as she spoke. "Looks like claiming to be as democratic as she does she might invite Babs and Dane to one of her old dances."

"You mean," Ann stated, "that Babs isn't going to like it because she and Dane aren't invited, and you are not going to like it because you like Dane."

Marilyn colored. "Dane Turner certainly means more to me than Rena Monterey does, and I'll just tell her so if she bothers with me. She thinks she has every girl at Livingston eating out of her hand, but I'll tell you I'm not. I'm as good as she is."

More trying to make a feeling of inferiority into one of superiority Ann thought. That was not the right way to do it, angrily stating that you were the equal, or superior of anyone did not make you so. It only had a tendency to make you feel more inferior if anything. That was the wrong way to treat your mind to keep it healthy. Ann's agile young brain went searching for what would be the proper treatment. Find something to do or say that would give you a feeling of superiority to the person you felt inferior to might be a good idea. Before she had time for more thought Rena called her from the hallway.

"Come on, Ann girl, and lets go home."

On the way from the college down Livingston avenue Ann and Rena passed Marilyn and Babs in Dane Turner's tan and brown car. Ann didn't like to see Marilyn with Dane, even if his sister was along. Dane had been going with Marilyn spasmodically for about six months. During the last month he had given Marilyn quite a rush. Such a rush that when Marilyn confided a few things to Ann, quiet, idealistic and romantic Ann had immediately become worried and asked Marilyn if she did not think she should tell her mother about the affair.

"Tell mother nothing," Marilyn had said, tossing her head. "She'd only seold me. I know more than mother knows about things."

Ann knew it was not true that Marilyn knew more about the things she mentioned than her mother did, but she saw it was useless to expect any checking of Marilyn's and Dane's romance from Marilyn's mother. Aunt Hester, who had never married, Ann felt almost sure would not understand, so Ann had resolved to watch Marilyn and Dane, and if possible to prevent any action on the part of both of them that might lead to serious trouble. Part of her plan was to see that Marilyn was with Dane as little as possible.
“Did you ask Marilyn to my party tonight?” Rena asked as they passed the other car.

“Yes, and Marilyn did not like it because you didn’t invite Babs and Dane.”

Rena frowned. “You know I had them at a dance, and Dane took a hip flask and got so drunk he could hardly stand up. After that Mother and I both turned thumbs down on the Turners.”

Ann said no more about the Turners. There did not seem to be anything more to say.

“You’ll be sure to be at my house tonight,” Rena insisted again as Ann got out of her car.

Ann stopped to pick up her books. “I—I don’t know.”

“No don’t know about it. You’re to be there,” Rena said in her brisk way.

“But, Rena, I don’t dance, or play Bridge and I really haven’t an evening dress to wear,” Ann said slowly, as she tucked the books under her arm.

Rena leaned over from the steering wheel and placed her firm hand under Ann’s little pointed chin. “Angel child, you’re beautiful enough without dancing, playing Bridge, or an evening gown.”

“O, no, you’re wrong! I’m not pretty and gifted at all, as you are Rena,” Ann cried.

“Pretty and gifted as I am?” Rena scoffed. “You don’t realize your own worth, Ann Dale. You’re suffering from one of those things—maybe two or three of them—what do you call them? Inferiority complexes! You just forget everything except your sweet self and come on to my party.”

Ann dashed a great shower of tears.
from her eyes as she went down the walkway. Rena did not know what it meant to have a feeling of inferiority because you did not do things like other young people did, and couldn't have pretty new clothes to wear and do your hair in the newest styles.

As she put her books down on the living-room table Ann felt a dull headache. Headache! That gave her an idea. She would telephone Rena that she had a bad headache, and couldn't possibly come to the party. She started to the telephone, but stopped before she reached it. Wouldn't that be trying to escape from the reality of a thing by feigning illness. In telephoning Rena she had a headache she would be admitting that she was not big enough to adjust herself to the situation, but must use some sort of subterfuge and hide behind a headache. That wasn't a good thing to do, escape from an unpleasant situation by pretending you were sick. If one kept that up for any length of time one would very easily become a chronic invalid, always sick when anything came up one did not wish to do. That was one way people became mentally unhealthy.

She would not telephone Rena just yet. She would wait a bit. Perhaps the headache would get worse instead of better and she would have a real excuse. Anyway whether the headache got better or worse she had decided she would not go to Rena's party.

Ann had just finished the cold lunch left for her when Marilyn came in to the Dale's dining-room, her usually pale cheeks a bright pink.

"I came to tell you, Ann, I can't go to Rena's party tonight. She sent my invitation through you, so I suppose I can send regrets the same way."

"I'm not going either," Ann started to admit, then caught herself. As much as Marilyn loved a party she would certainly go if she did not have something else to do which she con-

sidered equally as or more exciting. Dane Turner? Surely it must be something connected with Dane. Ann realized it was a delicate situation. She must act quickly and handle the situation with tact.

"You aren't going because Babs and Dane weren't invited? If I'll secure an invitation for them will you go?"

Marilyn hesitated. "Babs, Dane and I are going to drive to Roderstown tonight."

"Drive to Roderstown? Why, Marilyn, you couldn't possibly get back before morning. You three young people out all night without a chaperone! Don't you know the whole town would talk more about Babs and Dane than it does now, and you'd never be the same girl again."

"I know," Marilyn tossed her head defiantly. "Rena Monterey, you and a few others think she runs the young society crowd in this town. Babs, Dane and I and some others are tired of Queen Rena's rule. We're going to show her we can do a few things ourselves. When she hears we drove to Roderstown and back at night without a chaperone she'll have to admit we aren't so inferior after all. She'll know others in this town can do things as well as she can."

"Marilyn, that's not a nice thing to do," Ann said slowly. "You're trying to do a foolish thing, because you think in your own eyes and in the eyes of others it will prove you superior, or equal to Rena Monterey. That's no way of proving your superiority."

"Who said anything about proving superiority?" Marilyn flared. "You've been toadying to Rena so long she's given you an inferiority complex that's bigger than you are."

Ann bit her lip. There was no need to talk any more to Marilyn. She would appeal to Rena.

In answer to her carefully worded telephone request that Babs and Dane be invited to Rena's party that night,
Rena finally gave reluctant consent, when she understood that it was imperative that they be there.

"Oh yes, we'll be there," Marilyn assured Ann, brightly, after Ann had delivered the delayed invitation to her. Babs probably will not want to go, because she was not invited earlier, but Dane does anything I ask him to, and he makes Babs do what he wishes. I'll tell him I'd rather go to the party and he'll go."

Marilyn, Babs thought as the other girl left the house, must have been shaky about the Roderstown trip all of the time. She was glad of a chance to get out of going by having Babs and Dane invited to Rena's dance.

With Marilyn out of the house Ann felt an urgent need of someone who would understand to talk to about all of these queer cross currents and purposes in her own and her young friends' lives. She knew she must nerve herself for the ordeal of the dance tonight, and then there was what Uncle Amos had told her last night about giving up her plans for a musical career. Perhaps phonographs and radios were usurping the place of real musicians, but there would always have to be musicians to make original music even for phonographs and radios. Ann's ambition was to be one of these. Seated at a piano, her long, slim fingers flying over the keys inferiority complexes never worried Ann.

Aunt Hester agreed with Uncle Amos that the musical career must be given up. It would not do any good to talk to her. And if she mentioned such a thing as an inferiority complex to Aunt Hester she would say that was as the Lord intended. The Lord wanted people to be humble and obedient, not proud and sinful. The Lord was all right, Ann was sure. He had helped her out of lots of tight places when she had prayed to him, but Ann wanted someone to explain things more deeply to her than she felt Aunt Hester and her theology could.

Dr. Hackney! Sure, why hadn't she thought of him earlier?

The doctor was nearing sixty, a hale, hearty sixty that understood and sympathied with you. He was especially fond of Ann Dale.

"Dr. Hackney, I've got to go to a party tonight that I don't want to go to," Ann said, coming directly to the point, as soon as she was seated in the doctor's office.

"What, Ann, don't want to go to a party? Haven't I told you," the doctor pointed his finger sternly at her, "that you mustn't let your imagination trick you into thinking that you aren't just as good as anyone. You must never shirk going to a party or being out with other young people. Going to nice parties and having a good time in a decent way with other boys and girls is one of the best ways in the world of breaking yourself away from an inferiority complex."

"But, doctor, I don't dance or play Bridge, and I can't learn because I promised Aunt Hester and Uncle Amos I wouldn't," Ann remonstrated.

"Dance and play cards," the doctor snorted. "A girl as pretty as you are, who can play the piano as you do does not need to dance and play cards at a party."

Ann blushed prettily. "I—I haven't even an evening dress. My hair won't curl decently with a curling iron, and everyone had rather dance by radio or the phonograph than a piano."

Dr. Hackney slowly shook his head and reached for a prescription pad.

"Say, young lady, you're going to take this prescription, go to that party tonight and have the best time of your young life, or I'm going to tell your Aunt Hester to give you a good spanking as she did when you were much smaller than you are now."

"Oh-h!" Ann colored, and took the prescription the doctor had just written.
"Wear one simple pink organdy dress that you used to wear evenings last summer," she read slowly. "At the second dance at the Montereyes tonight let them start off with the phonograph, then have someone quietly stop it, while you begin playing the same selection on the piano. Be yourself—sweet, pretty Ann Dale."

"Doctor—" Ann looked up from the prescription.

"You know what I told you, Ann," the doctor refused to listen to any excuses. "You positively must take that prescription. There's a good mental law behind it, the discovery, and use by a person suffering from an inferiority complex, that though he or she can't excel in everything they can at least excel in one thing. In that pink organdy dress of yours there will not be a girl at Rena Monterey's party tonight prettier than you are. There isn't a girl in the city who can play the piano better than you do."

Ann arose to her feet, somewhat bewildered, clutching the prescription in her hand.

"Remember you take it, or Aunt Hester spanks," was the last thing Ann heard as Dr. Hackney closed his office door.

In her pink organdy frock Ann stood near the grand piano in the reception room of the Monterey home. Leon Monterey was hovering about the phonograph, pretending to be selecting and changing the dance numbers. In reality he was working with Ann in her effort to carry out Dr. Hackney's prescription and save herself from an unhappy evening, and her inferiority complex.

Ann tried to smile and be gay, but she was afraid her smile was an empty and artificial looking thing. She was so nervous, and her heart was beating so loudly she felt sure that the university senior who stood by her trying to convince her she could dance, must be able to hear it.

The phonograph began playing the waltz she and Leon had agreed upon. Ann started. Her throat felt dry and her hands were wet and clammy. She stood only a few feet from the piano but it seemed like miles to her dragging feet.

Sharply, without warning the phonograph stopped.

"What the—?"

Youths and maidens stopped in consternation on the dance floor.

Then from the other end of the room came the soft notes of the waltz played in perfect time on the piano.

"Gee, this is great! Real piano music to dance by," a youth said, as he and his partner stepped gracefully to the waltz time.

The waltz over there were clamors for more. Ann no longer nervous, or conscious of such things as inferiority complexes played selection after selection for the dancers. The piano was the center of an admiring group of youths and maidens, for girls as well as boys liked Ann.

Before half a dozen numbers had been played Ann was conscious that she was for the first time in her life really enjoying a party at Rena Monterey's. She smiled freely and easily at the boys and girls about her. She no longer felt inferior to them. None of the stubborn awkwardness and tongue-tiedness that were often her despair at Rena's parties harassed her. She understood in a flash what Dr. Hackney had meant by: Be yourself, sweet pretty Ann Dale." It meant to act just as freely and unconscious-
ly in the Monterey’s drawing-room as in her home with Uncle Amos and Aunt Hester, in Dr. Hackney’s office, or in her classrooms at Livingston. The key to the opening of this magic world, free from self-consciousness and a feeling of inferiority was the discovery, or the cultivating of some one thing you could do as well or better than other people did.

Ann began to wonder what a girl who did not have musical training could do. Why, she could learn to dance and play Bridge. If her parents or guardians objected to dancing and Bridge she could learn some simple parlor game, or puzzle. If she could not do anything else she could easily grow to be a good conversationalist, and what was harder and often more appreciated—to be a good listener. About clothes and hair, and those things, a girl—or boy—must learn that so long as clothes were of good material, modish of cut and color, and scrupulously neat and clean, clothes didn’t matter so much after all. It was the person in the clothes, and the way that person wore them more than it was the clothes that mattered. Young people mustn’t allow themselves to develop inferiority complexes because they felt their clothes weren’t just what they wished them to be.

Leon brought Ann some punch. She drank it, looking about the room, for Marilyn and Dane. Neither of them seemed to be in the room just then. Ann frowned. They were probably outside in Dane’s car. She did not like that.

“What’s the matter, Ann?” Leon asked, when he saw her frown.

“Marilyn and Dane,” she answered quickly. “I’m worried about them. Won’t you help me find them, Leon.”

“Dane Turner? Oh, yes, guess he’s up to some of his old tactics. You know we were in high school together. I’ll settle him, Ann. Father and mother want to see you. They are in the library. You leave Dane to me, and run on in to see them.”

“Your father and mother want to see me?” Ann looked puzzled.

“No, I’m not going to tell what they want,” Leon answered in response to her puzzled looks. “You go find out for yourself.”

It did not take Ann long to find out what Mr. and Mrs. Monterey wanted.

“We have always known you had musical talent,” Mrs. Monterey said, “but we did not realize until we heard you play that composition of your own tonight just how great it was. You know your father and Mr. Monterey started in business together twenty years ago. Your father’s untimely death severed the connection, but Mr. Monterey has always cherished a desire to do something really worthwhile for his old partner’s daughter. We want to offer you the advantages of the best musical training time, money and your own ability and diligent study will give you.”

Ann listened silently to Mrs. Monterey until she made the proposal for the musical training, then her heart leaped exultantly. O, good, old Dr. Hackney! Unwittingly his prescription, and her taking it had given her the first real opportunity of her life.

“I—I can’t thank you enough,” Ann breathed.

Then they all looked up quickly as the massive library doors opened. Leon and Marilyn on one side and Dane on the other came through the doors.

“Dad,” Leon called cheerily, “aren’t you some sort of a magistrate. This young couple were planning to elope and get married when I found them a few minutes ago. I told ’em to come in, and let you marry ’em.”

Mr. Monterey laughed pleasantly. “I haven’t married a couple in a long time, son.”

Then Mr. Monterey saw the determined glint in his son’s eyes. This, he realized was no joking matter. He turned seriously to Marilyn and Dane.
"I'll bet," he said slowly, "you two want to get married just to give yourselves some excitement and impress the other young folks with the fact that you're both rather unusual young people. No inferiority complexes, I believe they call them, about you two, eh?"

"Right, am I not?" Mr. Monterey asked, as neither Marilyn or Dane answered. "Don't you think you young people would show more superiority and self-control if you postponed your marriage until Marilyn has finished college, and you, Dane, are better established in your father's or some other business."

Dane fingered the fringe on his wool scarf. "Yes sir—Well, I guess we won't be married tonight, sir."

Nor were they. Two years later when Marilyn graduated from Livingston college and Dane was beginning to make a real success in business they were married.

"That night Old Man Monterey talked to me about what makes real superiority made me think all right and turn about face," Dane often said.

As for Ann, pretty, sweet, sensitive, musical Ann—she's studying in Paris now. She has grown to be quite an accomplished woman as well as a musician, but true to her promise to Uncle Amos and Aunt Hester she has never learned to dance or play Bridge. There are many things that she has learned about how to adjust herself to life's changing scenes, and to keep both her mind and her body healthy. In June Leon Monterey was in Paris. When he left Ann was wearing a beautiful clear cut diamond Leon purchased and gave her from his own earnings.

In the autumn she finishes her musical training in Paris. Then she returns to the United States, and she and Leon are going to see how well their love for each other and their former training will help them adjust themselves to the greatest change men and women make—marriage.

There will be no escape from reality, or shirking of the responsibilities of marriage on the part of either Leon or Ann. They day-dream over their coming marriage—perhaps a good bit. Where the other is concerned they have no inferiority complexes. They each think the other the most superior being God ever made, and wonder if they are fine enough for this great personage.

HEALTH IN RURAL SCHOOLS

We are publishing elsewhere in this issue of The Health Bulletin an article by Dr. James F. Rogers, Chief of the Division of Physical Education and School Hygiene of the National Bureau of Education at Washington. The article is entitled, "Ten Steps in the Promotion of Health in Rural Schools." It was first published in School Life, the official publication of the Bureau of Education, which is under the direction of the Department of the Interior. Teachers and health workers will find the article very interesting. Dr. Rogers writes well and we appreciate the courtesy of the Department in allowing us to republish his paper. Health officers will recognize the fact that we have in this State organized county health departments serving more than one-half the population of the State, which more or less effectively meets the school health requirements described in some of the paragraphs of Dr. Rogers' paper. There are too many references to Federal Bureau publications listed by number at a cost of 5 cents and 10 cents, and probably too little inclination to emphasize the work of other strictly health agencies, national and state and local. But these things need not confuse the reader. There is much good sound information in the article. Teachers will find it helpful because it is a carefully thought out plan covering a wide range of important school health subjects.
TEN STEPS IN THE PROMOTION OF HEALTH IN RURAL SCHOOLS

By JAMES FREDERICK ROGERS, M. D.

Chief, Division of Physical Education and School Hygiene

STEP ONE
Desire precedes attainment, and the first requisite for a successful program in health work is the wish to make health a real, as well as a theoretical, objective in education. Improvement in child health is doubly to be desired, since with it should go improvement in school progress.

School health work may be divided into:

(a) The arrangement of the general educational program as to length of school day, suitableness of subjects, variety of activities, observance of recess, teacher observation of any sympathy with the individual child, and the general pedagogic atmosphere.

(b) Conditions in the school plant affecting the health of the child.

(c) Efforts put forth to place the child in his best physical condition and to keep him so.

The items under (a) are under the direct control of the educational authorities and are presumably always looked after. They are not considered here.

STEP TWO
The stimulus and direction of health work should come from the county or district superintendent or supervisor, or, in a consolidated school, the principal may be the most suitable person to institute such work.

It goes without saying that the board of education should be made fully appreciative of what is attempted and that they should be made to understand that it is a matter of economy to place children in their best condition for doing school work.

Any improvements in the material outfit of the school will need the support of the community, while efforts intended to influence directly the hygiene of the child must be carried out chiefly in the home, so that close sympathy and understanding between the home and school becomes essential. Where there is not already a close understanding between the home and school, a parent-teacher association is a means of securing cooperation. Where such an association has been formed, a suitable committee will be of assistance in securing the promotion of health work, but the initiative and leadership should be assumed by the educator. The cooperation of local physicians or dentists can be secured by proper approach, and they may well be included in such a committee.

STEP THREE
Whether a school works alone or with the support of such an organization, the understanding of the parents as to what the school is driving at can be furthered by the distribution of such literature as that prepared by the United States Bureau of Education for this purpose in its booklet, Is Your Child Ready for School? which applies not only to the child at entrance, but throughout his school career. This publication may be

A pastoral scene in Franklin county.
had in quantity at such a price as to make its free distribution easily worth the cost in the results attained. (Single copy, 10 cents; additional copies, 4 cents each.)

STEP FOUR
Making the most of existing agencies—The official or committee organizing the school health activities should find out what assistance, if any, can be had from existing agencies. There is always (a) a State department of education; (b) a State department of health and, in some localities; (c) a county or district public health organization. There is no uniformity among the States in the assignment of the supervision of school health work to State education or health authorities, nor as to the powers or personnel for such work in either department. In some States little assistance can be had from one or the other. In the department of education of about 20 States there is a director of health and physical education, who can be called upon for assistance; and in most States the department of health can be expected to be helpful in determining certain essentials of sanitation, especially as to the safety of the water supply and the sewage disposal. A county health organization will no doubt be glad to conduct a sanitary investigation and may be able to offer the assistance of a nurse or a physician in connection with the physical examination of school children.

STEP FIVE
Having determined what help can be had from the sources mentioned, they should be called upon to suggest any needed changes in the school plant. Where no such assistance is available, the health committee or teachers can make their own survey of school needs and for this purpose appraisal forms for rural schools such as have been published by the Massachusetts Institute of Technology and by the Iowa State Department of Health are available. Among important conditions which call for investigation are: (1) Size and condition of playground, (2) safety of water supply, (3) safe delivery of water to pupils, (4) model toilets, (5) facilities for washing, (6) heating and ventilation, (7) lighting and shading, (8) condition of blackboards, (9) seats and seating, (10) time and methods of cleaning the school, (11) fire protection, and (12) facilities for preparing or serving the school lunch.

Unhealthful conditions found in the survey should be removed as early as possible. The school plant should be a model of sanitation for the students.

STEP SIX
Health examinations (medical and dental inspection).—If the home has been brought into full understanding of the health work of the school, the efforts at putting the child in his best condition to profit from his school work and to enjoy life should go smoothly.

(a) Communicable diseases (including skin diseases).—If the symptoms of communicable disease are not detected by the parent, and the child is not kept at home, the teacher becomes, of necessity, the examiner for these conditions. No nurse nor physician can take her place, for, when these are employed, they are rarely in daily attendance.

(b) Defects.—If there is a county health organization it may be possible to secure its help in making yearly examinations of pupils for physical defects, or the local physician may be employed to do this. (In rural New York they are paid from 50 cents to $1.50 per examination.) But, even if this assistance is to be had, the observations of the teacher are of the greatest value, for she is in the strategic position for knowing her pupils. In many schools she is the only examiner. Her proficiency as an examiner will, of course, depend on her preparation, but with the help of such
explanations as are given in a publication of the United States Bureau of Education, "What Every Teacher Should Know About the Physical Condition of Her Pupils," she can do very well without personal instruction. Her interest in the child should make her keen to see that any hampering defects of real consequence are reported tactfully to the parent. Like those of any other school examiner her findings are given only as opinions of what "seem" needed repairs or regulation of the bodily machine, for the physician consulted by the family is the source of final decision. Where parents can not afford such a final consultation the parent-teacher association becomes, again, a source of help.

(c) Dental defects.—Aside from aching teeth or infected gums (which need no skill for their finding, and should receive immediate attention), the examination for dental defects should best be made by a dentist, for we are especially concerned with the beginnings of decay in permanent teeth. It is still better to anticipate decay by finding and removing faults of development. (See "Better Teeth," Health Education Series No. 20, United States Bureau of Education.) However, if no dentist or dental hygienist is available, the teacher should look for beginning decay, especially in the permanent teeth, and she can find it as well as the average physician or nurse.

Whether examinations are made by teachers or by others, only such defects (aside from beginning dental decay) as seem to interfere with health or school progress should be reported to the parents. Every effort should be put forth to see that children found

This photograph affords a splendid example of the type of examination carried out by the health officer of Wayne County and his associates at Goldsboro, in their work last May for preschool children. As the photograph indicates, the examination was thorough in every detail.
defective are referred by parents to their physicians, since otherwise the finding of defects is a waste of time. If the parents have been properly informed, however, as to what the school is driving at in its health work, much effort will hardly be needed. Where parents are unable to secure treatment of their children, and this is not afforded by existing public means (such as traveling State clinics or near-by hospitals), the parent-teacher association should help to solve the problem.

**STEP SEVEN**

Health education.—The physical examination of the child becomes the objective beginning of his interest in his body and its working, and in the practice of habits conducive to health. Periodic weighing and measuring (at least once a term) should interest him in his growth and serve also as pegs on which to hang health lessons. Daily inspection for cleanliness and for signs of communicable disease help as reminders of the importance of health.

Health teaching in the lower grades consists chiefly in the effort to secure the habitual practice of a few things which are done by everyone who has attained his highest degree of health. They are as old as the hills, for in getting a child to go to bed at such an hour that he will arise refreshed and in time for an early breakfast, we are only insisting, in prosy modern parlance, on the carrying out of the ancient adage “early to bed and early to rise makes a man healthy and wealthy and wise.” Today, as of old, plenty of sleep and readiness for work at the appointed time are fundamental to attaining the chief ends of education—health, wisdom, and making a living. Through the explanation to older children of the reasons for practices affecting the health of self and of others (and particularly of the child before birth and in his first years) the foundations for better health can be laid for the generations to come.

Old adages may be preferable to some twentieth century rules for health practices in that they are not unduly specific. Children are not alike and can not be made so. No child can sleep a certain definite number of hours to order, nor is a specified number of glasses of water or glasses of milk (even if all glasses held the same amount) just right for every child under every condition. The teacher will need to exercise common sense in her health teaching and in her appraisal of the response of her pupils.

Helps for health teaching have been published in State courses of study and physical education syllabi, by the United States Bureau of Education, by the National Education Association, by the Tuberculosis Association, by the American Child Health Association, etc. A practical guide for interesting elementary children is Suggestions for a Program of Health Teaching in Elementary Schools, by J. Mace Andress and Mabel C. Bragg, Health Education Series No. 10, United States Bureau of Education, price 10 cents. Health Education in Rural Schools, by J. Mace Andress (Houghton, Mifflin Co., New York, N. Y.), is a more comprehensive book on the subject. There are many excellent textbooks on hygiene for use with children beyond the fourth grade.

Before beginning work along this line it will be well to find out, for later comparison of results, the present practice of health habits by the pupils and the information they possess. For the latter purpose the Gates Strange health knowledge test for each grade is perhaps the most satisfactory. This may be secured from the bureau of publication, Columbia University, New York, N. Y.

**STEP EIGHT**

The school lunch.—The nutrition of the child is of more importance than anything else, and while it depends on
other factors besides feeding, this is, of course, preeminent. It is, therefore, important that the school lunch, both in content and service, should be all that it can be and that it serve as an object lesson in hygiene and sanitation.

In consolidated schools the preparation of various foods with cafeteria service will often be essential; but in the small school, while it is well for the teacher to prepare one dish (as soup or cocoa) for all children, the remainder of the meal will be carried from home. The home must be brought into cooperation if the foods are the most desirable. Through the distribution of bulletins, such as The Lunch Hour at School, Health Education Series No. 7, United States Bureau of Education, the contents of the lunch box can be improved.

In cold weather warm food is desirable, and a simple plan for warming dishes brought from home, worked out by Jeannette E. Pugh, R. N., has been widely adopted.

The food to be warmed is brought in a wide-mouthed half-pint fruit jar. The apparatus for heating consists of a two-burner oil stove and a wash boiler with a home-made wire or tin rack for holding the cans and to keep them off the bottom of the boiler. (For a small school a one-burner stove and dish pan will serve the purpose.)

About 1 inch of water is needed in the boiler. Before school opens the pupils place their jars in the rack in the boiler. At about 11:30 o'clock the stove is set going and the food steamed for 30 minutes.

In preparation for lunch, the following outfit has been found adequate: (1) A 10-cent oil can containing liquid soap; (2) a faucet drinking fountain with drain pail (a faucet attached to the wash boiler will be better, or a pitcher will answer the purpose, and warm water from the wash boiler can be used); (3) paper towels or individual towels; (4) a box of toothpicks; (5) paper napkins.

At noon the pupils are lined up and as they pass, each receives from the teacher or one of the pupils sufficient soap in his palms which he rubs over his hands; he then washes under the faucet or with water from the pitcher manipulated by a pupil. He dries his hands with a paper towel, cleans his nails with a toothpick, throws the towel and pick in a waste basket, takes a paper napkin and his half-pint of warm food from the tray and returns to his seat. He then spreads the napkin on his desk and arranges on it the contents of his lunch box. Thirty-five pupils can carry out the procedure of preparation in seven minutes. The cost is slight and the object lesson in sanitary handling of food is most valuable.

In consolidated schools the sanitary arrangements need not be so simple, but they should be made use of as systematically.

**STEP NINE**

With physical education, we return to the starting point of health work; namely, to the playground, which was mentioned earlier as an essential feature of the school outfit. It should be ample in size (an acre for a 1-room school is not too large) and it should have such supervision by the teacher as will permit its free use by all pupils. If the children are among those unfortunates who do not know games appropriate to their ages, the teacher should either teach them herself or utilize other children for this purpose. Games and other activities are described in the physical education syllabi of many States or can be found in the bulletin of this bureau, Games and equipment for Small Rural Schools, Physical Education Series No. 8, price 5 cents. Another publication is Graded Games for Rural Schools, by A. R. Ross. (A. S. Barnes & Co., New York, N. Y.)
STEP TEN

Special workers.—All school health work goes best under expert supervision and, where possible, county or district supervision should be secured. A school health director can develop, county-wide, such a program as has been outlined. He or she will obtain available assistance from State or local authorities, interest parents, physicians, and dentists, and secure their cooperation; look after sanitary conditions; instruct and direct teachers in their work of discovering defects and diseases; help in securing the correction of defects (traveling dental and other clinics have been developed in some counties); and instruct teachers in methods of stimulating health habits and of imparting health information.

Such health directors (eight physicians, school nurses, physical educators, or "health directors" with especially broad training) are not yet easy to obtain, but they are employed in many counties. They are worth all they cost in placing health as the first objective of education.

Special classes.—The education of children seriously handicapped in limb, or with very defective vision, hearing, or speech can be specially arranged for in counties or other populous units. The proportion of such children varies greatly, but is, roughly, 1 to 500 of the general school enrollment for each of the defects named. As classes need to be small, a school population of 5,000 may find it desirable to combine in employing special teachers and establishing special classes with suitable transportation facilities. A sight-saving class has been formed for Ottawa County, Ohio, at Oak Harbor, and one for crippled children of Belmont County, Ohio, at Barnesville, and in Williamson County, Ill., at Marion, and doubtless there are other such schools in rural sections. Where nothing more is done for the child with serious visual defects he should, besides being adequately looked after by an oculist, be supplied with special large-print books and other sight-saving materials.

For the child handicapped by defective hearing or defective speech the establishment of regular classes is not essential, but such children may be helped by individual instruction according to their needs.

A recent publication of this bureau On The Hard-of-Hearing Child gives information in regard to the special handling of such children. The Society for the Prevention of Blindness, 370 Seventh Avenue, New York City, and the International Society for Crippled Children, Elyria, Ohio, are sources of information on their respective interests.

We fall far short of perfect results in the teaching of the three R's, and we need not therefore be discouraged if in our health work we do not attain all we hope for. As regards defects, in a city where highly organized work has been carried on by physicians and nurses for years, a recent annual report shows that not half of the visual defects found are corrected, that only one out of five children having defective nasal breathing is relieved, only one out of three with diseased ears is treated, and only one out of five with defective speech is helped. A sympathetic and tactful teacher in a rural school ought to accomplish more than this. If the physical handicaps of one child are lessened, or the sum of his energy for work and for the enjoyment of life is increased, it is worth while, even if the ninety and nine may not be apparently the better for our efforts. Besides, the effects of health work, like those of mental training, are not usually tangible or measurable; and the former, though not immediately apparent, may extend to future generations.—From School Life, Department of the Interior, Bureau of Education, Washington, D. C.
I am sure the young folks would like to hear a true story about a pigeon who went to school last winter. The Editor of the Bulletin says he is glad to publish the story together with a picture of the pigeon and the boy who owns it, and also a picture of the children in that particular school. So here is the story:

One day last winter where one of the school nurses was visiting a school in one of the counties of her district she actually saw a pigeon in the schoolroom. When the grade marches in, the pigeon sits on a window sill above. After the last child slips inside, the teacher comes to the door and says: "Birdie, Birdie," and the pigeon flies down and comes in.

It was Good Friday when the nurse visited this school and began in the first grade. Everything was decorated with Easter chickens and bunnies. When the nurse noticed the pigeon walking around she thought it was part of the Easter decorations, but it wasn't. The pigeon was coming to school and had been all winter. When the children sing, she flies up and down on their shoulders; sometimes on her owner's, sometimes on the other children. There was a small red bucket of shelled corn on the ledge under the blackboard, where she could help herself when she was hungry.

When the nurse was standing up by the eye test card pointing for the children, she felt something stick sharply in her ankle two or three times. She jumped and squealed a little. This made the children laugh. It was the pigeon pecking at her ankles. She does that when she wants something—the door or window opened. She does not come to school on Saturdays and Sundays. Other days she comes and gets on the outside of the window and the teacher opens it for her.

When the children went out for recess, the nurse stayed in to write up the notices to the parents. The pigeon came up and pecked her ankle again. She must have discovered it was not the teacher, and that the children had gone out and left her in there alone with a stranger. She quickly turned and hurried out, walking as fast as her little legs would carry her. The nurse imagined she was very indignant at being forgotten by the children. They were having an Easter egg hunt.

The nurse hopes that this true story of a pigeon who went to school will be printed in the Bulletin. She is sure the children who may see it will be interested in it. She told it the next day to a grade of little children while they were being weighed and measured. One tiny girl who was afraid at first forgot all about being afraid and marched on up with the others, so interested she was to hear about the pigeon who went to school.

HOW ABOUT THIS?

The Reidsville Review says: "When a woman goes in to get a pair of shoes and tells the clerk she wants 'any size so long as they are comfortable' she is past the fifty-year mark."

And Dorothy Dix says that no woman is completely happy until she is past fifty years old and does not care who knows it.
WATCHERS

By

GRACE NOLL CROWELL

A morning in September comes
When mothers stand to see
Mere babies faring forth to meet
A world's complexity;
They loose small hands—they bid them go—
They watch them yearningly.

So brief—so swift—the years have been—
So dear—the constant care,
And now bereft—at open doors—
Stand mothers—everywhere—
Within their eyes a wistful light,
Upon their lips—a prayer.

Dear God—compassionate to all—
I pray Thee keep apart
A space of warmth and tenderness
Within Thy sheltering heart,
For women watching through their tears
An eager child depart.

A mother's need is great this hour—
Oh, come to her today
And reassure her, God, and take
The anxious care away,
Then go with every child who goes,
And stay with them, I pray.

—Good Housekeeping Magazine.
OVERCOMING HANDICAPS

Children who are patients at the North Carolina Orthopaedic Hospital, School hours, showing the use of special desks for lame children in Elementary Grade.
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Cancer
Catarrh
Care of the Baby
Constipation
Colds
Clean-up Placards
Chickenpox
Diphtheria
Don't Spit Placards
Dyes
Flies
Fly Placards
German Measles
Hookworm Disease
Infectious Paralysis
Indigestion
Influenza
Malaria
Measles
Pellagra
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Typhoid Fever
Typhoid Placards
Venereal Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)
Infant Care (by Mrs. Max West)
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Save Your Baby
Hints to North Carolina Mothers Who Want Better Babies
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Several months ago we wrote Dr. O. L. Miller, chief surgeon of the North Carolina Orthopaedic Hospital at Gastonia, and asked him to submit an illustrated article describing something of the work done at that fine institution for the crippled children of the State. Dr. Miller kindly agreed to have written for us the kind of an article we so much desired. We are therefore pleased to publish in this issue the valuable contribution which embraces a great deal of interesting information about the institution.

A visit to the hospital and its one hundred and twenty-five children patients affords inspiration to everyone who may be fortunate enough to go there. No young physician should think of commencing the practice of medicine in North Carolina today until he has spent several days there. No matter what kind of specialty in medicine, if any, he expects to enter. We hope all our readers will pay especial attention to this article about the orthopaedic hospital.

Doctor James A. Tobey of New York, a well known authority on public health questions, is the author of a most interesting paper published under the title of "Milk on the Kitchen Shelf." Dr. Tobey wrote us a few weeks ago courteously calling our attention to the fact that in an editorial in the August issue we failed to specifically recommend evaporated milk as a substitute for questionable fresh milk for babies. We merely said "Powdered Milk." We immediately wrote to Dr. Tobey and asked him for an article setting forth in concise terms the available facts about dry, malted, evaporated and condensed milk. He graciously complied and his excellent article is the answer.

The State Cancer Control Committee has designated the second week in October as Cancer Week. We are therefore, in accordance with that designation, publishing some interesting items about cancer.

There are many other short editorial and quoted items which we hope our readers will find interesting.

Following our custom of several years the November issue will be devoted largely to a consideration of tuberculosis.
In the wave of interest in public welfare and social uplift which has traveled across the civilized world, particularly during the last quarter-century, no group of unfortunate has come in for more universal and constructive help than the cripples. From a time when the cripple of almost every kind was looked upon as hopeless, a permanent community liability and creature of abjection, we have passed into a period when, if a crippled child is not voluntarily offered for treatment by his parents, he is almost forcibly put under treatment by the will of the people; that is, every lame child should be given a chance to have his handicap corrected or improved as early in the growing period of life as possible.

This transition in the care of cripples is being contributed to by both professional and lay people. The task cannot be accomplished by one without the assistance of the other. Through the interest and generosity of the public, institutions for treatment of the lame and deformed are created and through the application of medical and surgical measures within these institutions, cure or improvement is accomplished. The time a child stays in this type of hospital is rather long, and his schooling and general training must not be neglected during this formative period; hence the necessity of carrying on the collateral things referred to in connection with the activities of orthopaedic hospitals and convalescent homes.

The coincidental interest of laymen and surgeons in the care of cripples during the present generation is contributing to an epochal period in the annals of the progress of medicine.
pital at Gastonia should not be undertaken without mention of its founder, Mr. Robert B. Babington, a native of Gaston County.

Mr. Babington, in a recent address before the annual convention of the 58th District Rotary relates the following experience: "One night in the month of March, 1909, I had a dream or vision of the deformed, crippled, orphan child. The dream was occasioned by my reading that evening of how a poor mother of a beautiful crippled little girl had applied to many orphanages for admission of her child, but at every place she was told they could not take a cripple. They had no surgeons, no hospital beds, no rolling chairs or anything for a crippled child. I dreamed all night about a big, fine hospital filled with crippled children, just thousands of them and all of them seemed happy and joyous. They were having a good time learning to walk."

"Since that night I have endeavored every day to establish in the minds of a humane public the necessity of such an institution. It has been an uphill business. Some friends said that it was needed but that it could not be done. Others said they would help all they could. After many years of hard but glorious work, we opened the doors of the North Carolina Orthopaedic Hospital to crippled children; the first State hospital of such a character in the South and one of a few of its kind in the United States.

"This great benefaction could never have been accomplished unless the cause had been sold to a God-loving and humane people. With this accomplished, our victory was won. We thank the people for what they did, the churches, the fraternal orders and the General Assembly of the State. The people of North Carolina made the institution possible—a haven for the rehabilitation of the neglected and deformed child."

Associated with Mr. Babington in the direction of the Orthopaedic Hospital is a group of trustees appointed by the Governor for terms of six years. Two new trustees, or two reappointments, are made every two years. The Board of Trustees meets semi-annually and the Executive Committee meets monthly, to deliberate on
the affairs of the hospital. The surgical, medical and nursing staffs are elected by the Executive Committee, subject to approval later by the entire Board.

As reported in the last biennial bulletin, the North Carolina Orthopaedic Hospital with 60-bed capacity was first opened for patients in July, 1921. Since that time 75 beds have been added, and the institution now has a capacity of 135 beds. The State provided 110 beds for white children and the late Mr. B. N. Duke gave money providing a ward of 25 beds for negro children. The plant, in acreage and buildings, is valued at approximately $400,000 and is located on New Hope road, two miles east of Gastonia.

CONCERNING ADMISSION.

The services of the hospital and clinics are free to indigent crippled children in this state under sixteen years of age. A child enters the hospital by making application for a bed. There is necessarily a waiting list for the available beds. Certain types of cases—tuberculous joints, osteomyelitis, etc.—are frequently admitted as emergency cases. Application blanks may be had on request from the hospital, from the office of any county health department, or from any superintendent of public welfare in the state. Under the present rules of the institution, any indigent crippled child is eligible, if, in the opinion of the hospital surgeons, he can be benefitted by treatment.

Up to this time, some 4,000 children have been treated in the hospital or examined and advised in the clinics. The question is sometimes raised as to the possible completion of the job of curing crippled children. This will never be. So far, the work has been in a great measure only educational,—as to the possibilities expected from this type of treatment, what forms of disease or deformity should be presented and at what period in the life of an individual or in the incidence of a disease should treatment be instituted. Many accidents and affections common to child life in our increasing population will make it essential to use all the orthopaedic beds now available, and many more as time goes by, if the work is thoroughly done.

Some of the more frequent diseases or deformities treated are—tuberculous joints, deformities from infantile paralysis, curvature of the spine, osteomyelitis, deformities from burns, deformities from fractures, birth injuries, deformities from rickets, miscellaneous joint affections, congenital club-foot, and other congenital affections. Most of these diseases or deformities must be under treatment for a long time if a satisfactory result is obtained. Careful clinical and x-ray records, including photographs, are kept of every patient. The average time a bed patient spends in the hospital is approximately three months and this explains the great necessity of state aid to such patients. Private hospitals costs for most families with children so afflicted would be prohibitive.

CONVALESCENT HOME.

So far, this State is not so fortunate as to have a convalescent home for crippled children. Such an institution would be a valuable adjunct to statewide orthopaedic work. Some diseases and deformities could then be treated for a shorter period in hospitals and
have their further convalescence managed in a well-supervised, specially equipped home. This would permit hospitals to take more waiting cases and also keep under safe, technical and economical supervision important cases transferred to a convalescent home. The follow-up care of cripples is important both from the standpoint of their physical state and their proper academic and vocational schooling.

HOSPITAL AND EXTENSION CLINICS

Out-patient clinics are held at the hospital on Tuesdays and Fridays at 2 P. M. At these clinics children who have been patients in the hospitals are observed as to their progress (and this is most important), new children are presented for examination, and many cases are treated altogether as out-patients.

On account of the importance of follow-up work in patients under orthopaedic treatment, and for the convenience of patients in the eastern part of the state, a regional clinic was opened at Goldsboro in 1928. This clinic is held the third Thursday in each month in a building at the corner of Herman St. and Highway No. 10.

Some of the staff of the Orthopaedic Hospital go down for each clinic and an experienced nurse doing follow-up work lives at Goldsboro. The patronage of the hospital and clinics is state-wide. Every county has been represented and the hospital is appreciative of assistance rendered by the various county health departments and superintendents of welfare in getting many children to and from the hospital and in locating delinquent and neglected cases.

HOSPITAL SCHOOL

School work was begun at the Orthopaedic Hospital very soon after its opening and is now carried on eleven months in the year.

The institution, from the first, has held a vision of the straight child as the whole child; has realized that the child in the Hospital for treatment and the correction of physical defects is a child who has the same need for mental training as the physically fit one in the home. He is “growing up.”

Animal trainers at the State Orthopaedic Hospital.
Ours is a part of the public school system of the State, a unit of the Gaston County Schools, employing two full-time teachers. Two very attractively appointed school-rooms were added in the building program completed last year. The primary department is bright with its little blue tables and chairs, piano and phonograph (gifts), books and blooming plants. The Elementary is equally so, with adjustable desks and other desirable features. However, these rooms are used for class-work only in inclement weather. Daily, from early Spring until late in the Autumn, the school moves, bag and baggage, to some favorite spot on the lawn, and is strictly an open air affair, in accordance with the health program of modern school life.

Afternoons are given over to bedside teaching in the wards. There, as in the morning work with groups, children assume the studies they recently left off in their schools at home. Often, necessarily, hospital treatment interrupts school attendance; usually this interruption is brief and the patient is soon back in school. Since individual instruction is such a large factor in the Hospital School, these gaps are bridged somehow, and teacher and pupil take "the cheery view," seeing the end gained rather than the difficulties.

Parents of a crippled child are often reluctant, even unwilling to take the child out of his home school where he is doing excellent work and send him to the hospital when his turn comes. They are sometimes inclined to feel that studies must not be interrupted, though the health and physical well-being of the child depend upon early treatment. It is the ambition of the Hospital to see that each patient, so far as he is able to do so, keeps abreast of his grade in his home school, and receives credit for it.

There is in the Hospital, at present, a fifteen-year-old boy, W—, who had formerly done excellent work in his school at home. Until recently, this boy had not studied any for more than two years, but after a few months intensive schooling at the hospital, he was able in May, to pass the County common school examination most creditably (average grade 97%).

Quite a few of the children receiving treatment have been so severely handicapped for years that they have had no educational advantages whatever. These children receive special attention. They struggle bravely with the mysteries of the Primer, and those are indeed great days when they are first able to read their letters from home and write their own replies.

R——, a girl of fourteen who has been a patient in the Hospital for almost three years, and in bed more than half of that time, is now doing third grade work, and is so happy in her newly-acquired "book-learning." Since her family is practically illiterate, and R—— unable to attend public schools, the advantage to her, and to the Community to which she will return, is apparent.

While one sees at once the economic advantages to the child, the Parent, and the State of "getting the child through the grades" and "preventing repeaters," the purpose of the school does not end there; its inestimable value is, after all, social. Some one has said, "Education is not a preparation for a life of some kind; it accompanies and interprets Life."

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A daily sunbath is possible most of the year in North Carolina.
OCCUPATIONAL THERAPY.

This Department in the Hospital tries to keep the children busy, for busy children are happy and happiness is essential to health. In the well-planned routine of a hospital there are hours during the day when there is nothing for many bed patients to do but lie still, and it is well known how difficult it is for a child to sit or lie still for any length of time and be contented. Unfortunately, many children cannot read, and consequently cannot entertain themselves in that way. Books are supplied for those who can enjoy them and all attend school or carry on their school work in the wards. If a child patient is not kept busy he may become homesick, discontented and restless, which could seriously interfere with his recovery, especially if he is supposed to remain in a certain fixed position as many orthopaedic cases must do.

During the World War, the Government considered occupational therapy so essential to the treatment of the wounded soldiers that special workers were provided to teach a variety of handicrafts to the men. Some soldier patients proved so efficient along certain vocational lines that they were able to specialize in some craft and go into successful business for themselves when discharged from the Army. Many wounded soldiers were not able to return to their original trade and some became independent through the vocation taught them in the army hospitals during their long period of treatment.

As occupational therapy helped the wounded soldiers, keeping them constructively busy and happy, so does it help children who stay long periods in such hospitals as this. Older children are given vocational instructions of various kinds. They are taught weaving, making of baskets, the making of toys and simple carpentry, and the making of braided and hooked rugs. A child's interest can be easily aroused and cultivated if he is given something to make for himself or to take home, and takes much pride in doing good work when a little praise or supervision is given him. A child is taught to make constructive use of many materials near at hand and to conserve many things that
otherwise might be wasted. This activity tends to cultivate taste, precision and economy.

The work in the wards is given and supervised during the morning hours, while the children who go to school in the morning go to the occupational therapy department in the afternoon. They do work in various crafts. If a child has a defective hand some work is given him to help develop that member. If he has a defective foot and leg, effort is made to have him operate a machine or something that will exercise the maimed leg, and this constitutes a real adjunct to the surgical treatment of many cases. When children under the care of the hospital reach sixteen years of age, they are referred to the State Department of Vocational Education, where they may be taught some vocation or trade in keeping with their permanent handicap.

RECREATION.

Recreational activities somewhat overlap the occupational therapy work. The children assist in preparing for all special entertainments and give surprise parties to the ward children unable to go to the school or work-rooms. One afternoon each week is reserved for ambulatory cases for a walk over the campus, and nature study. Another afternoon is devoted to dramatization of simple stories. Many crippled children learn to play together only after they reach the hospital, having been so much alone and away from other children at home.

There is a party on the last Thursday of each month when all the birthdays occurring during the current month are celebrated. Each child gets a cake with candles and some small favor. The cakes are furnished by a committee of Gastonia ladies and this same committee sends other ladies out to the hospital to tell stories in the wards one afternoon each week.

The children observe, in some simple manner, all special days in the year. There is an egg hunt for Easter, Flag Day exercises, 4th of July celebration, May Day party with May Pole exercises, parties for celebrating Valentine, Hallowe’en, Thanksgiving, and Christmas is an occasion beyond description. The hospital has a moving picture machine and screen which is a present from the Gastonia Kiwanis Club and a movie entertainment is given weekly. So a child’s life at the hospital is filled as full of things as he could wish.

EXPANSION AND DONATIONS.

The Orthopaedic Hospital anticipates further growth in its effort to efficiently serve its purpose. It is also hoped that the State may have its generosity supplemented by the material interest of some of its successful citizens, as has been the experience of such institutions in other parts of the country. It is the desire of the executives of this hospital that competent treatment be rendered its patients, and that every effort possible be made to contribute something useful to the art of orthopaedic surgery. The addition of an adult ward and a convalescent home would more thoroughly round out the institution.

The negro ward is a gift of the late Mr. B. N. Duke. The hospital will profit in the future through the philanthropy of Mr. E. D. Latta who left a substantial sum in his will to be spent for crippled children. Various shrine clubs, civic clubs, and individ-
What may be called kitchen-shelf milk is by no means a new and unique variety of that well known lacteal product which plays such an important part in human nutrition. Forms of milk that will keep unspoiled on any kitchen shelf for many weeks and months are now distributed extensively in this country and, as a matter of fact, they have been for many years. When such milk, requiring no ice to maintain it, is ready for use, it is generally just as fresh and clean as the best fluid milk.

The milks which may be thus stored in the kitchen or elsewhere for future use, and which may eventually be consumed with full confidence in their safety and nutritional quality, are made possible by modern scientific methods of canning. The kitchen-shelf milks are the canned milks, and it behooves every householder to know something about the characteristics, virtues and utility of these concentrated forms of the one ideal food, milk.

Unlike ordinary fluid milks, which are usually procured direct from the dairyman, the canned milks are obtained in the grocery store, and sometimes in the drug store where various aids to infant feeding may be purchased. These milks are, of course,
manufactured from pure cow's milk, and as a rule the only change in them is a removal of a portion of the water which comprises about 87 per cent of normal cow's milk. Water has its value in nutrition, but the 13 per cent of solids in milk are infinitely more significant as aliments, and these are maintained intact in the concentrated milks.

There are four important forms of canned milks. They are: evaporated milk; powdered or dried milk; malted milk; and condensed milk. Of these, evaporated milk is the most widely distributed. In 1928, for example, the people of America used as much evaporated milk as they did ice cream. They consumed almost as much of this form of milk as they did butter, and two and a half times as much of it as they did cheese. From these facts it will be readily seen that evaporated milk is a dairy product of some significance in the United States. In 1928, a billion and a half pounds of it were manufactured and sold.

**EVAPORATED MILK.**

Evaporated milk is whole milk from which about 60 per cent of the water has been removed by heating. This heating is carried out in a vacuum so as to prevent burning and coagulation of the milk and also to retain the nutritional properties, some of which would be destroyed by heating in the presence of air. After the water has been evaporated, the milk is homogenized, a process which breaks up the fat particles and causes them to remain evenly distributed throughout the milk. As a consequence, evaporated milk has no cream line, but it does contain all of the natural cream, which is much more easily digested in this homogenized form.

After evaporated milk is placed in cans, it is sterilized in these sealed containers for some 15 minutes at a temperature of about 240° F. Thus, evaporated milk contains no bacteria and, being sterile, is a thoroughly safe milk. The only ways it differs from fluid milk are in having less than half as much water, in its superior digestibility, its sterility, and in the loss of only one of the six vitamins which are found in milk. This particular vitamin, known as vitamin C or the antiscorbutic vitamin, is easily replaced in the diet by means of citrus fruits such as oranges and lemons, or by vegetables such as tomatoes, cabbage, and potatoes.

Evaporated milk is usually the most inexpensive form of milk on the market, for the average cost of a 16 ounce can of it is only about 11 cents. Since one of these cans contains the equivalent of a quart of fluid whole milk, the average cost of which is about 14 cents a quart, the saving is obvious. Evaporated milk is reliquified by adding to it an equal amount of pure water. It may then be used for any and all of the same purposes to which whole milk is put, be it for infant feeding, cooking, as a beverage, or for any other use. This milk may be regarded as a regular and not merely as a reserve supply.

**POWDERED MILK**

Powdered or dried milks differ from evaporated milk in that practically all of the water has been removed from them. They are likewise made in a somewhat different manner, two distinct processes being in vogue. The more popular of these is called the spray method, and in it, pre-condensed milk is sprayed through a fine nozzle.
into a heated steel chamber. The heat causes the water to be evaporated rapidly and the milk to fall to the bottom as a fine powder. It is immediately removed and placed in sterile tin cans.

The other process for drying milk is the roller method, in which pre-condensed milk is poured on heated steel drums which are revolving rapidly. The milk dries immediately and is removed as powder and canned. In both methods there is relatively little change in the nutritional qualities, though the antiscorbutic vitamin may be somewhat, though not entirely reduced. As in the case of evaporated milk, the powdered milks are more digestible than either raw or pasteurized whole milk.

Powdered milks are reliquefied by adding to them about eight parts of pure water. Thus, to 4½ ounces of whole milk powder should be added a quart of water, and the mixture vigorously stirred, preferably with a mechanical mixer. Another way is to use a packed level tablespoonful of milk powder to 2 ounces of water. The powdered milks may likewise be used in cooking without the addition of water. Besides powdered whole milks, partially or wholly skimmed milk powders are also on the market, as are special preparations such as powdered lactic acid and protein milks for infant feeding. These last should, of course, be used only under the directions of a physician, but powdered whole milk may be employed for all of the same purposes as fluid milk. It is, furthermore, used to advantage as it is a clean and safe form of milk, and takes up only one eighth as much space as does liquid milk.

MALTED MILK.

The malted milks, either plain or chocolate flavored, come in powdered form, but they contain other products besides milk. They are made from scientifically blended mixtures of whole milk, whole wheat, and barley flour, with a little added salt and sugar. They make bland, easily digested drinks, and when mixed with milk, add flavor and nourishment to it. The malted milks are often sold in glass packages as well as in tin containers.

Children of the North Carolina Orthopaedic Hospital off to the woods for an outing in the sunshine.
In certain cases they may be prescribed by physicians for infant feeding.

**Condensed Milk**

Condensed milk, or as sometimes called, sweetened condensed milk, is the original concentrated milk, for it was the first to be successfully manufactured. It is made in a manner somewhat similar to that employed for evaporated milk, but has sugar added to it.

By the process originated nearly three quarters of a century ago by Gail Borden, the inventor of the concentrated milks, pure whole milk is rapidly heated to a high temperature in order to destroy any bacteria which might be present. Cane sugar is then added in proper amounts and the mixture is condensed in a vacuum until two and a half parts of whole milk are reduced by the removal of water to one part of condensed milk. The product is then cooled and canned. One well known brand is distributed in glass jars.

Condensed milk is particularly useful in cooking where recipes call for both milk and sugar. Excellent recipe books for the use of all types of concentrated milks may, incidentally, be secured without charge from the manufacturers of these products. Condensed milk is the most digestible of any of the forms of concentrated milk, even exceeding evaporated milk in this respect. Since it is already modified with sugar, it may be used as prescribed by a physician for infant feeding merely by the addition of the proper amount of boiled and cooled water.

After the can has been opened, condensed milk is more easily kept than either evaporated or powdered, as the sugar tends to preserve it. There is thus practically no waste from this form of milk. In a recent article Dr. William A. Evans of *The Chicago Tribune* advises that “If the home does not afford a refrigerator, condensed milk is far safer than liquid milk, in the hot weather especially.”

**Advantages of the Canned Milks**

Dr. Frank E. Rice, former professor at North Carolina State College, and now secretary of the Evaporated Milk Association, has pointed out that the most economical method of taking the milk from the cow and putting it in the kitchen is by the concentrated milk route. He tells us that a recent survey in Pitt County, N. C., revealed that of 7,000 children, only 1,616 drank the milk that should have been a part of the daily diet of every one of these future citizens. Yet, even if fluid milk supplies are sparse near the homes of these children, the canned milks are easily obtainable.

The concentrated milks, whether powdered, evaporated, or condensed, not only have no disadvantages, but possess many distinct advantages. Besides being more digestible and of excellent nutritional value, they are safe and have never been the causes of outbreaks of disease, such as have been traced to contaminated whole milk supplies. They are convenient, inexpensive, and can be kept or stored for use when needed. They are uniform in composition and they offer excellent opportunities for securing the indispensable quart of milk which scientists assure us ought to be in the daily diet of every growing boy and girl.

Pure milk is the most nearly perfect

![Young artists at the State Orthopaedic Hospital.](image-url)
human food. It is the only single article which contains practically all of the elements needed to nourish the human system. One of the few reasons why milk is not a perfect food is its bulk and its tendency to spoil rather quickly. The canned milks have overcome these two difficulties and thus have aided in making generally available a food which is even more nearly perfect than when originally produced.

A PHYSICIAN MUST SEE A PATIENT TO MAKE A DIAGNOSIS

Every day in the year somebody writes this department, describing a few apparent symptoms, asking us to write and give them advice as to what is the matter, what treatment is necessary, and so on. We have to repeat so many times in so many letters our advice to see a physician and have an accurate examination made and then follow his competent advice that we sometimes fear people may think that we are running our department simply as an adjunct to the practice of medicine in North Carolina.

As a fine illustration of the point we are trying to make, we can do no better than to mention an occurrence which happened a few days ago. A friend of ours came to the office to see us, stating that she had a friend out of town who had a little child which was having night sweats: The parents of the child were unable to account for the sweats. They had tried little sporadic efforts at treatment, a physician had been consulted by proxy and persuaded to suggest some things that might be done, but no definite physical examination by a competent physician had been made.

The advice we immediately gave to our friend (and she was sensible enough to realize that we were giving her honest advice to the best interest of the child) was for her to advise the parents to take the child to a good, careful physician and have a thorough physical examination made in order to definitely ascertain the cause of

Crippled children in a May pole dance at the State Orthopaedic Hospital.
the night sweats, so that he might advise the proper course to pursue for the benefit of the child.

To make the story short, our suggestion was followed. The physician made a thorough examination, and at the conclusion of all his tests and so on he advanced the unqualified opinion that diseased tonsils was the cause of the child's having the night sweats.

Now suppose we had launched into the usual buncombe of advising a "tonic" sleeping in the open air, drinking more milk, better regulated diet, and, in case the parent had forgotten it, a little moderate exercise, and a trip to grandma's out in the country, the consequence would have been that the diseased tonsils would have been right there all the time, the child would have got no better, and we would have been in the class with the patent medicine faker who advertises his medicines for whatever ails the patient.

In this particular case the diseased tonsils, if permitted to remain, might be the means of genuine tuberculosis infection appearing later on. There are also many other complicating results which might follow diseased tonsils in a child, and in any event the child could not get any better until the focus of infection in the tonsils is removed in some way. About the only way that such infection, when thoroughly established, may be removed, satisfactorily is by a surgical operation, in which the tonsils are taken out of the throat. We shall think of this case for sometime now every time we answer a letter advising some anxious parent or friend to see a physician.

TULAREMIA OR RABBIT DISEASE IS REPORTED FOUND IN BIRDS

The United States Public Health Service has recently announced that they have received reports of cases of tularemnia from both North Carolina and Tennessee, in which it was thought that the origin of the disease was in birds. The question is not settled at present, but as there were several cases of tularemia or so-called rabbit disease reported from various sections of North Carolina last season, one doctor being very sick with this himself in eastern North Carolina, anything concerning the disease should be read with interest.

Rabbits are thought to be infected with the disease through the medium of an insect vector. Just how the birds contract the disease, if they do have it, is not yet known. The reports of the Public Health Service indicates that the infection was thought to be transmitted to humans through the handling and dressing of quail. The Editor of the Bulletin can discuss this phase of the disease with academic and professional interest strictly, so far as his personal welfare is concerned.

Not being a sportsman, having no gun or dog, and not caring anything for rabbit as a table delicacy, that lets us out. We have always been quite fond of quail, but since the law was passed several years ago forbidding the sale of quail anywhere in the State of North Carolina, and not being able to shoot and obtain our own, we have been forced to forego...
the pleasure of even an occasional mess of quail on our table. As the law is, only the sportsman, and his family and friends, who can go out and shoot this fine game bird are privileged to satisfy their taste for this game. The law may be a necessary one and may be a good one; we are not prepared to say. But it has certainly been an ironclad Volstead law for those of us who cannot and do not enjoy the sport of shooting quail.

Further reports and investigations may verify the Public Health Service suspicion, or they may prove that the suspicion is groundless. Until the question is settled, we would advise all citizens of the State who hunt and handle quail to exercise the same care in dressing for the table as they would in the case of rabbits. As is the case with rabbit, if the dressing is done with rubber gloves and otherwise care is exercised, and if the meat is thoroughly cooked before serving, there will not be any danger involved to those who handle or eat it.

SHAKING HANDS WITH DEATH

What follows in this article is the Editor of the Bulletin speaking in the first person singular. No doubt everyone that reads these lines has had a similar experience and can understand readily how we felt about it. We are telling this incident just like it happened to us, and we are telling it in the phrase beginning “yesterday afternoon.” It matters not what day nor what hour the reader may peruse these lines, “yesterday afternoon” will still be up to the minute, and just such occurrences are happening on every State road every day in the year and every hour in the day.

Yesterday afternoon I was coming into Raleigh after a trip of about one hundred and seventy-five miles. It was about six thirty in the afternoon, the sun was shining, and the place was about three miles south of Raleigh. The road was straight, or I would not have been here to tell this story now. I was riding along alone in the family chevvy and the speedometer was reading about thirty-five miles per hour. About every six miles all the way up from Fayetteville a large bull-necked fellow, wearing a cap and riding in a big, high-powered car with an Indiana license tag, had cut in in front of me and nearly raised my hair. He would occupy the middle or the left of the road as he sped on, each time menacing several cars which he was meeting and passing.

This particular chap had just passed me one more time, crowding me down, but not quite pushing me off...
the road, although pushing off the fellow that he was meeting. I was just getting over the nervousness and the temper inspired by the Indiana moron when I looked ahead up the road for about a half mile, as any good driver will be continually doing when making thirty-five miles per hour or more, and noted some three or four hundred yards ahead that somebody had parked a car meeting me, with the wheels about two or three feet over on the pavement. No one was in the car—a strict violation of the traffic laws, of course.

As I neared the parked car, a fellow driving a ramshackle old Ford approached at a terrific rate of speed right in the middle of the road. By that time I was practically opposite the car that was parked. The fellow in the approaching Ford simply took the middle of the road, heading straight into me, instead of slowing down, as the law requires, until the right of way, which I had, was clear. The first impulse I had in the split fraction of a second was to head into him and go on with him into Kingdom Come, thus ridding this section of one more menace to the welfare of the traveling public. Naturally in the next fraction of the second I knew that would not do. So I had to take the only alternative left, which was to leave the pavement and give him the road. It was a dangerous procedure, but, keeping my head and being too mad to get excited, I managed to pilot my car a sufficient distance without turning over, although the shoulder of the road was soft and numerous small washouts almost turned the car over a half dozen times. Fortunately it was a stretch of road that had been recently re-laid, leaving the telephone poles some yards away on the old location.

There is nothing new in this experience. It is happening every hour, as said in the beginning, somewhere in North Carolina and will continue to happen as long as such morons are allowed to continue their menace on the public highways. I have had similar experiences before, but nothing to approach the imminent danger of death which I had in this instance.

I am setting forth this story and using this space to accentuate the fact that our new road patrol have their work clearly cut out for them, and there is an abundance of it. One of the big portions of that work is to strictly enforce the parking or stopping law on the State highways and to arrest and prosecute to the fullest extent of the law the fool who persists in cutting in ahead, and which act undoubtedly is causing a large number of fatal accidents in this State.

ROCHESTER, MINNESOTA, A GREAT HOSPITAL CENTER GROWING FROM SMALL BEGINNINGS

On the sixteenth day of September, 1928, there occurred in Rochester, Minnesota, a notable ceremony of interest to sick people all over the world. On that day there was dedicated a new nineteen story clinic building in connection with the great Mayo Foundation at that place.

The history of the Mayo Hospital and their medical work at Rochester is one of the most fascinating stories of modern times. In 1863 the Federal Government sent Dr. William Worrell Mayo to that location as a provost marshal of the draft. At that time this section was an outpost and even troubled with nearby Indians. The village of Rochester was the center later of a large farming section on the fertile land of that section of Minnesota.

At the conclusion of the Civil War Dr. Mayo returned there for the practice of his profession. He was an active practitioner, representing one of the finest types of country physician
A crippled boy's "Tin Lizzie" at the State Orthopaedic Hospital.

of that period. He made long calls, he kept fine horses, and he did an extensive practice. His oldest son, Dr. William J. Mayo, finished his course in medicine and was a practitioner associated with his father, when in 1889 a disastrous tornado struck the village of Rochester, killing and injuring a number of people. The elder Dr. Mayo and his son were put in charge by the town council of an improvised hospital for the treatment of the wounded.

After all emergency measures following the storm had been met, Dr. Mayo realized anew the necessity for a hospital for the treatment of the agricultural population at Rochester and in the surrounding territory. Within a few years he was able to realize his ambition. In the meantime his second son, Dr. Charles H. Mayo, a few years younger than William J. Mayo, completed his medical course, and the two younger men together with their father assumed charge of the hospital which had been built.

The work has been successful from the very beginning. In the course of time Dr. William Worrell Mayo died and his two sons have carried on and enlarged the activities of the hospital work and clinic work under the world-wide name of "The Mayo Brothers." The facilities have constantly grown and expanded until today, less than forty years from the establishment of the first small hospital, from sixty thousand to seventy-five thousand patients annually are treated at this great institution. More than five hundred physicians and surgeons are employed for their whole time. Patients come from every country in the world for treatment at this small town institution.

In the dedication services in connection with the opening of the new nineteen story clinic out in that prairie town Dr. William J. Mayo said something which, in our opinion, offer the most plausible reason ever printed for the world-wide success of this great institution. As reported by a writer in the Journal of the American Medical Association, Dr. Mayo said:

"In 1863 Dr. William Worrell Mayo, representing the war department of the United States government, came to Rochester as medical provost marshal of the draft. He took up as a homestead the ground now occupied by the clinic, and it was here that he had his offices and his home. My brother was born here, and I lived here from the time I was an infant in arms.

"William Worrell Mayo held the belief that it was the duty of the medical practitioner to care for the patient without regard to his social or financial status, race or creed. In all the years since that early time no man has ever been refused treatment because of lack of ability on his part to pay; no note of hand or other evidence of debt has ever been taken; no one has ever been permitted to mort-
gage a home to pay his clinic bill, and no person has ever been compelled to pay by suit at law.

"It speaks well for mankind that so high a percentage of persons have of their own free will done what they could to meet their obligations to the clinic. It has been the practice of the clinic to look on all moneys as a trust, which through endowments is to be expended for the best interests of the sick; first, in better care of the patients themselves; second, in research which will prevent or alleviate human ailments, and third, in higher medical education."

SEDGWICK MEDAL AWARD

"The American Public Health Association announces that the first award of the Sedgwick Memorial Medal will be considered in 1929. This award was established in honor of the late Professor William Thompson Sedgwick, a former President of the American Public Health Association. The fund which provides the medal was raised by popular subscription from Professor Sedgwick's former students and friends. It is to be awarded for distinguished service in public health.

"Except for the fact that it is limited to the recognition of service in the field of public health there is no restriction as to the special line of service that will be considered. Administration, research, education, technical service and all other specialties in the public health profession will receive equal consideration. No limitations as to age, sex or residence have been fixed, though only candidates who are nationals of the countries in the American Public Health Association—at present, United States, Canada, Cuba and Mexico are eligible."

Mr. H. N. Calvert, of 370 Seventh avenue, New York City, is secretary of the committee which will make this award. They will not consider direct applications from candidates, but they do ask for suggestions, which they call nominations, from friends of persons who have rendered distinct service in the field of public health in recent years. They are not interested in any plans or suggestions or surveys, or in things that are "going" to be done. What they are interested in is a brief description of service already performed, measured in terms of benefit to humanity.

Any friend writing to the committee in the interest of any individual in this State, to whom they would like to see awarded this medal for service in the field of public health, should give the name of the person in the interest of which they are writing, the business or official address, as well as residence address, the age, sex, and the citizenship, whether of this State or some other state or country, and the degrees held, also the institutions from which such degrees were received, and also the principal public health positions held at present and in the past. A brief description of the service performed should also be included. This brief description may be accompanied by descriptive articles or reports, published or unpublished, which would be helpful to the committee in deciding the merits of the work accomplished and the right of the individual to receive such award.
PELLAGRA IN OHIO

Through the years that Goldberger was engaged in research on pellagra, he made frequent trips to Milledgeville, Ga., and other Southern communities to study pellagrins in their native environment. These investigations and others have in part created the erroneous opinion that pellagra is confined to the Southern states. Goldberger believed and, it would seem, finally demonstrated that pellagra is the result of a restricted diet. It can occur, therefore, wherever dietary habits or economic factors prevent people from obtaining certain essential food elements. Last year pellagra caused the death of twenty-one persons in Ohio, and the year before of sixteen. It has been recognized in other Northern and Western states. Practitioners who are not familiar with varied manifestations of this disease may fail to recognize them or to recognize the disorder because they do not anticipate its appearance in Northern states.—American Medical Association Journal.

A PARAGRAPH ON PELLAGRA

The Editor of the Bulletin has received a personal letter from a friend who is a competent physician and, in addition, is a persistent and earnest student of current medicine. His comment on the subject of pellagra at this time we are sure will interest many other physicians in the State. So we are passing it along: to-wit,

"I admit without debate that it is proved that diet is a mighty factor in pellagra. It is also proved that it (diet) is a mighty factor in tuberculosis. Whether diet is the sole cause of pellagra or not, I am unorthodox enough to admit that I do not know. I am a little suspicious that it may not be. I cannot quite go the limit...

![Graph showing death rates from pellagra in North Carolina (1922-1928)]
with Dr. Wood and insist that I know that in every case where a well-to-do intelligent person who has a balanced diet on the table develops the disease, that that person does not eat a balanced diet, regardless of what may be set before him. I am suspicious that an occasional case develops in a person who does eat a balanced diet. This may not prove the infectious nature of the disease. It may be due to some metabolic fault whereby that person cannot utilize the balanced diet. However, there are a few features about the appearance and disappearance of the disease in certain localities, the relative morbidity in various places, the rarity of the disease among the very poorest and most under-nourished persons in the north, etc., that suggests to me some other cause acting in addition to the mighty predisposing factor of a poor diet. I cannot help feeling that the whole story of pellagra has not yet been written, despite the brilliant work of many master minds in this field."

**SAYS BRIGHT'S DISEASE AND DIABETES SAME**

Doctors Peterson and Peterson, male and female, Chiropractors, came to this newspaper this week to advertise the opening of offices for the practice of their cult. They wanted a write-up as well. They were informed that this newspaper had no faith in Chiropractors and would give them no write-up. An argument started.

Said the Dr. Peterson who wore pants: "Do you believe in medical doctors? Do you know that in 5,000 years medical doctors have developed only one specific, quinine?"

"I should say they have done a bit better than that," replied the editor. "Would you not regard insulin as a specific?"

"Certainly not," said the Dr. Peterson who wore pants. "I can tell you about case after case of dropsy in which insulin failed."

"But insulin is not indicated in dropsy," said the editor.

"I mean Bright's Disease," said the Peterson who wore pants.

"But insulin is not used in Bright's Disease," exclaimed the editor.

The Dr. Peterson who wore skirts interrupted to prompt the Dr. Peterson who wore pants. "You mean Diabetes," she prompted him.

"Well, diabetes and Bright's disease are the same thing," said the Dr. Peterson who wore pants.

That was too much for the editor of this newspaper. Rising out of his seat he denounced the Dr. Peterson in pants as a quack.

And so we have with us another firm of Chiropractors in Elizabeth City, the head of which doesn't know that there is as much difference between Diabetes and Bright's disease as there is between kidney colic and an ulcer of the liver. And they come to treat ailing human beings and separate them from their money. —Elizabeth City Independent.

Mistress: "Mary, has the druggist sent that sleeping powder yet?"
Maid: "No, ma'am."
Mistress: "Then ring him up and ask him if he expects me to keep awake all night waiting for it."
Patchwork.
A YEARLY PHYSICAL EXAMINATION
By
JAMES W. DAVIS, M. D.

Just as every successful business must have a yearly audit to keep it in good condition, so every man and woman needs a yearly physical examination to prevent untimely sickness and untimely death, Dr. James W. Davis told the members of the Kiwanis club Friday evening. The yearly physical examination is not nearly so expensive as the doctor’s bills that may come later if the yearly check-up is neglected now, said Dr. Davis. Don’t think that you have to go away from home to get the physical examination, either. Your own family physician is the one to go to, and any physician in Statesville can give you a physical examination.

Dr. Davis quoted reliable statistics to show that out of 100 average healthy men, 25 years old, only 64 will live past middle life. Five of these men will be wealthy; five will still be working for wages; and the remaining 51 will be dependent on their relatives or on charity. Out of 100 men who die late in life, three will leave an estate worth $10,000, or more; 15 will leave from $2,000 to $10,000, and the remaining 82 will leave no income producing estate whatever. Dr. Davis remarked that, when he quoted these figures recently, a life insurance man in the audience could not wait for him to finish, but interrupted to say that those men who did not leave something when they died had taken out life insurance. However, it is not that sort of life insurance that I am talking about, said the doctor. When you think of life insurance you think of something that comes to your aid later in life, or that will come to your dependents after your death. But the life insurance that I am talking about is life insurance that will en-

Group of children from Vance County arriving for Clinic at North Carolina Orthopaedic Hospital.
able you to live a great deal longer and be in good health while you live. In some cases the men who were in need later in life failed to provide for their old age because of misfortune beyond their control; in other cases it was the fault of the men themselves; but in many cases ill health was the cause. Men become sick, get discouraged and fail.

The degenerative diseases are great causes of death—diseases of the heart, the kidneys, the lungs. There are diseases that may often be prevented to a great extent, if the patient is treated in time. Cancer is another great cause of death. Statistics show that in the United States one out of every 10 or 11 persons dies of cancer. The majority of these deaths might have been prevented if the patient had consulted a doctor in time. Dr. Davis stated that he had recently seen two cases of inoperable cancer and both cases could have been cured if the patient had gone to a physician eight months or a year ago. Tuberculosis can be cured in the early stages.

The individual shrinks from going to the doctor because he is afraid the doctor will find something wrong with him. A little pain seems a trivial thing, but neglected it may not prove trivial. How much better it is to go every year for a physical examination and be kept in good condition. Any doctor in Statesville can give you a general examination and tell you whether or not you have any trouble. If you want to live a long time go to your doctor every year and don’t overlook periodical visits to your dentist also if you want to keep in good health, Dr. Davis advised.

Dr. Davis stressed the importance of preventive medicine in the case of children. One of the great causes of fatal diphtheria in children is diseased tonsils and adenoids. Children who have been allowed to breathe through their mouths often develop chronic infection of the lungs. The safe thing at all times for every one is to have his family doctor give him a physical examination annually. — Statesville Landmark.

RINGWORM OF THE HANDS AND FEET

Recently it has been pointed out by Surgeon General H. S. Cumming, of the United States Public Health Service, that within the past few years throughout the whole United States many persons have been affected with an eruption of the hands and feet that is most marked during the hot weather. Information is slowly spreading among the public that in many instances this trouble is due to infection with a ringworm parasite. Medical knowledge of ringworm of the hands and feet is comparatively recent.

The disease is remarkably frequent, and it is probable that at least one half of all adults suffer from it at some time. In the University of Pennsylvania a careful survey of all students showed that over 60 per cent were affected with the ringworm organism. This work was definitely proved and not mere clinical diagnosis, for organisms were found in all cases. It is met with in every part of the country and is more frequent in the South than in the drier and colder climates.

It is said that in the Gulf States
practically the entire population has had the disease at some period. Almost everyone who uses a swimming pool, a golf club, an athletic club or any place where there is a common dressing room has the infection upon his feet. It is highly probable that the development of club life, the great increase in the number of swimming pools, and probably the general tendency of the American public to spend a certain amount of time in hotels, is largely responsible for the increase in this disease.

Ringworm of the hands and feet is caused by a vegetable parasite which is a distant cousin of the well-known mould that grows upon stale bread. In addition to living upon the human body it can probably live and grow elsewhere, and can resist drying for a long time. In fact, it is a remarkably resistant organism for it takes at least fifteen minutes of boiling to kill one. There are a number of varieties of ringworm parasite and it is highly probable that some are much more difficult to cure than are others. Unfortunately, at the present time, more exact knowledge on this point is needed.

Any type of person can be affected, whether well or ill. Food has nothing to do with the disease. Even the much talked of acidosis can hardly be credited to be the cause. The disease is much more prevalent during heated spells. Any occupation that entails long continued heating of the feet may be a predisposing cause or may aggravate an attack. Hot floors are bad. Feet should not be kept upon a radiator.

The disease is usually acquired by walking barefooted where the unshod have trod. Bath mats are justly blamed, and it is probable that ringworm can be acquired from them just
as warts upon the soles of the feet can be. As already mentioned, common dressing rooms are probably the most frequent places where the disease is picked up. However, it can also originate in hotels and from the use of infected towels or soap. There is no good proof that the water in swimming pools is in any way responsible.

In many instances either feet or hands alone are affected, but in the majority of instances traces of the condition can be found upon both. In its mildest form the disease exists as either a little cracking or a little scaling between the toes. In many instances the so-called soft corn is really entirely to infection with ringworm parasites. Other common types of lesion are those in which there are either few or many blisters, a diffuse scaly eruption and, lastly, wart-like growths. Any portion of the hands or feet may show one of these eruptions. Rarely they may extend as high as the elbows or knees. When the blisters break, fluid always escapes to the surface and there is a wet oozing surface that usually becomes covered with scabs. Itching is frequently intense.

In a few cases a pus infection occurs and rarely abscesses may develop. These may be upon the hands or the feet or in the lymphatic glands which drain the involved areas. This is the condition sometimes known as "blood poisoning." Fortunately, it is rarely serious.

In many people the disease is by no means a mild one. Out of 161 consecutive cases it was found that 14 were totally disabled and 32 partially disabled. In some instances this disability lasted as long as three months.

In certain cases the body gains some resistance against ringworm organisms, just as it does against many other infectious diseases. However, one attack does not aid in guarding against subsequent ones. It should always be remembered that the ringworm organisms exist deep down in the skin, and this, of course, is the reason why they are so difficult to kill.

A few other conditions may resemble ringworm infection. Yeast may grow between the fingers or toes and give rise to lesions that closely resemble those caused by ringworm. The blisters of poison ivy recur each year upon the hands of some individuals, but in many instances the trouble is due to a ringworm infection. Many persons know that the handling of the house primrose plant is frequently followed by an eruption of blisters upon the fingers, and more rarely, the hands, wrists and even the face. This condition too has been mistaken for ringworm. In fact, almost any type of chemical or mechanical irritation may be responsible for skin troubles that closely resemble those caused by ringworm.

The disease never invades the scalp, and it is exceedingly rare upon either the face or body. Almost all cases can be temporarily cleaned up, and apparently about 50 per cent can really be cured. Because of the great frequency of the disease it is difficult to tell whether a fresh outbreak is due to a recurrence or to a new infection.

An individual affected with ringworm should not use a bath mat. It is much wiser to step upon a section of newspaper and to burn that. Likewise the affected person should be most scrupulous about having his own towels and soap, and his socks, slippers and shoes should be worn by no one else. The use of light canvas slippers in dressing rooms would probably result in a marked decrease in the frequency of the disease. The floors of these dressing rooms should be washed and frequently treated with antiseptic solutions. A person in the active stage of ringworm should certainly sleep alone. Likewise, in the presence of lesions upon the hands, he should not dance, drive a car unless with gloves, hold to car straps or touch any object which others might
also touch. It is possible that door-knobs may convey the infection much more frequently than we know.

There is no type of serum which has the slightest effect upon the condition. A person suffering from the disease should soak the affected parts in salt solution at least once a day. This, it will be remembered, is a common type of treatment for infections in all hospitals. Practically every known type of antiseptic has been employed but no one has met with universal commendation. Almost every physician has his own favorite method of treatment. Very light doses of the X-ray frequently exert a most beneficent influence, but they do not prevent the disease from returning. It has frequently been noted that those going to the seashore and exposing themselves to the sun and salt water often recover in a short space of time. This observation has led to the use of ultra-violet light, and, under medical supervision, this remedy is often of great aid. Care must be taken that a marked burn is not produced. Of course, infected stockings, slippers or gloves must never be worn.—United States Public Health Service.

THE CANCER

The announcement of the discovery of a compound that dissolves and apparently cures cancers in animals made at the International Physiological Congress of Harvard Medical School comes with peculiar interest right now. The pathetic feature of all such announcements made before the remedy had gone through its necessary experiments to prove efficaciously when used in the treatment of humans, is the hope raised among many sufferers that relief is just around the corner.

The American Society for the Control of Cancer, with the backing of the American Medical Society, will devote the month of September to a campaign of education on cancer preparatory to observing the month of October as Cancer Control month.

The rapid growth of cancer as a cause of death makes the movement of vital concern. In 1900, tuberculosis ranked first in the death rate with 201 deaths per 100,000 population in the United States registration area. Following came pneumonia with 181; heart diseases with 132; nephritis with 89, cerebral hemorrhage with 72, and cancer with 63. Cancer was sixth from the top.

In 1927, after the space of 27 years, heart disease jumped from third to first place with 196 deaths per 100,000, while cancer jumped from sixth to second with 96.

What has happened? Tuberculosis...
Please meet a couple of Model State Board of Health Babies. Both parents of these Morehead City babies were for several years employees of the Board. Ann is four years old and Gilbert fifteen months old. Both are normal in height and weight. The mother writes that neither has ever been "sick or upset a day in their lives," and that she has found the bulletins and advice of the Board about babies invaluable.

contrary, pay little attention to heredity.

Cancer is not contagious as proved by Dr. Nicholas Senn.

III. In whom does Cancer occur? In any race, sex or age, but it is more prevalent in civilized races and to some degree seems to be a product of civilization, its frequency going hand in hand with higher civilized development. Jews suffer with diabetes which is antagonistic to Cancer. Rheumatism and gout, on the contrary, are frequently associated with cancer.

IV. Frequency—Cancer death rate has increased from 35 per one hundred thousand population in 1879 to 62 in 1900, 83 in 1920, 91.9 in 1924 (in U. S. Registration area).

N. C.—1915, total cancer deaths, 955; 1924, 1289; 1927, 1441, 1928, 1487.

100 people die in N. C. every month from cancer.

110,000 die in U. S. yearly from cancer.

1,400 American women die of cancer of the uterus every year.

One half million die in the civilized world every year and this in increasing 2 per cent a year.

Cancer kills 1 out of every 10 over 21 years of age.

Cancer kills 1 out of every 8 over 40 years of age.

V. What are the Symptoms and Signs? Age is probably the most important since cancer increases rapidly after age of 20 years. At forty it make an enormous jump and this is spoken of as the cancer age. We cannot however, be governed entirely by age because at times children die of cancer. Disturbed function of an organ is almost always present with
developing cancer. For example, a man 35 years of age who has enjoyed normal digestion begins to suffer with pain after meals, gas, belching, etc., such a man should be examined with the possibility of cancer in mind. Again a woman 40 years of age who has always menstruated normally, begins to have flooding or spotting between periods, has a danger signal which frequently spells cancer. Any abnormal discharge is suggestive and deserves attention. Especially is this true in women with foul discharge or blood after straining at stool, exertion, or douching. The first symptom of cancer of the breast may be a simple tingling about the nipple or the finding of an innocent tumor.

VI. Treatment consists of radiation or operation. In the former we use radium and X-ray, the latter the knife and electric current. The physician who is to render the treatment is the best one to judge as to the form of cure. In some cases radiation may be best alone or in combination with surgery; in other cases surgery is the most effective. And in this connection we must remember the earlier the treatment the better the results. As has been frequently said, the more sure the diagnosis the less sure the treatment. Twenty years ago the early signs of appendicitis were little known; people came to the surgeon late and the mortality was enormous in comparison with today when even the public recognize the early symptoms and the importance of immediate operation. The same can be said of cancer, early recognition, early treatment, good result; late recognition, delayed treatment, doubtful results.

In conclusion, prevention consists of:

1. The early recognition of pre-cancerous lesions through the means of periodic health examinations.
2. The prompt submission on the part of the laity of every suspicious lesion and symptom for diagnosis, and if necessary, early treatment.
3. The education of the public to liken the early signs of cancer unto those of appendicitis, and recognize that life or death often depends upon the promptness of adequate treatment.

MYRTILLIN

A Sugar-Reducing Substance Found in Huckleberry Leaves

Thousands of diabetics are now being kept alive by insulin, an extract of the pancreatic gland isolated a few years ago by the University of Toronto. One objection, however, to the use of insulin, is that it is administered by means of hypodermic injections. Many investigators are therefore seeking for a remedy of equal potency that can be taken by the mouth. At the meeting of the Federation of the American Societies for Experimental Biology recently held at Ann Arbor, several such remedies were discussed. One of these, called Myrtillin, is made from huckleberry leaves. Its discoverer, Dr. R. C. Wagoner, as reported in the Science News Letter, says that his attention was directed to it by a professor at Vienna who requested him to get him some huckleberry leaves as he had a mild case of diabetes which an old aunt had assured him would be cured by huckleberry tea. He had no faith in the remedy, but his aunt would give him no peace until it was tried. It was found, however, that huckleberry leaves do contain a substance that reduces blood sugar. The same sugar-reducing substance has been found by Doctor Wagoner in the green leaves of many other plants.—Good Health.
Occupational Therapy at the North Carolina Orthopaedic Hospital.

An hour in the work room, weaving baskets and sewing.
READY FOR SUN-BATH

Sun-baths, Children's Division, Guilford County Sanatorium
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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Cancer
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)
Infant Care (by Mrs. Max West)
Prenatal Letters (series of nine monthly letters, care)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Save Your Baby
Hints to North Carolina Mothers Who Want Better Babies
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THE NOVEMBER ISSUE A TUBERCULOSIS NUMBER

Following our custom established several years ago, the material for the November issue is supplied by Dr. L. B. McBrayer, Managing Director of the North Carolina Tuberculosis Association, and his co-workers. The reader will find many valuable contributions and special articles which will be helpful in any consideration of the question of tuberculosis from almost any standpoint. The tables were prepared by the Vital Statistics Department of the State Board of Health, and it is gratifying to note that the year of 1928 marked a considerable decline in the death rate from tuberculosis in North Carolina.

It has been announced by the Bureau of the Census at Washington that the general death rate for nearly every state in the Union increased in 1928. The fact that the tuberculosis death rate declined in the face of a general advance in the mortality from so many other diseases is proof, if any such thing were longer needed, that persistent intelligent efforts directed at the control of any disease, when persisted in long enough, will yield satisfactory results.

THE NATIONAL TUBERCULOSIS ASSOCIATION
A QUARTER CENTURY OLD

The annual meeting of the National Tuberculosis Association at Atlantic City, May 28th to 30th, marked the 25th year since its organization.

At the foundation meeting in Atlantic City twenty-five years ago, 197 were present, for the large part physicians interested in tuberculosis. Among these, three were from North Carolina, Dr. M. L. Stevens, Dr. Karl Von Ruck and Dr. Charles L. Minor, all of Asheville. Dr. Stevens is the only one that remains with us.

A banquet was given on the evening of the 27th in honor of the founders yet with us, of which there are 58, and 40 of these were present in the flesh. Some 2,000 other members of the Association, half of them laymen, sat down at the banquet board to do honor to these immortals.

Naturally during the session there was much retrospect, particularly as to accomplishments in the work of the first quarter of a century, we mention only a few:

Has organized a state tuberculosis association in every state; has 1,400 county or local associations affiliated with its state associations; has featured sanatorium treatment of tuberculosis in its educational campaigns, and has seen the number grow from a half dozen to nearly 1,000; it has discovered that tuberculosis exists and does its "dirty work" in children; it has learned how to diagnose tuberculosis in its early stage and also how to cure it; it saw the need of health education in schools and supplied the need through the Modern Health Crusade and later the nutrition class, now has a bureau in its office with a chief and an assistant; it organized and conducts the most economical and at the same time one of the most
thorough and far reaching pieces of co-operative research that has ever been seen; it has seen the deaths from tuberculosis cut more than half during the quarter of a century of its existence and the prediction was made that in another twenty-five years, even if no other important discoveries are made, the deaths from tuberculosis will be as few as we now have from diphtheria, about ten per hundred thousand of population. This prediction is predicated of course on the supposition that we continue the work as we have been doing, and improve and increase the work from year to year as we have been doing.

The National Tuberculosis Association finances all these and many other equally important and valuable things through the annual sale of the Christmas Seals. The first year the total seal sale amounted to $3,000.00. Last year these little penny seals brought more than five million dollars. It is well to remember too, that ($3,750,000.00) three million seven hundred and fifty million of this was used in the locality where the seals were sold, and half the remainder in the state.

Let’s everybody give a hurrah! And God speed to the tuberculosis work, and let’s fall in and help.

THE DIAGNOSIS OF TUBERCULOSIS TODAY

By

L. B. McBrayer, M. D., F. A. C. P.

Time was when a diagnosis of tuberculosis by a physician was not made by physical examination until it could be made by the general symptoms or, as we call it, clinically. On account of that fact the laymen, or average citizen, often arrived at a diagnosis about the time the doctor did and frequently before the doctor announced it. The doctor was not to be blamed, either. He saw cases of tuberculosis in the hospital while he was in medical college, but they were terminal cases. Yes, this disease was written about in the text-books and lectured upon by the professors of medicine, but these, too, were for advanced cases. At the time we have in mind the physical signs and symptoms of early tuberculosis, that are now so familiar to every physician, or ought to be, were not known. The tuberculin test had not been worked out nor had radiograms of the chest. In fact, the X-ray had not been discovered. All these things have existed since the creation, like many other laws of nature that we have discovered through scientific studies, and many more that we have not. We knew quite little, if anything, about tuberculosis in infancy and childhood. In fact it has only been quite recently in the last few years, that we knew how to diagnose and treat the disease in these tenderer years of life. You may guess that it is with no little degree of pleasure that those of us who have been studying tuberculosis for quite a number of years and endeavoring to slake its almost insatiable thirst for a continually increasing slaughter of our people and slow down its progress, are able to announce that this scientific study, largely made possible by the National and State Tuberculosis Associations and the sale of Christmas seals, has reached a point where we can announce to the world that we "KNOW OUR TUBERCULOSIS."

THREE AGE GROUPS

In the diagnosis and treatment of tuberculosis we have to consider three age groups.

1. Birth to three to 5 years, which we call infancy. In this age period
particularly the first year of life we thought that all children who were infected have either tuberculosis meningitis or miliary (generalized) tuberculosis and in either event about one hundred per cent died. We know now that we were wrong. We know that all children infected with tuberculosis in the first year of life do not die, but some of them get well and many of them will get well when properly treated. We now know that all of them do not have tuberculous meningitis nor miliary tuberculosis, but instead a goodly number of infants have a type of tuberculosis quite similar to the adult type, that is, so far as lung conditions are concerned, cavities large and small, few or many, but these cavities do not produce the symptoms usually produced in the adult, nor can the same signs as in similar conditions in the adult be found on physical examination, so that for the diagnosis of these cases in the infant three years old and under, we are in reality dependant upon the X-ray. Of course, when there is cavity formation and sputum can be obtained, which is difficult, you usually find the tubercle bacillus under the microscope, you will also find the tuberculin test positive, but neither of these give you any indication as to the lung findings and so we must rely wholly upon the X-ray for these. Any doctor who is familiar with the interpretation of X-ray plates or films of the chest can interpret the chest-film in the infant, but no matter how good a physician may be in the interpretation of X-ray films showing surgical diseases and conditions, it by no means follows that he is thorough in the interpretation of X-ray films of the chest, as a matter of fact no one can be thorough in this without much study and experience. With proper treatment we know many infants recover, and the treatment is the same as in the childhood and adult forms, the treatment and care of any concurrent diseases or defects, rest, nutrition of the body kept at par or above, fresh air, sunshine all under the direction of a competent physician with such additional treatment as the physician may think wise and necessary.

CHILDHOOD TUBERCULOSIS

This is sometimes called hilum, glandular or bone tuberculosis, depending on whether the glands or bones are affected, but at this time the term childhood tuberculosis is largely accepted and almost universally used. Let us mention at this time that glandular tuberculosis as we used to know it, that is, of the superficial glands, is scarcely seen at all at this time and the same may be said of bone tuberculosis, which affects the joints and inside the long bones, certainly in comparison with the frequency with which these occurred twelve to twenty years ago. What we call glandular or childhood tuberculosis is found largely in children of from 5 or 6 years to fourteen years or the beginning of the adolescent period, and is usually found in the glands around the hilum, which is the bifurcation of the trachea and blood vessels and lymphatics in the lungs, and has sometimes been called hilum tuberculosis. Though of course it may appear in other glands particularly the glands of the abdomen. At this time this group do not have such a high death rate as those previously mentioned and to be mentioned later, particularly if they are removed from the adults that are infecting them and given treatment.

In the diagnosis of childhood tuberculosis test and the X-ray play the stellar roles.

The first thing to do is to give the tuberculin test, which is entirely harmless, painless and easy of application. The extension department of the State Sanatorium has been furnishing this tuberculin in capillary tubes to physicians without charge for the past fourteen years. It is
rather surprising that so small amount is used that such a large number of physicians have never used it at all or at least have never availed themselves of this free offer. The public should understand that this tuberculin will not be furnished to any one but physicians. If this test is positive, it tells us that somewhere in the body of the child or person tested there are live tubercle bacilli and therefore the person is infected with the germ of tuberculosis and the Extension Department of the State Sanatorium in an examination of some thirty-five thousand children in grammar school finds that about twenty-two per cent of all grammar school children are so infected—but all of these are not ill with tuberculosis by any manner of means. Then there must follow a careful and thorough physical examination of each child so infected, which must include an X-ray of the chest. When this has been completed it will be found that about 1.75 per cent or 1750 out of every 100,000 children will be ill with tuberculosis and in need of sanatorium treatment. Another 5 per cent or 5000 out of 100,000 will be borderline cases, that is they do not necessarily need to go to a sanatorium but can be taken care of in summer camps, preventoriums, etc., provided they are carefully supervised when they return to school preferably in nutrition classes, seeing that their nutrition, rest, exercise, fresh air, health habits, etc., are suited to their needs. Unless this is done this five per cent group will furnish us our cases of tuberculosis during their adolescent and adult life. The remaining 15 per cent or 15,000 out of each 100,000 who are positive to the tuberculin test are in no present danger of becoming ill with tuberculosis, provided only that proper nutrition is maintained and proper health habits are formed—AND PROVIDED THAT THEY ARE REMOVED FROM CONTACT WITH THE PERSON OR PERSONS WHO CAN INFECT THEM, OR PROVIDED THE PERSON IS REMOVED, WHICH IS USUALLY EASIER. THIS HOLDS TRUE FOR ALL FORMS OF TUBERCULOSIS, PARTICULARLY IN CHILDHOOD.

Let us emphasize that whenever a child is found positive to the tuberculin test a careful study of the people in the child’s home must be made in order to find the adult who has infected it. This will frequently determine the fact that some parent or grandparent has for many years has a chronic cough but who was supposed to have chronic bronchitis in reality has a very chronic case of tuberculosis and has been the infective person for the child. Having determined this factor, the person should be separated entirely from the children, preferably sent to a sanatorium for treatment.

The Adult Group

The third group is adults, or as we speak of it, the adult form of tuberculosis. This has been written about and talked about so much and so many cases have been treated in our state that one is constrained to believe that everybody knows about it and acts on that knowledge, and yet we are informed that the percentage of early stage adult cases received at the State Sanatorium is no greater than it was eight or ten years ago.

The tuberculin test and the X-ray are important factors in the diagnosis in these cases, but the physical signs are much more important than in the other group and coupled with a carefully taken history can, most of the time make a diagnosis without either of the other two, however it is advised that a stereoscopic pair of X-ray films be made of every adult case examined, for while there may be no doubt as to the diagnosis in a given case, yet the X-ray may be able to show cavities or activity that could not be detected by the physical examination, and too, the X-ray films are
better than the record in the Doctor's memory or any written record that he may make, for reference in future examinations, particularly as to the advancing or improving of the disease.

EXAMINATION OF SPITUM

This is a wise and important laboratory procedure, but it is frequently improperly interpreted by other persons than physicians.

Everyone should understand two things:

1. that the presence of the tubercle bacillus in the sputum means tuberculosis.

2. that the absence of the tubercle bacillus from the sputum does not by any manner of means mean that the patient does not have tuberculosis.

THE PATIENT SHOULD BE MADE FREE TO GET WELL OF HIS TUBERCULOSIS

We mean by this that every person who is found to have tuberculosis, should have a complete and thorough examination of his entire body and be treated for any other disease he may have. Prior to ten or twelve years ago I visited every State Sanatorium within reach that applies to all my travels. I was greatly impressed, in fact shocked, at the complacency of most of the medical staffs after they had examined the patient's lungs. They seemed to think that a patient who had tuberculosis could not have any other disease, which is not true, but the contrary is true and quite frequently it is the other disease that caused the break down with tuberculosis and which prevents the patient from getting well of his tuberculosis.

It naturally follows that when a person is cured of some inter-current disease that has been preventing him from getting well of his tuberculosis, he is then free to get well and will. As an example of the disease that might prevent one from getting well of his tuberculosis, or might be the immediate cause of his break down, that is, so undermines the natural resistance of the body that he is unable to resist the inroads of tuberculosis, we might mention infection of the sinuses, badly infected tonsils, abscessed teeth, hookworm, malaria, other focal infections, the acute in-
fectious diseases, under nutrition, in women certain diseases of the uterus or appendages, sometimes frequent pregnancies, etc.

**GIVE THE NORTH CAROLINA CHILD A FAIR CHANCE**

Notwithstanding the fact that the Extension Department of the State Sanatorium through its school clinics or children's clinics has examined some 35,000 children, and found some 630 of these ill with tuberculosis, and in need of sanatorium treatment, 1750 others in need of proper care in the school and the home, including proper medical care which goes without saying; and 5250 more who are infected with the tubercle bacillus, but who are so mildly infected that there is no danger of development of the disease if they develop proper habits of hygiene and nutrition. I say notwithstanding these cases have been found and there is on an average as many more in any and every other group of 35,000, yet a large majority of these children are not being properly cared for. I would not have you think that nothing is being done, for there is a splendid beginning—we are showing in this issue pictures of some of the buildings for children in connection with some of our County Tuberculosis Sanatoriums, then we have this last summer three tuberculosis camps for children, we have asked for pictures of these and hope they arrive in time to appear in this Bulletin. These camps cared for about 90 children this summer. The three children's divisions of County Sanatoriums will care for about 250 children annually, then the children's division of the State Sanatorium which was featured in the Tuberculosis Number of this Bulletin, November 1927, will care for about 150 annually, and then Catawba County is completing a Sanatorium for children that will care for about 80 annually, which totals an annual capacity of about 570 children. This is good, very good as far as it goes, but it does not go far enough—many other counties ought to follow these splendid examples.

And then it is well to remember that the establishment of a children's division of your Sanatorium is not the whole program, you have then just gotten to a point where you are able to handle childhood tuberculosis, but there is much more to it than the sanatorium building and equipment, including a physician who knows how to find and treat childhood tuberculosis.

The superintendent and medical director of a county sanatorium should be at the head of the tuberculosis work in the county, and he should have an assistant of his own choosing, cooperating to the very fullest with the county health officer and his department and likewise the city health officer and his department, if there be one. This co-operation is absolutely essential to a complete program and its success and is essential to the most economical administration. To complete the triumvirate of success the school superintendent, or superintendents, and his or their forces should enter the alliance.

The grammar grade children, every one of them in the county should be examined. As mentioned before, about 1.8 per cent will be found ill with tuberculosis and in need of sanatorium treatment. These of course should be treated as rapidly as possible. Then about 5 per cent more will be found border line cases, all of these who do not respond properly to the ambulatory treatment in school and home, should be treated in the Sanatorium. Then the remaining 15 per cent that are infected but not particularly ill should be placed in nutrition and health habit classes, along with all undernourished or under par children. A careful, complete and thorough physical examination should be made of each and every one of these children and every disease or defect treated, so that the
child infected with the germs of tuberculosis shall be free to get well and the under nourished child shall be made free to gain.

I will not go into a discussion of the nutrition classes and health habit classes only to say that these are of equal importance to the sanatorium treatment, and in fact, of greater importance, in that the children who are returned from the Sanatorium should be cared for in these and all others in the various group previously mentioned. And this work requires the cooperation of the sanatorium superintendent, school physicians, public health nurses, school and otherwise, the school officials including the individual teachers of the individual grades and the children, and last but by no means least, the parents. This last will require visits to the homes by the nurse and by the teacher, but frequently final reliance will get back to the child, who alone in some instances will be the one that casts the deciding vote and secures the intelligent interest and cooperation of the parents.

"THE MAN BEHIND THE GUN"  
or  
THE ADULT WHO INFECTED THE CHILD

We have right here in North Carolina a vicious circle in tuberculosis that is at once astounding, terrible, expensive, death dealing. It ought to be broken—It shall be broken.

Here it is: The father and mother or aunt or other adult living in a given family has tuberculosis, is expectorating thousands and millions of tuberculosis germs every day. This person infects all the children in the given family and not satisfied with that he infects some of the children in the neighboring families, usually half of them. This adult may not know that he has tuberculosis, he may never have been seriously ill with it, may never have consulted a physician in regard to his cough. He has probably had this cough for years, and attributed it to hay fever, asthma, bronchitis, etc., and as he was able to continue his business, he probably took a little patent medicine and went along killing and maiming his own children and the children of his neighbors. Of course some of his children and some of his neighbors' children die from tuberculosis in infancy, and some of them, most of them perhaps, reach adult life and they in turn infect their children and their neighbor's
children. Reader, health officer, physician, nurse, teacher, parent—everybody—don't you agree with me that this terrible death, dealing vicious circle must and shall be broken. If so, North Carolina will soon be delivered from the bondage of tuberculosis that has been costing North Carolina annually in dollars, more money than she spends on her entire state government, including roads, school, health, crime, administration and every other expenditure—and then no accounting has been made on the "slaughter of the innocents."

And how will we break this vicious circle? The program briefly outlined in regard to the care of our children, both those who have tuberculosis and those who have not, cuts out half the circle, but that is not enough. Finding the man or woman who has been infecting the children in the family and perhaps in his neighbors, and stop him from infecting them or any one else. In addition to the many other methods of finding these cases that have been in use for some time, this work in childhood tuberculosis enables you to 'clean up' in the modern vernacular, that is, to find all such cases as mentioned above, cases that are not very sick and have not consulted or been examined by a physician. When one or several children are found infected with tuberculosis, it is the duty of the physicians and nurses to go into the home of such children and examine every adult in the home, find the adult who infected the child, take him or her to the Sanatorium for treatment, and if he does not recover to a point where he does not expectorate the tubercle bacilli and he insists, in spite of all the teaching both by precept and example received at the Sanatorium, on infecting others, he must be removed from the others and from every one whom he can infect. This must be carried out with every adult case, and all infected children cared for as outlined. When our people are sufficiently interested in themselves and their children to do it, our state will be delivered from the thralldom and scourge of tuberculosis. It is everybody's fight, and like the rebuilding of the walls of Jerusalem, "every man must build in front of his own door."

But in that day leaders were necessary, and perhaps the leaders in this work are more necessary than in Bible times. As an encouragement, we predict that at least one county in our state will put on this all comprehensive program, and we hope to be able to report on it one year hence.

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TUBERCULOSIS IN CHILDHOOD AND ADOLESCENCE

By

F. MAURICE MCPHERSON, M. D.

Philadelphia, Penna.

(Paper read before twenty-fifth annual meeting of the National Tuberculosis Association, Atlantic City.)

The great interest deservedly focused on tuberculosis in children springs from many diverse and important causes that have a universal and lasting appeal. There is the keen desire that children should be protected from the illness, crippling and restrictions that tuberculosis involves. There is the economic interest of the community, enormously involved because of this, the most wasteful disease of early adult life, develops during childhood and adolescence. For these directly engaged in efforts to reduce invalidism and to lengthen life, tuberculosis in children presents a large
and stirringly hopeful field. To the physician, its urgent and enduring interest lies in the diversity of its forms, in the relationship of one form to another, in the wide range of the symptoms that may be produced, and, above all, in the success in cutting short or preventing illness that attends prompt application of adequate rest, and thus rewards early diagnosis.

Almost every form of pulmonary tuberculosis may be seen in childhood and adolescence. Acute, even fulminating infiltrations are represented in infancy and early childhood and also among the apical lesions of adolescents. Chronic, indolent infiltrations that cause little or no disturbance of health, appear in young children as lesions that are chiefly nonapical and in adolescents as densities within the apex and adjacent areas. The latter are, however, less commonly indolent throughout if observation is continued over a period of years.

Certain characteristics of pulmonary tuberculosis in childhood require special comment. The first is the latent period, during which infiltration is discovered roentgenographically but does not make itself recognizable by the production of symptoms or of physical signs. The length of this varies widely. It may be only two or three weeks during which a consolidation develops in an infant before the first symptom, often cough, appears. It may be as much as three or more years, during which an infiltration in an adolescent, if untreated, descends from the extreme apex where it is recorded only with difficulty, into the sub-apical areas, where it is readily perceptible and usually, but by no means always, productive of symptoms. Courses such as this are not infrequently observed by serial roentgenograms of children living in household contact with sputum-positive tuberculosis.

One aspect of latency that is implicit in the above has received scant attention, yet it is of the utmost importance. This is the fact, readily
demonstrable by serial roentgenograms, that, while remaining latent, in the clinical sense a lesion may progress rapidly. Dense infiltration, even excavation, may be observed to develop without either symptoms or physical signs. Yet because of the convention established by the arbitrary description of clinical activity, there are those who regard such lesions, as long as symptoms and signs are lacking, as scars or as negligible. The mechanism by which tuberculosis accomplishes its destruction of the lung and eventually of life is infiltration and excavation. There is no method that records this invasion and its progress or retrogression with accuracy approaching that of the X-ray.

Another characteristic that must be reckoned with in the treatment of tuberculosis is the rapidity with which severe lesions develop and spread. Rest must be prompt, and adequate to meet the indications. It should always comprise absolute bed rest for soft spreading infiltration. Careful observation should be maintained to determine when pneumothorax may be advisable to supplement general with local rest. Tuberculosis in children is often acute. For such cases long sanatorium waiting lists and ambulatory treatment are as inappropriate as for any other disease that immediately threatens life. Furthermore, to compensate, as it were, for the violence of its advance, there is a capacity in children, for rapid retrogression and healing; including the disappearance of moderate and, occasionally, large cavities, that is nothing short of amazing. The allocation of infirmary beds should take account of the issues that tremble in the balance, to be won or lost, according as absolute rest is made available or not. Sufficient beds to care for all dangerous lesions in adolescents should always be at the disposal of the tuberculosis service, whether hospital or sanatorium. There is nothing more gratifying in the treatment of tuberculosis than the great possibilities of repair that attend the institution of prompt, complete and sufficient rest for the violent lesions of childhood and adolescence.

Linked with the rapidity and severity of damage and the rapid response to adequate treatment characteristic of children is a tendency to sharp relapse from apparent well-being. This has long been recognized, but it has not received sufficient practical emphasis. Retrogression is marked conspicuously by the relatively rapid subsidence of symptoms and the slowly acquired stability of the lesion. This fact, common to tuberculosis at all ages, is especially important in a child because of the danger of losing the opportunity to treat him so that his illness will not recur. In proportion as the patient is young, with the greater liability to disastrous relapse, and the more of life to face handicapped by whatever irreparable damage may follow failure to make the most of his splendid capacity for repair, by so much ought we to make sure that he is not discharged until material restrictions can be safely discarded.

Especially in children do the symptoms, then the physical signs, disappear before the lesion is stable enough to carry the load that the necessities and heedlessness of the patient may throw upon it.

The fundamental principle in the treatment of tuberculosis should be to secure evidence that the means by which the disease causes damage is brought to an end. In latent tuberculosis, the roentgenogram is the sole evidence of the existence and course of a lesion. Elevation of temperature and of pulse, malaise and fatigue are, properly speaking, late effects, coarse indices of activity. The most reliable criterion we have of the activity of any lesion, whether latent or not, is the changes in the size and number of the spots constituting its shadow on
the X-ray film. This was indicated years ago by the work of Amberson and others, and is true today, even with our present imperfect X-ray technique. The best evidence of a healed lesion is to be found in the sharp, dense strands that remain stable for months under competent roentgenographic control. While the roentgenogram will never be one's sole reliance for examination and supervision of patients, it is even now the method of precision for detecting the presence and evaluating the extent, severity and direction of change of a lesion.

The roentgenogram is thus the pivotal point of early diagnosis, and the guide and index of effective treatment. As such, it must be accurate enough to record slight lesions, to differentiate the significant from the irrelevant, the lesion from artefact. The factors that have produced a diagnostic film must have known and controllable, trustworthy comparison of the extent and intensity of the lesion from time to time. To this end, account must be taken of the anatomical and physiological properties of the chest and of the chief mechanisms in the production of roentgenograms. These fundamentals of X-ray technique must be the basis of attempts to produce a satisfactory roentgenogram. They must be known to the clinician in deciding whether a film is informative enough to enable him to recognize or exclude the presence of abnormalities. It is idle to expect to perceive slight, but often crucial, pathological changes in density when the normal structures are not clearly recorded. The time of exposure must be short enough to offset the effects of cardiac movement, which, on the average, occupy about three-tenths of a second. It is clear that, depending on the heart rate, this will vary in practice form one-third to one-half of the cardiac cycle, as the rate varies between sixty and one hundred and twenty. The distance of the source of X-rays, the tube, from the film must be sufficient to prevent diffusion and thinning out of the shadow of posterior infiltration until they are imperceptible.

No chest specialist can properly ignore these principles in making the best use of available apparatus, and in defining clinical requirements upon which improvements in apparatus must be based. Many difficulties in producing truly comparable films depend on faults in apparatus and can be overcome by appropriate design and careful adjustments. The details of these improvements in design and construction must be left to the roentgenologist aided by the physicist. It remains for the physician to define the standard of performance that will achieve more accurate and hence more comparable films. There is little commendatory to be said for the defeatist attitude toward improvement in roentgenograms. Better apparatus will be found attainable in response to demand. The importance of the X-ray apparatus, in the care of children already heavily infected, is second only to hygienic living.

Probably the physician faces no task more difficult than to prevent the development of clinical tuberculosis in a child who presents a progressive latent lesion. Both parent and child resent the interference with liberty imposed upon an apparently healthy person. If the parent is the source of infection and was not made seriously ill by the lesion from which the child, in his earlier days, acquired his infection, the physician, in securing adequate rest, will need all his philosophy and endless persistence. But it is rare, surely, that he will feel entitled to greater satisfaction than when he knows that of a group of children whom he has successfully cared for in an effort to prevent clinical disease, not a few owe this freedom largely to his guidance.
MODIFICATIONS AND DEVELOPMENTS DURING THE LAST QUARTER-CENTURY OF OUR KNOWLEDGE OF TUBERCULOSIS AND WHAT CHANGES, IF ANY, ARE THEREBY REQUIRED IN THE TUBERCULOSIS PROGRAM: CLINICAL POINT OF VIEW.

In clinical work in tuberculosis there have been eight outstanding advances in the last twenty-five years:

1. The development of the X-ray for diagnosis of pulmonary and other forms of tuberculosis and for the exact following of changes which occur during treatment. The stereoscopic X-ray is the only method of detecting early pulmonary tuberculosis. Tuberculosis lesions are usually advanced when cough, hemorrhage or pleurisy occur.

2. The increased appreciation of the value of rest, and of prolonged rest as the only specific remedy, and the introduction of improved methods to achieve this principle.

3. The growth of sanatoria allowing the application of rest, fresh air and skilled attendance, as well as the isolation of children from the tuberculous. The coincident growth of dispensaries, and of institutions for under-nourished children.

4. The modifications in our opinions regarding so-called specifics such as tuberculin, and climate, and their employment only in special instances. The progress of research toward specific immunization.

5. The empirical application of ultra-violet radiation and other forms of actino-therapy in extra-pulmonary tuberculosis.

6. The improvements in differential diagnosis from such diseases as accessory sinus and bronchial conditions, and hyperthyroidism.

7. The virtual disappearance of so-called “scrofula” and the decrease in the incidence of bone and joint tuberculosis since the increased prevalence of pasteurization of milk.

8. The increased conservatism regarding surgery in extra-pulmonary tuberculosis as a result of which the old term “surgical tuberculosis” has become a misnomer.

The following suggestions for the tuberculosis program in the future are made:

1. The continued education of physicians to consider the possibility of tuberculosis in all patients and to investigate sputum and all symptoms and signs thoroughly.

2. The advocating of stereoscopic X-rays for all patients, and in members of tuberculous families, this should be done annually. Much emphasis must be placed on improved technique and correct interpretation.

3. States should be encouraged to build more sanatoria for adults and children, and more preventoria for children.

4. The importance of prolonged rest should be stressed and physicians and patients should be impressed with the fact that three or more years are necessary for the cure of tuberculosis. This includes tuberculous pleurisy with effusion.—Dr. Gerald B. Webb, Colorado Springs, Colo., before Twenty-fifth Annual Meeting of the National Tuberculosis Association.
"Slaughter of Innocents! God look down
Upon the need of every town!
Teach us to count as priceless wealth
The heritage of normal Health."

To my co-workers in the North Carolina Federation of Women’s Clubs who are interested in health, I come with this my fourth message; hoping thereby to create a deeper interest, a practical interest, in one of the most vital studies and practices that pertain to the human family.

Health is the soul that animates all enjoyment and progress. It is necessary to have and to hold in order to be able to meet the demands that are laid upon the human family today. The truth of this statement we acknowledge. Then isn’t it remarkable that we give so little thought to this vital subject.

Our nation is awakening to the deep need of the study of our country’s greatest asset—our children—and there remains much to be done. President Hoover will call a conference composed of child health and welfare leaders from all sections, to determine the present status and the future needs of the nation in this work. This meeting will be preceded by an extensive survey by committees identified with various phases of child health and welfare which will include the National Tuberculosis Association, American Child Health Association and others. To cover the expense of this survey congress has wisely put at the disposal of Mr. Hoover, five hundred thousand dollars. The subjects covered we are told, will be regular and thorough medical examination, school and public clinics for children, hospitalization, adequate milk supply, community nurses, problems of dependent children, maternity instruction and the teaching of health in schools.

The calling of this conference and the results of its deliberations with other movements that have been inaugurated in our nation by several far-seeing health organizations will mean more for the health of the child, the future citizen and the generations yet unborn, than it is now possible for us to see.

The reading, thinking, cooperative club women can wield an untold influence in the home and community when she realizes the value of co-operation, and is willing to carry the lighted torch of her knowledge into the dark and doubtful corners, giving to those in need, light, and the essentials of real life.

We desire further to stress in our health work the need of co-operation with all accredited groups who are interested in and working for the improvement of child and adult health. Largely through the stimulus of the child health and other organizations in America there has come the knowledge that all that is essential to the health should be studied, taught and practiced. There should be an organized program to include the home and school, which will include class room
discussions, physical education, and medical supervision correlated to promote the maximum of health, and to cultivate an efficient health consciousness that will aid the child in maintaining a healthy body. In this work there should be a union of effort carried on by the teacher, doctor, parent, nutrition worker and nurse. The strength of all should be aligned with each for best results.

Ideally a leader in a health program should have a number of qualifications. They must be able to recognize the signs of disease and health, both physical and mental, in order to have a standard by which to judge the symptoms of illness. They should have a thorough scientific understanding of the part that proper nutrition, rest, sunshine and exercise play in the development of the child. It also seems necessary that they have a knowledge of child psychology so they may teach right health habits through an appeal to the child's natural interests, and it is of equal importance that they should have a social viewpoint in order that they may have sympathy and understanding of the parent and can impress them with the importance of their cooperation to make the child health program a success. Since it is almost impossible to find all this ability combined in one individual, it is the logical conclusion that the variously qualified persons—that is the parent, the nutrition specialist, the physician, the nurse, and the social worker, assist each other in this broad field that even now finds many unexplored areas in our state.

We find in our observation and study of this problem that the foremost students of this subject of child health are convinced that the ultimate responsibility lies with the class room teacher and the parent. They have a proper knowledge of the child's mind or soul and its activities and capabilities and the implements for carrying on their teaching, a willingness and desire to succeed, coupled with an intimate knowledge of the child, acquired from daily association. The weak place in this work is the indifference of the teacher and sad but true often the parent lacks the knowledge and desire of and for the child's health.

Here rests a great responsibility upon the club woman as mother and instructor. The crying need is for us who are advocates of religious, civic, health and educational advantages to use our utmost influence as good citizens of our commonwealth. Look into our school curriculum and we fear there will be found a lack of appreciation, and a great need of health teaching as a part of our course of study in our schools in the town and rural districts. We should use our influence to get this most essential course of study and work in every school in the state.

As club women to accomplish this we should as individuals have a health consciousness at least sufficient to give us a desire for a social viewpoint of health education as well as to require it of our school teachers. We need a more complete preparation for this work in our schools; which should include a general scientific foundation in biology, physiology, bacteriology, chemistry and psychology; some specific technical information on preventative public health activities and the fundamentals of nutrition and health for children and adults, and last but not least, practical training in health teaching.

Again comes responsibility to the club woman as a mother and neighbor. A very essential part of our school programs is the interest in and support of the principal and superintendent in the schools of our towns and cities and of the superintendent of our county school system. He should have the time and place for health in the teaching schedule, and it is in his power to motivate the work greatly, both with the teacher and the parents. The home economics and the
physical education teacher can also make a definite contribution; the home economics teacher by placing the emphasis on the nutrition and health feature of our work; the physical training teacher by considering exercises suited to the individual child. It is especially helpful in the case of under-par children to have the close cooperation of the physical education and nutrition experts. Take for example, the child with a faulty posture, which is a common accompaniment of faulty nutrition or disease, in this, both better nutrition and corrective exercise play a part along with rest and an abundance of sunshine, and good fresh air.

Another most important essential that must be carried out if good results are obtained is an organized program with home and community cooperation, since the health activities in the school must coordinate with the practice of the desired health habits in the home. To that end parents must know what the school is trying to accomplish. In the majority of cases it is the work of the school to bring about a mutual understanding of the purpose and method of work. As club women and parents we must be on the alert in our health department to see that there is a mutual interest and knowledge between parent and teacher. The majority of parents are sincerely interested in the health, nutrition, and general physical improvement of their children and it is most reasonable to conclude that they will do their part if they are informed and if they have confidence in the program.

Another most important factor and responsibility in this program for the interested club woman who has a genuine desire to aid in our child health program is—the problem of the parent who for any reason cannot cooperate with the school. A prominent nutrition specialist tells us poor nutrition of children in the last analysis is due to one of the following causes: poverty, ignorance or lack of
proper home control. The family budget may not be able to include sufficient food of the right kind and in such cases the social worker, the health department of the Woman's Club, or any outside relief agency may be needed to supply aid. May we say here that over long years of study of this problem we have found that ignorance of the fundamentals of child care, feeding, and training is not confined to the parent poor in worldly goods or the uneducated one, as is sometimes popularly supposed. "The poor little sick child," is indulged in too highly seasoned foods and sweets, most often over stimulated by too strenuous social and educational activities—a disagreeable child, made so by over indulgence. Many a well meaning parent does not know the value of adequate diet, long hours of rest, an early bedtime and hours of play in the sunshine in God's great out of doors. There is also the parent who understands these but dismally fails in the psychology of child management and so cannot control their child's habits. Both of these failures can be met by education.

Here again is a responsibility that can be met partially by the club women having classes and lectures upon health and psychology in the health department program of their clubs. The home demonstration agent in the community and the home economics teacher in the school may be of aid in training parents in right food and health habits so that they may be cooperative. The problem of home control is much slower and more difficult and delicate to handle. In some communities the "habit clinic" and the "conduct clinic," has been developed to meet the need of behavior problems of children. There are national institutions that disseminate information on child care and management which mothers and child study groups can use, in the Women's Club campaign for better health for the child and adult, the same rules hold good. There is a very definite place for the health specialist. In any health educational program, the first step is an examination by an accredited physician for diseases, infections and physical defects and general nutrition conditions. A nurse may greatly aid and enlarge the effectiveness of the medical service by follow-up work in the home. Because of her position of trust she has a remarkable opportunity to teach hygiene and diet in the home. The dentist, besides caring for the school children's teeth in the dental clinics can give valuable advice on the relation of diet to the teeth. The health divisions of our clubs can give aid to the social and welfare workers who are trained in the technique of home visitations and the delicate art of looking after other peoples affairs. There is a need for specialists broadly and well trained in their respective fields and, with a knowledge of resources and the inter-linking of health with other social problems. Preventive work in tuberculosis, for example is most thoroughly done when the public health nurse employed in this field has had training in tuberculosis and social work. It is a most difficult problem in many cases to know the relation that economic status and mental attitudes bear to recovery as well as to the prevention of this disease.

I sincerely believe cooperation to be the key that unlocks the door of success to all good health work. Give recognition to all well trained workers and as a health department in clubs, aid along all lines of health work wherever found.

"He who cures a disease may be the most skillful; but he that prevents it is the safest physician."—Thomas Fuller.

Medical history tells us that prior to the discovery of smallpox vaccine by Edward Jenner, a country physician of England, that smallpox sometimes killed 25% of the population in an epidemic. Since Dr. Jenner
blessed the world with his discovery, when people contract smallpox they have erred by not being vaccinated.

When Lord Lister discovered and introduced aseptic and antiseptic surgery to the medical profession, he made surgery a blessing that has saved countless lives, while previous to this time surgery was a horror to doctor and patient alike, for it meant almost certain death. So Lord Lister lives on in this one great scientific discovery.

Diphtheria another dread disease has been overcome by Dr. Behring's antitoxin to cure it, and later toxin-antitoxin to prevent it. Diphtheria has joined the ranks of curable and preventable diseases.

Typhoid fever was a very great death toll taker of our people only a few short years ago—now through scientific experiments typhoid fever is in the rank of preventable diseases.

So the diseases that destroy our people today are not the diseases that swept away so many lives in the past. If every family would protect themselves from smallpox, typhoid and diphtheria, these diseases would cease to exist.

Certain other diseases are yielding to medical science, although as yet they do not have any well established vaccines to prevent them. Children's diseases in summer are not as numerous or fatal as a few years ago, largely due to better and purer standards of milk and water and a broader knowledge of infant feeding, treatment and a more widely disseminated knowledge of general hygiene.

Tuberculosis—the destroyer of so many people of the past generations has dropped 50% in the past 20 years and 40% the last ten years. This is largely due if not wholly to educational campaigns put on largely through the aid of our Tuberculosis Christmas Seal.

There is the group of chronic degenerative diseases, heart, blood vessel, kidney and cancer. The deaths from these are reaching higher ratio in forty years and over age group than they have ever shown before and constitute a problem that challenges medical science.

The victim of tuberculosis is warned by a number of well recognized symptoms. These degenerative diseases creep in like a thief in the night without alarm or warning—yet upon examination the physician finds serious inroads have been made by the disease—sometimes so serious they cannot be checked in their assault on our bodies. The question arises what can be done to stem this steady rising tide of deaths from these diseases that are now the destroyers of the older members of our human family? There's no specific vaccine for these, the only thing we can do is to learn of the existence of the disease in its earliest form by annual examinations and avoid all conditions that favor their development. We are told to avoid all excessive stresses and strain of life, chronic localized areas of infection such as bad tonsils, teeth, and all areas of ulceration which may favor later development. To do this we must take good care of these bodies of ours for they go on with us and should be given every chance to be normal. It is only in the last few years we have become aware of the great importance of having annual health examinations. Your club can popularize this in your community by both precept and example.

In the swing of the centuries from Hypocrates and Galen to Pasteur and Koch, twenty-five years is as a flash of lightning. Yet in this last quarter of a century many of us have seen tuberculosis relegated from its position as the chief scourge of mankind, to that of a controlled, and still more controllable disease.

EARLY DISCOVERY—EARLY RECOVERY

Detected early and treated properly, tuberculosis is usually curable. Brief as it is, the fact that this
statement is not understood and applied universally allows tuberculosis to retain its position as the cause of many deaths in North Carolina and in our nation. Tuberculosis claimed the lives of 2578 North Carolina residents in 1928. What is more important is the fact that tuberculosis is the greatest cause of death in the age group from 14 to 40. Whereas the six leading mortality causes are organic heart disease, pneumonia (all forms) nephritis, cancer and other malignant tumors, tuberculosis (all forms), cerebral hemorrhage (apoplexy). Heart disease leads and tuberculosis takes fifth place.

CANCER

We understand, through Dr. H. H. Bass, Durham, N. C., who is State Chairman of the American Society for the control of cancer, that a small state fund for cancer control is now available. The second week in October is designated as cancer week for North Carolina, during this week clinics will be held throughout the state by the American Society for the Control of Cancer, the county boards of health and the doctors of each county medical society. The suggested plan is the American Society for the Control of Cancer furnishes the literature on cancer control, the county board of health arranges for the clinics and distributes the literature, the doctors throughout the state will be asked to hold these clinics. Each county medical society will be asked to appoint a permanent committee on cancer. These committees assisted by all the members of the county medical societies will make these examinations. We believe in this way many, many cancer cases will be detected in their incipiency thereby many lives will be saved. We hope the health chairman of our Women's Clubs will offer to serve on these permanent committees and cooperate in every way possible in this most important work, thus aid in prevention work.

The health department of our women's departmental clubs should cooperate with the State Board of Health at Raleigh, N. C.

Pellagra, known as the "deficiency disease" is on the increase. This has to be fought with a well balanced diet consisting of a wide variety of food. Secure and read the North Carolina Health Bulletin for April 1929. Get from the United States Public Health Service, Washington, D. C., Bulletin No. 1174 for study of pellagra.

THE VALUE OF LIVES THAT COULD BE SAVED

It is estimated by the Metropolitan Life Insurance Company that "the total capital value of the lives which can be saved annually by the application of modern preventive medicine and public health measures is over $6,000,000,000." This is an estimate of what might be.

Club women of North Carolina awaken to your great responsibility as mothers, club women and citizens of this commonwealth, to the health of self, your children, your community and your state! There is nothing more wonderful than the human body and it is worthy of the very best care we can give it. Let us work to preserve it.

CHILDHOOD TUBERCULOSIS

The North Carolina Tuberculosis Association is working at the right place to eradicate tuberculosis—with the children. The undernourished child is being cared for. The little Christmas seal in the hands of the association, sponsored by the club women and others interested in the work has proved an untold blessing to the undernourished tuberculosis child of our state—by the correction of dental and tonsil defects by the State Board of Health and private physicians. The tuberculosis clinics inaugurated by the North Carolina Tuberculosis Association and carried on now by the Extension Department of the State
Sanatorium, real progress is being made—Yet there's much to be done. Tuberculosis affects everybody in one way or another and it should be everyone's duty and pleasure to fight it. It invades the mansion and the hovel alike, is no respecter of persons. It takes for its toll the fatherless. In a recent visit to an Orphan home this was pathetically proven—five of the one hundred fatherless little ones were infected, one active case. These were found by the clinician of the Extension Department of the North Carolina Tuberculosis Sanatorium. This child through the State Sanatorium will be treated and be saved from the fatal plague. Club members, is it worth while through your efforts in selling the Christmas Seals to aid one of the least of these? Can we not work to prevent disease and thus prove ourselves not skillful but saving physicians?

It is said we have eradicated tuberculosis from the cattle of our state. All praise must be given our County, State and National Departments of Agriculture. They are aiding in the fight for our children.

The same can be accomplished with our people by untiring and persistent effort. The same tactics must be followed as those used by the Department of Agriculture. "Find all who have tuberculosis and prevent them from infecting others," by finding and having all tuberculosis cases treated in its earliest stages. Taking proper care of our children, keeping them physically fit so that they may resist infections of tuberculosis and other disease. Here rests the responsibility of the club woman.

Just A NOTE OF WARNING—DIETING FADS ARE DANGEROUS

When aunts and mothers on the uncertain side of forty need to count calories and need to deny themselves sweets, pastries, etc., the advice of their physician is most necessary before reducing is undertaken.

In the "teen age" girl the fad for a "boyish figure" by dieting is fraught with real danger, according to tuberculosis specialist. The ages between 15 and 24 show the highest tuberculosis death rate and much higher for females than males. Physicians are unanimous in blaming lack of rest, lack of regular nourishing meals and the fad for dieting for this appalling condition. They say the young girl is not likely to break down from tuberculosis in the twenties if in her "teens she gets enough sleep, at least eight hours every night, and not over worked under unhealthy conditions, and has a generous diet of good plain wholesome food, including a warm nourishing breakfast. No girl need fear that any loss of beauty will accrue from a few added pounds; for her clear healthy skin, shining eyes, glossy hair, and abundant energy will make her more popular than a frail body and an irritable disposition. Health brings in its train happiness and should be prized as a precious jewel. Health and beauty can be preserved and gained by rest, sunshine, fresh air and proper diet.

It is the responsibility of the club woman to impress upon the public that health depends upon vigilance in protecting the body—annual examinations—the early discovery of disease and proper treatment means early recovery.

SUGGESTED PROGRAM

September meeting:
(1) Study the cancer problem and have program on same.
(2) Offer services to health officer and county medical society in clinic for second week in October.
(3) Set a good example by being examined yourself.
(4) Have a conference with the health officer, president of county medical society in order to have your work dovetail with theirs and no overlapping.
(5) Secure pamphlets on Cancer from Dr. H. H. Bass, Durham, N. C.
who is State Chairman for the control of cancer, representing the American Society for the Control of Cancer.

November meeting—Subject Tuberculosis:

(1) Make a study covering what has been done and what is being done.
   (a) Do you have a county sanatorium.
   (b) Do you have a children’s division of your county sanatorium or children’s summer camp or Sanatorium.
   (c) Have you had a children’s tuberculosis clinic. If so, have the undernourished and positive children received the needed care which is treatment for all diseases and defects by a physician and dentist, and for the tuberculous and undernourished children, nutrition classes in school and health habit formation in connection therewith and follow-up work in the homes. The 1.8% who are in need of Sanatorium treatment should be sent to the children’s division of the State Sanatorium, or a county sanatorium.
   (d) Have you followed into the homes where the children live to find out who infected them and remove that source of infection from the children and have him or her or both treated.
   (e) Have you had adult tuberculosis clinics.

(2) Do you have the annual sale of Tuberculosis Christmas Seals in your community. This is promulgated by the national and state tuberculosis associations. Twenty-five per cent of the gross receipts is sent to the state tuberculosis association which forwards half the amount to the National Tuberculosis Association, the remainder is kept by the local organization for use in the local community. If there is no local seal sale organization in your community, your club through its health department should take on this activity. If there is one your club should render every aid possible. Many clubs are doing so and accomplishing wonderful things thereby.

GIVES THE CHILDREN A CHANCE

The average American child of today has more done for its present and future health and happiness than any other youngster the world has ever seen. And yet, withal we are doing for our children, the great mass of us have scarcely more than scratched the surface of the possibilities which lie open to us. Children are being studied as they have never been studied before, not only their bodies but their minds, their intellects and their moral performance. The net result of these studies is enormous and it is possible to do for young children today what was almost unheard of a generation ago.

There are, of course, limitations which the most advanced science cannot overpass. It cannot endow a child with better inherited traits than his parents and grandparents handed down to him. It cannot give him a new germ plasm, nor undo the work of the ages. Within these limits, it can and often does produce beneficent results which seem little short of miraculous. In the past thirty years there has sprung up an ever-increasing group of specialists in the diseases of children. In our larger cities they are readily available; but speaking broadly and in a nation-wide sense the American mother has not yet discovered the pediatrician, nor has she gained any adequate idea of the extraordinary services he can render her babies and her youngsters of tender years. When she does, she will lean heavily upon him.

To the competent specialist in this field a young child is as plastic as a
lump of putty. He can not only bring it through the usual diseases of childhood, but by taking thought he can enable it to escape many of these ailments entirely. He can build up its resistance, he can detect at the outset harmful physical tendencies and find means to correct them, and he can lay down for each of his patients rules of diet, exercise, hygiene and daily life which will be suited to his individual needs and which will vastly increase his chances of developing into vigorous manhood with a sound mind and a rugged body. Most of these specialists have only children for patients. The large numbers they see bring them the skill which springs only from the widest experience.—Editorial, Saturday Evening Post.

SOME TENDENCIES IN TUBERCULOSIS

The two tables below are quite interesting. We regret to use statistics from Massachusetts. No doubt our State is about the same. The Bureau of Vital Statistics of the North Carolina State Board of Health would have compiled these statistics for us, but the Massachusetts' figures were ready to hand.

**TABLE 1**

PULMONARY TUBERCULOSIS IN MASSACHUSETTS

Approximate increase or decrease in the number of deaths in 1927 in each sex and age-group as a result of the changes in the trends during the period of the World War.

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<th></th>
<th></th>
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<td></td>
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<td>Increase</td>
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<tr>
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<tr>
<td>All Ages</td>
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<td>120</td>
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<tr>
<td>Total decrease</td>
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<td>568</td>
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Representing a decrease in the rate for males in 1927 of 27.4, an increase in the rate for females in 1927 of 1.8, and a total decrease in rate for all ages and both sexes of 12.2.
TABLE 2
Percentage that the rates of 1927 are of those of 1865
Rates read from the trends are approximate only

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<tr>
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<td>1865</td>
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<td>60-69</td>
<td>710</td>
<td>141</td>
<td>20</td>
<td>570</td>
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<td>70-79</td>
<td>900</td>
<td>79</td>
<td>9</td>
<td>900</td>
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<tr>
<td>All age groups</td>
<td>340</td>
<td>76</td>
<td>22.3</td>
<td>370</td>
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<tr>
<td>All age-groups, both sexes</td>
<td>282</td>
<td>86</td>
<td>30.5</td>
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</table>

MANY STUDENTS IN THE TRAINING SCHOOL FOR NURSES AT STATE SANATORIUM ARE EX-PATIENTS

A large percentage of the young ladies entering the Sanatorium Training School for Nurses break down with tuberculosis just as they are completing their high school course and, on leaving the institution as patients, find themselves unprepared for any special type of work as a means of earning a livelihood. During their months of taking the cure they become interested in tuberculosis and eager to help in the great work of reducing the mortality from the disease. Naturally, they decide they can best do this by becoming trained nurses and devoting their lives to the work of caring for those actively "chasing the cure."

Another large group comprising the school's pupils of the past and present is made up of those who have not had tuberculosis themselves, but have been associated with it through contact with members of their own families who have suffered from it. This contact arouses an interest in the disease and makes them eager, like those who have had it themselves, to devote their lives to its cure.

SCHOOL STARTED IN 1915.

The school was started in 1915, and since that time it has graduated a large number of trained nurses, practically all of whom are now employed at excellent salaries in various tuberculosis sanatoria or in private duty. Taking last year's class as an example, one finds that approximately twelve months after graduation three of the ten members are employed at the North Carolina Sanatorium, two are employed at the Mecklenburg Sanatorium, two are completing their third year of instruction at a general hospital with their eyes on a R. N.
degree, one is married, and two are on duty at Pine Crest Manor, at Southern Pines.

Miss Elizabeth Connolly was largely responsible for the school's organization in 1915 and has been its superintendent ever since, except for three years between 1916 and 1919, during which time she served overseas with the American Expeditionary Forces at a hospital in Havre, France. During Miss Connolly's absence Miss Mamie O'Kelly acted as superintendent.

The first class, consisting of Miss Maude Mann, of Saxapahaw, at present assistant laboratory technician at the sanatorium, and Miss Carrie Craig, of Sanford, was graduated in the spring of 1917. Miss Craig did not complete her residence period until some time following her graduation, and, strictly speaking, was not graduated until then. So Miss Mann is entitled to the honor of being the school's first graduate.

Starting with that initial class, a group of young ladies have been graduated every year since 1917. The number has varied from one to ten. The 1929 class consists of five members.

THE DOCTOR MAKES UP HIS MIND

In making up his mind as to whether or not a person has tuberculosis the physician is guided largely by the history of the patient and whether or not he is in close association with other persons who have the disease. To this factor more and more attention is being paid. Five thousand six hundred and fifty-nine infants under two years of age who were seen in the public health institutions in New York City were examined for tuberculosis. Three hundred thirty-six of these infants were found to have the disease. They were divided into two groups, one from those in families in which there were cases of active tuberculosis and the other from families in which there were no such cases. Of the infants that came from families in which tuberculosis was present 47 per cent are known to have died of the disease, and of those from nontuberculous families only 12 per cent died. The investigators assert therefore that the chances of death of infants with tuberculosis in families where there is contact with a serious case are about four times greater than for those in families in which there is no contact with an active case. Two possibilities present themselves in treatment; the removal of the infant from its home, which is contrary to sentiment and desire; and the removal of the person with tuberculosis, who is a serious menace not only to the public but especially to every one in the family. The development of great institutions for the care of the tuberculous makes the latter procedure by far the more desirable.—Dr. Morris Fishbein in Hygeia.

TUBERCULOSIS CHIEF MENACE TO YOUTH, SAYS UNITED STATES PUBLIC HEALTH SERVICE

In ancient Crete, according to an old tale, a monster minotaur was each year placated by a choice meal of the strongest youths and most beautiful maidens. Today the ancient monster of disease is annually permitted to devour large numbers of the finest youth of the land. A recent survey of the United States Health Service reported by Surgeon General H. S. Cumming showed the ages 20-25 years most free from sickness of any time in life, but strange to stay, while so remarkably free from other illness these are the years in which pulmonary tuberculosis reaches its peak. Tu-
Tuberculosis specialists point out this unnecessary waste of youth may be prevented by greater care during these years and the 'teen ages. That youth must be served is recognized, so the appeal made in the Campaign for Early Discovery and Early Recovery now being made by the New Jersey Tuberculosis League and its affiliated branches throughout the state stress beauty, joy and success as the rewards of radiant health. A program of rest, fresh air and good food in the 'teen ages will usually prevent breakdown from disease in the twenties, according to tuberculosis specialists.

**TUBERCULOSIS IN CHILDREN**

1. The incidence of tuberculous infection among school children of Philadelphia, indicated by the tuberculin reaction, corresponds closely to that reported from large European cities such as Vienna.
2. About 1.5 per cent of children from fifteen to nineteen years of age have roentgenologically demonstrable apical tuberculosis.
3. About 15 per cent of children from fifteen to nineteen years of age have roentgenologically demonstrable tuberculosis of the tracheobronchial lymph nodes.
4. Of the children whom we examined, 42 per cent of those who had apical tuberculosis had calcified lesions of the tracheobronchial lymph nodes in addition.
5. A routine examination of school children with tuberculin test and X-ray examination reveals many who have advanced latent infection. Examination of adolescent children is especially important because at this age apical tuberculosis begins to make its appearance.—Dr. H. W. Hetherington before Twenty-fifth Annual Meeting of the National Tuberculosis Ass'n.

**WHY TUBERCULOSIS?**

The epidemiological basis for efforts directed towards control during the early years is grounded on:

1st—The frequent presence of latent childhood tuberculosis in cases of pulmonary tuberculosis (the type that kills) occurring during the 'teens. This small group of between three and four per cent of the entire school population furnishes one-half of the cases of pulmonary tuberculosis before the age of twenty years.
2nd—Children with the childhood type of tuberculosis frequently disclose the identity of parents with chronic fibroid pulmonary tuberculosis who are dangerous spreaders of tubercle bacilli (the germs that cause the disease).—Dr. Walter L. Rathbun, Cassadaga, N. Y., before Twenty-fifth Annual Meeting of the National Tuberculosis Association.

**IMPORTANT FACTORS IN THE DECLINE OF TUBERCULOSIS**

By

LOUIS I. DUBLIN, Ph. D., New York

(Paper presented at Twenty-fifth Annual Meeting of National Tuberculosis Association, Atlantic City.)

The year 1928 had the lowest death rate on record for tuberculosis. Thirty years ago, the rate was close to two and a-half times as high as now. In a single year, 140,000 persons will survive who would have died from tuberculosis, had the rates of 1900 prevailed. My view is that this rapid decline
has resulted largely from the direct intervention of all the agencies of government and of social service interested in the health and well-being of the people. Improved industrial and economic conditions have likewise played a part, and probably a very important part, in the reduction of tuberculosis. The decline does not represent, as some have suggested, a temporary downward trend. Not only has tuberculosis mortality been falling, but the rate of reduction has been an ever-accelerating one. There is no indication that this state of affairs will change or that forces beyond the control of man will cause the mortality curve to swing upwards. I firmly believe that by continuing and strengthening the same activities which have been directed against tuberculosis in the past, we can still further reduce the incidence of this disease and ultimately eliminate it from the list of significant causes of death.

The several factors that seem to me involved in the decline of tuberculosis, which I here propose to discuss are: (a) The standard of living; (b) Sanitary control; (c) Tuberculosis hospitalization; (d) Public health education.

(a) The Standard of Living

The standard of living has an immense influence on the tuberculosis death rate. This is shown by comparing the death rates among the various economic classes. At the main working ages of life, the industrial classes have rates more than twice as high as have commercial and professional workers. The standard of living of the American people has greatly improved in the last thirty years. Not only have wages increased absolutely, but their purchasing power has also risen. A bulletin issued by the American Federation of Labor states that the real wage income of the American people has increased so that, roughly, the wage-earner today can buy twenty per cent more commodities than he could at the beginning of the century. Though there is still enough poverty, it is nevertheless true that the worker is better off here than he is in any other country, or than he has ever been in any other epoch. This improvement is even more significant because the size of the average American family has gone down. The family resources have therefore been used to greater advantage for each individual. Altogether, there is more and better food, better housing, better medical care and a better understanding of how to use one's resources today than thirty years ago. As poverty is still further eradicated, tuberculosis mortality will still further fall.

(b) Sanitary Control

Sanitation is the function of health departments. Ordinarily 10 per cent of the activities of the well-organized health department are directed against tuberculosis, but in some of the better organized departments, the figure is very much larger. One health officer says that if everything were included which bears on tuberculosis, a quarter of the health department work could be charged with tuberculosis eradication. This would include the supervision of the milk supply, its pasteurization, and the inspection of meat and food supplies. There is also the reporting of cases of tuberculosis, their supervision by field nurses, the establishment of clinical facilities for the examination and diagnosis of cases and their contacts, the admission to hospitals and sanatoria, the organization of open air classes, day camps and preventoria for children. In many communities, there are anti-spitting ordinances, housing inspection, and in some, isolation and forcible removal of advanced and dangerous cases. All of these activities, when properly carried out, have the effect of preventing new cases and prolonging the life of those suffering from the disease. Reporting of tuberculosis is better and so is
treatment; today, there are not far from fifteen cases for every death that occurs in a year. The earlier studies showed only five open cases for each death.

(c) Hospitalization

Hospitalization has played a very important part in the reduction of tuberculosis. Communities which have adequate hospital facilities, that is, one bed for every death, have uniformly the lowest tuberculosis rates; those with inadequate facilities have the highest rates. There are today approximately 75,000 beds for the tuberculous in the United States, which represents a shortage of about 25,000 beds if all the requirements of the country are to be supplied.

A study of patients discharged from the Metropolitan Sanatorium at Mt. McGregor discloses that they have a subsequent mortality more than three and a half times that of the whole company staff. Cases far advanced on admission show the highest mortality ratio. Incipient cases show the least. Male ex-patients have better subsequent mortality than females. As regards ability to work following discharge, 60 per cent of all cases discharged between 1914 and 1926 were able to work in 1927, 11 per cent were unable to work, 14 per cent were dead, and information for the remainder was missing. The record of males as regards ability to work is much better than that of females.

One of the first steps in the tuberculosis campaign is to discover the early cases of tuberculosis and to provide care for them. For thirty years, the sanatorium movement has developed rapidly, but there has been little attempt to adapt its facilities to the actual conditions of the tuberculous sick. Incipient cases give the best promise, although sanatoria cannot quite wipe out defects of disease, even in such cases.

(d) Public Health Education

The tuberculosis movement has been furthered by the development of the programme of public health education. But it has, in turn, been the most powerful agency in creating and launching the movement for popular health education. Today, practically every man, woman and child knows how tuberculosis is spread and that it is curable and, to a certain extent, preventable. Public health education is responsible for the new hygienic regime which is the chief reliance against the spread of infection and the breakdown of individuals with latent tuberculosis or other communicable diseases. The schools have played an important part in this movement. In future, the newspaper, the film and the lecture platform will have to assure more and more the function of educating the public in all matters of health and will include among their most important activities the prevention of tuberculosis.

NOTICE

We still find it necessary to call attention to numerous requests which we receive from people asking for literature, or that their names be placed on our mailing list to receive the Health Bulletin, and who fail to sign their names or to give any other indication of their identity. If any such people happen to read this notice, they will, of course, understand why their requests have not been heard from.
DEATHS FROM TUBERCULOSIS, PULMONARY AND OTHER FORMS, BY AGE, RACE AND SEX GROUPS FOR YEAR 1928

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<tr>
<th>RACE</th>
<th>Total</th>
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<th>1 year</th>
<th>2 years</th>
<th>4 years</th>
<th>6 years</th>
<th>8 years</th>
<th>10 to 19 years</th>
<th>20 to 29 years</th>
<th>30 to 39 years</th>
<th>40 to 44 years</th>
<th>45 to 54 years</th>
<th>55 to 64 years</th>
<th>65 to 74 years</th>
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**Total** 2,244 1,030 1,204 10
"It should be a matter of State pride to every patriotic North Carolinian to know that the tuberculosis death rate in this State has gradually decreased, along with the decline in the United States at large, during the last twenty-five years. I feel sure that the Great National Tuberculosis Association, with the North Carolina Tuberculosis Association affiliating with the former as it has through your able service during these many years, has contributed materially to the decline in suffering, sickness, and deaths from this terrible disease.

"As your fine organization is financed exclusively through the sale of Christmas seals, I wish to commend this work to the people of the State, and I hope that the sales this year will exceed in number the records of any previous year." — O. Max Gardner.

(Quoted from letter by Governor Gardner to Dr. L. B. McBrayer, Secretary, State Tuberculosis Association.)
THE LIVING MEMBERS OF THE CLASS OF 1879, U. N. C.

Last June the ten men shown in the above picture, the living members of the class of 1879, held their fiftieth reunion at the University of North Carolina. The two ladies were not members of the class. Every one of these men is a living refutation of the more or less popular theory that a man is done at 40, in his dotage at 50, and out at 60. One of the group wrote his first book achieving national success at sixty-five, after making a distinguished record in the law and as a judge. Another at seventy-five was a leader in the last Legislature. The medical, legal, business and political life of the State has felt their influence from one end to the other.
MEMBERS OF THE NORTH CAROLINA STATE BOARD OF HEALTH

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)
Infant Care (by Mrs. Max West)
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Save Your Baby
Hints to North Carolina Mothers Who Want Better Babies
Table of Heights and Weights

The Runabouts In the House of Health (pamphlet for children from 2 to 6 years of age)
Baby’s daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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SHALL IT ALWAYS BE DECEMBER FOR THE AGED?

With some little misgiving we attempted to make the December number of the Health Bulletin last year, 1928, more or less an Old Age Number. In that issue we depicted some extent the plights of old people whose partners have gone on and who are beset with the ills and diseases incident to the burden of their years. The response to that number was so overwhelmingly favorable that we have decided to make our leading consideration for the December number again this year center around some of the present day problems of old people.

We do not have the figures at hand, but it is more than likely that not less than ten per cent of the people at present living in North Carolina are past sixty years of age. In other words, it is likely that there are at least three hundred thousand men and women in the State who are approximating, or who have already passed, their three score year and ten allotment. In North Carolina at this time it is exceedingly pertinent for the State Board of Health to give due consideration to the problems of this increasingly large class of people. The reason for this is that during very recent years North Carolina is rapidly undergoing the revolutionary changes incident to becoming an industrial state.

Up to a few years ago, ever since the birth of Virginia Dare on Roanoke Island, North Carolina has been an overwhelmingly agricultural State. It is true that agriculture to-day occupies a very important place in the scheme of things, but it is also true that agriculture is no longer the predominant influence in the State of North Carolina. As North Carolina rapidly becomes an industrial power, the two great questions of capital and labor and their inevitable clashes become of more absorbing interest all the time. To add to the confusion and the predicament of increasing numbers of old people, this industrialization of our State takes place at a period in the world's history when technical inventions, financial mergers, and other changes are bringing about very rapidly a revolution in industry itself. This revolution of methods and means, in which numbers of men are displaced and machines installed, is serious enough in the older industrial regions of the North, but it is doubly serious in a State in which industry is comparatively new, as in North Carolina.

Nearly all the employees of the various mills and factories in North Carolina at present come directly from the farms or the very small villages and towns of the State. They have no long line of ancestry, as the laborers in some of the regions of the North have, through which they have become adjusted to coping with industrial problems. Therefore the great body of labor in North Carolina is very likely to be misled in one of two directions. That is, they may become too docile, and therefore are unable to look out for their own interest and to provide for themselves
in shifting economic conditions, or they may take the equally or possibly more dangerous direction of stubbornness and rebellion against conditions that they find themselves in. It is a time in this State for the exertion of the most unselfish efforts and sound thinking on the part of every responsible citizen, so that we may eventually emerge from the present status into a system equitable and just to all.

On the farms, especially the farms of the small landowners coming down from generation to generation, each succeeding generation inheriting its portion of land from their ancestors, the problem of the old has been less acute. There has always been plenty of suitable work around the farm to keep the old people busy and occupied, into which scheme of things they have always fitted perfectly. In the present machine age this class of people, who find themselves engaged in the labor of industry, find that it is an economic loss to undertake to carry along any member of the family who does not have an earning capacity. The old people are quickest to perceive this feeling, and thousands of them evidently suffer acutely in such a situation. These people coming from the farms have burnt their bridges behind them. The farms are gone and rest in other hands. They cannot turn back. They did not have sufficient background to have enabled them to prepare for the emergencies of being prematurely laid off from work, and therefore they are, plainly speaking, at the mercy of the world.

All of these problems will be met in the future. To those of us who are easily discouraged, it looks as if it will be the distant future. So the problem for this generation is right with us at this time. In these days of the five-day ship crossings of the Atlantic compared to the three months it took Columbus to cross, and the round-the-world trips by air ships, and the immense advances in traffic made in other directions, we are impressed with the continual shrinking in size of the earth. In other words, the earth today is many times smaller, practically speaking, than it was even a generation ago. This means of easy traffic and access to the heretofore remote sections of the earth serve to convince us as never before that the civilizations of the world are of very comparatively recent origin. So we may be able to look back and compare our treatment of old people today with that of the savages, who promptly murdered them when they became unproductive, and realize that we have indeed made a little progress. But we have a long way to go yet.

When industry becomes fixed and stable and the children of the present laboring classes, through various means, have improved their status, become better educated and better paid, and therefore more stable citizens, it will be easier to work out plans for the intelligent and humane care of those who are no longer able to be in the thick of the conflict. For industry as a whole, undoubtedly the old age pension on the principle of the present sickness insurance or some such method will be adopted; that is, when labor is secure and industry stable. A certain amount of the wages earned by every employee, a little each year, will be set aside by the corporations for which these people work, to become available when past sixty, when they may retire and draw the benefits of their own labor and thrift in savings accumulated throughout the year, this to be done for the balance of their life. The Atlantic Coast Line Railroad has long had a department known as the Relief Department. Every employee of that big concern, before going on their payroll, must stand a physical examination. They have an age limit beyond which they do not take on any new employees. Once on their payroll, however, an individual of capabilities and character, who is willing to work and to take his place and to discharge
his responsibilities as an employee of that corporation, is assured of a place for life. Each month out of his wages a small percentage is retained by the corporation to which they contribute a certain amount. This is put together into a fund and in case of permanent disability or of inability to continue in the work at sixty years of age or afterwards, they may retire on a monthly income sufficient for their actual needs for the balance of their lives. All industry of the State must sooner or later come to a similar arrangement.

OLD AGE ANNUITIES

The insurance feature, as at Roanoke Rapids in case of illness during working years and as mentioned by the Atlantic Coast Line Railroad Company, will, after all, embrace only a small proportion of the aged people who will need assistance in their later year. The burden of care must be eventually shouldered by the State itself. Already a number of states have passed "old age pension laws."

The word "pension" sounds harsh. Why not call it old age annuities? The sound is more business like and smacks not a whit of charity. And business is exactly what it is or ought to be. Such a law ought to be simplicity itself to enforce. The source of funds should be easy. The establishment of a sinking fund, obtained jointly from the general tax fund and from the income of the beneficiaries during their productive years, could form the basis. It would be easy enough to provide exception through which no individual could be barred out as a result of illness or loss of jobs for which the needy one could be blamed.

If civilization is to endure, and human rights are not to be subject to the cold domination of materialism, and human beings thus bound in slavery to wealth and property, it is inevitable that better provision shall be made for helpless old people. As most of the world is at present organized, it is almost a crime to grow old. Our boasted humanitarianism is really very often no better than the hard,
cruel methods of nature and the lower animal kingdom.

**AGE LIMIT SHOULD BE HIGH.**

It is significant, however, that most of these great corporations and the states that do provide old age pension set the minimum age limit as high as sixty years, some of them sixty-five years, and others even as high as seventy years. This indicates that the productive power of men and women in normal health extends far beyond the period of forty, now recognized as the deadline by certain short-sighted corporations as well as individual employers. As a rule, unless ill health or other troubles have undermined them, the mental ability of the average man and woman is in its prime far beyond sixty, and often beyond seventy. When these things are taken into consideration with the experience gained through a life of effort with the care that is exercised by an increasing number of people today toward safeguarding their health through biological living; there should be an increasing number of older people every year who are more and more valuable as citizens and workers of the State than ever before. If people in the critical ages from forty to fifty would adopt the plan of having a careful physical examination made at least once a year, and therefore detecting early the little signs and symptoms that are always present in the beginning of degenerative diseases, these things could be postponed for many years, and the earning power and capacity for happy living on the part of old people would be greatly increased and their years prolonged a great deal.

The young and middle aged people have a tremendous responsibility on them, which should require them to exercise every means at their command in making it easier for the older people and making their lives happier and more useful to their families and friends. Old people themselves can contribute to their own happiness by endeavoring to keep their hands and minds occupied in some useful and congenial task every day that they are able. The boy or the girl at twenty looks upon the years ahead of them as stretching out interminably ahead. In other words, it seems to them that they may live so long that it practically seems like forever to them. They are naturally interested in the problems of life and living, in the pursuit of happiness and pleasure, and they have no thought whatever of the problems of old age, of the shortness of the years that are going to pass by. It is natural therefore, for older people, or those past fifty or sixty, to contemplate their own lives and to often become overwhelmed with a sense of the shortness of life as well as its uncertainties, and begin to calculate the possible number of months, the weeks, or even days that they may have left. The finest way to counteract this depressing attitude has been exemplified time and again through the statement of old people who have avoided such an attitude and who state that they have kept young in viewpoint through association with younger people and through keeping up with the progress of the world and the freshness of ideas. This does not mean that every old December should try to marry a May, but it does mean that morbid forebodings should be put well in the background or banished altogether, and the world taken as it is.

When a man or woman is past sixty, the passions and enmities and conflicts incident to every one's life should be well behind and remembered only in retrospect. Such people should be able to philosophize and remember that even the oldest life is but a moment, as time is marked, and therefore it behooves every living individual to make the most of his or her opportunity for happiness and an effort to contribute to the happiness of others as long as life lasts.
PERIODIC HEALTH EXAMINATION

A few months ago this division of the State Board of Health sent out a short statement, issued by the State Health Officer, advising health examinations and dental examinations at periodical intervals, in order to guard against heart diseases particularly. A personal friend of the State Health Officer saw one of these statements, published in his home paper, while he himself was sojourning in a hospital in the North for this particular purpose. The friend of the State Health Officer writes as follows:

"I anticipated you were going to come out shortly with the statement like the enclosed clipping; so I took the train for this place last week. My wife and I have both been here ten days and will probably remain another week. Both of us have passed through the clinic, and been greatly benefited by the 'rest cure' we are getting here. We have had all sorts of laboratory tests made, been X-rayed from hat to shoe sole, and I am glad to state all that has resulted in favorable findings."

This friend of the State Health Officer picked out a well known and more or less famous institution up in New York State to consult for his periodic examination. It is needless to say that it is costing him a pretty pile of money, but as he has plenty of it that is no item in his case. However, as there are thousands of people in the State of North Carolina who are not so fortunately situated, and great numbers of them need the examination a great deal worse than our chief's friend, judging from his statement, we are writing these lines to urge these people to arrange to consult the local physicians and clinics of North Carolina for their periodic examination. This advice is, of course, urged on the promise that there is a large number of physicians, and some clinics in this State, who are just as competent, and who can make just as thorough examination, as the celebrated place in New York State mentioned in the friend's letter.

Just as we are writing these lines a letter comes in from a town of fifteen thousand people in the piedmont North Carolina from an intelligent man who has been a sufferer from different kinds of ailments for some four or five years. He has corresponded with this department at intervals, asking for suggestions from us with reference to different kinds of problems he was facing. The letter we are mentioning now is a response to our last letter to him, some ten days previous, in which we advised him to ask his family physician, whom he has stuck to through thick and thin, to refer him to a trustworthy clinic or specialist where he could have a more thorough examination made in the hope that some of his present troubles could be dispelled. We are quoting from his letter as follows:

"My doctor sent me to a doctor in ... (one of the North Carolina cities of seventy-five thousand class) about two years ago, and he did not go over me any better than my regular doctor. He said all that was wrong with me was that I was getting poison from my intestines and if I could clear that up I would be O.K. When I asked him how much his charge was, he replied that he would only take twenty dollars from me that day; and all the relief I got was being relieved of the twenty dollars."

Our correspondent says further:

"My doctor is an honest man, I believe, and he has certainly been faithful to me, but he is so busy he does not have time to give me the time I should have, and that seems to be the chief trouble with him in being able to help me get down to the bottom of my condition. Within the past four or five years I have paid out about five hundred dollars for doctors' fees. I have had my appendix
out, my tonsils have been removed, I have been X-rayed, and I have had all the rest of it first and last. The reason I have been writing you is because I know you are not caring about the money, and that you will honestly tell me the truth."

The extracts from the two foregoing letters state the case concerning periodic physical examination as practiced in the States of North Carolina and New York at present. We have been advising this patient from the beginning to select a practicing physician in his home town, whom he had reason to have confidence in, and then to stick to him through thick and thin. This the sufferer states that he has done. That is the first requisite for satisfactory relationship between a physician and patient. It was the secret of the old time family physician's hold on the public. The people had confidence in him and they had this confidence because he merited it. He might be ignorant on some medical questions, he might be without much of the modern paraphernalia for making examinations and diagnoses, but there was never any question about his honesty, his common sense, his practical knowledge of medicine, and his faithfulness to the last detail, and above all his conscientiousness in trying to do something for his patient in reciprocation for the confidence placed in him.

Times and methods have, of course, been revolutionized in the practice of medicine, as well as everything else, but the same fundamental principles still obtain in relation between doctor and patient. The patient on his part must manifest, not only through words but actions, absolute confidence in the physician of his choice. He must stick to him through thick and thin, and then the responsibility is placed squarely upon the shoulders of the doctor so confided in, and if he has even a quintessence of honor and obligation to the ethics of his profession, he will do his full part.

We know that there are honest, conscientious and competent doctors in this State sufficient to give a thorough and satisfactory examination to all the people in it, needing such examination, and we hope and believe that there are enough of them who are able and willing to perform the service in consideration of fees within the reach of the general public.

In conclusion, we herewith reiterate the advice we have been repeating for several years, let everybody have a periodic physical examination at least once a year, and let it be a genuine physical examination.

**BUSINESS MEN FAVOR OLD AGE PENSION**

Early in October one of the syndicate news services of the country sent out from New York the following interesting item concerning the question of old age security. This item is so interesting and so important, and fits so well into our scheme in the December Bulletin, that we take the liberty of quoting in full.

"Business men are changing their view toward old-age pensions, according to a statement made before the New York Commission on Old Age Security, which is holding public hearings in this city."

"A representative of the National Industrial Conference Board, repre..."
senting a score of anti-union employers' associations, canvassed 318 business men. He reported that many employers who had previously held that such legislation is “socialistic” and antagonistic to the American philosophy of individualism, have changed their minds, in view of the enormous complexities of modern economic and industrial life.

"Prominent social workers claim that neither private charity nor group insurance or industrial pensions can cope with old-age dependency.

"Economists, statisticians and representatives of charitable and relief agencies insisted that old-age pensions is the only method of dealing satisfactorily with the problem. All admitted, however, that even pensions would not do away with the necessity for additional relief in special cases.

"Witnesses declared it is untrue that bank savings and regular insurance take care of the aged. Figures showed that the amount of industrial insurance (the only kind the poor can afford) lapsed in 1927 as compared with the amount paid out in death claims.

"It was estimated that between 30 and 40 per cent of the workers have no insurance. The prosperity of the nation, it was claimed, is largely due to the lack of foresight of the population and their reckless expenditure of their income.'

"State Senator Mastick, chairman of the commission, has declared in favor of old-age relief in some form and that an investigation of the entire subject is necessary. He did not venture an opinion on what form the commissioner's report to the legislature will take."

The same news service about the same time also issued the following statement concerning the working of the old age pension system in the Dominion of Canada. It is unequivocally stated that the plan is very successful in the Dominion. Following is the item concerning the Canadian system:

"The Canadian old-age pension system is working successfully in several provinces, according to E. H. S. Winn, chairman British Columbia Compensation and Pension Board, who discussed this subject at a meeting of old-age pension advocates in this city.

"The British Columbia old-age pension act has been in effect two years," said Mr. Winn. "The cost for the second year, with over 4,000 dependents receiving pensions, is about $1,000,000, one-half of which is reimbursed to the provinces by the Federal government. Funds come entirely out of public taxes. Administration is local and the cost is very low, about 1½ per cent.'"

THE NURSES' PAGE

In no activity touching human relations are the ministrations of a competent nurse more acutely appreciated than in caring for invalid or semi-invalid old people. A recent survey of nursing service in some states indicates that there are more trained nurses than are able to find profitable employment. This would not be true if there were some system by which all the aged and infirm who need it could be direct beneficiaries of a nurses' services. Such an ideal may be reached some day through a better organization of community nursing service.

At no period of life is creature comfort, spiritual consolation, and intellectual fellowship more needed or appreciated than in life's twilight.

When the loves and hates and passions of younger years are gone, most of life's illusions are also gone with them. In the language of one dear old woman past her three score and ten, suffering a thousand aches in as many places, they are "Waiting for the Boatman" with little real interest
in life except in retrospect. When feet are unsteady and walking is unsafe, when vision is too dim for much reading, even though the printed page still held interest, then it is that the little world encompassed by the walls of a single room assume a vast importance in the scheme of things for the man or woman fortunate enough to achieve this stage.

The journey is uncertain no longer for old age has arrived. Fortunate is the individual who at this period is able to maintain a philosophical mental attitude and a fresh outlook through contact with children and young folks, and so to enjoy that poise which makes so many of them dear to everybody who comes in contact with them. In such cases the old person, particularly a grandmother, naturally becomes the center of all family activities about the house. The picture in such a situation is only marred when the old person is called on to endure more than a fair share of the frailties of age. The degenerative diseases so often present in chronic form cause much suffering as well as discomfort. There are sure to be many minor ailments to make life miserable. Constipation is nearly always a disturbing factor. Sore mouth is unduly present. Small sores and ulcers give a great deal of trouble. Teeth unless long since gone are a source of pain and danger. Sleep is fitful and fails to refresh. The cough so often present is exhausting and that causes pleuritic pains which add to the general discomfort. Such elderly people resent being “babied” and their sensitive souls are injured at the suggestion of their being invalids. They are upset if considerable relatives insist on calling the family physician for all their “little aches and pains” as they term it. So, in these numberless homes of such old people a tactful, wise nurse can within a few minutes spell the difference for them between discomfort and happy satisfaction. There is no suggestion that the nurse take the place of the physician—far from it—but the nurse can do much in a few minutes that physician cannot do at all. We are not speaking of the ultra professional nurse with her inevitable handbag, long rain coat, man’s neckwear and plug hat; but the fine type of graduate nurse—womanly, competent, sympathetic and above all the kind who are able with a few deft strokes to make a hard bed soft, and who can make an orange-albumen taste better than an old time egg-nog.

We trust that every nurse who may read these lines will resolve to visit at least one half dozen old people during the Christmas holidays and take along all the paraphernalia they possess in the way of sunshine and good cheer. The old English poet had the idea when he wrote his exquisite little poem on “Sympathy,” beginning with the lines:

"Tis a little thing
To give a cup of water; yet its draught
Of cool refreshment, drained by fevered lips,
May give a shock of pleasure to the frame
More exquisite than when nectarine juice
Renews the life of joy in happier hours."

These Greensboro boys are busy making men.
Constipation has been called the Great American Disease. However, it is not a disease, but a condition due to a variety of causes.

We may consider three main types—spastic, atonic, and obstructive.

Spastic constipation is by far the commonest type. The intestinal wall contains involuntary muscles running both longitudinally and in a circular direction—along and around the bowel. An intestinal contraction involves a complicated interplay of these muscles. If, however, the contraction is to be effective in pushing the bowel contents onward, such a contraction in a given portion of the bowel must be associated with a simultaneous relaxation of the portion of the bowel immediately beyond the contracting part. If the entire bowel, or a considerable length of it, contracts all at one time, the bowel contents are not moved along, but are simply squeezed. This is just what happens in spastic constipation, and explains its essential nature. A long segment of bowel is irritable and will not relax as it should, but clamps down in an extensive spastic, or spasmodic, contraction. The bowel contents remain where they are, and will not move on until the spasm relaxes. The longer they stay in the bowel, as a rule, the more water is absorbed from them, and they tend to get unnaturally dry and hard and difficult to expel.

The main causes of spastic constipation in most cases are nervous in origin. The high tension of modern life, the hustle and bustle, the hurry and worry, are factors increasing nervous irritability and favoring spasmodic intestinal contractions. A crowded routine of life, with lack of prompt attention to the calls of nature, with too little time allowed when such attention is given, favor additional nervous irritability.

Atonic constipation is just the opposite of spastic. It is due to a lack of sufficient muscular activity on the part of the intestines. It is often seen as a complication of severe exhausting illnesses, after surgical operations, etc., and may also occur from eating a diet too exclusively made of foods that are so completely digested and absorbed as to leave too little undigested waste matter for the bowel to work on. It is fairly frequent as a chronic condition in the aged, when the intestinal muscles, like all the rest of the muscles of the body, may show a certain amount of wasting away, with a consequent loss of power.

Obstructive Constipation. It is not intended to include under this heading the serious surgical emergency known as acute intestinal obstruction, which occurs when a hernia becomes pinched in a narrow space, and in certain other situations which are fortunately rare, as this justly dreaded condition is very rapidly fatal if not relieved by prompt operation. However, many things may cause a partial obstruction to the intestinal tract, which tend to slow the current of its contents. Little kinks in the bowel, partially constricting “adhesions”—little bands of fibrous tissue encircling and narrowing the bowel slightly—the abnormal pressure of certain organs outside the intestines, such as a displaced uterus, an enlarged prostate, a tumor pushing against the bowel wall, etc. One of the most frequent causes of
an obstructive constipation is the development of focal impactions. These often result when constipation is already present due to other causes, and they make the condition worse. If there is too great delay in the passage of the bowel contents, and too great absorption of water, a portion of the hard dry stool may get stuck in the bowel and keep getting drier and harder, and also keep getting larger because more material may be constantly added to it. This usually occurs in the lower part of the large intestine. Sometimes the wall of the rectum may be lined with a thick hard mass of dried feces that the patient cannot evacuate, yet a small channel is left through which a partial evacuation occurs daily, and the patient does not realize that he is constipated, though he may often notice that evacuation seems to never be quite complete.

The symptoms associated with constipation are many and varied, but need not be detailed at great length, as they are familiar to everyone. Lassitude, weakness, headaches, coated tongue, bad taste in the mouth, foul breath, loss of appetite, abdominal distention, a feeling of heaviness in the abdomen, inefficiency in work, nausea, and various other phenomena grouped under the vague term "indigestion," etc., are well known. Sometimes conditions less obviously due to constipation may have their cause in the absorption of poisons from the intestinal tract that fail to be eliminated properly—some cases of neuralgia, neuritis, chronic muscle and joint pains loosely miscalled "rheumatism," etc., may be examples of these.

The prevention and treatment of constipation can best be discussed together, for no treatment is adequate that merely clears out the intestinal tract without tending to prevent a return of the trouble.

As may be seen from what has already been written, the causes and types of constipation are varied. Often more than one cause may be operative in a single patient. Therefore, in attempting adequate treatment it is of the first importance to try to detect the type and cause of the trouble. A thorough history of the details of the individual's daily life should be worked out. If there are emotional disturbances, excessive rush or worry, inattention to the calls of nature, etc., these conditions should be corrected. Improper diet must be changed to a proper one. In some cases exercise is all-important. The writer has treated two or three men with nothing other than the simple prescription to join a business and professional men's gymnasium class at the local Y. M. C. A. and get regular exercise and recreation therein, with most gratifying results. On the other hand, some patients need rest rather than exercise, and to order gymnastic work for such persons would be adding insult to injury. The element of recreation is often very helpful in its power to divert the mind from worries and anxieties, and often demonstrates the literal meaning of the word—re-creation.

There is no standard diet for constipation. Some patients need more green vegetables, celery, and other forms of "roughage." However, the roughage idea has been carried to the extreme of a fad by some, and Dr. Walter C. Alvarez of the Mayo Clinic has done great service in showing us that some persons need a "smooth diet" rather than a "rough" one.

General hygienic living—plenty of sleep, fresh air, regular habits, etc., is of great importance.

Besides a careful history, a thorough physical examination of the patient is indispensable. Constipation is a condition secondary to something else, as a rule. If it is of the obstructive type, the type of obstruction must be known to affect a cure. Fecal impactions must be removed when they
are present. This is done in various ways. Sometimes oil enemas will do the work, sometimes the impactions have to be broken up with the finger in the rectum. Very high impactions that do not yield to other forms of treatment may on rare occasions have to be removed surgically. Other forms of obstruction are usually surgical. If the constipation is secondary to some other disease, that disease should be discovered and treated, of course.

It is by no means unusual to see spastic constipation due to eyestrain, and cured by wearing proper glasses. Eyestrain often means a strain on the whole nervous system, and once this strain is removed, the spasmodic condition of the bowels relaxes, and the patient is well. Chronic disease of the appendix, hemorrhoids, lacerations from childbirth, and a host of other conditions are the real causes of many cases of constipation. Often these organic causes coexist with emotional causes that put an added strain on the nervous system, and in such cases, all the causes that are found should be corrected.

Nothing so far has been said about drugs, for the simple reason that drugs do not cure constipation—they merely give temporary relief at best, and at worst they upset the stomach, irritate the whole digestive tract, and make the constipation worse.

As a general proposition, strong purgatives should be avoided in treating constipation. Castor oil, salts e. e. pills, and various other forms of "dynamite" almost always have a constipating after-effect, and irritate the bowels. Castor oil may be indicated in a case of diarrhea due to some irritating food that should be cleared out of the system at once, but it is no treatment for constipation. Epsom salts may be a valuable temporary measure in an attempt to lower blood pressure, but it has no place in treating chronic constipation. It is a sound principle to rely on drugs as little as possible. At times it is urgent that the bowels should be made to move. Often a simple enema of warm water, or warm water with a teaspoonful of baking soda in each pint, or warm water plus some sweet oil, despite the fact that the two do not mix well, will be the best thing to use in such a situation. It is usually best to let the enema run in slowly, so that it will soften the bowel contents and work its way as far up as it can. Often it is well to unload the lowest part of the bowel with one injection, and then immediately follow with a further injection to go higher up. A soft rectal tube is better than a hard one, as it is less irritating, and there is no danger of perforating the bowel. It should be lubricated with soap, vaselin, etc., and should be inserted gently, upwards and forwards, in a general direction towards the navel. A fountain syringe that flows by gravity is the best type to use—the pressure should be avoided. A height

This beautiful photograph was given to us by Prof. John J. Blair of the State Department of Education. Baseball and the Flag seem to be on a parity here. And the outdoor combination spell health.
just sufficient to permit a free flow into the bowel, and no more, is best. This is preferable to the type of syringe where one sits on the bag to create the pressure.

There are a very few mild laxative drugs that do not appear to have a constipating after-effect, and the lubricant mineral oil also seems to be free from this undesirable action. None of these things, however, laxatives, mineral oil, or enemas, can take the place of the institution of proper hygienic living, and none of them should be considered as more than temporary expedients to give relief over a limited period of time, with the possible exception of certain atonic cases in the aged. The idea of treatment is the restoration of normal function so that drugs are unnecessary. Function is never normal that has to depend on drugs, lubricants, or enemas.

It should be evident, by this time, that a thorough conscientious physician is needed to search out the causes, determine the type, and direct the treatment of constipation, if the best results are to be obtained. The study of the details of daily life involved in a properly made periodic health examination will often correct unhygienic ways of living before they cause actual constipation, and so prevent the condition. About the worst thing that can be done to produce or aggravate constipation, is to take a weekly or more frequent dose of salts or castor oil on false theory that such drugging is “good for the system.” Sooner or later, trouble will result. You can’t keep whipping a horse unmercifully and expect him to remain a good horse, and you can’t keep irritating a bowel with strong purgatives and expect to keep healthy.

The sensible intelligent person will have a thorough examination by a good physician, and will follow his advice.

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WHEN THE TB TRAVELS

By
Sudie E. Pyatt

When the TB travels comfort, rest and food, with fresh air thrown in for a good fourth, are the things that make the trip successful and enjoyable. This applies whether the TB is actively ill, in the first venturesome stage leaving the sanatorium, or a veteran of some years experience and adjustment to normal conditions of living.

A trip that lasts longer than six hours is always more comfortable made on the pullman cars of a good train than in an automobile. For distances of any length the train is, in my opinion, to be preferred to an automobile bus. The difference in the cost between a day coach and a pullman car is well worth paying for the extra comfort and rest one is able to secure in a pullman. A trip of equal length can be made in a pullman car with far less wear and tear on nerves and lungs, and in greater comfort than the same trip could be made in the not so convenient day coach. This is not an advertisement for the pullman car company. It is the result of my own experience in using trains for travel.

People supplied with money, accustomed always to travel by pullman car may think that a mention of the use of a pullman superfluous. Many TBs are not well supplied with money, and they are not accustomed, as a regular thing, to riding in pullman coaches.
A pillow, which the Pullman porter will always gladly provide, will help to make a twelve-hour trip seem far less long, and save aching backs and bones, not to speak of lungs.

Even if one is riding in the Pullman car of a de luxe passenger train, a visit several times during the day to the dressing room to clean up and refresh one's early—or late—make-up and hair-dressing, helps to keep one feeling fresh and fit. Until tried one has no idea how rested one will feel after an en route toilette.

Food, good, nourishing food, taken at the same intervals such meals would be eaten if not traveling is an essential part of a journey's success. Food may always be taken with one, or secured along the route of travel. It is best, too, not to attempt to do on make-shift meals, but to have full and complete ones that leave you feeling well satisfied and at peace with the particular part of the world you happen to be traveling over.

Messy eating of fruits, candies and cakes along the route of travel will not take the place of regular meals, and unless one gets very hungry while traveling are usually best not bothered with. Frequent drinks of cool water, or other refreshing drinks will often drive away an incipient headache, or help to prevent one altogether. Many of the headaches, and much of the fatigue occasioned by a long trip is caused by insufficient food, or the improper eating of food while traveling.

The arrangement of a trip, what trains to take, stop-overs, and whether to travel by day or night often has a great deal to do with the successful completion of the trip. On any trip of twelve hours or more one might well weigh the advantages of traveling at night snug in a berth, to sitting up all through a long day. On the other hand people who travel infrequently as the TB, or ex-TB probably would, do not often sleep well on the train. There is something in making the trip by day, and getting to your destination in time to tumble into real bed and have a sound night's sleep following the day of travel.

In a twenty-four hour, or longer trip that can not be broken, of course, both the day and night must be spent on the train until journey's end is reached. Then the TB or ex-TB simply remembers the three essentials of a successful and non-tiring as possible trip, comfort, food and rest, and gets as much of all of them as possible all through the trip.

Just as I completed the writing of this article I happened to glance through the September number of a current magazine. There were three articles on transportation in the magazine, by motor bus, airplane and tramp steamer. The article on motor bus transportation states that one may travel from coast to coast by motor buses equipped with berths for sleeping. As to airplane travel I've never tried it, but expect to be able to some day. Tramp steamers? I believe I'll let my adventurous young brothers do the traveling on them for me.

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THE CASE OF THE MIDDLE-AGED
Changing Business Conditions Held to Be Cause for Youth's Perfection

The letter by J. E. McAfee published in The Times was based wholly upon the assumption that the great trouble with the middle-aged worker finding employment is that a new occupation must be learned. This limits the problem to the manual worker solely, a limit that is not right. Don Dickinson, in a recent issue of Printers' Ink, wrote about "The Dark Spot
on the White Collar," and discussed the plight of clerical men and technically educated men who are being thrown out of employment in great numbers as the result, principally, of mergers.

The feeling against men over 40 is merely a fashion. It is leading thousands of men to shave smooth, to dye their hair and drop as many years from admitted ages as they believe the smooth face and the darkened hair will permit. In the ranks of middle-aged unemployed can be found men who have held very important executive positions and who have earned good pay. They may be functioning splendidly when the business changes hands, but once out they are out for good. I have made a personal investigation and know that many employment agencies will not register men who confess to more than 40 years of age, no matter how good their experience. They say that employers do not want them.

**CHANGING CONDITIONS A REASON**

In my opinion the real reason for the rapid spreading of the fashion to prefer younger men is the changing of business conditions. From 1873 to 1898 we were doing business on a constantly lowering price level. Men trained to do business in those days are now old, or at least elderly. From 1898 to 1926 there was a rising price level and people bought rapidly because by waiting prices might be too high. Money was plentiful, in a sense, and production was speeded up. Selling became a hectic affair and the majority of salesmen became little more than order takers for products that were extensively advertised. Advertising became a very important factor in all business.

The peak was reached in 1922 and since then the tendency has been downward, fluctuating within very narrow limits for months at a time, but showing a net recession at the end of each year. Management has become al-

most panic-stricken and we have the authority of Herbert Hoover in the unemployment commission report for the statement that management is far more greatly responsible for inefficiency in business than labor.

**CUTTING DOWN OVERHEAD**

Management today does not understand what is happening. Instead of the former habit of laying off thousands of workers and reducing wages mergers are formed to reduce overhead, which today has reached unwarranted proportions in many establishments. Good paying positions filled by middle-aged and elderly employees are filled with very young men at low wages and seasoned executives at good pay are replaced by very young men who were their assistants at considerably lower salaries. The workers are not interfered with to as great an extent as formerly because present employers have adopted the theory of Ford, that the employee is not merely a producer, his is also the

![A Beaufort baby enjoying the December sunshine. The mother is a former valued employee of the State Board of Health.](image-url)
December, 1929

The ultimate consumer, so must be kept working and earning in order that he may continue to buy. When the worker, however, is laid off or leaves a job, a very much younger man is hired to take his place. The young man is hired because American employers are hysterical and follow the crowd. They are crazed with "pep" and the gospel of pep and think that only young blood contains pep.

The present market craze is merely a symptom of conditions that are affecting our business world. Everyone has become a little bit insane over what money procures. What people want does not appear to be a guarantee of safety after working days have departed, a haven in age, but those who earn salaries and wages wish to live in all respects like people with inherited incomes. The unjust treatment of workers who have past the age of 40 is merely one symptom of what will go down to history as "America's Jazz Age," a phenomenon akin to the Dutch "Tulip Mania" and Law's "Mississippi Bubble." The world appears to be compelled to go through such periods of insanity when injustice reigns, followed by years of depressions and remorseful plodding, the tempo of which gradually accelerates until another attack of insanity follows. The human race cannot, nor can anything in nature, progress on an even gradient; there must be humps and hollows.

For the present generation of middle-aged there is small hope. There must be worked up a sentiment for the display of heart in attacking the problem, but that will not fully settle the matter. The present problem is to keep production at a high pitch with consequent purchasing at a high pitch. It can be done only by holding down to a minimum the number of dependent persons in the mass of people living. With every one independent, other than those of course too young to produce each would spend according to his means.

The solution lies in compulsory insurance. Endeavors to have industry or the government, or both, take care of aged dependants by taxation have unwittingly done much to cause the fashion to spread of not employing those who have passed 40 years. This can be all avoided by compelling each worker to leave with the employer to be handed to the government a definite percentage of the weekly wage or monthly salary. This money will be credited in a book carried for the purpose, like a bank book, and good interest will be paid for it. When the worker becomes incapacitated through illness or injury or fails to find employment after a certain age the savings will be returned in the form of an annuity for life. Some aid may be given by industry and the State, but the main reliance should be upon forced contributions on the part of workers to a retiring fund. Then elderly people will not be a burden on their children and their gloominess will not affect current thinking.

Slowly Down is Apparent

Much is heard of the unfortunate plight of unemployed middle-aged people because more people live today to middle age than ever before. Also, the average person over 40 is far more active than ever before. Also, and this is important, the bar against middle-aged employees affects many whose education and social standing are far better than those of manual workers who chiefly were affected a generation or so ago. The people now affected are more articulate than the manual workers. This is not saying that the prejudice against middle-aged employees is apt to lead to a movement to lay off all those over 40 but it does mean that today when such an employee does lose a job it is impossible to obtain another without the aid of good friends.

The average man, as well as many of our most eminent men, appears not to understand that we are at the
beginning of one of the world's periodic slowings down in tempo in industry, because the number of non-producers, unwilling dependent and actual parasites is increasing at too rapid a pace for the workers to support them and still enjoy all the comforts and luxuries the common people have been taught to appreciate.—Ernest McCul

THE HIGH COST OF SICKNESS

The American College of Surgeons in session last week devoted considerable attention to the problem of the high cost of sickness and its related problem, the high cost of maintaining health.

Dr. W. J. Mayo, distinguished surgeon, speaking from the hospital standpoint, declared that half the population of America finds the cost of hospitalization and nursing can be met, if at all, only by a very considerable sacrifice. It was Dr. Mayo's opinion that too much emphasis has been placed on the desirability of expensive private rooms and private nurses, which patients are encouraged to engage either by hospital or by the belief that only by such provision they may receive the best attention. Said Dr. Mayo:

"My own experience has been that the patient in a well planned ward, giving a moderate degree of privacy, on the whole will make a quicker recovery than in a private room with two nurses, who are caring for the physical needs and increasing the happiness of the patient may suggest a mental state in which the diseased condition is aggravated sympathetically, and if the patient is worrying about the expense a bad effect may be produced.

"When the hospital is built it should be with the common man in mind and have fewer frills and showrooms, and the nurses' home should be good but not complete with a luxurious hotel."

At the same meeting Dr. Glenn Frank, President of the University of Wisconsin, prophesied a medical revolution which threatens to eliminate the private practitioner in much the same way that the industrial revolu-

tion banished the hand craftsman unless the medical profession succeeds by itself in educating the people to a program of disease prevention.

Dr. Frank based his assertion upon statistics showing that the annual economic loss caused by preventable sickness and postponable death is $350,000,000 work days or $1,800,000 annually. Said he:

"It is estimated that this loss could be cut to a point where, over and above the costs of prevention, a balance of something like $1,000,000,000 could be left in the pockets of the working population and the industries.

"Our only hope of a healthier nation, unless we go bag and baggage to state medicine, lies with the unselfish doctor who will consciously reduce his income by giving sick patients advice that may keep them from falling sick again."

The alternative, Dr. Frank pointed out, is that insurance companies, industrial concerns which bear a great share of the losses, and even the State may step in to take preventable medicine out of the hands of the private practitioner. Here was the point of his argument that the medical profession must educate the public mind away from its conception of the private doctor as an emergency agent to the point where he will be consulted at regular intervals for the present sickness prevention.

It is singular that both the address of Dr. Mayo, a professional, bearing on the unnecessarily high cost of medical service, particularly hospitalization, and that of Dr. Frank, a layman, bearing on the expensiveness of illness to insurance companies and industry generally are complementary.
Unquestionably men of moderate means delay medical attention, when it is possible to delay it, because of its expensiveness. If it continues to be prohibitive to the many except in an emergency, the stage is set for the revolution which Dr. Frank reasons may be coming.—News and Observer.

INTEREST IN GOOD TEETH A PRENATAL REQUISITE

Sometime ago the State Board of Health received a letter from a very intelligent woman. Some of the questions she asked so thoroughly cover the ground together with the answer written her by Dr. Branch for the State Board of Health that we here-with quote from her letter, followed with the answer.

Question: I wish to ask for help from you, if among your researches and experiences, you have met with such a problem. Starting with my own mother, all my sisters and brothers as well as myself, have soft, crumbly teeth, of a light tan shade. Is there any food I may eat or any special care I may take to help my offspring to have strong white teeth? I realize the color cannot be helped as much as the quality, but any help you can give me along these lines will be greatly appreciated."

Answer: "The question most frequently asked a dentist by a mother is: "How early shall I carry the child to the dentist?" The answer to this is: 'Before the child is born.'

"By going at this time there are a number of things the dentist will tell the mother that she ought to know. The first is that her health and diet during pregnancy is in a great way responsible for the condition of the teeth in the child. He will tell her that the prospective mother should be under the care of a competent physician from the beginning of pregnancy; that she should have her teeth gone over and put in proper condition by a dentist; that during pregnancy the acids of the mouth are much stronger than at any other time and since the lime salts of her own teeth are not being replenished, but that all the lime salts that she can furnish is taken to make teeth and bone of the developing child, that the cementing substance between the enamel rods of the enamel of her teeth is distin­ grated by the strong acids in the saliva in the mother's mouth; that is necessary that she use a mouth wash that will leave a film of protection over her teeth. Mouth washes for this purpose is lime water and milk of magnesia—one of these to be used the last thing before retiring. Take about a spoonful of this in the mouth and pump it in and around and between the teeth with the tongue and hold in the mouth some two or three minutes before spitting it out. This will leave a film of protection against the acids in the saliva that we just spoke of.

"Another thing the dentist will tell a prospective mother is that the health and diet of the child is responsible for the second teeth; that the first teeth begin developing about the twelfth week of embryonic life and the second teeth begin developing about the birth of the child.

"Milk, fruit, and vegetables contain materials for building teeth and bone, and should be eaten in abundance both by the prospective mother and growing children."
INFLUENZA IN RETROSPECT AND PROSPECT

It is easy for all of us to recall the terrible epidemic of influenza which afflicted this country in 1918. The death toll at that time was the heaviest ever recorded in an epidemic of any kind in the United States. There was a recurring epidemic in 1919, but it was not so widespread as the 1918 epidemic, nor was the disease so severe, neither accompanied by so many complications. Although the 1919 visitation caused many deaths, it could not be compared in severity to the 1918 disaster. In 1920, it will be remembered in various sections of the country, there was a third recurrence of the disease, but this was still milder and of much less consequence than the one in 1919 even. Since that period people have experienced the usual winter visitation of respiratory diseases, with the usual mortality from such diseases as pneumonia and other complications which very often accompany respiratory infections, but there had been no widespread occurrence of the disease which even approached pandemic proportions for the country as a whole until last fall.

On or about the twentieth of October, 1928, influenza was reported in various parts of the city of San Francisco. Quickly following, reports were forthcoming from some of the cities of Southern California and the coastal cities of the northwestern sections of the country. Within a few days the national news agencies were carrying the information to all parts of the country that a serious epidemic of influenza threatened the whole country again, in similar proportions to the pandemic of 1918. The news agencies paid particular attention to the epidemic in Los Angeles, California, making especial reference to the disruption of the moving picture business at Hollywood on account of so many of the actors in that work there being ill from the disease. In proportion commensurate with ordinary travel, the disease rapidly spread to the Central States, reaching parts of New York State and Ohio and the cities of the Southeast, including North Carolina, within a few weeks after its occurrence in California.

The newspapers and health agencies everywhere were busy warning the people to get ready for the threatened invasion. Much apprehension was felt, and the only hopeful element in the situation was the repeated assurance that the disease was mild, and not accompanied with any severe complications. The older health officers and physicians of the country readily recalled that the 1918 epidemic had similar features, when first reported from different sections of the world. Therefore they could easily apprehend that the situation might change over night, so to speak, and that the disease would prove to be another plague of dangerous proportions.

The spread of the disease seemed to reach its greatest proportion in North Carolina about the middle of December. From that period until the end of that month the disease seemed to be rapidly spreading to all part of the State. All through December much illness was reported, and this volume increased with a greatly increased number of deaths reported in the month of January. As plain evidence that the disease was a serious visitation it is only necessary to call attention to the difference in the death rates from influenza for the periods December, 1927, January, 1928, and December, 1928, January, 1929. In December 1927 only 107 deaths were reported from influenza for that month. Compare this with one year later and we find that in December, 1928, 487 deaths were reported from the disease. In January, 1928, 142 people died from influenza in North Carolina, but in January, 1929, 937 deaths were re-
ported to the Vital Statistics, Department of the State Board of Health as occurring directly from influenza.

We would like to call attention right here to the fact that influenza, when regarded as the primary cause of death, is reported as such, and pneumonia, when regarded as the primary cause of death, even though having been preceded by influenza, is recorded as a death from pneumonia.

It seems to us that the foregoing figures need no comment in the way of emphasizing the visitation from this disease in the past winter.

**Surgeon General Calls National Conference at Washington**

The health officers of the country were fully aware of the peril, and lost no time in advising people as to the best ways and means of avoiding the disease. Surgeon General Hugh S. Cumming of the United States Public Health Service was very apprehensive all the time. At the same time Surgeon General Cumming, and all other important state and city health officers of the country, assured the people daily that the progress of the disease was being carefully watched, and that as long as it continued mild, there was no need for a stampede on the part of any large masses of the people.

Surgeon General Cumming called a conference at the Public Health Service office in Washington, D. C., which was held January 10 and 11, 1929. All the state health officers of the United States and a number of the larger city health officers of the country and some of the important professors of public health and preventive medicine in the larger institutions of the country were invited to attend. This conference was largely attended, and some important developments transpired there.

The Surgeon General was criticised to some extent, especially by some of the lay newspapers of the country, for calling this conference in what they termed the middle or near the end of the visitation, instead of calling the conference several years before, in order to map out plans for prevention. To physicians and competent health officers in the country this criticism was unjustified. A disease can only be studied definitely at the time and place when and where it is present; that is, a disease of an infectious and contagious nature.

At the conference which was held in Washington, and which was attended by the state health officer of North Carolina along with about half of the state health officers in the Union, it was brought to the attention of the Conference that some of the same questions and the same problems were being discussed in the same way, and the same conclusion reached, that had occurred in a similar conference called in Chicago in 1918. During this intervening ten years some progress has been made in the study on disease, but very little new facts in the definite specific knowledge in the manifestations of influenza have been learned in addition to what was known at that time. The actual specific germ or germs responsible for the disease still remains unknown.

One of the ironies of the conference at Washington was that Dr. Cumming himself was suffering severely from an attack of the disease, and was unable to attend. His assistant, Dr. W. F. Draper, a surgeon of the United States Public Health Service, presided at the conference. Dr. Draper read in the opening of the conference a communication from Dr. Cumming under the title of "The Present Epidemic and Purpose of the Conference." Among other things presented in Dr. Cumming's foreword to the conference was the following:

"It is a practical certainty that in the years to come there will be further epidemics of influenza of varying degree of severity. It would seem, therefore, to be our duty to take
council of one another in order that
nor combined knowledge may be exerted
toward better methods of control
and better understanding on the part
of the public."

One of the first notable authori-
ties of the country who was called on
in the conference was Professor Ed-
ward O. Jordan, eminent bacteriolo-
gist of Chicago. Dr. Jordan was
asked to review the present knowledge
of influenza. Dr. Jordan emphasized
numerous points, among which were
the following:

"Another feature of the epidemiolo-

gical picture is the remarkable inde-

dependence that influenza shows of any

environmental conditions. No age is

exempt. Both sexes are affected in

very nearly the same degree. All races

of mankind are affected. Social or

economic position offers no barrier to

the spread of the infection. The state

of nutrition and general physical well

being do not seem to affect the spread

of the disease.

"There were only two points of

first-rate importance, perhaps I

should say only one, established during

the 1918 pandemic. One of these was

the observation of leukopenia in a

large proportion of influenza cases.

That observation had indeed been

made in 1892, but it had attracted

little attention. In fact, so good an

authority as Jochmann in 1914 stated

there were no changes in the blood

in influenza. But, in a great many

cases, as you know there is a con-

siderable diminution of the white

blood cells in the early states of the

influenza cases, a pretty good objec-
tive criterion of influenza.

"The second point that was estab-

lished in 1918, and the one I think the

real major importance in our con-

ception of the disease, is based very

largely on the observations of Dr.

Frost and his associates on the matter

of immunity. The observations in

Baltimore and other places, showed

very plainly, conclusively, that the

number of persons who had influen-

za in 1920, in one of the secondary waves

of this disease, were just as numer-

ous among those who had influen-

za in 1918 as among those who had escaped

in 1918. In other words, no immunity

seemed to exist a little more than a

year after the initial infection. Those

observations were confirmed and cor-

robated in other parts of the coun-

dry, and to some extent by observa-
tions in Great Britain. Here is a

fact, I think, of cardinal importance,

and one which affects one whole con-

ception of the nature of influenza.

It may eventually, I think, give us

the clue for the appearance and disap-

pearance of those great pandemics.

"For the first time in our study

of influenza it was shown that the

attack rate varied a great deal, not

only in different localities, but in the

same city.

"With respect to the mode of trans-

mission of influenza I think we have

some very definite knowledge. There

is no reason whatever for believing

that the disease is caused by drink-
ing water or milk or by the bite of in-

sect, or that it is conveyed from the

lower animals. All the evidence in-
dicates the enormous importance of the

human agent in spreading this

disease. But there, as you know, we

get into great difficulties. When we

ask, How does the human being spread

this disease, the infectious theory is

perhaps really the most plausible.

But you all recall the experiments of

Dr. McCoy, Dr. Goldberger, Dr. Leak

and others of the Public Health Ser-

vice carried out under the most fa-

vorable conditions, with human volun-
teers, apparently during an early

stage of the infection; and yet the

experiments yielded almost entirely
negative results when the mouths and

nostrils of volunteers were sprayed with

material taken from the upper respira-
tory tract of individuals presenting

apparently a picture of true clinical

influenza. These negative results

have been and are still very puzzling
to explain. The disease under natural
December, 1929

THE HEALTH BULLETIN

What is going on, a health officer in a measure loses his usefulness and efficiency.

"This epidemic was very much milder than that of 1918-19. A check of the deaths that happened here shows that almost without exception no real healthy person passed out. Those who did die, history teaches us, had some previous organic disease, others were afflicted with diabetes or tuberculosis, nephritis or heart disease. I think that this is interesting in view of the fact that the last epidemic (1918) claimed so many fine, big, strong, apparently healthy people.

"During the 1918 epidemic, if you will recall, health officers throughout the world said, 'Give the patient all the air he can get.' As a result of that, we not only opened the windows and doors, but placed many cases out doors, some on the house tops and some in the yards. It is my impression that cases should be placed in a bright, cheerful room, just enough covers to be comfortable; that the temperature should be kept at 58 or 60 and the windows wide open; that is, enough heat should be maintained in the house to keep the temperature as mentioned above with the windows open."

The foregoing remarks of Dr. Parish are especially interesting, especially his remarks about the exposure which was unduly accorded to numerous patients in the epidemic of 1918. If he had just added the fact that many patients were killed by the administration of such drugs as aspirin in excessive doses, he would have completed the picture.

Doctor Parish's remarks are interesting at the present time particularly because of the long delayed common sense observation about the question of sleeping in the fresh air. For young, exceedingly strong, healthy

Conditions spreads very rapidly from person to person, but it can be transmitted only with the greatest difficulty by the secretions of the upper respiratory tract when control experiments are carried out with volunteers. It is very difficult to understand just what happens there, what the explanation is.

"With respect to the prevention of the disease since our knowledge of the modes of prevention is almost as limited as the famed chapter on snakes in Ireland—there are no snakes in Ireland—I thing I need not go further on that."

Doctor Frost of the United States Public Health Service said:

"In 1918, when the epidemic of influenza broke over the country, the Public Health Service, like all other medical organizations, was more or less overwhelmed at first in trying to care for the sick, so we were not in position to undertake any studies until the epidemic had more or less declined."

Those of us who were engaged in public health work in North Carolina at that time can appreciate fully the significance of Dr. Frost's statement. In this State every public health agency, as well as medical organization and individual physician, was certainly overwhelmed in trying to care for the sick. There was not time left for research work or calm study of the epidemic nature of the disease at all.

OBSERVATIONS OF DR. PARISH, HEALTH OFFICER OF LOS ANGELES

As Los Angeles was one of the first cities in the country to be affected by the recent epidemic, the remarks of Dr. Parish, made at the conference in Washington, are particularly interesting. Following are extracts from Dr. Parish's paper:

"The present epidemic of influenza taught one lesson: Without means of educating the public or conveying to the public definite information of
adults who are used to a rough outdoor life, or who practice many hours physical exercise in the gymnasium every day, sleeping outdoors in cold weather, or on sleeping porches, with no heat or extreme cold, seems to cause no ill effects, and if such people are comfortable, it is no one else's business. But for elderly people, for children, and for adults who are not physically strong, the sensible method of sleeping is in a room with the temperature agreeable to their comfort.

As has recently been pointed out by the Chicago Board of Health, the United States Public Health Service, and the New York State Commission on Ventilation, in extreme cold weather the natural leakage in ordinary rooms of cold air into the room is sufficient and ample ventilation. This statement, of course, does not apply to families who live in crowded quarters, where the rooms are dark, and where the ventilation is insufficient, and where the tendency is to over-heat through the use of iron heaters, and when the fire goes out, the temperature goes too low, and thus the extreme changes within the twenty four hour period cannot be beneficial to the inmate of such rooms, whether sleeping or awake.

**REMARKS OF DR. J. F. SILER, UNITED STATES ARMY**

Doctor Siler reported careful studies made of the occurrence of the disease and its presence in the different army barracks, situated in nearly all sections of the country. The significance of Dr. Siler's report lies in the fact that the surgeons of the army were amply able to cope with the disease in the various camps. They were able to make careful studies of each individual case and to make a careful diagnosis. In their report each chief surgeon at any army post is required once a week to send in a careful statistical report concerning all communicable diseases occurring in the troops under his charge the previous week.

Doctor Siler made the point that influenza is very difficult to diagnose. He said:

"I believe that our medical officers, however, throughout the country probably can diagnose it as accurately as most medical officers in civil practice. We do pay attention to leukopenia, great prostration, and explosiveness of occurrence that are supposed to represent influenza.

"We have observed that in every epidemic that we have had reports of unusually large numbers of cases of the common respiratory group of diseases always preceding influenza. In other words the first diagnoses we get, or the first report we receive, evidence an increase in the rates of the common respiratory diseases.

"In the common respiratory group we include the following diseases: acute bronchitis, coryza, acute tonsilitis, acute pharyngitis, acute nasopharyngitis, acute laryngitis, and pleurisy."

Doctor Siler made the point of his observation that the common respiratory diseases as he enumerated always precede the onslaught in influenza in epidemic proportions; that is, that influenza practically comes on from one to two week following the advent of wide-spread trouble from the respiratory diseases aforementioned.

Doctor Siler made the point that the diagnosis of influenza is sometimes influenced by publicity. With reference to that criticism it may be mentioned here that the Surgeon General's conference the health officers from the state of Massachusetts openly charged that a large proportion of the influenza epidemic was mental; that is, that people were frightened, and those who in ordinary times would have been considered to be suffering from ordinary common respiratory infection prevalent at the season, when the newspapers' and health officers' warnings indicated an approaching epidemic, these persons, and sometimes
their doctors, acquiesced and immediately decided that they had influenza.

There may be something to the foregoing statements, but there evidently cannot be much significance attached to such statements, and the comparative death rate, as mentioned in the beginning of this article, occurring in North Carolina bears us out in this statement.

As of interest to our physician readers, it is important to state that Dr. Siler stated unequivocally that "leukopenia is the thing we place most reliance on in making a diagnosis." (For the information of our lay-readers, leukopenia means a deficiency in the white cells in the blood.)

Another thing that Dr. Siler emphasizes, that the diagnosticians in the Army Medical Service pay particular attention to, is the explosiveness in the character of an attack of influenza. This fact, when coupled with the deficiencies in the white blood cells, as shown by the microscope, is regarded as sufficient evidence of genuine influenza.

"BOSTON IS A STATE OF MIND RATHER THAN A LOCALITY"

The famous Dr. W. H. Welch of Johns Hopkins University, when called on for his contribution to the conference, prefaced his remarks with the opening statement to the effect that he was very much impressed upon listening to the health officer from Massachusetts, because Dr. Bigelow intimated that "Boston is a state of mind rather than a locality." Dr. Welch went on to state that the Massachusetts health officer had his sympathy, and remarked that Dr. Nicoll, the New York state health officer, has previously experienced a similar feeling. He said that Dr. Nicoll had been loud in his appeals a few days preceding the conference "to stop this absurd panicky talk that is in the newspapers." Dr. Welch, becoming serious, however, stated that an attendant on the conference "should go away impressed with the fact that there is something more than some of us may have surmised in the newspaper reports." Dr. Welch said:

"The conception as a working hypothesis may be an infection due to an unknown virus with this extraordinary effect of reducing the resistance so that the body, at least the respiratory tract becomes such that any organisms are able to invade and produce acute respiratory trouble and also pneumonia. I think that when there was a lesion of the lung that it was attributable to the virus, the real influenza virus, not general respiratory manifestations, but due to any organism which might be in the neighborhood, and the especial thing was the practical abolition almost of the resistance of the upper respiratory passages and the pulmonary organs to infection.

"That is the working hypothesis in my mind as to influenza as a non-fatal disease only terminating fatally by virtue of the fact it opens the way through the destruction of the resistance of the body to the infection of whatever organism is at hand.

"One should use a public state of mind like this, the outbreak of an epidemic disease like this, utilize it for the purpose of furthering knowledge because only until we have additional knowledge can we hope to attack successfully the problems of prevention. From that point of view I think the familiar statement that a great epidemic like cholera or yellow fever, the plague, and so on, have probably resulted in saving more lives than they actually destroyed, by the fact that the public is awakened and you can secure the means which otherwise would not be available.

SOME OF DR. SIMON FLEXNER'S OBSERVATIONS

Doctor Flexner of the Rockefeller Institute of New York City naturally discussed the pathological and epi-
demiological aspects of the disease. Dr. Flexner stated that:

"The intent is to study by such means as are available or can be devised the bacteriology of the respiratory tract, and the bacteriology of the circulating blood, and, possibly, other fluids, so far as they can be obtained.

"In the carrying out of these bacteriological studies, attention will be given, of course, to the commoner microorganisms just as attention will also be focused on possible unusual microorganisms. For example, every one would wish to have in mind the point which Dr. Welch has stressed; that there may be a virus of some nature, even one at the present time unknown, which, if it could be discovered, might throw light on this epidemic disease." Perhaps I should point out a discrepancy between epidemic influenza and virus diseases as now known. It will be recalled that Dr. Jordan emphasized the failure of an attack to confer immunity. The virus diseases in general are characterized by the opposite effect. We know true influenza according only to its epidemiological qualities, and I think, therefore, it only fair to state that it is likely, except through very fortunate circumstances, that the solution of the etiological problem of epidemic influenza will come slowly because the disease is subject to study only in epidemic periods, and they in the past have been separated from each other by considerable terms of years."

**ALKALINE TREATMENT FOR INFLUENZA**

Some of the members of the conference, particularly Dr. Hogan of the United States Navy Medical Corps, and Dr. Ennion G. Williams, state health officer of Virginia, state that in their experience the so-called soda treatment or alkalization of the blood employed by many doctors had proved beneficial. Dr. Hogan stated that he regarded sugar in the diet as very essential in the treatment of influenza patients, along with thorough alkalization of the blood.

We mention this in the present review simply for the interest it may have, and should be regarded in no way as an endorsement of the efficacy of the treatment by the North Carolina State Board of Health. But in a Lieutenant Commander in the United States Navy and the State Health Officer of Virginia are certainly entitled to a respectful consideration of any views that they feel like expressing on this or any other medical subject. It may be said that quite a number of authorities in the country agree with them. It does not seem at present, however, that there has been enough experimentation in the treatment upon which to base final conclusions.

**DOCTOR ROSENOW OF THE MAYO FOUNDATION ENDORSES VACCINATION AS A PREVENTIVE**

Doctor Rosenow submitted to the conference the conclusion to which all experienced health officers and physicians will certainly agree, as to the inadequacy of attempts at quarantine in outbreaks of the disease. Dr. Rosenow said:

"The time it seems to me, has fully arrived when epidemiologists and boards of health should acknowledge that while common sense quarantine measures are indicated the disease cannot be adequately controlled in this way and that however important contact infection may seem to be it is not the fundamental factor that causes epidemic and pandemic waves of this disease to appear and disappear so suddenly and so mysteriously at varying intervals of time."

Doctor Rosenow presented figures to the conference indicating his success with a vaccine that he has perfected. His claims were staunchly upheld by Dr. McCormack, state health officer of Kentucky. The latter also presented figures indicating the suc-
cess with which the Rosenow vaccine had met with in controlling the spread of epidemics of influenza in the state of Kentucky. Dr. Anders, another member of the conference, stated that he felt that on the evidence presented by Dr. Rosenow and Dr. McCormack that this vaccine should be recommended for trial, but he insisted that "the statement should not go out from this conference to the effect that there is not any efficacy in treatment or in quarantine."

Doctor Anders went on to state that it would probably be a long time before vaccination could be perfected to the extent of offering wide-spread protection, and that he thought the most effective kind of quarantine was real isolation of the members of a family, when a first case appeared in that particular family. Dr. Anders claimed that if the first patient getting sick in a family was immediately isolated from the other members of the family, that the incidence of influenza would be greatly reduced.

We simply set forth the foregoing in this review as coming from these various authorities for what they are worth.

It may be stated that the health commissioner of Saint Louis also endorsed the Rosenow vaccine. At the conclusion of the discussion on vaccination, Dr. Nicoll, the state health officer of New York, emphatically objected to the conference recommending Dr. Rosenow's vaccine, or anybody else's, as a preventive of the disease.

It was recorded as the sense of the meeting that the information was received and issued as coming from the aforementioned authorities, but it could in no way be construed as an indorsement by the Conference of vaccine as a preventive of the disease. Not only that, but Dr. Milton J. Rosenau, one of the greatest authorities on preventive medicine in the world, stated unequivocally:

"There is no prevention that I know of that is effective in this disease. We made an extensive study of the use of vaccine, on the contrary, of various sorts, during the last epidemic, but they failed not only to prevent the disease, but also to make milder its complications."

WHOLESALE HOSPITALIZATION CONDEMNED

Doctor Bigelow, the Massachusetts health officer, specifically established before the conference the fact that, while there is no specific for the prevention of influenza, there is a specific which "prevents the killing complication of influenza, namely, pneumonia, and that is, treatment in bed at home." Dr. Bigelow observed that:

"I think this publicity that has come out of the Public Health Service is the same thing we are talking about and therefore we are delighted with it, namely, that every effort should be made against wholesale hospitalization."

Doctor Bigelow condemned the tendency of communities, in the beginning of an epidemic of influenza, to crowd the hospitals, filling all the beds and the wards to the halls and the corridors with patients. Non-official organizations volunteer and want to help establish emergency hospitals everywhere. In Dr. Bigelow's opinion—and we might humbly add the opinion of this writer—a crowded hospital is about the worst place to which an individual influenza patient could be taken. The patient should be kept at home, if it is humanly possible to get even a part time nursing service, and in that way the killing complications of the disease is less likely to follow an attack of influenza.

One question that the conference was not able to establish with any degree of satisfaction was the question as to whether or not the virulence of the attacks might be increased by the more rapid transmission from individual to individual. The fact that some outbreaks are much more severe
in some localities than in others in the same epidemic cannot as yet be explained. There is an indication that there are wave-like rises and falls in the virulence at different times in the same epidemic. Just what causes these, or how they are brought about, no one definitely understands.

PRACTICAL DIFFICULTIES ENCOUNTERED IN COMBATTING INFLUENZA EPIDEMICS

Doctor Draper asked the conference to discuss what practical difficulties are encountered in combatting influenza epidemics and what practical advice is desired.

Speaking of the above question Dr. James A. Hayne, health officer of South Carolina, stated:

“One practical difficulty is brought out more plainly in this discussion, namely, that a certain number of physicians of the community, of the state, of the country, when influenza first makes its appearance, seem to think that it is the seasonal incidence of coughs and colds; and consequently no notice is taken of that condition until suddenly the number of reported cases jumps to peaks, and then the fact is borne in upon the people that they are not dealing with ordinary common coughs and colds, but have an epidemic of this disease to deal with. Consequently the steps that are taken to prevent the epidemic are usually taken after the peak of the epidemic and have extremely wonderful effects because you can always put down the dates at which the most strenuous efforts have been taken, and that is usually a little after the peak, and as a consequence, there is a tremendous decline which would occur anyhow, and it is attributed to the measures taken. So if we would take some measures probably before the peak we would be able to know whether our measures had anything to do with reducing the number of cases or not.

“In 1918 the Conference on the Prevenion of Influenza, and so forth, occurred, and a working program was made, in December, 1918, long after the epidemic had worked its havoc throughout all the United States. I have now this working program in my office which was gotten up in Chicago in 1918. That program even to the trench digging and burying of the dead is as available now as it was at that time, because as far as I can see there have not been any preventive measures suggested today that were not brought forward to that committee in 1918.”

The city health officer of Pittsburgh, Pennsylvania, made the point that there are two problems in discussing influenza. There is a problem “of hysteria from wrong advice,” or over advice, and too much warning about going to bed and staying there; and there is the problem of under advice which persists in saying that there is no need for alarm, and which does not sufficiently warn the people until it is too late.

BEST PROCEDURE TO ADOPT IN PRESENCE OF EPIDEMIC

Much discussion in the conference was devoted to the question of what procedure should communities and individuals adopt in the presence of actual or threatened epidemics. The consensus of the conference opinion may be set forth in few words to the effect that it was the sense of the conference that the best procedure for every unit of government—such as county, town, or city—in the country to follow as a routine measure is the organization and permanent maintenance of responsible local health departments.

MOST PROMISING LINE OF RESEARCH

Under the title of “What suggestions are offered as the most promising line of research and what agencies should undertake them,” an interesting question was raised by the health officer of Cleveland, Ohio. The point he raised was that the transmittal of
influenza by intermediate objects was considered to be in his opinion very important.

Doctor Rockwood, the Cleveland health officer, referred particularly to the United States Public Health Service Report, and also to a number of Army reports, with reference to such things as careless washing of dishes and the transmittal of infection by hands. Therefore a definite study along this line was thought to be important by Dr. Rockwood as constituting valuable research.

Doctor Allen W. Freeman of the Johns Hopkins School of Hygiene made an important contribution to the discussion on the subject of "Minimizing droplet infections in hospital wards or other crowded institutions in times of epidemic." Dr. Freeman simply made the point that experiments had shown that if sufficient floor space was allowed influenza patients in hospitals, that that simply acted as minimizing the danger from droplet infection passing from one patient to another through coughing and sneezing and so on.

This certainly appears to be a most common sense observation. It is well known that there are several types of pneumonia, but there are only one or two types of especial virulence. And it is also known that the danger to a patient suffering from any kind of respiratory infection, coming in close contact with another patient suffering from some of the types of such infection, increases the danger of an exchange of infection, with resultant death. Many syndicate health writers constantly stress the advisability of every individual protecting himself by remaining five feet or more away from the direct spray coming from the cough or loud talk of an individual. If such a distance is important for the well person, it should certainly be much more important for the protection of a patient that he be sufficiently removed from another patient at a time when his susceptibility to contraction of additional infection is greatest.

THE PUBLIC SCHOOLS IN TIMES OF EPIDEMIC INFLUENZA

It was the sense of the conference that schools or colleges should not be closed wherever adequate medical and nursing supervision is available, but it was advised that prompt seclusion of all persons showing suspicious symptoms should be exercised. The assemblage of students at boarding schools and colleges, after vacations, might be deferred, unless there are generous accommodations for bed care for those who may be attacked. The conference deprecated the general closing of places of public assemblage, unless there were ample local conditions to justify such action. As to the conduct of local schools during an epidemic the conference stated that "In groups which can be brought under daily professional inspection the isolation of early and suspicious cases of acute respiratory tract infection, particularly when these are accompanied by a rise in temperature, may result in delaying the spread of the disease."

In short, it is best for the morale of any community in the face of an epidemic to continue its daily routine life in as nearly normal quiet manner as possible. This applies to the schools as well as to other activities. It is agreed that children are better protected going to school, assembling in their regular classes, than they would be roving the streets, going to moving pictures, or to the dime stores and other places of miscellaneous aggregations of people. In the language of the conference report on prevention, "Unless the disease is sufficiently prevalent to demoralize the attendance, schools should not be closed but the teachers instructed to keep careful watch over the children and send each one home immediately when there is evidence of colds or indisposition."
REPORT OF COMMITTEE ON EPIDEMIOLOGY

The gist of the whole conference proceeding and the portion of the discussion most interesting to the public generally were embodied in the Report of the Committee on Epidemiology, which we herewith publish in part exactly as presented to the conference:

"The features which has distinguished influenza in its typical pandemic outbreaks, such as those of 1918 and 1889-90, are:

"1. A great increase in the prevalence of illness of which the usual symptoms are: fever, of more or less sudden onset, of moderately high range and of only a few days' duration; aching of the body and limbs; catarrhal inflammation of the upper respiratory passages, and marked prostration. In its manner of spread this disease has the characteristics of a highly contagious infection, transmitted directly from person to person.

"2. Coincident increase in the prevalence of pneumonia, developing apportion of a certain proportion of the influenza cases.

"3. A rise in the general mortality rate, due largely to increase in deaths certified as influenza or pneumonia. These deaths characteristically show an age-distribution different from that of normal times, in that the proportion of young adults is increased.

"4. In any given locality, the epidemic develops and runs its course rapidly, so that its duration, even in a large city, is usually a matter of not more than five to ten weeks.

"5. The tendency is to rapid and wide expansion, different communities being attacked in such quick succession that the spread across a continent requires only a few weeks; and, where the disease becomes pandemic, it travels around the world within three to six months.

"The epidemics which show the full development of all these features, including world-wide prevalence, are rather rare events, recurring at intervals which usually have exceeded 20 years. However, at much more frequent intervals we have minor epidemics, similar in general character, but differing from the typical picture in some respects, notably in lower prevalence, less severe clinical type slighter effect on mortality and less extensive area of spread. The exact relationship which these bear to true pandemic influenza is still a matter for investigation rather than fixed opinion; but the more distinct of the minor epidemics are generally accepted as true influenza of modified virulence and intensity. Since 1919 at least two such outbreaks have occurred in the United States; one in 1920 and one in 1926, with some more doubtful epidemics in other years.

"The data available at this time for judging the nature, extent and severity of the present epidemic are: clinical accounts of the cases seen in communities already attacked; official morbidity reports, which are admitted incomplete and uneven, but have nevertheless a certain significance; and, for the large cities listed in the Weekly Health Index, weekly reports of deaths from all causes, and from influenza and pneumonia.

"All this evidence agrees in indicating the present existence of a definite epidemic of influenza. It seems to have developed first in the vicinity of San Francisco early in November. Since that time it has extended, with characteristic rapidity and in fairly regular sequence, until it has now become plainly demonstrable in all sections of the United States except the northeastern states.

"The epidemic is already on the decline in those western cities which were first affected; and has apparently reached its peak in some middlewestern cities, but in the east seems not yet to have come to full development. The effect on mortality has not approximated that caused by the pandemic of 1918, and has been less than
at a corresponding period in the epidemic of 1920, but more severe than at any time since the latter date."

**Scientific Research as to the Cause of Disease**

We could not possibly close this review in a more interesting manner than to quote the concluding remarks at the conference by Dr. J. C. Bloodgood, the eminent Baltimore authority for the Committee on Scientific Research. It is an intensely interesting conclusion, interesting to every intelligent individual alike. Read what Dr. Bloodgood had to say:

"There is a splendid opportunity for all the Departments of Health and for the medical profession through its representatives and for workers in the medical sciences in the great research laboratories to bring before the people of this country and their representatives in Federal and State Legislatures the increasing importance and value of research.

"Let us take three diseases threatening life on a large scale—influenza, infantile paralysis and cancer. Even the most ignorant know what these diseases are. The majority of children in the primary schools can understand what I am saying and am about to say.

"Each one of these diseases presents three problems, or the problem has three phases—first, the care of people attacked by these diseases who come to the medical profession and the hospitals in the early, late or hopeless stage. Second, an educational problem or phase—some systematic method of teaching children in the primary schools and broadcasting to the adult world correct information which tell and influence them to seek the advice of the medical profession or hospitals at the earliest period after the first symptom. This undoubtedly decreases the mortality of each disease and minimizes the period of disability, the sequelae and complications. In some instances this educational effort can bring about prevention when it is possible, as in typhoid fever, diphtheria and smallpox.

"The third problem in some diseases like influenza and infantile paralysis is most important, and that is research. In cancer a huge amount of money and energy is diverted in attempting to cure late cancer by extensive surgery and radiation. The more money is spent on education, the larger will be the number of cancer patients in which treatment by operation or radiation offers the largest

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The Public Health Nurse suggested that the baby should have his own separate bed and that he should be protected from flies. This ingenious Pitt County mother added wagon wheels in order that the bed might easily be moved to the yard or cotton field when her work took her away from the house. She is a very intelligent mother and is much interested in health rules.
per cent of cures. For example, the following figures picture the difference between the chances of an enlightened individual and one ignorant and uninformed. Up to 1900 in most of the clinics of the world, in regions like the breast, abdomen, oral cavity, and skin, the inoperability varied from fifty to ninety per cent, and the actual per cent of five-year cures from one to ten per cent. During this period lesions in these localities were about eighty per cent malignant to twenty per cent benign. Since 1920, in some clinics of this country, hopeless cases have been reduced to ten per cent, cures have increased from ten to sixty per cent, and the proportion of malignancy has been reduced from eighty to twenty per cent. In brief, an enlightened patient should have at least sixty per cent of a cure in cancer of the breast, stomach and uterus, and their correct information should absolutely protect them from cancer of the skin and mouth.

"Granting that every individual is correctly informed and seeks advice the moment he or she is warned, we can only offer a woman with cancer of the breast seventy per cent chances of a permanent cure. Considering all cancers, the ultimate cure of at least forty per cent rests upon research which will discover a method of prevention or a cure similar to that we have for diphtheria.

"Let us take infantile paralysis, the chief cause of crippling of children today. We have no preventive serum. We can tell parents very little, except that if the child is sick in any way during an epidemic of poliomyelitis, it should be taken at once to a physician or to a hospital. More intelligent mothers can be instructed by their physicians to put the hand under the back of the child's head while it is resting on its back in bed and lift the head upward and forward. If there is any rigidity, they must move quickly. However, when this disease is treated with convalescent serum in the earliest hours, the reduction of paralysis is only from 65 to 19, and, with the best educational publicity, it is rarely possible to get under observation in the early period more than from ten to twenty per cent of the cases. However, millions of dollars are expended today to help the crippled after the crippling, much less is spent on educating parents to the importance of having their children examined at once or bringing them to a hospital, and very much less is spent on research.

"The first research that led to the relation between diet and disease was that in regard to scurvy. The deformity of rickets is practically absent in our streets due to the experimental laboratory work on essential foods and vitamins.

"Tuberculosis of bones largely bovine in origin is being eradicated through researches in medical science which lead to the pasteurization of milk and the control and supervision of tuberculosis of the lungs in adults. Pyogenic osteomyelitis is rapidly disappearing, because in children, infected tonsils, teeth and adenoids are being eradicated. Poliomyelitis remains therefore the great crippling disease."