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A REASONABLE HEALTH PROGRAM
FOR 1931

1. Cut in half the number of deaths occurring annually in the State from the following disease: Pellagra, Diphtheria, Typhoid Fever.

2. Make a substantial reduction in the mortality caused by the great preventable killers: Diarrheal Diseases of Infants, Tuberculosis, Measles, Whooping Cough, Scarlet Fever, Cancer, Heart Disease, Venereal Disease, and Automobile Accidents.

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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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<td>Tuberculous Placards</td>
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<td>Typhoid Fever</td>
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<tr>
<td></td>
<td>Typhoid Placards</td>
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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)
- "Our Babies"
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- 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 15 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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THE TRAGEDY OF APPENDICITIS*

By

HUBERT A. ROYSTER, A. B., M. D., F. A. C. S.
Raleigh, N. C.

“Is it time to stop talking about appendicitis? No! It is just the time to begin talking about appendicitis, and talking most seriously and emphatically about it.” Thus spoke John B. Murphy fifteen years ago. The need of such a challenge is every whit as compelling today as it was in 1915. In spite of all our efforts, appendicitis kills four times as many people as cancer before the age of fifty. Is it not really a fact that we have stopped talking about appendicitis? Have we not relegated this most frequent of abdominal disorders to the pigeonhole of solved problems and concerned ourselves largely with what we consider more important and more modern matters?

While some individual surgeons are reporting a low death rate, the general opinion over the whole country seems to show that the death rate is increasing. If this is true, and it can hardly be disproved, the proper question arises, who is to blame? When the disease is confined to the appendix itself, the death rate from operation is virtually zero. It is the complications that kill, and the conditions leading to these complications in most cases are delay in operating and the taking of laxatives. Gangrene of the appendix and bursting of the appendix are the two dangerous complications. The first is due to delay, and the second to laxatives. There is pressing need to remind everybody that delay in the beginning of acute appendicitis is still the deadly sin. In these favored times this appears extraordinary and may sound strange, but it is not beside the mark, even in our larger civilized centers. There are some who are still waiting for the acute attack to pass off before advising operation, even allowing the appendix to burst before their very eyes.

Still abroad in the land is a lingering fancy that there is such a thing as medical treatment of appendicitis. The very worst feature of this idea is the giving of purgatives in the acute stage with the false notion of driving out of the intestinal canal something or other which has no relation whatever to the disease. This fallacy constitutes the second deadly sin—purgation. It may be fatal to give any form of purgative at any time in any abdominal pain. This just as surely causes a blow-out as would happen to a thin rubber tube when stretched beyond its capacity.

Further enlightenment of the laity upon appendicitis is imperatively demanded. Foremost in the cause should come the physician and to his aid must follow Boards of Health, civic organizations, schools, nurses and

druggists. If an annual Cancer Week and periodic health examinations and tuberculosis clinics, why not an Appendicitis Week? People must be shown that in appendicitis the “attack” is not the disease, but only the knock at the door; that appendicitis is a continuing process, a going concern, always existing before the attack comes; that one attack does not protect, but that in 98 per cent of the cases it means others to follow. The city of Philadelphia, through its Health Department, has shown commendable zeal in proposing a campaign to reduce the high death rate in acute appendicitis. Bulletins published show that there was an increase of 18 per cent in the death rate of appendicitis in Philadelphia between the years 1913 and 1923, and that laxatives given to patients with abdominal pain before they reached the hospital were responsible for 207 deaths. In addition, attention is called to the estimate that in 1926, 17,000 people in the United States died of appendicitis: 12,000 of these were given laxatives, and of this number 11,000 probably died from laxatives.

The danger of delay is also stressed in another bulletin which shows that between those who lived and those who died there was more than 70 per cent increase in lapse of time between the beginning of the disease and the operation. It would be interesting to know further how many cases of appendicitis died without being operated on. In the so-called clean cases of appendicitis, almost any surgeon can show a record of no deaths. The whole matter, then, is to have the appendix removed before gangrene sets in, and before rupture occurs, and to remember that the causes of these complications are practically always procrastination and purgatives—twin factors of fatality in appendicitis.

Let us summarize the salient points:

1. There is no medical treatment of appendicitis.
2. There is a crying need to remind both the medical profession and the people that delay in the beginning of acute appendicitis is still the unpardonable sin; that the administration of laxatives in any form is the explosive blast that wrecks the works; that once appendicitis, always appendicitis, until “the little assassin” is removed.
3. Instruction of the laity and renewed concern of the physician, chiefly upon the dangers of delay and the giving of laxatives, is demanded.
4. Whenever gangrene or bursting of the appendix occurs someone has blundered.
5. The tragedy of appendicitis is that even one human being should die of the disease.

**SELECTING THE PROPER FOOD FOR HEALTH**

By THOMAS A. MANN, M. D.

Vigorous health and the feeling of well being depend more upon the proper adjustment of food and exercise than upon any other factor of one’s environment. In relation to food, this adjustment depends not only upon the selection of the proper food materials, but also upon their preparation for ingestion; in other words, upon good cooking.

In the selection of a proper dietary, one must be assured of a requisite supply of food elements. There should be no deficiency of any food essential because of the danger of development of one of the so-called deficiency dis-
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eases. Among these diseases are rick-

ets, scurvy, beri-beri, xerophthalmia,

and pellagra. Statistical records show

an alarming increase of pellagra in

the South within the last decade. The

widespread incidence of the disease
could have been prevented by a whole-
some dietary.

One should also be sure of the

cleanliness of his food supply, and

should guard against the transmission

disease through any contaminated

or spoiled food. Sometimes a valuable

food from a chemical standpoint may

be dangerous because of bacterial con-
tamination. Unfortunately the good

and the bad cannot always be differ-

entiated by the eye. Milk, for example,

which is one of our most valuable

foods from a nutritional standpoint,

may be sweet, apparently of the high-
est grade, and at the same time be

teeming with millions of dangerous

bacteria. For this reason students of

preventive medicine and public health

officials are now almost unanimous in

their advocacy of pasteurized milk

supplies.

The claim that heating of the milk

changes its vitamin value does not

outweigh the safety factor brought

about by proper pasteurization. We

must look to other sources than

milk for a supply of any vitamin

which may be destroyed by heating.

It is the writer's opinion that all

milk, when not pasteurized, should be

heated to the boiling point before in-
gestion, unless it is freshly milked

from a healthy cow. After standing,

it should be heated. It is customary to

cook animal foods before consump-
tion. It should be remembered that

milk is an animal food.

In order to simplify the selection

of the proper constituents and

amounts of food for a normal diet,
tables showing the caloric values and

vitamin contents of various foods

are shown. A discussion of the phy-
siological action of foods may be help-
ful. Man is subject to environmental

changes, just as lower animals and

plants are; but natural laws are im-
mutable, and when environmental

changes come in conflict with these

laws, they are unbending in exacting

a penalty. Environment cannot change

the chemical constituent of men's

body, nor lessen the necessity for all

the food elements required by nature.

It should be remembered that this is

a machine age, and that man does not

have to resort to muscular energy to

perform his daily work, as was form-
erly necessary. Man has the same

muscles, however, and, to prevent a

deterioration of the race physically,
it becomes necessary for him to give

time daily for recreation and play.

Both food and exercise must be regu-
lated in accordance with the laws of

nature. If man does not regulate his

food in accordance with these laws,
he must pay in terms of sickness.

Man's body is made of definite organic

and inorganic chemical compounds to-
gether with certain, as yet, unidenti-
fied substances known as vitamins

which are essential to normal nutri-
tion. In selecting a proper dietary, it

is necessary to keep in mind the value

of foods in relation to their supply of

energy, their supply of inorganic

salts, and also their supply of vit-
amins. If some of these elements are

lacking, he pays the penalty with the

deficiency diseases. If he habitually

eats too much, he pays the penalty

with indigestion, ulcer of the stom-
ach, or some other intestinal trouble.

In regard to quantity, our guide

must be in terms of some standard

measure. The standard that has been

adopted is the calory or heat unit.

When one knows the caloric value of

a large measure of food, it is easy to
calculate the value of one serving. A

calory is the amount of heat required
to raise one liter of water one degree

centigrade. One liter is slightly more

than a quart, and one degree centi-
grade equals 1 8-10 degrees Fahren-
heit. The caloric value of a food can
be measured outside of the body by using a device known as a calorimeter. The amount of heat or energy produced by food in the body is, with a few known corrections, the same as is produced outside. In other words food has a definite heat or energy value in calories just as coal or gasoline has a definite energy or heat value.

In regard to the quality of food, our guide must be in terms of chemical constituents. One does not necessarily have to know chemistry, however, to be able to select the proper food any more than a housewife has to know bacteriology in order to do successful canning. A knowledge of the simple functions of foods as regards the organic compounds, proteins, carbohydrates, fats, and the inorganic salts, together with the vitamins, is all that is necessary in order to select a proper and wholesome diet.

The functions of food are:
1. To supply waste and build more tissue.
2. To furnish heat and energy.
3. To promote growth and repair of tissue.

Daily Food Requirements
The amount of food needed daily varies with the amount of work done. The approximate number of calories required by an adult when not working has been determined. With these facts we can use a little mathematics and determine the food necessary for our daily needs. An average healthy man resting in bed produces approximately 1,680 calories or heat units in twenty-four hours. If food be taken, extra heat is produced to the extent of about 168 calories per day. 1,848 calories then can be considered as the daily requirements of an average man resting in bed. The simple act of sitting in a chair during the day requires twenty calories per hour additional. This would mean that a man leading a sedentary life would need about 2,168 calories per day. Any exercise would require more energy. To walk an hour on a level road at an ordinary gait requires about 160 calories. Since men of sedentary habits necessarily take some muscular exercise, a safe standard of 2,500 calories daily can be set for writers, draughtsmen, tailors, etc. Farmers require about 3,500. A boy of twelve years of age requires about 1,500 calories daily. Boys from fourteen to seventeen require from 2,500 to 3,000 calories. The following table from Rose will give an idea of the energy expenditure of a normal man weighing 154 pounds.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleeping</td>
<td>154</td>
<td>8</td>
</tr>
<tr>
<td>Sitting</td>
<td>154</td>
<td>8</td>
</tr>
<tr>
<td>Standing</td>
<td>154</td>
<td>4</td>
</tr>
<tr>
<td>Walking and light exercise</td>
<td>154</td>
<td>4</td>
</tr>
</tbody>
</table>

The changes in food requirement due to differences in activity may be summarized as follows:

1. It must have a sufficient caloric value.
2. It must contain protein, fats, and carbohydrates. (The quantity of the first two should not be less than 70 grams a day. The protein should include a certain amount of animal protein.)
3. It should contain a certain proportion of fresh foods, such as green vegetables, meat, and eggs and in children milk, in order to supply the necessary food substances.
4. It must contain a proper proportion of salts, especially chlorides and phosphates.
5. It must be palatable.
Appetite is an essential factor for secretion of the digestive juices and therefore the digestion and assimilation of the food, so that good cooking becomes an important condition for the maintenance of health. The use of various flavoring agents and condiments, which is general throughout all races, is therefore physiologically justified.

Food must supply the elements needed in growth and repair of tissue, and it must supply heat and force. It must also supply certain health promoting substances called vitamins, a study of which within recent years has had a marked effect on our dietary.

Food or nutriments can be classified under the following heads: water, inorganic salts, proteins, carbohydrates, fats and vitamins.

**Water**

Since water makes up about 60 per cent of our body weight, it follows that it deserves proper attention in our dietary. It is lost from the body through three main channels; the lungs, the skin, and the kidneys. While a large amount of the water needed daily is taken into the body in the food, enough attention should be paid to its use to insure a plentiful intake. Adult individuals generally require three to five pints per day. So it will be readily seen that several glasses daily besides that taken with the food is advisable, there is not much danger of drinking too much wholesome water.

When drinking water with the meals, care should be taken not to use it as a mechanical means for washing down the food. Remember that slow, thorough mastication promoting salivary secretions promotes proper assimilation.

**Inorganic Salts**

While calcium, phosphorus and iron are the principal mineral substances required by the body, there are many others that are present in small quantities. Vegetables and fruits are necessary to supply the mineral requisites. Approximate proportions of calcium, phosphorus and iron are shown in the following tables:

**TABLE NO. 1—FOODS CONTAINING CALCIUM**

<table>
<thead>
<tr>
<th>Serving</th>
<th>Proportion of daily requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>1 glass</td>
</tr>
<tr>
<td>Cheese</td>
<td>1 in. cube</td>
</tr>
<tr>
<td>Beans, navy</td>
<td>½ cup cooked</td>
</tr>
<tr>
<td>Oranges</td>
<td>1 medium size</td>
</tr>
<tr>
<td>Figs</td>
<td>3 figs, ¼ oz.</td>
</tr>
<tr>
<td>Fish, white</td>
<td>¼ oz.</td>
</tr>
<tr>
<td>Eggs</td>
<td>1 egg</td>
</tr>
<tr>
<td>Beans, string</td>
<td>½ cup, 2½ oz.</td>
</tr>
<tr>
<td>Beets, canned</td>
<td>4 small beets</td>
</tr>
<tr>
<td>Cabbage</td>
<td>1 serving, 2½ oz. raw</td>
</tr>
<tr>
<td>Carrots</td>
<td>½ medium sized</td>
</tr>
<tr>
<td>Onions</td>
<td>1 medium onion</td>
</tr>
</tbody>
</table>

**TABLE NO. 2—FOODS CONTAINING PHOSPHORUS**

<table>
<thead>
<tr>
<th>Serving</th>
<th>Proportion of daily requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish, white</td>
<td>4½ oz.</td>
</tr>
<tr>
<td>Beef, round steak</td>
<td>¼ lb.</td>
</tr>
<tr>
<td>Beans, navy</td>
<td>½ cup</td>
</tr>
<tr>
<td>Milk</td>
<td>1 glass</td>
</tr>
<tr>
<td>Peanuts</td>
<td>1 oz. shelled</td>
</tr>
<tr>
<td>Cheese</td>
<td>1 in. cube</td>
</tr>
<tr>
<td>Egg</td>
<td>1 medium sized</td>
</tr>
<tr>
<td>Egg yolk</td>
<td>1 oz. dried</td>
</tr>
<tr>
<td>Bread, graham</td>
<td>1 serving</td>
</tr>
<tr>
<td>Beans, lima</td>
<td>6 nuts</td>
</tr>
<tr>
<td>Potatoes</td>
<td>3 tabsp. uncooked</td>
</tr>
<tr>
<td>Spinach</td>
<td></td>
</tr>
<tr>
<td>Walnuts, English</td>
<td></td>
</tr>
<tr>
<td>Rolled oats</td>
<td></td>
</tr>
</tbody>
</table>
Egg ------------------------------------- ------------------- --- 1 egg
dian corn and potato, however, are
intermediate position. Bread, rice,
more valuable than the proteins in
proteins of rice and potatoes hold an
bread, beans, and Indian corn. The
fish, egg and milk are considered
ed than others. The proteins of meat,
are about thirty different proteins,
is constituents of every animal or
stances containing the element
are found to be the cause of simple goiter.
are essential in building
muscle, blood, nerves and so forth and
is seldom found.
tricts. A deficiency of iodine has been
shown, for instance, by the
urence of simple goiter in certain dis-
der is the cause of simple goiter,
the water or food is furnished, goiter
is seldom found.
Joines
Prunes __________ ________________________________________ __ __
Figs
Dates
Cabbage
While these lists give only a few of
the principal mineral foods, it should
be borne in mind that most all fruits
and vegetables contain mineral mat-
ter. Calcium, iron, and phosphorus are
are three of the various salts that
are required, but a balanced diet in-
cluding a variety of these three prin-
cipal mineral constituents will give
a sufficient amount of all mineral
needs. In some territories, however,
there is sometimes a lack of certain
lements in all the food. This is
shown, for instance, by the occur-
ence of simple goiter in certain dis-
tricts. A deficiency of iodine has been
found to be the cause of simple goiter,
When a proper supply of iodine with
the water or food is furnished, goiter
is seldom found.
Proteins
The proteins, minerals, and water
supply the chief needs in the build-
ning process. The proteins are sub-
stances containing the element nitro-
gen. They are essential in building
muscle, blood, nerves and so forth and
are constituents of every animal or
plant cell. The protein needs cannot
be substituted by other foods. There
are about thirty different proteins,
some of which are more easily diges-
ted than others. The proteins of meat,
fish, egg and milk are considered
more valuable than the proteins in
bread, beans, and Indian corn. The
proteins of rice and potatoes hold an
intermediate position. Bread, rice, In-
dian corn and potato, however, are
valuable carbohydrate foods, and are
consumed for their carbohydrate
value rather than protein value. One
of the most valuable proteins is
found in milk. In supplying our daily
protein requirements, however, the
sum of all the proteins should be tak-
en.
While meat proteins are considered
more valuable than vegetable pro-
tein, one should not be misled by
food advertisements and food propa-
ganda and thus be induced to use too
much protein food. Only a small ex-
cess over that required to repair tis-
sue is desirable. It is readily oxidized
and used as fuel. In Winter or in cold
climates more protein can be utilized
than in summer. The Esquimeaux con-
sume larger quantities of proteins in
meat without harm.
The actual amount of protein food
utilized daily in the body amounts ap-
proximately to 1.5 grams per kilo-
gram of body weight. This means that
2.2 lbs. (1 kilogram) of body weight
utilizes about 1.5 grams of protein.
1 oz. equals 28.35 grams. In other
words, every pound of body weight
uses about .024 of an ounce of pro-
tein daily. If a man weighs 140
pounds, he will require practically 3.3
ounces of protein per day. An ounce
of protein contains 116 calories. It
follows then that a person
weighing 140 pounds requires about
390 calories of protein daily. By re-
fering to table 4 it will be seen that
there are one hundred calories in a

<table>
<thead>
<tr>
<th>TABLE NO. 3—FOODS CONTAINING IRON</th>
<th>Amount of Serving</th>
<th>Proportion of daily requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef, round steak</td>
<td>1/4 lb.</td>
<td>1-4</td>
</tr>
<tr>
<td>Spinach</td>
<td>1 serving</td>
<td>1-8</td>
</tr>
<tr>
<td>Beans, navy</td>
<td>1/2 cup</td>
<td>1-4</td>
</tr>
<tr>
<td>Potatoes, white</td>
<td>1 medium</td>
<td>1-8</td>
</tr>
<tr>
<td>Beans, lima</td>
<td>1 oz. dried</td>
<td>1-7</td>
</tr>
<tr>
<td>Fish, white</td>
<td>4 1/2 oz.</td>
<td>1-10</td>
</tr>
<tr>
<td>Shredded wheat</td>
<td>1 biscuit</td>
<td>1-10</td>
</tr>
<tr>
<td>Egg</td>
<td>1 egg</td>
<td>1-10</td>
</tr>
<tr>
<td>Milk</td>
<td>1 glass</td>
<td>only 1-40</td>
</tr>
<tr>
<td>Prunes</td>
<td>6 medium</td>
<td>1-15</td>
</tr>
<tr>
<td>Raisins</td>
<td>2 tbsp., 1/4 oz.</td>
<td>1-55</td>
</tr>
<tr>
<td>Figs</td>
<td>3 figs</td>
<td>1-15</td>
</tr>
<tr>
<td>Dates</td>
<td>6 large</td>
<td>1-10</td>
</tr>
<tr>
<td>Cabbage</td>
<td>1 serving 2-3 oz. raw</td>
<td>1-20</td>
</tr>
</tbody>
</table>

Beef, round steak
Spinach
Beans, navy
Potatoes, white
Beans, lima
Fish, white
Shredded wheat
Egg
Milk
Prunes
Raisins
Figs
Dates
Cabbage

While these lists give only a few of
the principal mineral foods, it should
be borne in mind that most all fruits
and vegetables contain mineral mat-
ter. Calcium, iron, and phosphorus are
are three of the various salts that
are required, but a balanced diet in-
cluding a variety of these three prin-
cipal mineral constituents will give
a sufficient amount of all mineral
needs. In some territories, however,
there is sometimes a lack of certain
lements in all the food. This is
shown, for instance, by the occur-
ence of simple goiter in certain dis-
tricts. A deficiency of iodine has been
found to be the cause of simple goiter,
When a proper supply of iodine with
the water or food is furnished, goiter
is seldom found.
Proteins
The proteins, minerals, and water
supply the chief needs in the build-
ning process. The proteins are sub-
stances containing the element nitro-
gen. They are essential in building
muscle, blood, nerves and so forth and
are constituents of every animal or
plant cell. The protein needs cannot
be substituted by other foods. There
are about thirty different proteins,
some of which are more easily diges-
ted than others. The proteins of meat,
fish, egg and milk are considered
more valuable than the proteins in
bread, beans, and Indian corn. The
proteins of rice and potatoes hold an
intermediate position. Bread, rice, In-
dian corn and potato, however, are
valuable carbohydrate foods, and are
consumed for their carbohydrate
value rather than protein value. One
of the most valuable proteins is
found in milk. In supplying our daily
protein requirements, however, the
sum of all the proteins should be tak-
en.
While meat proteins are considered
more valuable than vegetable pro-
tin, one should not be misled by
food advertisements and food propa-
ganda and thus be induced to use too
much protein food. Only a small ex-
cess over that required to repair tis-
sue is desirable. It is readily oxidized
and used as fuel. In Winter or in cold
climates more protein can be utilized
than in summer. The Esquimeaux con-
sume larger quantities of proteins in
meat without harm.
The actual amount of protein food
utilized daily in the body amounts ap-
proximately to 1.5 grams per kilo-
gram of body weight. This means that
2.2 lbs. (1 kilogram) of body weight
utilizes about 1.5 grams of protein.
1 oz. equals 28.35 grams. In other
words, every pound of body weight
uses about .024 of an ounce of pro-
tein daily. If a man weighs 140
pounds, he will require practically 3.3
ounces of protein per day. An ounce
of protein contains 116 calories. It
follows then that a person
weighing 140 pounds requires about
390 calories of protein daily. By re-
fering to table 4 it will be seen that
there are one hundred calories in a

TABLE NO. 3—FOODS CONTAINING IRON

<table>
<thead>
<tr>
<th>Amount of Serving</th>
<th>Proportion of daily requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 lb.</td>
<td>1-4</td>
</tr>
<tr>
<td>1 serving</td>
<td>1-8</td>
</tr>
<tr>
<td>1/2 cup</td>
<td>1-4</td>
</tr>
<tr>
<td>1 medium</td>
<td>1-8</td>
</tr>
<tr>
<td>1 oz. dried</td>
<td>1-7</td>
</tr>
<tr>
<td>4 1/2 oz.</td>
<td>1-10</td>
</tr>
<tr>
<td>1 biscuit</td>
<td>1-10</td>
</tr>
<tr>
<td>1 egg</td>
<td>1-10</td>
</tr>
<tr>
<td>1 glass</td>
<td>only 1-40</td>
</tr>
<tr>
<td>6 medium</td>
<td>1-15</td>
</tr>
<tr>
<td>2 tbsp., 1/4 oz.</td>
<td>1-55</td>
</tr>
<tr>
<td>3 figs</td>
<td>1-15</td>
</tr>
<tr>
<td>6 large</td>
<td>1-10</td>
</tr>
<tr>
<td>1 serving 2-3 oz. raw</td>
<td>1-20</td>
</tr>
</tbody>
</table>
TABLE No. 4—100 CALORIE PORTIONS AS WE EAT THEM

<table>
<thead>
<tr>
<th>Food Description</th>
<th>Measure</th>
<th>100 Calorie Portion</th>
<th>Distribution of Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Weight</td>
<td>Protein</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ounces</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food</th>
<th>Measure</th>
<th>%</th>
<th>Calories</th>
<th>%</th>
<th>Calories</th>
<th>%</th>
<th>Calories</th>
<th>%</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk, cow's</td>
<td>1 cup</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
</tr>
<tr>
<td>Milk, skim</td>
<td>1 cup</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
</tr>
<tr>
<td>Milk, buttermilk</td>
<td>1 cup</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
</tr>
<tr>
<td>Eggs, raw (in shell)</td>
<td>1 egg</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
</tr>
<tr>
<td>Eggs, (whites)</td>
<td>1 egg</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
<td>1/2</td>
<td>10</td>
</tr>
<tr>
<td>Eggs, (yolks)</td>
<td>2 yolks</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Cheese, American, pale.</td>
<td>1/4 cup</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Cheese, cottage</td>
<td>1/2 tsp</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Cheese, cream</td>
<td>1/2 in.</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Beef, sirloin, broiled lean</td>
<td>2x1/2 in.</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Beef, sirloin, medium fat</td>
<td>3 in.</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Hamburg steak, broiled</td>
<td>2 1/2 in. diam., 7/8 in. thick</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Meat stew with vegetables</td>
<td>2 1/2 cup</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Blue fish</td>
<td>medium serving</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Macarol, spanish, broiled</td>
<td>serving</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Lamb chops, broiled</td>
<td>1 chop</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Mutton, leg roast</td>
<td>1/4 in.</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Bacon</td>
<td>1/2 in.</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Sausage</td>
<td>3 in. long, 7/8 in. diam.</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Chicken</td>
<td>serving</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Turkey roast</td>
<td>1 serving</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Clams</td>
<td>12 or 2-3 cup</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Oysters</td>
<td>6 to 12 or 2-3 cup</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Yeal-leg roast</td>
<td>2x2 1/2 in.</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

Carbohydrates

The carbohydrates furnish the energy for muscular work and in part for body heat. Carbohydrates, when given in sufficient quantities, spare the protein and allow the protein foods to be utilized as tissue builders only. The fats also supply energy. The functions of the carbohydrates and fats are similar. Since, however, the caloric value of fats is greater per pound than carbohydrates, thus having less waste material to add volume to the stools, and since carbohydrate foods are more economical, they are used to a greater extent. An-

piece of beefsteak 2x1 1/2 x 1/8 inches. It should be remembered, however, that the one hundred calories in a piece of beef this size, which is approximately two ounces, has only forty-seven protein calories. The other fifty-three calories are derived from the fat.
other reason for the use of an excess of carbohydrates is that these foods contain many of the inorganic salts and vitamins necessary for the body.

An average diet considered in caloric value is as follows:

<table>
<thead>
<tr>
<th>Grams</th>
<th>Ounces</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>100</td>
<td>3 1/2</td>
</tr>
<tr>
<td>Fats</td>
<td>63</td>
<td>2 1/4</td>
</tr>
<tr>
<td>Carbohydrates</td>
<td>400</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

While this diet contains more protein than is required to keep up the body cells, the excess is not enough to be undesirable. It is better to have slightly more proteins than the body actually needs for repair than an under supply.

Vitamins

Vitamins are accessory food substances which are necessary for normal nutrition, both in lower animals and man. They do not furnish energy, but supply certain substances that are necessary for tissue growth and maintenance. Six of these substances are now recognized. A recent editorial of the Journal of the American Medical Association, January, 1930, has a very good discussion on this subject. It says:

"In addition to the fats, carbohydrates, proteins, mineral salts and water, certain unidentified accessory food substances are required for optimal nutrition. Besides the problem of the identity of the vitamins chemically, there is the important question of their physiologic action. Much of what is known has been elicited through observations on animals deprived of the factor in question; as a result of such studies, a useful, if more or less rough, classification of functions of the recognized vitamins has been evolved. Vitamin A prevents xerophthalmia, promotes growth and prevents metaplasia with subsequent infection of the epithelium along the gastro-intestinal tract and in the urinary system; vitamin B cures polyneuritis; in the absence of vitamin C, the syndrome of scurvy appears; vitamin D is at least one of the essential factors in the prevention and cure of rickets. Except in a few instances, the recognized picture of the various vitamin deficiencies is a complicated one. Thus far, little is known of the fundamental action of these substances. Indeed, it appears from the results of recent research in this field that some of the phenomena attributed to the lack of a given vitamin can be demonstrated to occur as a result of the deficit of any one of several of these factors. Any study that attempts to demonstrate a more specific activity of closely similar accessory food factors is, therefore, worthy of attention."

The vitamins so far found and classified are A, B, C, D, E, and G.

Vitamin A is called the opthalmic vitamin because when deficient or lacking a disease known as xerophthalmia develops. Vitamin A also promotes growth and brings about a resistance to infection. Vitamin A is found in butter, egg yolk, cod liver oil, and fats of liver and kidney.

Vitamin B is water soluble and is not associated with fats and oils. It is distributed in natural foods and is abundant in yeast, eggs, most meats, and especially the glandular organs like liver and kidney. It is also found in vegetables, as potatoes, spinach, carrots, turnips, and grains. Vitamin B is removed from the grain in milling; hence a disease known as beriberi in Asia, which was found to be due to a diet of polished rice, Yeast is rich in vitamin B.

Vitamin C is water soluble and is known as the antiscorbutic vitamin. It prevents scurvy. It is found chiefly in fruits and vegetables. It is abundant in oranges, lemons, grape fruit, raw cabbage, lettuce, and tomatoes. Heat in the presence of oxygen de-
stroys vitamin C; hence the wise cus-
tom of giving infants orange juice or
tomato juice to insure an adequate
supply of vitamin C.

Vitamin D influences the formation
of bone by its action on calcium and
phosphorus. Formerly a deficiency of
vitamin A was thought to cause
rickets. We now know that vitamin
D, which is associated with vitamin
A, is the controlling factor in rickets.
Vitamin D is found in butter, cod liv-
er oil, and most green vegetables. Cod
liver oil is the best natural source,
but it can be produced in pure form
by irradiating ergosterol. Most cod
liver oil now has Vitamin D added,
which makes it a more valuable prod-
uct. Vitamin D in viosterol is some-
times called bottled sunshine, since
sunshine on the body has the same ef-
fect as vitamin D when given arti-
ficially. In this connection we might
suggest that a generous supply of
vitamin A and D will have a beneficial
effect on expectant mothers and will
have a valuable influence on the bony
framework and teeth of their off-
spring.

Vitamin E is the reproductive fac-
tor. Feeding experiments on small an-
imals show that when this factor is
taken from them, they cease to propa-
gate. Vitamin E, however, is present,
in most foods. Lettuce and wheat
germs are especially rich in it. There
is no shortage of vitamin E in an
ordinary mixed diet containing veget-
ables.

Vitamin G is the anti-pellagra fac-
tor. It is present in most foods that
contain vitamin B. Whole wheat, how-
ever, which has B, has almost no G.
Fresh milk, fresh meat, and fresh
vegetables have more G than B. Yeast
has both B and G. To prevent pel-
lagra take a generous supply of meat,
milk, eggs, and fresh vegetables. Meat
and egg yolk have more vitamin G
than the cereals.

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**DIFFICULT—WE ARE ALL THAT WAY!**

Being a Discussion of Some Habits That Make People Difficult to Live
With, and How the Difficulties May Be Minimized in Such a Way
as to Make the Difficult Livable If Not Likeable

By SUDIE E. PYATT

Are you one of those people whom
the exigencies of life make it neces-
sary for you to live, work and find
your recreation and amusements in
the company of difficult people, that
is people who are difficult for you?
If you are, perhaps, you are facing
the New Year with the thought in
mind that if it only was not for a
certain person, or persons, 1931 would
be a happy year for you so far as
your relationships with people are
concerned. Our relationships with
other people make or mar our hap-

Intelligent, sympathetic under-
standing of the difficult, with an hon-
est effort to adjust yourself without
friction to their difficulties, will go
far toward making your relationships
with other people more happy in 1931
—or any other year.

No one has a monopoly on being
difficult. It is a chain business that
extends from coast to coast, around
the world and back again, with all of
us members of the organization.

Constant contact with people who
are difficult to live with takes much
of the joy out of living, and tends to
bring on unhappy mental states, and
actual physical suffering in some
types. At times all of us are trying
and difficult for others—even our-
selves. This will always be true. Every single one of us is born with a different personality that environment, standards of living and conduct makes still more diverse. It is well that this is true, if it were not this colorful world of ours, would be very dull and monotonous.

People who are difficult to live with seldom have personalities that are in harmony with their surroundings. This makes it necessary for those who have to live with difficult people to adjust their personalities to the difficult, for seldom will the difficult do any adjusting of their own volition.

The best way to handle the difficult ones, and you will find them everywhere, in the home, in business, in the club, in society, is to cushion yourself with shock absorbers calculated to make the roughest bumps the difficult ones may give you, a bit less jarring.

There may be any number of things that make a man or woman difficult to live with. There are a few things that make some people particularly difficult.

Difficult people always ask "Why?" You would think they were relatives, who have no right to inquire into your affairs, but taking the privileges of relatives do so anyway, by the way they ask "Why?"

To handle the "Why?" ones, either surprise them by giving them more information than they expect, or give them none, which ever way you happen to feel toward the inquisitor at the moment. Either way will work.

Pay as little attention as possible to the difficult ones of whatever type, for attention is a thing that all of them crave, and often they are difficult because they have found that their difficulties give them prestige and standing in their own circles that a more likable disposition would not.

They will never admit being wrong. If one ever admits he is wrong, he is not a bona fide member in good standing in the Society of the Difficult. The difficult ones are ever right. You may bring all of your proofs, all of your arguments in, and still they are right and you are wrong.

A woman office manager, who makes an amazing number of mistakes for a person in the position she holds, is one of those difficult ones who will never admit they are wrong. When trouble in the business arises and she is called into the owner's office, her clerks, department heads, and the workers in other departments are at fault—never she!

All of the proof that those in the establishment may bring is not sufficient to change the viewpoint of this woman who will never admit she is wrong. Consequently she keeps in the good graces of her employer and holds her position, while others bear the brunt of her mistakes, and find her extremely trying to work with. It pays this woman to be difficult!

This type of the difficult is not an easy one against which to provide yourself with shock absorbers. A little study of the persons, who will not admit they are wrong, will always show that despite their apparent belief in their own proficiency, they have a vulnerable spot, and they can be attacked distinctly to advantage at this point. Look for the hidden weak points in the assured ones among the difficult.

Difficult people are always good talkers, and excellent in argument. The art of persuasion is theirs to command only by touching some unseen button that connects them immediately with an entire battery of argumentative machinery. While they are talking they can convince you with only the use of minor arguments in their battery of argumentative machinery, that the thing they wish done and not the thing you want to do, is the thing that should by all means be done, or future generations.
or something equally distant and as terrifying, will suffer greatly.

Good preachers, teachers, reformers and public speakers come from the ranks of the difficult. The very nature of the business in which these people are employed makes it necessary for them to be able to lead others to see the light as they see it, and that is one of the chief talents of the difficult.

To combat the good talkers, and those excellent in the art of argument, learn to be a good talker, and quick at argument. The first time you show one of these talkers a flaw in their machinery, future encounters with them will be much more pleasant.

The difficult either insist upon doing a thing before anyone else is ready for the task, or they postpone the doing of it until no one but themselves cares to engage in the act. If you are one of those people who cannot be satisfied unless you can do a thing immediately, avoid as you would the plague, those who persist in postponement, and vice versa. Efforts to change either of these groups fail mally.

"How do you like Marjorie? Lots of people do not like her, you know." Two women were discussing a mutual friend.

"Yes, I know she is not generally liked," the woman queried, replied, "but she has always been nice to me, and we are all that way, touchy and hard to get along with on some points."

"I, too, always liked Marjorie," the other woman conceded, "but if she does not like you it certainly is not comfortable for you to be around her."

The difficult are that way. When they like a person they go to extremes to show their liking, both in public and private, and if they do not like you they go to equal extremes to show that they do not. If they like you they are always making plans for you without consulting your wishes, because they fit in so nicely with their own plans for themselves, but plans that are perfectly detestable to you.

If you succeed in eluding them, and their plans that you do not want to be bothered with, and begin working out your own plans, they always manage somehow to discover what you are doing and to act in a sort of "I warned you, my skirts are clear" manner around you that makes you feel as if you were a criminal.

"We know you get tired spending your week-ends alone," a gentleman and his wife said to a young woman, working alone in a town. "We want you to make our home your headquarters while you are in town. Come over every evening, and any other time you feel like it."

The young woman thanked the man and his wife, and told them that she would avail herself of their invitation, knowing all of the while that she would not unless forced to do so.

The forcing part came promptly. The couple were of the kind who make plans for you because they fit in with their own plans, and then they proceed aggressively to put their plans to work. When the young woman did not take immediate advantage of their invitation she was called at all hours of the night and day, on any pretext to go on long tiresome trips, and visit people that she did not care for in the least, with her kind friends, who were determined that she should have a good time and not be lonesome.

If she succeeded in eluding them for an evening or a week-end they were hurt, thinking of how lonely she had been. The young woman was not strong at the time and she needed her evenings and week-ends for quiet rest with friends of her own choosing. When the inevitable split with her difficult friends came, they shook their heads sadly. To them the young
woman was as difficult as they had been to her. They had done everything that they knew of to make her have a good time, and here she was telling them that she did not care for any more of their type of entertainment.

There is a way of escape from those who would plan the minutest details of your life for you, but it requires a firm manner, and a determination not to have others do your planning, as strong as that of these difficult planning ones, is to do so. Quick thinking, and plans of your own that will forestall the undesirable ones of those who would make arrangements for you, are ways of escape.

Enthusiasm is not one of the good points of trying people. Difficult people are never enthusiastic about others' enthusiasms. Some people become easily enthusiastic over the simplest of things. Considerately they even find enthusiasms for the enthusiasms of difficult people, and do not see why the non-enthusiastic ones can't return the courtesy by showing a bit of sympathetic enthusiasm for their enthusiasms.

Enthusiastic people should cultivate the habit of allowing their enthusiasms to be their own compensation and not expecting other people to share them to the same degree they do themselves. If the enthusiastic are kind-hearted they may make a hobby of the enthusiasms of others, but don't expect others to return your enthusiasms.

They, the difficult ones, like to talk ceaselessly about their health, which is never good. A mild cold gives them an excuse to talk more about their health than two and one-half years in a hospital would give those who do not consider bad health a topic for conversation. They never have any health, these difficult ones say, and "I never talk about my health. It is so depressing, you know." They never talk of anything else.

Always have no less than half a dozen subjects other than health on the tip of your tongue when you know you are going to come in contact with one of these difficult ones who have poor health. The more persistently they talk about the state of their health, the more determined you must become to talk of other things.

It is not easy to live with difficult people. O yes, it is, if you are willing to lend a sympathetic ear to all of their troubles, allow them to dominate every group, and give in to all of their desires.

Difficult people are never interesting. If they show the slightest tendency to becoming interesting, their difficult pomposity at once stands in their way like a fat man's stomach when he would bend to tie his shoe laces.

Difficult people are always abominably fussy. If you do not belong to the fussy people of the world these fussy ones are a constant bother to you, and constitute a problem that you may have to use all of your ingenuity to fortify yourself against. Avoid them when you can. Don't place yourself in positions that will cause you to become the brunt of their fussiness, and chose your friends and associates from among the more likable, less fussy ones of earth.

Invariably trying people are fussy about food. It is never cooked, or balanced, or served, or seasoned, or what not, just right. If you have a good appetite, and an equally good digestive system, and enjoy eating, you do not like to hear someone complaining about the food you are eating.

Eat your meals away from the company of such, if possible, and if not, get the food difficult ones talking about some of his other grievances for the length of the meal.

There is not need to make any reform designs on the difficult ones. Your reform plans once introduced to the difficult ones would never stand a
chance. The difficult ones can give three reasons why they can not and will not be made over into likable people, while you are giving them one reason why they should.

Those difficult ones ever have a way of getting what they want. They have not a "winning way," but a "wanting way." In your "winning way" you might as well go on letting these people with their "wanting ways" have their way, while you with your "winning ways" secure the same things from life that they are getting by "wanting ways."

The same things that make people difficult for you, make you equally difficult for others. Nothing irks those who like to wait to do a thing more than to have to be bothered with one of those insignificant persons who insist upon doing it now.

Difficult people—we are all that way!

The solution to the problem lies in understanding ourselves and others, and adjusting our lives to the lives of others in such a way that the things which cause difficulties cease to exist, or are greatly minimized.

CURES AND CURES

Strange things are done under the North Carolina sun, as well as under the midnight sun of Alaska, as is told by the verse writer who has immortalized (?) the shooting of Dan McGrew.

Down in Bertie County they needed a new jail. They also needed a hospital. They built the new jail and took the old jail for a hospital. Now it is the policy of Bertie people to cure moral ills with the aid of the new jail and to cure bodily ills with the old jail. And thereby hangs a tale.

One Bertie citizen advised against building the new jail, but rather advocated construction of a new hospital. She maintained that the county would have less need for a jail if it had a good hospital. She reasoned that sick minds superinduced sick morality.

The fact is, jails have a doubtful value as being agencies of morality. It is pretty safe to assume that the chief use of a jail is to isolate dangerous individuals who might do real harm to a helpless society if they were allowed to go free about the State.

An eminent authority has declared that criminals are divided into two classes—one who can be helped by reasonable punishment for wrongdoing and one who are irreparably criminal in nature.

Indeed, a man now in State Prison, who once lived in Winston-Salem and is possessed of a reasonable intellect, has declared his belief in this principle. He states that some people, hemmed in by a peculiar array of circumstances, commit crime one time who never would permit themselves to be so ensnared again. These people, he declares, are most deeply affected by moderate punishment and can become the best types of citizens if released.

On the other hand, he states that some people are sick of mind (sometimes incurably sick of mind) and, therefore, are hopelessly criminal unless something can be done for them physically. For these people, imprisonment does little good other than to protect society from them. Hospitalization of the right kind might make them potentially good citizens.

This same Winston-Salem man has declared from his prison cell at Raleigh that the man who is not a confirmed criminal, but is a criminal by chance, can be converted into one by extremely harsh treatment—that is, by unreasonably long prison sen-
tences, petty prison tyranny, poor housing conditions, isolation from people of respectable and law-abiding nature and all of the other unfavorable agencies which are often incidental to prison life.

The question which the people of Bertie County had to decide, then, was a complex one. However, the admirable thing is that they realize the fact they needed both a hospital and a jail and they have constructed both. Now they will be able to effect cures of two types.—Winston-Salem Journal.

SOMETHING MUST BE DONE TO SAVE LIFE IN NORTH CAROLINA

If a smallpox or typhoid fever epidemic in North Carolina resulted in two deaths daily, it would be a matter of great public concern. Physicians and nurses would be mobilized and preventive measures taken.

Fortunately there is no such epidemic in this State, thanks to the preventive efforts of modern science, but there is another just as deadly. That is the speed craze. With the best highways of any State of similar environment in the nation, we have gone speed crazy.

Two persons daily are killed on North Carolina highways in automobile accidents.

Ten years ago the average was two a week. Then it was considered a condition that must be remedied. Instead of remedying it, the number has increased seven times. And the end is not yet. Unless resolute steps are taken to check this speed craze, it will soon be three and four a day.

It would be bad enough if only those guilty of speeding and careless driving were the victims. It would be a tragedy for them to be broken to pieces, mangled beyond recognition, dead ere they had begun to live.

The speed craze does not stop with crushing those who become intoxicated with unrestrained power. It crushes to death our best citizens, our fair women and our innocent children. No one who travels the highway today in North Carolina is safe.

If such conditions prevailed in Chicago, it would be a national scandal. If they had prevailed in North Carolina ten years ago, it would have been a State scandal. Unfortunately they have prevailed so long that we have gotten used to them.

What shall be done about it?

The average man, when he hears about these things, shrugs his shoulders and moves on. He feels helpless in such a situation. He says there is nothing he can do about it except to drive carefully himself, but he has no guarantee that some fool will not run into him.

It may be that the average man in North Carolina can do little about it. Even so, there is something he can do, and he should resolve to do what he can. It is not possible for any man to measure the sphere of his influence. Every man can at least do something.

It is different with the leaders of public opinion, even if it be granted that an individual can do little about it. Ministers in their pulpits can call attention to this horrible condition, teachers in their school rooms can instruct the children under their care, public speakers can give warnings in their addresses and newspaper editors can give emphasis to conditions in their news and editorial columns. Reckless and intoxicated drivers can be put on the roads instead of being let off with nominal punishment.

It is time that something was being done about it. And the time to begin is now.—News and Observer.
**DEATHS FROM PELLAGRA IN NORTH CAROLINA**

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**Comment:**

- Favorable: The smallest annual increase since 1924.
- Unfavorable: The largest number of deaths ever reported in any one year from pellagra.

**Suggestions:** Now is the time to do something about it.
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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
- Constipation
- Colds
- Clean-up Placards
- Chickenpox
- Diphtheria
- Don't Spit Placards
- Eyes
- Fleas
- Fly Placards
- German Measles
- Hookworm Disease
- Infantile Paralysis
- Influenza
- Malaria
- Measles
- Pellagra
- 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) "Our Babies"
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- 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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TETANY

The State Board of Health frequently receives inquiries from people asking for information or literature on the subject of Tetany. Most people confuse the term Tetany with Tetanus, the latter being the technical name for lockjaw. There is no relation between the two conditions. In order to be able to publish a short descriptive article about tetany we asked Dr. Frederick R. Taylor of High Point to answer one of these letters. He did this sometime ago and we are publishing below a copy of his instructive letter.

Following is Dr. Taylor's letter:

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 questions regarding tetany. You ask for information regarding the symptoms, treatment, and nature of the disease, and if it is curable.

"In the first place, tetany is not exactly a disease—rather it is a special condition that occurs in quite a variety of diseases. It is what we call a symptom-complex, i.e., a group of associated symptoms due to a special condition which, as I have already stated, may occur in a number of very different conditions. It is usually easily curable, but not always, for it may be associated with some incurable conditions, but tetany itself, unless it complicates some unusually serious disease, is very satisfactory to treat in most cases. It is rather unfortunate that the term 'tetany', denoting the symptom-complex soon to be describ-
means without known cause—in this case a disease without any specific symptoms other than tetany), occurring in otherwise healthy workmen during the early spring months, especially in some of the central European cities, where it sometimes assumes epidemic form.

"7. Tetany occurring (a) in association with pregnancy or lactation; (b) during the course of an acute infectious disease such as cholera, typhoid fever, scarlet fever, etc.; (c) following acute poisoning with chloroform, ergot, phosphorus, morphin, etc., and (d) during or after surgical operations. Probably some of the cases in this miscellaneous group would, if carefully studied by special investigators, be found to belong in some of the first six groups.

"Two factors essential to normal bodily function must be understood before directly approaching the problem of tetany. In the first place, the blood must contain sufficient calcium salts (lime salts) in a form that can be used when needed. Second, there must be a proper relation in the blood between the acids and alkalies. An excess of alkali tends to disturb the proper use and distribution of the calcium salts.

"Let us now consider the subject of infantile tetany in some detail.

"Tetany is much more frequent in infants than in older children or adults, but usually much less serious, as many of the cases in adults, as may be seen from the above classification, occur in association with serious diseases. Tetany occurs in infants usually between the ages of 4 months and 2 years, and as noted, is nearly always associated with rickets. Both rickets and tetany are more severe in winter and spring, and in artificially fed babies, though they may occur in breast fed. Cases have been seen, according to Dr. Grant, as early as 2 months old, especially in premature infants, but this is very rare.

"Infantile tetany may be of so slight a degree as to cause no symptoms at all, or at most some restlessness and overexcitability. In such cases, it can be discovered only by certain special signs in response to tapping or pressing on certain muscles, or in response to certain electrical stimulation of the muscles, which will bring out the special type of muscular irritability present in tetany.

"At times, the first active symptom of tetany occurs at the onset of some febrile disease, and takes the form of a convulsion. All convulsions in infants are not due to tetany, but it is the commonest cause of convulsions in infancy, and should be suspected rather than teething and such normal processes.

"Another symptom of tetany is a peculiar spasm of the fingers and hands, and often the feet, which bends them in a characteristic position until the spasm passes off. These muscle spasms may be severe enough to be painful. Sometimes certain facial muscles are contracted, giving a peculiar expression that can hardly be described. There may be attacks of breath-holding until the infant gets quite blue, followed by a deep crowing breath not unlike the whoop of whooping cough. In some cases these periods of stopping of breathing become alarming, but it is a rare exception when they prove fatal. Any, all or none of these symptoms may be present in a given case.

"Infantile tetany usually lasts from a few days to several weeks, but clears up in summer. It can usually be cleared up at any time by treatment. It is very rarely fatal, and the convulsions due to tetany are not dangerous, as a rule. It does not show a tendency to cause any bad after-effects as a rule.

"The usual methods of treating tetany in infants consists of giving calcium in some form, cod liver oil..."
and exposing the child to ultraviolet rays in some cases. Physicians often have special lamps furnishing these rays in their offices. Sunlight (not coming through glass, but direct) is rich in these rays; hence the tendency for tetany to disappear in summer when life is largely outdoors with much direct exposure to sunlight. The treatment of tetany should be under the direction of a competent physician — the most effective treatment may require a considerable amount of technical knowledge.

"Very little is known about the tetany of pregnancy and lactation, other than that the outlook for recovery is usually good. I presume the treatment would be on the same general principles as those involved in treating infantile tetany.

"Tetany of the other types mentioned in Dr. Grant's classification should be regarded as of subordinate importance to that of the diseases which the tetany complicates, and the treatment should be directed to the special disease involved. Of course the treatment of tetany due to voluntary excessive forced breathing, is to stop such breathing and breathe naturally. I do not know that such tetany has ever occurred except as an intentional experiment on the part of scientists experimenting with themselves in an effort to better understand the nature of tetany.

"It is always a pleasure to try to explain anything we can in the field of medicine, but I realize that this letter must be rather unsatisfactory, for the whole subject of tetany, excessive accumulation of alkali in the blood, etc., involves some of the most highly technical and complex chemical problems that we encounter in medicine, and a really intelligent understanding of the problem can be arrived at only by much laborious technical study, so that it is practically impossible to give an adequate explanation to anyone other than a person well trained in the fundamental scientific principles of chemistry, physiology and medicine. However, if the rather labored attempt at explanation in this letter fails to explain as clearly as I would like it to do, at least I hope you may find comfort in the knowledge that infantile tetany is usually susceptible of the most satisfactory treatment, and that the ultimate outcome may be expected to be complete recovery."

WHY LET CHILDREN DIE OF DIPHTHERIA?

We cry out against Nature because she has so far refused to yield to us the secret of the cure of cancer. We spend millions of treasure and years of the labor of hundreds of doctors in an endeavor to find means for preventing or quickly overcoming tuberculosis, or even so rare a disease as leprosy. Would we apply this knowledge if we had it?

We condemn our law-makers for putting laws on the statute books and then expecting these laws to enforce themselves, when we, ourselves, are considerably tarred with the same stick.

It so happens that after this writing was begun the postman brought in some reports on mortality in several of our sister States which show the death rate from diphtheria for 1929 to have been: Alabama, 258; Louisiana, 138. Florida, 68; Georgia, 181. Our own State and the adjoining States will show about the same number of deaths proportionate to population. And for more than a quarter of a century we have had a well-nigh infallible cure for diphtheria!

Some of the great of the world are seriously urging that Science cease its efforts at discovery and invention until the race catch up with—or at least approach to—the achievements al-
ready made. This seems a sound thought as to the field of Medicine. Certainly our leaders might more stress that efficient weapons, already forged and everywhere easily available, be used to the fullest.

To a Charlotte hospital in the past three months more than 30 children have been admitted so far advanced in diphtheria as to require tracheotomy, and at least two have died on the way to the hospital.

Every doctor graduated in the past 25 years has been instructed to suspect every sore throat or croup in a child to be diphtheria, to examine the throat of every child that has fever, to take swabs from all throats which present suspicious appearance, and when in any considerable doubt as to urgency to give a large dose of antitoxin promptly, without waiting for a laboratory report.

In recent years the Schick test and antitoxin-antitoxin have provided us with ready, cheap means of preventing diphtheria. But the children keep right on dying.

Can it be that there is too much division of authority and responsibility between the family doctor, the specialist, the school physician, the health officer, the school nurse, the visiting nurse, and so on?

The wise man picks out a good doctor, puts the health of his family in the hands of this doctor and then holds him accountable for giving his family the best that Medicine has to offer.—Southern Medicine and Surgery.

AUNT SARAH'S CONVERSION
Nurse and Medical Counsellor to An Entire Community Aunt Sarah Disapproved of the Giving of Toxin-Antitoxin to Young Children to Prevent Diphtheria Until Her Little Great-Grandson Fell Ill With the Dreaded Childhood Disease
By SUDIE E. PYATT

Aunt Sarah Dawson sat in the warm sunlight of the spring-like February day on the back porch steps of her granddaughter, Hettie Brown’s home, holding fondly in her lap Little Joey, Hettie’s and Joe’s three-year-old son, her only great-grandchild. Her faded old blue eyes looked out across the back-yard garden at the brave yellow fried-egg plants that were struggling up from the gray winter earth, reminding Aunt Sarah that winter was almost gone, and that she must begin brewing numerous bottles of the dark, bitter concoctions that the entire community looked to her for in the springtime to cure many very real troubles and ward off many other diseases that were rumored to be “going about.”
to matters of nursing, medicine and disease.

Disregarding both Aunt Sarah and the community Martha had embarked upon her course of training. Only two weeks before she had been to spend a few days with her sister and her grandmother.

Martha's training had begun to "take," Aunt Sarah had said, when the young woman had insisted that her sister take Little Joey to Dr. Howland at the county seat, and have him given toxin-antitoxin to guard him against infection from diphtheria.

Many bouts, most of which she had seen lost, with the dreaded childhood disease, had left Aunt Sarah with a wholesome respect for this stealthy enemy of childhood that struck so quickly with such deadly results. But she did not think much of this toxin-antitoxin as a means of preventing diphtheria.

"All doctors do nowadays," she grumbled, "is stick needles into people, immunizing, vaccinating and inoculating. Joey's too little to stand a needle stuck in his arm once every week for three weeks until the treatment is completed."

So far as Joey's immunization against diphtheria was concerned Aunt Sarah's verdict ended it. Good natured Joe Brown, and his equally easy going wife were too sure of Aunt Sarah's ability to even question her right to say whether their child should or should not receive the proposed treatments, rather than the younger sister, who was advocating a method of treatment new and painful, which did not meet with "Grammie's" approval.

"Grammie" was Joey's nickname for his great-grandmother, and almost everyone in the community who did not call her Aunt Sarah called her "Grammie."

"Grammie won't let old doctor mans stick little needle in Little Joey," the child said looking reproachfully at his pretty young aunt, who was proposing such an unusual means of treatment for him.

Martha had given up the effort to have Joey immunized against diphtheria for the time being. Too well she knew of her great-grandmother's influence with Joe and Hettie to attempt to argue them into having the child treated against her wishes, but Martha resolved to write the State Board of Health at Raleigh and have some literature relating to diphtheria and childhood diseases mailed her sister. By indirection she hoped to accomplish what she had failed to do by direct effort.

A sharp wind sprang up, and Joey snuggled close to his "Grammie." A winsome little fellow with big blue eyes and soft wavy brown hair, he had early become the pride of Aunt Sarah's old heart. She had guided his mother along approved, old-fashioned paths during the nine months preceding his birth, with a struggle she had given up to have a doctor with the young mother when he was born, and she had cared for both mother and babe during the days following his birth, and, indeed, during every day of his young life.

Let a doctor stick a needle into her baby? No, siree! Not as long as she was Sarah Dawson, and could get about and talk as she could.

The sun sank further down the western sky, and it grew chilly on the backdoor steps. Aunt Sarah and Joey got up and went into the warm kitchen where Hettie was preparing supper on the wood range.

Joey continued to feel chilly, and crowded near the stove. Neither his mother, nor his great-grandmother paid any attention to him as they went about preparing the meal.

At suppertime Joey said he had a sore throat, and ate very little of the good hot food his mother placed on his plate. After supper Aunt Sarah
took Joey in charge. After she had given him a cup of bitter hot tea, which he swallowed with difficulty, and rubbed his chest and throat with some vile smelling grease, the foundation of which had come from Hettie's herd of geese, Aunt Sarah put a red flannel cloth on Joey's chest and up about his throat, and put him to bed. Before she left his room, which was also his father's and mother's room, she saw to it that each window was carefully lowered. The night air, in Aunt Sarah's opinion, was not good for little boys with sore throats.

Back in the combined dining-room and sitting-room Aunt Sarah found her grandson-in-law reading some paper bound booklets that had come, he said, from the State Board of Health in the mail that afternoon. Hettie had glanced over the booklets, and had put them aside, saying she must finish a suit she was making for Joey, and that she would read the booklets some other time.

Joe decided they looked as if they might be interesting reading, and selected one of the books at random to read.

He had not read far before he discovered that the book was about diphtheria and toxin-antitoxin treatment. Why, he thought, that was what Martha had wanted them to have the doctor give Joey when she was home on her last visit.

Joe read on. The book said that diphtheria was a constant menace to the life and health of children, particularly those under five years of age. It was a stealthy disease, often coming on with only slight symptoms, such as sore throat, chilliness, a little fever, or with pains, and it might be mistaken for sore throat, laryngitis, or some other less serious disease. The poisons of diphtheria worked rapidly, and if a doctor was not called at once death often resulted.

Diphtheria, this dread disease of little children, was easily and almost positively prevented with toxin-antitoxin, Joe learned. He also learned that babies and little children needed the protection of toxin-antitoxin more than did children of school age, and that as diphtheria was so easily prevented with toxin-antitoxin, the disease was regarded as one of neglected children, only those whose parents or guardians had neglected to have the toxin-antitoxin treatment given them, falling victims of the disease.

The toxin-antitoxin treatment was given in three doses, one week apart. At least three doses of the treatment must be given. Usually no more than three doses was required to immunize a child against diphtheria, but four or six months after the last dose of toxin-antitoxin the doctor could give a child a test, called the Schick test, that would tell whether or not it needed to receive more of the toxin-antitoxin in order to immunize it against diphtheria.

Once the disease had taken hold antitoxin, Joe read, and not toxin-antitoxin, was given in an effort to cure the child. Toxin-antitoxin was a preventive measure, while antitoxin was used to cure the disease. If antitoxin was given early enough it would cure a sick child.

Joe put the booklet down thoughtfully. If he had known all of these things about the disease when Martha spoke of having Joey immunized against diphtheria he would not have given in so easily to "Grammie's" flimsy excuse for not having the treatments given Joey.

The little chap had not been well tonight. Suppose it was diphtheria. Joe's heart contracted as he remembered that diphtheria was a disease of neglected children, and that no child who had received the toxin-antitoxin treatments need be a victim of diphtheria. He did not like to think of Hettie and himself as neglectful parents, even if their neglect had been caused by ignorance.
In the morning Joe decided to talk to “Grammie,” who had now retired for the night, and convince her that the thing to do was to have the doctor give Joey toxin-antitoxin, to ward off any possible diphtheria infection.

It was too late to give Joey toxin-antitoxin when morning came.

During the night Joey developed unmistakable symptoms of diphtheria, symptoms that even his young mother, who had always left the diagnosing of his baby ills to her grandmother, recognized as the dread diphtheria.

With hot teas and salves Aunt Sarah worked anxiously over the little lad.

Standing by Joey’s crib, as he rapidly buttoned himself into his coat, Joey’s young father announced that he was going for the doctor.

That booklet he had read last night said that antitoxin given in time would save a child suffering from diphtheria. He hoped by the time he could urge his sturdy little car over the seven miles of country road to the county seat town where the doctor lived, and return with him, it would not be too late for the antitoxin to work its saving power on Joey. If they had only known about toxin-antitoxin and had Joey immunized when he was a tiny baby, only six months old, how wonderful it would have been; the child saved this terrible suffering, and he and Hettie and Aunt Sarah relieved of tortured minds.

That Aunt Sarah was suffering because of the child’s illness, Joe could tell with a glance at her wrinkled old face, now ashy white, as she went about treating the child they all loved, with the simple home remedies that she knew. So worried was she over Joey’s condition she offered not the slightest objection to Joe’s stated intention of going for the doctor.

Gray dawn was breaking over the little Eastern North Carolina county seat town when Joe stopped his car at Dr. Howland’s home on Main street, and rang the physician’s front doorbell.

“A child sick with diphtheria?” Sure the doctor would come as soon as he could get his bag. He was already up and dressed. His own car was out of commission, he told the young farmer, and he would have to ride with him on the trip out, and get Joe to bring him to town.

Joe nodded his head, and said, “Hurry, doctor or it may be too late to do anything for the little fellow.”

Dr. Howland shot a quick glance at the strained face of the young father.

“If I could only get you parents to see that the toxin-antitoxin treatment is the thing to give children to ward off diphtheria, it would save much physical and mental suffering for both the children and their parents.”

“I know it now, doctor. I did not before,” Joe said, as the doctor got into his machine.

When Dr. Howland administered the antitoxin to Joey whatever real or fancied objection Aunt Sarah had previously had to the use of a hypodermic needle disappeared before the reality of the child’s suffering.

“I think he’ll be all right,” Dr. Howland said, getting ready to leave. “I am going back to town and get my own machine in working order. Later today I will drop back and see how Joey is.”

The antitoxin had been administered to Joey just in time. Its effect was marvelous, and the little chap safely escaped, if by a narrow margin, the yawning blackness the fearful child’s disease had spread across his baby pathway.

“Doctor, I will never again talk against toxin-antitoxin.” Aunt Sarah solemnly told Dr. Howland the last time he called to see Joey, and pronounced the little boy out of danger. “I objected to Joey’s parents having toxin-antitoxin given him before he became ill with diphtheria, but after that night when I saw him suffer so,
and then saw how the antitoxin saved him, you can start a campaign immediately to immunize every child in Bethel community and I'll go in the homes myself, if necessary, and persuade their parents to have their children immunized against diphtheria."

"That's very fine of you, Mrs. Dawson," the doctor answered, "and since you have suggested it, I am going to see the county health officer today, and make arrangements to have him at Bethel school-house to give toxin-antitoxin treatments as soon as he can make the arrangements.

"You know, Mrs. Dawson," the doctor went on talking, "I suspect you belong to that older group of men and women who brew bitter teas and all kinds of concoctions, and take them in the springtime to ward off diseases. Modern medicine has found that for mankind from the cradle to the grave, vaccination for smallpox, immunization against diphtheria, and inoculation against typhoid fever, together with the proper living habits, taking advantage of what we know of modern hygiene, cleanliness of body and mind, and avoidance wherever possible of carriers of disease, mosquitoes, flies, and people who have infectious diseases, also infected food and water, are the best means of warding off disease in the springtime, or any other time of the year."

"I always told the folks I nursed that the medicine I gave them would do them more good if they lived in the right manner than if they did not," Aunt Sarah agreed to the doctor's suggestions as to the best way to avoid diseases. "I would like to see some books about different diseases and how to avoid them by right living, something like Joe had from the State Board of Health about diphtheria and toxin-antitoxin," Aunt Sarah told the doctor.

"Sorry, Mrs. Dawson, I haven't any with me, but if you will drop a post card to the State Board of Health, Raleigh, North Carolina, they will be glad to send you books that will cover every subject you are interested in."

Aunt Sarah searched in the drawer of the table by which she and the doctor stood talking. She was looking for a pencil and a post card. "I don't see as well as I used to," she told the doctor. "Won't you write for me now and post it as you go into town. Our rural free delivery man won't be along until this afternoon. If you mail it this morning I calculate I'll get the books a day earlier. Spring's coming, and there'll be lots of folks in this community that'll want to know how to prevent coughs, colds, spring fever, and plain laziness. I'd like to give them the right information when they come to me."

Surprised at Aunt Sarah's immediate acceptance of his suggestion Dr. Howland wrote the card, signing it with Aunt Sarah's name, and pocketing it, he promised her it would be posted promptly when he reached town.

Modern, preventive medicine had won in Aunt Sarah as staunch a supporter, as she had once been a foe, as she turned to go into the house in response to Little Joey's call, after telling Dr. Howland goodbye.

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THE ESSENCE OF QUACKERY

By WALTER CLARKE, M. D.

The harm done by quacks and those who sell nostrums for the self-treatment of syphilis and gonorrhea is still incalculably great in all parts of the world.

It is not always easy to say wheth-
er an individual has one of these diseases. Years of training in a medical school and in hospitals under expert supervision are required to qualify a doctor to make a correct diagnosis and he must have, in addition, modern laboratory equipment available for the investigation of these diseases.

It is easy for an untrained person to mistake syphilis or gonorrhea for other diseases. To a patient who has syphilis or gonorrhea an incorrect diagnosis may be a great disaster threatening his health and life and that of his family.

It is almost as great a misfortune to mistake other conditions for syphilis or gonorrhea. In such cases the patient is led to believe that he has a serious and often fatal disease and that he is a danger to his family and friends. He is unnecessarily subjected to severe mental strain and long and expensive treatments; he may be forbidden the normal satisfaction of marriage and parenthood; his happiness and that of his family may be destroyed.

No human is infallible. Mistakes are sometimes made even by highly trained medical practitioners. The quack, however, wilfully deceives and lies in order to exploit the patient. He often leads the patient to believe that some simple condition is syphilis or gonorrhea in order to frighten the patient and so to obtain more money from him. He promises speedy cure in order to extract larger fees. No one ever heard of a quack actually treating a patient free of charge or continuing treatment after the patient's money was gone as physicians so generously do. The essence of quackery is the will to deceive sick people in order to obtain money from them.

The manufacture and sale of nostrums for the self-treatment of syphilis or gonorrhea is a kind of quackery. The proper treatment of these conditions requires supervision by a physician. Drugs which are administered must be carefully adjusted to the patient's physical condition and the progress of his disease. How, then, is it possible for a patent medicine to be effective in the self-treatment of these diseases? It is manifestly impossible. The "medicine" handed down from a shelf for the self-treatment of syphilis, the pills and washes passed out for the self-treatment of gonorrhea would do more good if they were thrown into the gutter. They are manufactured and sold not for the welfare of patients but for the profits—and they are large—which such 'remedies' bring.

In cases of syphilis and gonorrhea the doctor's problem is made more difficult if some ignorant person such as a quack or the patient himself has tinkered with the disease. Such meddling always decreases the possibility of satisfactory results when, after trying this and that, and going here and there, to quack and drug stores, the patient at last comes to the proper source of treatment, namely, the physician.

Uninformed people still believe in the magical results which quacks and patent medicine vendors so glibly promise. Until the public is better instructed, until quackery is rigorously suppressed, exploitation of the sick will continue.—Journal of Social Hygiene.

HEART DISEASE
(From Westchester Health Bulletin, White Plains, N. Y.)

Under the title of "heart disease" are very loosely and unscientifically grouped a variety of conditions affecting the heart and blood vessels which, taken together, constitute the leading cause of death in this country. These figures, unfortunately, have been in large part based on death
certificates from which it is rarely possible to draw conclusions as to the exact part played by disease of the heart itself in determining the fatal outcome.

In 1927 in the United States Registration Area there were reported over 200,000 deaths from all forms of heart disease, 17 per cent of the total mortality from all causes. Since 1900 the death rate from this cause has increased nearly 50 per cent.

Truly this is a discouraging state of affairs, which at first glance would seem to reflect discredit upon the work of public health officials and the medical profession, especially in view of the part that they have played in bringing about the enormous reduction in deaths from such diseases as tuberculosis, diphtheria and the diarrheas of infancy. When, however, one studies the statistical data on heart disease, largely compiled within the last decade, only one definite conclusion may be reached, namely, the vast difficulties of the problem to be solved in the light of our present knowledge of the subject.

For purposes of discussion, the various conditions statistically grouped under heart disease may be roughly divided in two parts, first, those in which the heart is primarily affected and its functions more or less permanently impaired as the result of a disease, in all probability of an infectious nature, which is usually contracted in childhood and young adult life. Its clinical manifestations are described as rheumatism, chorea (St. Vitus' dance), and tonsillitis, and by the laity and older physicians as growing pains. Certain of the common infectious diseases, notably diphtheria and scarlet fever, not infrequently cause organic and functional pathologic changes in the heart, while syphilis in its late stages is accountable for a large percentage of the cases of disease of the blood vessels and the heart occurring in later life.

A second class of conditions affecting the blood vessels and heart may be taken to include cases other than those cited, and largely represents an expression of the degenerative changes which take place in the human body during old age. A study of the statistics will show that contrary to the general conception, heart disease has not increased during the last decade in the young age group as a whole, namely, among those under 40 years of age, and that the great rise in mortality has taken place in the group over 45 years of age, which in 1927, in the country as a whole, accounted for approximately 50 per cent of deaths from this cause. It naturally follows that the rural areas, containing as they do an older population, furnish a larger percentage of the degenerative cases than do the urban districts and industrial sections of the country which embrace a relatively younger population. If we accept the frequently quoted statement that "A man is as old as his arteries" we must conclude that heart disease is one of the manifestations of the breakdown of vital functions in old age to which inevitably a great many of us must succumb who live to attain it. Viewed in this light the picture, while not a cheerful one, is far less dispiriting than is generally felt by those who base their judgment on the crude figures which show a tremendous increase in the mortality from heart disease. It cannot be denied that deaths of the aged who have accomplished their life work are of far less moment than deaths of individuals who are at the period of full usefulness to themselves, their dependents and the community at large.

If we subject the first group of cases to a more critical analysis we shall find a very interesting phenomenon, namely, that at ages under five, there has been a noteworthy decrease in deaths from heart disease, and in the group from five to nine years of
age, also a decrease but one much less marked. On the other hand, in the ages from ten to fourteen, inclusive, there has been a notable increase and in the group from fifteen to nineteen, a very great increase of deaths from this cause, after which the mortality decreases until middle and old age is reached, when it again increases rapidly with age.

It has been suggested, and with some degree of probability, that the decrease for the first five years of life, and to a less extent during the next five years, has been due to the attention that has been given to the general care of the health of young children, but no definite explanation has been forthcoming for the great rise of mortality during the next decade. One can only suggest that the habits of modern life and lack of supervision of the health of those in their teens are such as to bring about diminished resistance to the unknown infection which is responsible for disease of the heart at this age. If a sadly needed study should prove this to be the case, there is real hope that cooperative effort on the part of public health officials, the medical profession, parents and guardians, will produce some definite amelioration of this most deplorable condition of affairs. But noteworthy results in the protection of health and the saving of lives in this important group of the population must wait upon the discovery of the specific cause and method of prevention of those diseases which are so frequently followed by involvement of the heart.

What can be done for the second class of cases, first, as to their prevention? Since syphilis is a most important factor in the production of the degenerative changes in those beyond middle age, blood tests for the discovery of this disease should become very much more of a routine procedure of medical practice than is now the case. Prompt and thorough specific treatment should be made available to all those in whom syphilis is discovered. In the cases of cardiac and arterial disease, for which no specific cause can be assigned, it must be confessed that the possibilities of prevention are not hopeful, but there can be no question that much can and should be done to prolong the usefulness and comfort of the patients.

The splendid work of the cardiac clinics of New York City furnishes an example of the possibilities in this field, proving as it does that unnecessary suffering and hopelessness of a large number of our old people can be vastly ameliorated by skillful medical care, efficient follow-up social work and adequate hospital provision for those who cannot be given the needed care in their homes.

Before much progress can be expected in the control and treatment of so-called heart disease, it is evident from the facts as stated that a far greater knowledge of the subject should be made available. Data regarding the causes and conditions which lead to cardio-vascular diseases are being daily accumulated from special clinics and hospitals, while research to determine the cause of rheumatic diseases is being carried on in a number of laboratories.

The State Department of Health, through the Division of Vital Statistics, has recently sent a questionnaire to each physician in this state asking him to give full clinical details, including the treatment and its results, of every case of heart disease occurring in his practice. The County Commissioner of Health has supplemented this appeal for knowledge by a letter to the physicians of Westchester County urging their full cooperation in this effort to throw light on one of the darkest problems confronting public health.
The old trite saying of Cazalis, that a man is as old as his arteries should be extended, that his arteries are as old and efficient or inefficient as his endocrine glands. The part which these organs play in the maintenance of an efficient circulation is not yet fully recognized. The preventive side of medicine, apart from that dealing with infectious diseases, which I believe is going to be the medicine of the future, is only slowly developing. The reason for this is that prevention does not pay the individual practitioner, and the public do not believe in paying for what may never happen. Moreover it is not always an economic proposition; when a public health officer tells me that in his particular city he has saved so many thousand lives, and actually has the temerity to put a money value on his work, I retort that I would like him to trot them out, and let me see whether they were worth saving and how long the saving process is likely to last. I believe that every person dying under the age of 20 is an economic failure. Nature weeds out the unfit, and enormous sums of money are spent yearly in thwarting Nature, but in the long run progress must be established and Nature gets her way. The late Dr. R. J. Ewart recorded in the Eugenics Review how a few wet summers had enormously reduced the death-rate from infantile diarrhoea, but an epidemic of measles came along and wiped out all the inefficient lives that had been saved. War is dysgenic and in the late great war millions of the fittest of the fit were killed. While our A-1 men were sacrificing life and limb, the weaklings at home were propagating the race, but Nature was not going to be thwarted all the time; she came along with a world-wide epidemic of influenza and wiped out more of the weaklings than the numbers of the fit killed in the war.

If you want an A-1 race you must breed them, there is no other way. You must apply genetics to the human race just as you do to the lower creation. We want children of choice not of chance—which is the usual haphazard method in the present day. The parental side of the question has always been too much stressed: Personally I have long held that the fifth commandment requires serious modification. "Honor thy father and thy mother that thy days may be long in the land, etc." was all very well when the father had the power of death, but now-a-days it should be: Parents endow your children with good health and an intellectual capacity to enjoy life, so that they may live long to be an honor to those who gave them life. We want more "Mothers of the Gracchi," and not the namby-pamby individuals unfit for parental duties. Parents are often selfish, lustful beings unworthy of honor, and those who transmit hereditary disease merit a curse rather than a blessing. No person has any moral right to bring mental and physical weaklings into this austere world. Those who cannot produce healthy children should leave the job to those who can.

I get no more deplorable reading than the annual reports of Sir George Newman, Chief Medical Officer of the Board of Education. "There are approximately 2,000,000 children in
England and Wales under the age of five for whose nurture and education there is no proper organization. Up to two years of age infant welfare centers are doing a most magnificent work in improving the health of the nation, but it is lamentable that despite this, one quarter to one third of all children admitted to school at five are in need of medical attention before they are fit to receive the education provided for them. It is estimated that there are 300,000 dull, backward and retarded children of school age, or 500,000 if all children of two years and more are included, and about 100,000 are educable mental defectives.

What a black outlook for the nation with a million and a quarter constantly unemployed and unemployable. If Sir George Newman would get rid of his Lamarckian ideas he might really do some good in his exalted position. If the maternity and child-welfare centers were turned to proper use we might stop this manufactory of uneconomic beings who never had and never can have much enjoyment in life. Then the fit in all classes of society would have a chance of doing something for the race instead of being taxed out of existence to support uneconomic wastrels. There is no use in providing cannon fodder; intelligence will win the next war.

There is no part of the animal economy more under hereditary influences than the circulatory system. You get your health, physique, intellectual capacity and longevity—in fact the harmonious workings of your endocrine system, from your progenitors. I know that there are many of our profession so imbued with Lamarckian ideas that they will tell you, all children are born healthy, that their potentiality for life is equal, that their bad health depends on the environment. Such doctrines are scarcely worth refuting as there is no such thing as equality in Nature, not even in the same family. The Mendelian laws should be widely studied and carried out. We should take lessons from horticulturists and animal breeders. The nation that produces the finest and best race is sure to win in the long run. Of course we do not wish to raise a race of hot-house plants, every progressive race must take risks; the safety-first principle never made any nation.

When we get children with healthy circulatory systems it will be my part to tell you how to keep it not merely healthy but efficient to advanced age. Of course the circulation of a "clerk" might be as healthy as that of a "navvy" but it would not be as efficient though it might wear longer. It is unfortunate that we measure the length of our existence by the number of revolutions we have had round the sun rather than by the work which we have accomplished. Before Einstein appeared on the scene, it might have been argued, and was successfully argued by many ancient philosophers that there is no such thing as time; certainly so far as our senses are concerned it is a physical non-entity. A revolution of the earth on its axis we arbitrarily divide into 24 parts which we call hours, and if we are at the equator we are being whirled round at the rate of 1,000 miles an hour without knowing it. Part of this time we get the beneficient influence of the moon which is not only the activator of the tides, but, as Professor Baly has shown, its polarized light has a great influence on the early growth of plants, and in the maturation of fruits. Our ambit round the sun we divided into 366 1/4 days, and during this excursion we travel at least 68,000 miles an hour. The question in my opinion is not how many of these excursions we have had, but what have we been doing. If we be merely parasites the fewer revolutions the better for the nation. What troubles me is that many of our best and most worthy citizens after they have had 60 excursions suffer from a fail-
ing circulatory apparatus and die in the most useful period of their lives. They must be taught how to lessen this wasteful mortality, and preserve their utility to a more advanced age. I completed my 80th excursion about four months ago, and I can truthfully say that I have never been a parasite. The older I get it seems to me that the more quickly does time fly; the days are always too short and the nights too long for the work which I wish to do; even in bed I carry on experiments in my inner consciousness which are afterwards developed like a photographic plate.

**OVERDOING THE ULTRAVIOLET RAY BUSINESS**

An editorial committee representing the American Medical Association recently issued the following timely warning concerning the dangers of fooling with the ultraviolet ray contrivances, unless such devices are in the hands of competent physicians or their technicians. Treatment by the ultraviolet ray has taken its place among the many measures of therapeutic value when utilized by competent physicians, but, like the administration of morphine or the amputation of legs or arms, it is a matter for competent practicing physicians to advise about.

The American Medical Association suggestions follow:

"The tendency of therapeutic methods to be adopted and discarded in great waves of popularity and forgetfulness has never been so completely manifested as in the current attention given to the use of physical therapeutic methods, particularly the ultraviolet ray. Not only do barbershops swindle prospective victims of baldness with incandescent lamps colored purple, not only do electrical corporations sell, as ultra-violet ray devices, contraptions delivering hardly any ultraviolet radiation at all, but some manufacturers of apparatus actually delivering ultraviolet rays of potency endeavor to place these devices wherever a sale can possibly be made.

"Regardless of the fact that practically every method in medicine that may do good can also do harm, these machines are being sold to bath institutions, swimming pools, massage parlors, beauty shops, clubs, barber shops and innumerable other businesses in which medical supervision is certainly not probable, indeed, hardly possible. The sales are made notwithstanding the fact that scientific literature has already revealed that the rays may in some instances depigmentize or bleach the skin, that they possess dangerous effects for the eyes, that some people who do not tan easily are exceedingly poor subjects, that persons with a tendency to pellagra develop serious skin symptoms, that persons with low blood pressure react sometimes with serious symptoms, that persons with early tuberculous conditions may be greatly harmed, that menstruation constitutes a contra-indication to the use of ultraviolet rays and that there are innumerable records of severe skin eruptions following over-exposure to ultraviolet rays in persons who are unduly sensitive.

"Moreover, the rays are being advised as useful in a vast number of conditions for which the scientific evidence is extremely slim. It recognizes in many a limited application as demonstrated by scientific evidence. It must continue to deprecate the uncontrolled use of such agencies in the hands of those without scientific knowledge and in such a manner as may result in serious harm."
Total Number of Deaths From Diphtheria
Reported in North Carolina for Eleven-Year Period—1920-1930, Inclusive

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
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<tr>
<td>1920</td>
<td>286</td>
<td>11.1</td>
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<tr>
<td>1921</td>
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<td>9.5</td>
</tr>
<tr>
<td>1928</td>
<td>355</td>
<td>12.0</td>
</tr>
<tr>
<td>1929</td>
<td>324</td>
<td>10.8</td>
</tr>
<tr>
<td>1930</td>
<td>253 (Provisional)</td>
<td>7.8</td>
</tr>
</tbody>
</table>

The above figures tell the story for the last eleven years. What of the next few years? The rate for 1930 is lower than before, but 253 deaths is a terrible sacrifice to make to the little dirty gods of Ignorance and Carelessness.
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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  
Constipation  
Colds  
Clean-up Placards  
Chickenpox  
Diphtheria  
Don't Split Placards  
Eyes  
Fleas  
Fly Placards  
German Measles  
Hookworm Disease  
Infantile Paralysis  
Influenza  
Malaria  
Measles  
Pellagra  
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Typhoid Placards  
Venerable Diseases  
Water Supplies  
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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)  
"Our Babies"  
Prenatal Letters (series of nine monthly letters)  
Minimum Standards of Prenatal Care  
What Builds Babies?  
Breast Feeding  
Sunlight for Babies  
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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DIPHTHERIA PREVENTION

On the front cover of this issue we are publishing a table setting forth, year by year since 1920, the number of deaths from diphtheria reported to the State Board of Health of North Carolina. We are not only publishing the number of deaths, but the rate per hundred thousand population.

A study of this table will afford the gratifying information that in 1930 the lowest rate and the fewest number of deaths were recorded for any year during the eleven-year period. This is encouraging to all concerned, but it affords little satisfaction to the parents of the two hundred and fifty-three children who died last year from the disease, nor to the additional number of families who had serious illness from the disease during the year, in which many children who finally recovered had serious attacks, and whose lives were in danger from the disease.

It is a simple thing to say that diphtheria is now easily prevented. Getting it done is another matter. There are two different kinds of treatment which will prevent diphtheria. One is toxin-antitoxin, and the other is a somewhat similar product called toxoid. Any physician or health officer in North Carolina is qualified to advise with you concerning which agency would be best for any individual child. Furthermore, any practicing physician, and any health officer, is prepared at any time to administer this preventive treatment. This being true, every death that now occurs from diphtheria is a death needlessly sacrificed either to ignorance or to carelessness.

Ignorance of the law is said to afford no protection. The same thing applies to disease prevention. Preventable disease will attack and kill a child whose parent knows about these things and yet does not avail himself of the protection offered. But there is a vast difference in the responsibility resting upon the parent who wilfully and deliberately and carelessly fails to avail himself of the protection offered to the parent who, in ignorance, knows nothing about the methods.

March, April, and May afford the most satisfactory seasons of the year for immunizing all children under six years of age in order to keep them from having diphtheria this year or in any future year. We therefore urge every parent in the State to see his physician or health officer at once and arrange for this treatment to be given immediately.

THE GOOD SAMARITAN HOSPITAL
Charlotte, North Carolina

The First Hospital Erected Exclusively for Colored People in North Carolina

One year ago this month the Health Bulletin emphasized the progress being made in the building and equipment of modern hospitals exclusively for colored people in North Carolina. The first was done with a view of calling to the attention of the people of North Carolina the celebration of National
Negro Health Week. Again this year, as National Negro Health Week is to be celebrated during the month of April, the editor of the Health Bulletin desires to bring to the attention of the people of the State a little matter of hospital history about which most of the people of the State, with the exception of the people in the vicinity of Charlotte, know little or nothing.

Last year the article in the Bulletin called attention to the three modern hospitals exclusively for colored people in Greensboro, Durham, and Raleigh. Sometime later a regular reader of the Bulletin, residing in Charlotte, wrote us giving a good bit of the history of the Good Samaritan Hospital in that city. The article last year was not intended to describe all the hospital activities for Negroes in the State, but simply described some of the more outstanding activities in this section familiar to the editor of the Bulletin. The editor takes pleasure in presenting the information concerning the Good Samaritan Hospital, but again there is no intention of discriminating against any other hospital activity by failure to mention such institutions. All such will afford good material for later stories, provided the information be sent to the editor of the Health Bulletin.

It is probable that the Good Samaritan hospital in Charlotte was the first hospital not only for Negroes in North Carolina, but the first to be built exclusively for Negro patients in the United States. The building was commenced in 1888 and provided at first for sixteen beds, but of recent years has consisted of fifty beds. It is a general hospital. Recently, with the aid of local funds, supplemented by the Duke Foundation and the Rosenwald Fund, a considerable addition has been made to the hospital, bringing it up to a capacity of sixty-five beds.

The reader of the Health Bulletin in Charlotte who has supplied us with a great deal of information about the hospital, its origin, and establishment has the following interesting comment:

"While the Episcopal Church is given the credit for the organization of the Good Samaritan Hospital, and it was and is a church institution, though, of course, open to any and all, the hospital movement was begun by Mrs. Jane Renwick Wilkes, wife of Mr. John Wilkes, and the whole weight of raising funds, over-coming what was then the prejudice against such efforts for the colored people, devolved on her, and was carried to success by her, and her name is now so accredited in Charlotte, both in the church circles and at large."

The writer goes on to say that his recollection is that the movement got well under way about 1885. This is probably true. The first official report of the Good Samaritan Hospital was issued in 1892. In the official report the statement is made that the necessity for such an institution was felt in 1882, and the movement really dated from that time. The first contribution in cash was received from a church in South Port, Connecticut, in December, 1882. The raising of funds at that time was a slow process. The officials of the church in 1883 used a part of the fund collected for completion of a mission church for Negroes in Charlotte. According to the official report, this was done because of the influence it would have in the future work of raising funds for the hospital. The lot for the hospital was bought in 1886, and in 1887 the cornerstone was laid and the actual work of building the hospital was commenced. The building was not completed sufficiently to admit patients until 1891. The hospital was therefore opened to patients in September of that year, nearly ten years.
after the date of the first organized effort for the institution.

The emphasis was laid from the beginning on the fact that the Good Samaritan Hospital is a charity hospital. The first official report states that "the physicians of Charlotte gave their time and skill most kindly and freely." It was stated in that report that the Negro population of Charlotte at the time was about five thousand, and, although they were interested in the hospital, they were able to give very little towards its maintenance.

"A training school for nurses has been carried on from the opening of the hospital. At this time it is stated that the training school has twenty nurses in training and graduates a class yearly."

In the first official report one paragraph stands out nearly as significant in some sections today as when written thirty-nine years ago, although there are many well-to-do colored people in the State, and the condition of the Negro today is immensely superior to the average living conditions of the masses of the race in 1892. The statement follows:

"It is hard to make plain the very great need of this hospital to those who are not familiar with the homes of the greater part of the Negro race. The crowded and squalid condition of their houses, the poverty which bars them from the food and medicines they need, the want of quiet and privacy, of good nursing, and of all conveniences and comforts for the sick make hospital care and treatment very necessary."

So far as the hospital care for Negroes goes, the cities, such as Charlotte, Greensboro, Raleigh, Winston-Salem, Durham, and many other places in the State, have fine facilities for caring for their sick. This is largely through the aid of white people and philanthropic organizations, but the Negroes themselves have not failed to do a great deal along this line. But the Negroes on tenant farms and in remote rural sections suffer just like the poorer white people in great many sections of North Carolina for hospital and nursing care when ill.

The Charlotte writer states that "the two high spots in the hospital's existence have been caring for forty-six injured people in 1906, when the Seaboard Air Line Railway had a wrecked excursion, and again in 1911, when a similar wreck put eighty-one patients inside the hospital, all of whom had been without food for fifteen hours, and sixty-two of whom were seriously hurt. And this was done without seriously interfering with the regular inmates."

In truth, the organization and maintenance of this hospital, through nearly forty years of prosperity and adversity, affords a distinct contribution to the history of hospitalization and medical care for the unfortunate colored people that will stand as a record for a long time in this State.

### TYPHOID FEVER CONTROL IN NORTH CAROLINA

**By G. M. Cooper, M. D.**

The provisional tabulation of typhoid fever deaths reported in North Carolina for 1930 records the fact that 141 deaths from this disease occurred in the State during the year. This is the lowest death rate ever occurring in the State since the memory of the oldest living man "runneth not to the contrary." During the year exactly 1,000 cases were reported to the State Board of Health from all parts of the State.

Twenty-five years ago there was no such thing as the recording of vital
statistics in this State. Dr. Richard H. Lewis was secretary of the State Board of Health, serving on a part time basis, and the total appropriation for the conduct of the entire State Board of Health was only $2,600 a year including the newly established State Laboratory of Hygiene. Out of this Dr. Lewis' little salary was paid, the expenses of maintaining an office, and printing, postage, and all of it. Certain diseases requiring quarantine, like smallpox, required reporting to Dr. Lewis by the different county superintendents of health, as they were called in those days. There was a part time physician serving as county superintendent of health in each one of the counties. There was not a whole time health officer in any city or county in North Carolina at the time.

Dr. Lewis stressed every month in the Health Bulletin the presence of diseases like typhoid, malaria, measles, smallpox, and so on about over the State. Through his energy and his unfailing courtesy, he had a system of reporting, voluntarily done by the different county superintendents of health, that kept him informed from month to month of the presence of communicable disease about over the State, just about as well as the State Board of Health is at present informed of the occurrence of these diseases. At that time it was voluntarily done, and, for the most part, chiefly done by the physicians who held the office of part time superintendent of health. At this time, of course, it is required by law and is a part of the great business system of reporting on the part of the various whole time health organizations in city and county in North Carolina, at present serving more than half the population.

During the month of January, 1906, twenty-five years ago, for example, typhoid fever was reported to Dr. Lewis from twenty-nine counties in North Carolina. Caldwell County, up in the mountains, reported 10 cases. Harnett County reported 10 cases. Mecklenburg, Mitchell, and Forsyth reported "many", Franklin, Anson, and New Hanover reported "several." Cumberland reported "in all parts." So the story runs.

The scourge was present in every community and in every city and town in the State from the first of January to the thirty-first of December every year. It reached serious and dangerous proportions during the late summer and fall months annually. Literally thousands on thousands of citizens of almost all ages became victims of the disease, and many thousands of them died every year, most of the deaths occurring among the young adults or young men and women in the prime of life.

We of today cannot even estimate the number of deaths that occurred each year and the numbers of widows and orphans, as a result of typhoid fever, which occurred every year a quarter of a century ago. Every meeting of the State Medical Society at this time was punctuated with papers on typhoid fever, largely how to treat it. A physician, practicing medicine at the time, who happened in one way or another to achieve a reputation as a good "fever doctor" had his success then and there underwritten. He was the doctor for the masses, and they would have his services at all hazards.

About this time such men as Chapin, in Providence, Rhode Island, and Lewis, secretary of this State Board of Health, began to agitate for control and prevention of the disease. No much headway, however, could be made except through the conscientious efforts of individual practicing physicians until the beginning of typhoid vaccination, introduced in this country by Russell, in the army on the Mexican border, about 1912, and of the fine work of medical sanitarians.
in providing safer milk, food, and pure water for the people of the cities and towns especially.

The battle against typhoid fever in this State, as in other sections of the country, has been a long and hard struggle, a struggle to overcome ignorance and carelessness, a struggle for the dissemination of practical information and the knowledge of protection among the people generally.

The writer of these lines recalls with supreme satisfaction the fact that while he was one of the part time superintendents of health, more than twenty years ago, he received cooperation at the time on the part of practicing physicians in putting into effect the more or less crude methods of prevention back there, and also their keen insight and intelligent efforts in tracing out the cause of each individual case. He remembers particularly that one epidemic late in 1913 was nipped in the bud because of the fact that the country physician who was called to treat the first case in the first family contracting the disease, experimented that summer day himself in order to satisfy himself on that first visit whether or not the case was derived from a carrier, from contaminated water, or from milk. That physician eliminated the carrier. He eliminated the milk and food supply, but he located the source of the infection as coming from a well into which surface water was running across the ground from a spring in the edge of the hill above the top of the well. Another physician in another section of the county about the same time traced the source of a first case to infection from a carrier, the infection getting into the well from a distant underground source, and that physician traced it through the simple expedient of placing some methylene blue in the water that he suspected was getting into the water in the open well being used by the family for drinking water. The writer as county superintendent of health was called into consultation for the purpose of preventing any further spread, and in both these families control was effected and no further cases developed and the source of infection was all cleared up.

For the most part, however, people had no protection, and physicians were generally called after one or more of the family were prostrated and the disease all too many times attacked practically all the members of a family. Those were times that the older physicians and the older residents of North Carolina remember with a shudder.

From the work of such physicians as just mentioned, from the work of far-seeing health officers like Lewis and Chapin, and from the work of various scientific research workers, gradually methods of typhoid control and elimination were put into effect in this State.

It was the writer's privilege to direct the first intensive vaccination work against typhoid in North Carolina. This was in 1915, the year following the first authentic reporting of deaths to the newly instituted vital statistics department of the State Board of Health.

Just here it is well to set forth before the reader the facts which proclaim the record in the battle against typhoid much louder and more eloquently than any words can describe. The record for seventeen years is here set forth, so that all who can read may see for themselves. In 1914, the first year in which the report of deaths was placed upon anything like an authentic basis, it will be seen that 839 people died of typhoid fever. The estimates of cases that year occurring in the State was a little more than 11,000. Now read the table giving the number of typhoid deaths as occurring each year from 1914 to 1930, inclusive.
Year | Typhoid Fever Deaths
---|---
1914 | 839
1915 | 744
1916 | 700
1917 | 726
1918 | 549
1919 | 427
1920 | 322
1921 | 307
1922 | 299
1923 | 267
1924 | 270
1925 | 277
1926 | 270
1927 | 226
1928 | 184
1929 | 164
1930 | 141

Thus, it will be seen by a study of this table that the control of typhoid fever in North Carolina has been a slow and tedious process, but it has been a battle well worth waging, and it has received the attention of some of the best men in the medical profession in this State. Like winning a war of any other kind, the strategy has had to be planned and the battle lines carefully formulated, and it has required courage of no small order to carry through, even to the present stage, the work so far.

The comparison of 141 deaths with 1,000 cases in 1930 to 839 deaths and 11,000 cases in 1914 is a record not to be ashamed of. At the same time, just so long as there is one case of typhoid fever within the borders of the State, there will be a possibility of an epidemic reaching to dangerous proportions at any time. The disease has to be kept under control, and to do this requires constant vigilance on the part of health officers, physicians, and the people themselves. Carriers must be located before they leave a record of cases and deaths in their wake. Sources of infection of every description must be sought out and eradicated before human infection occurs.

There are many weapons with which to fight the disease now, the best of which is typhoid vaccination, safe sewage disposal, pasteurized milk, or otherwise pure and safe milk, pure water for cities and towns, and especially pure water for each of the householders among the 2,300,000 people of the State who live in rural districts, and therefore obtain their own water supply for family use from individual wells or pumps or springs.

Efforts must be kept up. Those who are getting old in the service, and who have borne the brunt of the battle for so many years, must pass the torch along to those coming behind, with the urgent injunction to keep up the efforts at eradication of this terrible disease until there is no longer a person suffering from the disease, or a death occurring from it within the confines of North Carolina.

**WATER ANALYSIS AND WATER SUPPLY**

By J. W. KELLOGG, Bacteriologist and Chemist

Sanitary analyses of water samples have been made in the State Laboratory of Hygiene since the laboratory was established in 1908 and during that time nearly 90,000 samples have been examined, over 60 per cent of which have come from the public water supplies of the State. Under the State Law samples from such supplies must be sent for analysis each month. There are at present about 230 public and semi-public water supplies, ninety of which are derived from wells, and 140 from streams and surface water. These are all under the supervision of the State Board of Health, which has set up very rigid regulations as to the source of supply and the treatment which is necessary in each case.

Public supplies. Samples taken from the deep well supplies have
shown that with very few exceptions, they are of satisfactory quality from a public health standpoint. One is being treated to remove the excess iron in solution, and one or two others are sterilized in order to remove the danger of possible pollution. As a class they are all safe for domestic use.

The supplies derived from springs and mountain streams are also sterilized as a precaution against chance pollution, from human sources, and are thus made safe for human consumption.

The third class, and the largest, both in number and from the point of number of population served derive their water from surface streams, where the character of the raw water makes filtration and sterilization necessary. The filtration process clears the water of turbidity and color and produces a clear sparkling effluent. This process is hastened by the application of alum or other coagulants in solution which produces a floc. This floc carries down with it the turbidity and color in a mass which is removed in the sedimentation basins and on the filters. By this process also the number of the bacteria is greatly diminished, and finally the filter effluent is sterilized as a further precautionary measure. At nearly all these filter plants daily tests of the water, both chemical and bacterial, are made to insure its safety. It should be stated that the alum and other chemicals used in the purification processes are completely removed from the water when the chemical dosage is properly supervised.

Spring and Bottled Waters. There are about two dozen spring and bottled waters sold in this State, each of which must be examined monthly to comply with the statutes. If for any reason you wish to use such a water for drinking purposes, be sure that it has been examined and found free from intestinal bacteria.

The medicinal value of most bottled spring waters has been much over-rated, and except when a certain water is prescribed by your physician, there would be no advantage in using such a water over any other pure water.

Private Water Supplies. In contrast to the public water supplies the private supply can not have the same supervision, and we know that the majority of private supplies are not so safe, judging from the many analyses we have made. However, in nearly all sections of the State we find that the soil makes an ideal natural filter, and consequently the deep ground waters are as a rule safe. Thus the problem is to protect the water from infection by human agencies. The deep ground water is much to be preferred as a domestic supply to surface springs or shallow wells, although they too may be made safe for use. The type of well is very important. A bored or punched, or driven well with a good pump is the safest. Next comes a dug well with a water-tight casing from bottom to the top of the ground, with a water-tight cover, and a good pump. Next in safety comes the spring, completely enclosed and covered to prevent surface drainage, with an overflow pipe from which the water may be drawn. In all cases, provision should be made to prevent the entrance of surface water, and for carrying off water drawn from the well or spring. The danger of using water from an open-top bucket well is almost obvious. Drainage from the house or barn or privy may seep into the well and pollute it, but the more direct and dangerous means of pollution is by the handling of the buckets and chain by those who use the well. A person who has a mild or unrecognized case of typhoid or dysentery, or a convalescent from one of these diseases may handle the
bucket and chain and the germs from his hands go into the well, only to come out in the next bucketful. Thus a well is infected and unless protected by vaccination you may be the next one to drink from that well and contract the disease.

Springs. An open spring is also constantly liable to receive dangerous pollution, and if your supply is from springs, be sure to protect it. It should be completely enclosed in cement to prevent the entrance of surface drainage. A tight cover should be installed to prevent dipping into the spring with dirty vessels, and the water collected only through an overflow pipe. Spring waters are usually pure as they issue from the ground, but in order to have a safe supply the water must be protected from human pollution. A well or spring is not a menace in itself. Typhoid does not originate in water but from a previous case of typhoid. Underground water at a reasonable depth is pure. The problem is to protect it from pollution.

Collection and Examination of Samples. We make sanitary analyses of water samples only when they are received in sterilized bottles procured from us. This regulation is not a matter of "Red Tape" but must be observed in all cases except in waters bottled for the market. With the latter not only the condition of the cleanliness of the bottle is a factor to be determined. Examinations are made free of charge for physicians and health officers who state that the examination is in the interest of public health. Otherwise there is a fee of $5.00. The examination of samples from open wells and open springs is of little value in the individual case as nearly all will show evidence of pollution. If there is reason to suspect your water supply get your physician to request a sterilized bottle. Do not send a sample in any old bottle you may have and expect to have it examined. A bacteriological examination is a very delicate operation and may reveal evidence of pollution if care is not taken to properly collect the sample. Carelessness in sampling may be responsible for an unfavorable report. Directions for sampling are enclosed with each bottle. When a sample of water is received at the laboratory, portions of it are plated in sterile dishes in sterile media and incubated at body temperature for twenty-four hours. At the end of this time the bacteria have formed colonies which may be seen with the naked eye and these are counted, and an estimate made of the number of bacteria in the sample. Other portions are inoculated into sterile sugar media and incubated at the same temperature for the development of the lactose fermenting bacteria, which are in most cases members of the colon group (colon bacilli.) The presence of members of this group of organisms is our best evidence of pollution. If this group of bacteria is not found in the portions of the sample examined we infer that the water was free from pollution at the time the sample was collected. A few chemical determinations having a bearing on the sanitary qualities of the water are made, among which is the test for Chlorides or salt content. Salt is used much by humans in their food and excreted in the discharges. So an increase in the salt content of water over the normal may indicate pollution. Another test is for Nitrites a form of nitrogen, which is derived from the oxidation of albuminoid substances found in the stools. The presence of nitrites is thus evidence of recent pollution of the water.

In some of the underground waters of the State however both these and other chemicals are in solution in large amounts and the finding of excess chlorides or nitrites may be dis-
counted unless the results are confirmed by the bacteriological findings and the sanitary survey. The hardness of a water may be an economic problem in some industries such as laundries, but in N. C. we have no hard waters, comparable with the hard waters of the North and West and so far as we know the hardness of a water has no deleterious effect on the human system.

Physical. Samples are observed for sediment, color, turbidity and odors, each of which test has a bearing on the suitability of the water for domestic purposes.

Interpretation. A single analysis of a sample from a water supply may indicate whether the water is safe or not, but it must be remembered that the results of an analysis refer only to the sample as received at the laboratory, and must not be considered as a complete report on the water supply. In all cases it should be interpreted in the light of a sanitary survey of the supply. This should show the location of well or spring, all the conditions surrounding the well, the possibilities of pollution from surface drainage and all the nearby possible sources of pollution. In an attempt to interpret a water analysis we should know as much as possible about the origin of the sample, as to source, depth of well, etc. In such a survey it is possible to overlook the real source of pollution. For instance a break in the pipe casing below the surface of the ground may be responsible for the pollution of a supply, and only the repeated finding of bacterial evidence of pollution will prove that such avenues of infection exist, unless there be an epidemic of some water borne disease as proof of the fact.

The physical properties of a water are to the average consumer of the greatest importance, and may influence some to seek a clear spark-

ling polluted water in preference to that from the public supply which is far safer, but perhaps of a less pleasing appearance.

The chemical content of the waters of this State in general is so low in amount that it may be disregarded. In relation to public health the mineral content of water has a very slight significance.

An increase in the chlorides or Nitrites over the normal for the locality may indicate possible pollution, but this increase is usually accompanied by or actually preceded by bacterial evidence of pollution. This bacteriological evidence is something hard to explain but when we continue to find such evidence in sample after sample we may be sure that there is some unexplained source of pollution. On the other hand the failure to find intestinal organisms in repeated samples is fair proof of the purity of a water supply. The total number of bacteria present in a sample may be an indication of the purity or impurity of a supply, but the presence or absence of organisms of the colon group is the best evidence we have and easy to demonstrate. If tests for this group are consistently negative we may state that there is no evidence of pollution. Their presence however is evidence of the danger of the supply. These bacteria like the typhoid and dysentery bacilli inhabit the intestines, and if their presence in a water supply is demonstrated, we may assume that the supply is not safe. Disease germs are not however as widely distributed in nature as the members of the colon group and the prospect of isolating the typhoid bacillus from water samples is quite remote. Therefore we must rely on other easier tests for indications of fecal pollution.

The presence of colon bacilli in water is undesirable and an indication of the potential danger of the supply, not that the water is actually
dangerous unless it has been infected with the discharges from a previous case of typhoid or other water borne disease. Water acts merely as a carrier of the germs and the problem is to keep each water supply from becoming contaminated. Wherever the human element enters there is danger, in the handling of water or foods.

"GARDEN MINDED"

By SUDIE E. PYATT

"Ma, I can't spare one of the boys, and a horse and plow all day just to bother with a garden. You forget about a garden. You're getting too old to go digging around in the cold dirt."

Having delivered his verdict, Frank Harper turned on his heavy soled shoes and walked toward the farmyard mule lot, while his mother, to whom he had made the speech, stood anxiously by the sagging gate that led into the bare acre of ground on the right hand side of the house that was called a garden, but was not.

Barbara Harper was disappointed, but she was not "put out," if being "put out" meant that the Harper family would forego fresh vegetables during the spring, summer and fall months ahead, because her "hard-headed"—that was Barbara's term—elder son could not see the wisdom of letting one of the boys leave the plowing of the cotton and tobacco land for a day, to prepare the soil in the garden for the planting of vegetable seeds.

Barbara's fingers were literally itching to plant. This spring with the business depression, money scarce, and many needs to be met, Barbara felt they needed the garden more than at any time previous.

If there was no other way to do it she would dig the rich, brown earth up with a hoe and plant her seeds in the ground thus prepared. A garden, Barbara knew, for she was distinctly "garden minded," was worth any day on a farm a good many acres of cotton and tobacco, or hay and corn.

In the farmhouse, Lillie, Barbara's daughter-in-law, was getting ready to do her spring house-cleaning. Who would probably like to have Barbara's spry help, but Barbara was not "house-cleaning minded" today. She was decidedly "garden minded."

A treasury cache in an out-building that had once been the farm house's kitchen, held seeds and bulbs packed away from the garden Barbara had grown the year before on the farm she and her husband had lived on for forty years, until Frank Harper, Sr., had died last winter, and their youngest daughter and her husband had gone to make the farm their home, while Barbara decided to visit around among her children.

Packed away in neat little bags and boxes in the cache were seeds of all of the common vegetables, as well as some uncommon ones, for Barbara and Frank, Sr., had liked to experiment with new and sometimes strange plants, in their garden.

Tomatoes and cabbages Barbara had already sown in boxes in the cellar of the house, anticipating the garden, that her son refused to consider.

Barbara grumbled as she looked over the fresh, clean seeds and bulbs, "Onions ought to be set, and Irish potatoes planted. Time to get early string beans, butter beans, squash, beets, cucumbers, lettuce and sweet corn in, too."
Frank, Jr., worried her. She did not understand how a son of hers could show as complete unconcern over a garden as he had shown that morning.

Under a shed where the farm tools were kept, Barbara found a hoe. She was beginning her garden. The earth in the garden was firm and black, the kind of soil that would make an excellent garden if properly cared for. Barbara dug away happily, if a bit slowly. As the spring sun climbed up the sky she discarded the woolen sweater she had worn in the early morning.

Working Barbara thought of how Frank, Sr., had handled the business of a garden on his farm. Every tenant on their farm had had his garden. When the land was rented that was one of the specifications. He must till at least an acre of land in garden.

To make it easier for the sometimes shiftless, careless, white and colored tenants who lived on the farm to have a garden, Frank, Sr., had provided a day in the spring to put the garden in shape for planting, then so many hours for keeping it cultivated during the year. If his men did not have seeds with which to plant the garden, Frank, Sr., cheerfully furnished them from his own plentiful store. Such plants as cabbages, tomatoes, collards and sweet potatoes, were always supplied the tenants ready for planting from the farm hot beds.

An acre of sweet potatoes, and half an acre of Irish potatoes besides the acre of garden were always required of each tenant. He must keep fifty chickens, one fresh cow, and half a dozen hogs to fatten for his own meat.

"I calculate with fresh vegetables, potatoes, chickens, eggs, milk, butter, and home-grown hog meat and lard, no farmer and his family is going to starve if Wall Street blows up and disappears from the map," had often been Frank, Sr.'s, answer to the economic problems of the farmer to persons who insisted that farmers were coming to ruin if not actual starvation.

"No farmer ever made a success of farming who planted all of his land in tobacco and cotton, bought his family food from fresh vegetables to coffee at the "Time store" and fed his team on grain and hay that came from the same place. Why our farmers do not take time to plant foodstuffs to supply their families and livestock before attempting any of these so-called 'money crops,' I can not understand," sensible, honest Frank Harper, Sr., had often said, and his equally sensible, honest wife had agreed with him.

"A farmer who grows money crops and pays no attention to food for his family and livestock is like a merchant who tries to do business without any stock to sell, and each is going to be about as successful as the other."

So thinking Barbara worked happily in the garden until noon when her daughter-in-law called her to dinner.

"It's hard to get a meal this time of the year with fresh vegetables, even potatoes, selling so high in town," Lillie complained as she served the meal.

"Haven't you any sweet potatoes, or canned vegetables and fruit?" Barbara inquired.

"The sweet potatoes are all gone and this is only the first of March. As to canned vegetables and fruits I did not have any to begin with. Frank was always too busy to bother with a garden last year, and we have never planted any fruit trees," Lillie answered her mother-in-law in a hopeless kind of way that plainly said, "All of these things would be nice, but I never expect to have them."
Barbara frowned. She had gone to live with her elder son in accordance with a promise made to her children when her husband died. The promise had been that she would spend a part of each year with each of her five children.

The farm on which Frank, Jr., lived was one that he had purchased five years before with the aid of funds from his father. The farm, an immense big plantation devoted by its former owner, and now by Frank, almost exclusively to the raising of cotton and tobacco, and money crops, Barbara knew her son had not paid for.

Frank, Jr., was making every effort to make the farm pay, except those his mother thought the right ones. She was sure Frank, Sr., would have seen to a vegetable garden, fruit orchard, and to stocking the farm with chickens, cows and hogs, before he attempted to grow money crops, for these things not provided for on the farm would destroy all of the profit that might be made from the money crops, when purchased elsewhere. Not grown on the farm they would have to be bought in town at the time store.

"I started working on the garden this morning," Barbara told her son and his wife. "If the sun stays as warm as it is today it won't be long before we will have fresh onions, radishes, lettuce and spring greens from the garden, and a little later on, beets, squash, cabbage, tomatoes, potatoes and many other good things."

"Determined to have a garden, eh, Ma?"

"Yes sir," Barbara replied. "Children need fresh, green vegetables in the spring and summer, in fact all of the year, to make them grow and develop properly, and grown-ups need them to keep their bodies functioning in the right manner. Purchased from the time store fresh vegetables are expensive for a family of seven people, and three hired hands, grown in your own garden, outside your own and your help's time, and the seed, fresh vegetables cost you nothing. They save you much actual cash in feeding your family, and add immeasurably to the family's health and happiness by providing them with the proper kind of food, and plenty of it."

After dinner Barbara went back to the garden. During the late hours of the afternoon it grew cold, and as Barbara put on her sweater when she left the garden near sunset, she realized that she was tired and chilly.

The next morning Barbara found herself suffering from a cold brought on by overworking, as well as getting herself overheated the day before.

Frank, Jr., came to see his mother before he went to work.

"If you had let the garden alone this wouldn't have happened," he told her.

"But Frank," his mother protested, "you and your family need the garden so much more than you realize."

Frank jammed his hat down on his head and left his mother's room before she had a chance to say more. He might as well do it. She would not let him rest in peace until he did.

Outside he called his eldest son to him and told him to get the two-horse plow, go in the garden, break the land thoroughly, then change to the cultivator and make sure the land was smoothed and the earth finely pulverized.

"After you have done that lay it off in rows two feet apart," Frank completed his instructions, and went on down to the south field, feeling better than he had since he had refused to prepare the ground the day before.

Robert Harper was no mean farmer, and his father knew how to prepare a garden if he did not think the
growing of one important on a big money crop farm. Robert went his father one better. First he hitched his team to the farm wagon and hauled load after load of rich, fresh stable manure, spreading it heavily on the ground before he plowed it.

It took Robert two days to complete the preparation of the garden, but when the work was finished it was a good job both his father and his grandmother told him, and the soil was now ready for the planting of whatever seeds Barbara desired to place in the ground.

Her cold better, and with Robert and the other children to help Barbara planted early spring turnip greens, radishes, lettuce, onions, Irish potatoes, beans, English peas, sweet corn, and other vegetables that should be sown late in March in the warm Carolina climate.

As the season wore on Barbara with the aid of the children kept the garden free of weeds, made new plantings in order to keep the supply of vegetables constant and seasonable, and aided Lillie in canning many jars of tomatoes, sweet corn, string beans, and vegetable mixtures for soup. She personally made several barrels of sour kraut to be stored in the cellar for use during the winter, when fresh cabbage were not forthcoming from the garden.

During that summer Lillie never had any reason to complain of difficulty in getting food to feed her family, and the expensiveness of the food. When Lillie contemplated the well-filled shelves of her pantry, and thought of the Irish and sweet potatoes that would be placed away in the cellar, she knew that next winter the food bill for the Harper family would be less than it had been since they had come to the big farm to live, and the family would be better fed than ever before.

One thing Lillie missed, that was fruit, but last spring after his mother had succeeded in getting him interested in making a garden, she had also gotten Frank to make a start toward a fruit orchard. In a few years Lillie knew they would have all of the peaches, apples, plums, pears, cherries, and other fruits and berries such as strawberries, raspberries and dewberries, that the family could use.

October came and Barbara said, as she brought in a bucket full of fresh rutabagas from the garden that she supposed she would be packing and going to her younger daughter's the next day.

"I have been with you and Frank nearly a year," she told Lillie when her daughter-in-law protested. "I got interested in the garden, and I sort of felt that you and Frank needed me. Now the garden is history, and I don't think you or Frank, either, will need me to start making your garden next spring."

"Mother, I calculate that garden you grew at my house this summer must have been worth $300 clear of all expenses," Frank, Jr., told his mother on the day he took her to his sister's home. "I would like to see any farmer make $300 clear on one acre of cotton or tobacco. You sold me all right on the idea of a garden. There will never be another year when I won't have a garden on my farm."

**HOW IT IS WITH INFLUENZA**

After a second round with Influenza—or, more properly, "endurin' of" a second round—we've come to the attitude which Dr. C. S. Matthews says he has had ever since his experience. Dr. Matthews, thinking he detected a lack of respect for or awe of Influenza in references in these columns to "flu," said that that was not the way he referred to it when he
had it. He said he always took off his hat and respectfully and with meticu­lous care referred to it as Influenza, using always the capital I. And we're doing that same hereafter, or until summer comes or until such other time as we may feel safe in shaking our fist at it and telling it to go to.

But we wonder sometimes if a body ever does get rid of this here In­fluenza. Irving Cobb tells about a banker who was noted for his close­ness. One day he sent a negro on a hot and dusty errand a mile away. When the faithful colored man re­turned after discharging the errand this banker rummaged around in his pockets and finally said, "That's too bad, Uncle Jim, I though I had a nickle here I was going to give you."

"Cap'n Henry," said Uncle Jim, "you look again. If you ever had a nickle youse got it yit."

There are a number of folks here­abouts who are almost persuaded that it is the same way with Influenza.—Lumberton Robesonian.

PRINCIPLES OF CANCER CONTROL
By State Committee on Cancer Control

1900 was the beginning of the control of tuberculosis in North Carolina. At that time tuberculosis headed the list as the cause of death in our state, and was responsible for 274 deaths out of every 100,000 population. Today it is responsible for the deaths of less than 80 per 100,000.

Education has been responsible for the wonderful reduction in the mor­tality of tuberculosis. The people have been taught the dangers of infection, proper sanitation, hygiene, the early signs of tuberculosis, and how to protect their neighbors and their families. They have also been taught the won­derful curative effect that fresh air, sunshine, wholesome food, and rest have upon the disease. These things have become the public property of the school children, everyone has been taught these fundamentals of controlling tuberculosis.

Cancer is just as preventable, just as curable when it is once understood. In preventing cancer it must be re­membered that it is not a germ disease. Consequently vaccines and se­rum for the prevention and cure of the diseases like diphtheria, and ty­phoid fever are worthless in the treat­ment and prevention of cancer. Can­cer never develops out of a clear sky, but always develops at the site of some old low-grade infection. Whether the infection had its beginning as the result of some mechanical irri­tant is immaterial as these only act as portals for infection. It makes no difference what type of germ is re­sponsible for the low-grade infection. Not every low-grade infection pro­duces cancer, but it is under these conditions that cancer has its begin­ning, and under conditions of this sort are recognized as precursors of can­cer, which are called precancerous dis­eases. Such conditions can be cured before they become cancerous, and it is in this way that we can truthfully speak of the prevention of cancer. In such a case cancer is prevented just as definitely as typhoid is prevented by vaccination. One or another form of chronic infection is found to exist as a precursor of almost all forms of cancer.

Cancer of the tongue and mucous membranes of the mouth is perhaps one of the best examples of cancer arising in a previously benign pre­cancerous condition. The chief sources of irritation here are bad teeth, the use of tobacco, and syphilis. As a re­sult of one or more of these causes, sore spots, ulcers or thickenings of the mucous membranes of the mouth occur, which sooner or later become cancer if they are not cor­rected. In the underlying causes and by simple appropriate treatment. In such cases, cancer is prevented.

Many other precancerous conditions are recognized in the form of ulcer­ations and thickenings of the external skin, benign tumors and diseases of organs such as the breast, thyroid, ovary, bladder, uterus, and indeed of almost every organ of the human body. The correction and cure of these diseases in the precancerous stage has become an important part of the work of the modern cancer clinic, and prevents the occurrence of cancer in countless individuals.

The individual who desires to pro­tect himself from cancer must be alert to detect the signs of chronic infection. The moment such a condi­tion is observed the family physician should be consulted.
PERFECT TEETH—HEALTHY CHILDREN

These children are brother and sister. That they are fine physical specimens may be seen at a glance. Moreover, their teeth are perfect. Good health is dependent upon sound teeth. Clean your teeth twice daily and have them cleaned and examined by a dentist twice each year.
MEMBERS OF THE NORTH CAROLINA STATE BOARD OF HEALTH

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<td>H. A. TAYLOR, M.D.</td>
<td>Acting Secretary and State Health Officer</td>
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<td>Assistant to the Secretary</td>
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<td>Director of Health Education and Vital Statistics</td>
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<td>H. E. MILLER, C.E.</td>
<td>Chief of Bureau of Sanitary Engineering and Inspection</td>
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<td>ERNEST A. BRANCH, D.D.S.</td>
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<tr>
<td>D. A. DEES, M.D.</td>
<td>Field Assistant In County Health Work</td>
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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)
- "Our Babies"
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- 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 5 years.

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BETTER FOOD DISTRIBUTION METHODS NEEDED

A recent issue of the Ohio State Board of Health Bulletin carries an interesting description of some of the public health problems in the state of Ohio this winter on account of the serious drought conditions existing up there. The bulletin says that it is "quite obvious that need of food in the rural districts is far greater than in the cities, towns, and villages. Some counties have indicated that they have no way of knowing exactly the needs among the farmers, as many object to asking for help, regardless of their condition."

The bulletin goes on to say that physicians in many sections are reporting infant feeding cases in need of milk and that there "seems to be a very definite lack of medical care in most of the counties in the drought area. This is giving the health department agencies no little concern, and to date no methods seem to have been devised to meet the needs."

The most interesting item in the article, however, is that one dairy in an Ohio county had an excess of skimmed milk, amounting to about seven hundred gallons per day, which was being poured into the sewer because there was no use for it. Fortunately that particular county was well organized for relief work, and arrangements were soon made with the dairy to deliver the milk, after being pasteurized, to the city and rural schools for a very nominal sum. The milk, of course, was made free to all school children needing it.

This is certainly a serious situation, and we are wondering if any such an occurrence could be possible in North Carolina at this time.

Skimmed milk has about one-half the nutritional qualities of whole milk, and made into buttermilk, it is an excellent article of food and with the exception of the fat contents retains a large amount of its nutritional value.

It is an astounding thing to realize that such a thing as milk could be poured into the sewer within near distance of thousands of children needing this valuable food. Such a thing is on a par with the act of the New York City authorities last summer in dumping into the river there thousands of tons of the finest vegetables and other foodstuffs, which were sent up to New York from the farmers of the South and other sections, and which were dumped into the river because the market was said to be glutted, although it is possible that not less than a million people in New York City were at that very time suffering from the lack of this very food.

The time will come when such historical notes will be viewed by the people of future generations as the chief indictment of this present generation in these United States. To a normal thinking person, the most unreasonable situation that could possibly exist in a civilized country is for foodstuffs like wheat and milk and corn to exist in abundance on every hand and right along with it hunger and starvation and malnutrition and death for thousands of people for lack of proper food. It is a stigma on this generation and virtual evidence of our lack of ordinary intelligence when such a situation is allowed to exist.
READ THE ARTICLE BY MRS. GREEN IN THIS ISSUE

We are pleased to publish in this issue of the Health Bulletin an article by Mrs. Charlotte Hilton Green on the subject of iodine as found in the soil, fruits, vegetables, sea foods, and water of this section of the South.

Mrs. Green has written a most interesting article, which is published exclusively in the Health Bulletin. Mrs. Green writes, not as a medical contributor, but as a feature writer and newspaper woman of experience. She has also done a great deal of research work in gathering material for her article. Her statements are conservative and based on facts which she has gathered from many sources.

Goiter is not a serious problem in North Carolina, but there is a sufficient number of cases in certain sections of the State, especially among the children, which makes the article important to a large number of people. These sections are confined for the most part to sections where long erosion of the soil has contributed toward a little deficiency in the iodine content of the drinking water especially.

The principal interest, however, in Mrs. Green's article is centered around her discussion of the historical facts about goiter and in the fact that the soil of most of North Carolina is conducive to the production of fruits and vegetables rich in iodine content which makes such fruits and vegetables much more valuable than the consumption of fruits and vegetables grown in areas of great iodine deficiency.

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PELLAGRA PREVENTIVE WORK IN BEAUFORT COUNTY

By
T. C. BRITT, M. D., County Health Officer.

For any public function to succeed in its endeavors it must of a necessity have the cooperation of individuals and outside agencies. In my work as a public health officer during the past six years in North Carolina I have tried diligently to enlist the confidence, support and intelligent cooperation of all the organized agencies for public good of whatever nature.
tire and as well the sympathies and advice of key people in the communities. It is of particular importance to have established departments and organized agencies whose work is well founded in the minds of the public to lend a little support to the work that I am attempting to do. This serves as a valuable beginning and is one of the best methods of disseminating new and better knowledge. The work of all public welfare agencies are correlated and to a greater or less extent inter-dependent for best success in any effort. Many of the problems confronting the health officer and the home demonstration agent and the farm agents are joint problems and the combined efforts of the three in so far as is practical appears to be the best method of attack. The work of the departments must in the main be educational. In general the amount of good derived from any campaign to the individual is the least good unless it is made known to others; too we must depend largely upon groups for the dissemination of our knowledge. The home demonstration agent has well organized clubs of women and girls in every community whose primary objects vary from year to year and perhaps from month to month. It is through these groups that practical application of knowledge of better homes, clothing, food, its production, preparation, and preservation is spread. With such organizations an educational program is carried on. All of these too are related to public health materially, which in its broadest scope aims for their accomplishment.

From this viewpoint Miss Alexander and I in cooperation with school superintendent, welfare department and farm agent planned a campaign against pellagra in Beaufort County. We began late in the season and our success to date is not what we wished for. Visibly however our aim was to take advantage of this situation to do some educational work. Underweight and malnutrition and its relation to disease is one of the greatest public health problems. In combatting the problem we are able to secure the correction of many physical defects in school and pre-school children. The fight against tuberculosis aims to bring the underweight to normal and good nutritional state. The poorly nourished child is perhaps no more susceptible to the contagious diseases than the overweight but complications are much more common in this group.

Pellagra is a deficiency disease. Prevention is based on the theory that a faulty, deficient diet is the primary etiological factor. Theoretically all that is necessary for the control and eradication of the disease is the substitution of an adequate diet for the faulty diet of the affected population. Practically, however, in attempting to accomplish this, one encounters difficulties of two general categories. First that represented by the meagerness of our knowledge of the distribution in our foods of the unknown dietary. Until more is known about this dietary factor advice as to diet must be of a broad, general character; that is that the diet be made a normal adequate one, as varied as possible with special emphasis on fresh milk and fresh meat since evidence indicates that they contain the pellagra preventing factor or factors. The second difficulty is the economic situation. Each community must be studied to determine the factors that may be operative in the causation of pellagra. Encouragement of family cow ownership or improvement in marketing conditions and the establishment of a year round garden — raising poultry, eggs—adequate for home consumption with some for market. A part of the surplus poultry and vegetables should be processed for winter use.

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Pellagra then offers perhaps the best opportunity for a campaign
against malnutrition of any of the diseases. The health officer needs to know to what extent the population in his county is affected and is interested in seeing that every case is seen by a physician. Unfortunately many pellagrins do not consult their family physician until they are bedridden. Many will not accept the diagnosis of the physician when seen but I believe where possible most of them will accept his advice and treatment. It seems that too much has been said and published about the association of pellagra and poverty. Pellagrins in general are timid and shy and many of them try to keep away from any one who may know that they have pellagra. Quite often when questioned they are evasive and refuse to give information about their diet or disability that would tend toward positive diagnosis. In spite of these facts the people in the community can point to or direct the investigator to nearly every case. Strange as it may be one pellagrin will quite often know of several others and even miles away from his own community. So the problem of finding the cases is not an easy one. Nor is it easy to get them to visit their physician for proper medical care. Many have been given expensive treatment without being informed as to the probable cause and method of preventing the disease. It is we feel this type of case where most often this disease recurs from year to year. Treatment readily clears up the diseases but the individual does not eat the proper diet to prevent appearance of lesions the next year. The case fatality rate in general from pellagra is not high but the economic loss is great particularly in rural populations where farming is the chief industry and the demand for labor is greatest during the spring and summer.

In our campaign we visited together cases reported as pellagra or probable cases of pellagra for the purpose of diagnosis and at the same time to carry on an educational campaign for a well balanced diet.

Before beginning the campaign we enlisted the support of all agencies.

1. The medical society voted unanimously their support and agreed as individual physicians to see in their offices free of charge all individuals who believed they might be suffering with pellagra. We would not have been able to carry on without first having this cooperation.

2. The county board of health approved the plan.

3. The board of county commissioners.

4. The county welfare department.

5. Whatever functioning organizations of women's clubs; the Parent-Teacher Association, etc.

The home demonstration agent and the health officer made a personal investigation of the dietary habits of 88 patients residing in different sections of the county with the following findings:

- 84 do not take milk
- 54 do not eat eggs
- 66 do not eat fish
- 72 do not eat beef
- 78 do not eat chicken
- 32 do not eat greens
- 67 do not eat many vegetables
- 86 do not eat much fruit
- 85 do not eat whole grain products

It will be noted that the dietary deficiencies shown here are the same as those which were pointed out by Dr. Goldberger to be the cause of pellagra. Two patients admitted that they did not eat the necessary foods because they did not like them. The remaining eighty-six did not produce these foods, therefore did not have them to eat. Pellagra was found in seventy-five homes. Forty-nine of these homes had no fall or winter gardens, families of only eight persons had cows.

The following facts may also be of interest:
**Number of families of pellagrins visited** | 75
---|---
**Total number in families** | 351
**Number of patients** | 88
**Number white patients** | 72
**Number adult male whites** | 14
**Number adult female whites** | 45
**Number children, male, white** | 7
**Number children, female, white** | 3
**Number Negroes, adult male** | 0
**Number Negroes, adult female** | 16
**No. Negro children** | 0
**No. children under 5 years, male white** | 2
**No. children under 5 years, female white** | 1
**Oldest patient, adult male white, 76 years** | 
**Youngest patient, male white, 22 months** | 
**Number new cases, 1930** | 33

In each home that was visited the health officer made the diagnosis, gave the yeast and advised as to treatment and prevention. The home agent gave advice as to diet, production, prevention, and preparation of needed foods. Literature which included the Goldberger diet list, the Special Bulletin on Pellagra from the State Board of Health, the North Carolina Extension Bulletin on Gardening and Canning and Recipe for milk dishes and other recommended foods.

It is known that six families at least have bought cows as a result of these home visits. Fifty parents of the patients whose histories have been secured have reported either personally or in response to a questionnaire, that they are greatly improved. All of these report that they are following directions as to diet in so far as they are able. The great problem therefore is to get these people this spring to begin the production of the foods needed for their protection.

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**PELLAGRA**

By

FREDERICK R. TAYLOR, M. D.

Pellagra is a disease manifested chiefly by symptoms involving the skin, the alimentary tract, the central nervous system, and, in severe cases, the general bodily nutrition.

It has an extraordinarily interesting history. Pliny, in the 26th book of his Natural History, describes under the name “mentagra” a condition highly suggestive of the disease. A number of authorities have suggested that the case of St. Francis of Assisi, recorded in 1224, may have been pellagra—we cannot be certain of this. The earliest scientific records of pellagra known to us describe it as an old curse, long known to the common people. The Asturian peasants called it Mal de la Rosa, and Gasper Casal, who became physician to Philip V of Spain, first accurately described it under this name. The word “pellagra,” meaning “rough skin,” was in use by the Italian country people long before Francisco Frapolli, a Milan physician, first used it in medical literature in 1771. Pellagra has been known under many other names, the best known of which was perhaps Alpine scurvy. Kaiser Joseph II of Austria founded a special hospital for the treatment of pellagra in 1784, which was placed in charge of Gaetano Strombio. Four years later this hospital was abandoned and Strombio assumed charge of a larger one established in Milan, and became one of the greatest authorities on pellagra of all time. He published a three volume work on the disease, and was one of the earliest writers to suspect that spoiled corn played some part in its etiology. This idea reached its height early in the present century, its greatest champion being Cesare Lombroso, who spent 25 years investigating the disease. However, later studies have definitely refuted this hypothesis.

The history of the development of pellagra in the United States is of the utmost importance. Bloom of New
Orleans states that the first authentic case was recorded by Dr. John T. Gray of Utica, N. Y., and the second by Dr. John Tyler of Summerville, Mass., both in 1864. Authorities differ as to the existence of pellagra in the armies of the Civil War, but there is considerable presumptive evidence from many case reports that it did exist, though unrecognized. In 1870, many Confederate veterans in the South Carolina Asylum at Columbia were affected, according to Dr. H. N. Sloan of Columbia. Dr. Pope, of the same city, reported two cases occurring in the South Carolina penitentiary between 1880 and 1885. A case in North Carolina described as psoriasis in 1889 was diagnosed as pellagra by E. J. Wood of Wilmington nearly 20 years later by a study of the records.

Interesting as these sporadic cases are, the most significant event in the history of the spread of pellagra in our country occurred in 1907. In that year, without any warning, it appeared explosively in epidemic form, 88 cases occurring in a Negro asylum in Alabama with 57 deaths. In only a few months, extensive outbreaks were reported from Texas, North Carolina, and many other states.

At the present time pellagra is widely distributed throughout the world, and has become a problem of major importance in many sections of the Americas, Europe, Asia, and Africa; notably so in Rumania and the United States. It is increasing by leaps and bounds in this country. Of special interest to us are the mortality figures in our own state, where, reaching the low mark of 224 deaths in 1923, it rose to 981 deaths in 1929, and in the first half of this year there were 607 deaths, from which we may fairly estimate a probable total of about 1200 deaths for the year.

Pellagra attacks persons of all ages, though it is rare, and often very mild, in infancy and early childhood. It is more common in females than in males. It is more prevalent in the white race, but more deadly in the black. Dr. G. M. Cooper classified 472 cases according to occupation. Seventeen occupations were represented by about 97% of the cases occurring among the first five occupations listed, viz. housewife, domestic, farmer, day laborer, and mill or factory worker.

The etiology of pellagra is today the storm center of discussion. Years ago, the Thompson-McFadden Pellagra Commission concluded that inadequate sewage disposal probably played a great part in the spread of the disease, but reached no final solution of the problem. Joseph Goldberger and his associates in the United States Public Health Service appear to have shown conclusively that the lack of a certain vitamin, usually designated vitamin G, is a very potent cause in the development of the disease, and the supplying of an adequate amount of the vitamin a very potent factor in the prevention and treatment thereof. In the opinion of many, however, these investigators appear to have carried their conclusions too far. They have taken the position that pellagra is due solely to this dietary lack. Their researches have been not only brilliant, but heroic, involving many efforts to infect themselves with pellagra, including such measures as swallowing pellagrous feces in capsules, transfusing themselves with blood from patients severely ill with pellagra, etc. They have never been able to transmit the disease in this way. Moreover, they believe that they have produced it in volunteer criminals by a prolonged deficient diet. This has been questioned by some, but even granting it to be true, might not similar experiments be conducted with analogous results in the field of tuberculosis, a known infection?

There are, therefore, today, two schools of thought regarding the eti-
ology of pellagra—the Goldberger school, regarding the disease as due solely to dietary deficiency, and the dietary-infectious school, to which I belong, which regards pellagra as an unknown infection preying especially, but not exclusively, upon those whose diet is deficient in vitamin G. So far, our school has no experimental bacteriologic evidence to stand on. No organism has been discovered that has met Koch's criteria. Holt and Parker of Greensboro report a series of cases, 100% of whom showed Vincent's organisms in the mouth, but, as you all know, these organisms are frequently found in the mouths of non-pellagrins. While bacteriology gives us no support, epidemiology gives us a great deal. Why the sudden explosive outbreak in that Alabama asylum? No evidence has been brought forward to show any radical change in diet preceding the epidemic. Even if there had been, why the rapid spread all over the southern United States? The dietary habits of a people do not change over night! Moreover, what about the form in which pellagra first appeared—acute pellagra, often fatal in a few weeks from onset? Today, pellagra is a chronic disease in this country, as it has been in Italy for centuries. Is not this the history of many infections? When introduced among populations not previously exposed to the disease, they have assumed an extraordinary virulence. Measles did this in the Fiji Islands, showing a death rate of 90%. We all know what pandemic influenza did in 1918—many cases were fatal within 24 hours of onset.

Dr. O. L. Miller reports a case of pellagra developing for the first time in a young woman who had been under his observation for six months in our state orthopedic hospital, who was known to have eaten a diet rich in meat and milk during that period. It is very interesting to note that pellagra is rare in China, where starvation is so rife.

As you have seen by the chart, pellagra has increased, not only in the present time of depression, but ever since 1923, yet during this period our great new school system with its home economics departments, the work of county demonstration agents in domestic science, and the development of women's clubs with their varied activities, have taught our people how to eat as never before.

With your permission, I will quote a paragraph from a paper I read last April before our state medical society. "Many interesting analogies can be drawn between pellagra and tuberculosis which strengthen the infectious theory of pellagra. General malnutrition is a mighty factor in the production of tuberculosis, and adequate diet essential in its prevention and cure. Special malnutrition (a deficiency of vitamin G) is a mighty factor in the production of pellagra, and supplying the vitamin by proper diet or by dried yeast very important in its prevention and cure. Both at times are incurable. Both do better when treated early. Both used to be more acute in a large number of cases than they are now. Both are largely diseases of poverty, though by no means limited to the poor, and both used to attack a larger proportion of the well-to-do than they do at present. It is comparatively rare for a doctor or nurse attending either disease to contract it, whereas it is not rare for others living in the household in close contact with someone suffering from either disease to do so, yet it is very rare for all the members of a family of considerable size to contract either disease, though when pellagra first appeared in epidemic form the involvement of many persons in one household was more frequent than it is now. Tuberculosis, of course, is known to be an infection, Pellagra is not known to be as yet,
but I cannot accept the view that Goldberger’s work has disproved the possibility, or even the probability, of an infectious origin."

I will not go into the pathology of pellagra further than to say that when the central nervous system is involved, almost any type of destruction of various parts of that system may occur; and to state that recently Kenneth M. Lynch of Charleston has done some highly suggestive work tending to show characteristic gross and microscopic changes in the pellagrous intestine.

The symptoms of pellagra may be described briefly. Often there are prodromes of vague indigestion and mental depression. The skin manifestations are the most essential for diagnosis. They may be anywhere on the body, but in the vast majority of cases are most fully developed on, or limited to, those parts of the body exposed to light and air. Therefore, the backs of the hands, the forearms, face, and neck are most often involved, also the feet and legs in those who go barefooted. The lesions are strikingly symmetrical on the two sides of the body. They tend to appear in the late spring or early summer, and many think sunlight a factor in their production. At first the eruption resembles the erythema of sunburn, but it does not change to a tan, or rapidly blister as a severe sunburn does. Rather it stays red and raw looking, cracks, scales off, etc. Superficial gangrene of a dry or moist type may develop in severe cases.

The alimentary tract frequently shows a stomatitis, an achlorhydria, and a chronic or intermittent diarrhea. Constipation, however, may be present. The stomatitis is signalized by a beefy redness of the mouth and tongue.

The nervous symptoms are so many and varied that it is impossible to describe them all in a paper of this sort. They may simulate almost any organic disease of the brain or cord, or almost any type of functional neurosis or of frank insanity. In my experience, a melancholic depression has been the most frequent type of psychosis, but mania, stupor, dementia etc., are also often seen.

These groups of symptoms, skin, alimentary, and nervous, are all represented in the typical advanced case, but many cases do not develop so fully. When the skin symptoms are lacking, the diagnosis is almost impossible unless a history of previous skin involvement can be obtained. This often occurs, however, for pellagra frequently affects a patient for years, disappearing in part or entirely during the winter, and recurring the following spring. However, it is advisable to put any patient with a sore mouth plus a chronic or recurring diarrhea plus nervous symptoms, who has been on a deficient diet, on an antipellagrous diet.

**Prognosis.** Many cases recover on modern treatment. Some do not. Extensive involvement of the central nervous system is of grave prognostic import, as is inability or unwillingness to eat the proper diet.

**Treatment.** A proper diet is as important to the pellagrin as to the victim of tuberculosis. However, the diet must not only be well balanced and nourishing—it must be rich in vitamin G. The ordinary foods richest in this vitamin are fresh lean meat and milk. The most potent source of vitamin G is dried yeast, so this should be prescribed, a heaping tablespoonful three times a day, mixed with any liquid or semi-solid food. In addition to an adequate diet and yeast, arsenic in some form may be used. It seems to be of value in some cases. I rarely prescribe it at first, because of the human tendency to exaggerate the value of drugs and underestimate the value of diet, fearing the patient will rely on his arsenic and neglect his diet to his detriment. Dilute hydrochlori
April, 1931

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acid is usually indicated after meals, well diluted with water and taken through a glass tube. The patient should be told that this is to help his digestion rather than to cure his disease, thus emphasizing the importance of diet.

The two greatest obstacles in treating pellagra, as in treating tuberculosis, are poverty and ignorance. Until further discoveries are made, the hope of the future in pellagra control is the adoption of intensive and extensive measures of education and of public hospitalization of pellagrins, similar to the measures already developed to combat tuberculosis.

IODINE FOUND IN NATURE
THE SOUTH’S CONTRIBUTION TO HEALTH

By CHARLOTTE HILTON GREEN

"Have you had your iodine, today?" seems fated to become a familiar slogan, for the abnormalities of the thyroid gland are now focusing the attention of the medical profession—with iodine as the essential for the gland’s correct functioning and the prevention of goiter.

Iodine! And the South holds the key to this store-house of health-giving qualities, for scientists and research workers are finding that the water, soil, fruits, vegetables, and sea-foods of this section are much higher in iodine content than are those of the rest of the country. This is strikingly brought home when we learn that in parts of Michigan and Minnesota, where the iodine content of drinking water and of local foods is extremely low, as many as 70% of the high-school girls have enlarged thyroids. Girls are more subject to this disease than boys.

Recent painstaking researches have proved beyond question that the waters of the South and of the Atlantic coast states are far richer in iodine than are those of the North and the Northwest. Careful analysis shows that this section contains from 23 to 18,470 parts of iodine per hundred billion parts of drinking water against one to twenty parts in the waters of the North and Northwest. An iodine content of less than 22 is considered iodine poor.

Many of the southern states are making a careful research and analysis of the iodine contents of their foods, waters, and soils. Up to the present, South Carolina has made the most exhaustive study, the work being done under the direction of Dr. R. E. Remington, Director of Laboratory, and Dr. William Weston, chairman, of the Food Research Commission. A brief glance at some comparisons of Carolina foods, with some from California and Oregon, shows how much more of the health-giving element is contained in the southern products.

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*—Parts per billion.

This health-giving element comes to us, not in the form of a drug, but in the food we eat, straight from Mother Nature. Often it is done up in the most luscious of packages, as the watermelon— and strawberries—which, in the South Carolina analysis, were shown to contain 411.5 (parts per billion) and 181, respectively.

The entire South needs to heed what Irvin Cobb said about all North Carolina needed was a press agent. If
California could make the claims that the most careful research and analysis, made by some of the best trained scientists in the country, is proving true of the South—can't you hear the mighty shout that would go up!

Goiter, a distorted swelling of the neck, due to an enlargement of the thyroid gland, which is caused by iodine starvation, is a prevalent, widespread disease that constitutes a serious health problem of every nation in the world; and there is a worldwide movement to obtain foods which naturally contain sufficient amounts of iodine so that when eaten in moderate quantities goiter will be prevented. Although we are hearing so much about the thyroid diseases today, they are not newly discovered. Perry, of North Carolina, in his research thesis says: "The earliest writings of medical men mention goiter. The Hindu Atharva Veda (about 1500 B.C.) contains a collection of charms and superstitions supposed to cure this disorder."

Ancient Greek writers mention "turtle-shaped" growths on the neck, and during a Roman conquest of the Alps, Caesar's soldiers noticed in several villages terribly deformed idiots. Today they are known as cretins. Certain cures for goiter were known to the ancients; the Greeks found seaweed and sponge to be beneficial; the Phoenicians also learned to use sponge ash in the treatment. Some two or three thousand years before Christ—when our own Anglo-Saxon ancestors were wearing skins and living in caves—the Chinese were using the thyroid from sheep and ashes from burnt sponges, in their treatment of the disease. In our own country the American Indians used salt from certain licks for its curative purpose.

None of these ancient peoples knew the why or wherefor, of course, but probably by the trial and error method for cures they had stumbled on materials that were high in iodine content.

Later, in the grim, dark days of the Middle Ages goiter was considered more a curse than a disease, and was generally thought of as a punishment inflicted by God for blasphemy or sin.

The connection with goiter and drinking water goes far back into antiquity. Pliny and Vitruvius mention "goiter wells," as certain rivers and wells were supposed to be goiter producing. In some European countries men subject to military service drank of these waters in an effort to acquire the disease and thus escape conscription. Tradition says that in certain districts mothers tried to develop goiters in their male children, so they might escape military service. The mother instinct in them probably preferred live goitrous sons to dead soldier sons—sons who had died from fighting some petty prince's foolish quarrel—a quarrel perhaps not remotely connected with themselves.

Dr. Remington lists the results of lack of iodine as follows:

1. Enlargement of the thyroid gland in the neck.
2. Lowering of mental and physical activity.
3. Birth of young which are stunted physically or mentally; producing dwarfs or idiots.
4. Sterility—failure to reproduce; young born dead or surviving only a short time.

He explains cretinism thus (in his "Vegetable Food and the Goiter Problem"): "A lack of iodine extending over several generations gives rise to the birth of cretins—children born without functioning thyroid glands and who do not grow and develop normally, so that in some European countries—especially certain sections of the Alps—we see numbers of curiously misshapen dwarfs. Other effects are the birth of congenital idiots.
In earlier ages these bulky, broad-faced, thick-lipped, short-necked dwarfs were cruelly exploited; their pitiful misshapen bodies were the subject of sport and ridicule. Many of them were attached to a king's court where they served as a butt for the barbs and the stinging wit of the king and his courtiers. A languid and bored court, many of whom could not read, needed something to amuse!

There are records of these court dwarfs in many of the royal paintings; Velasquez, court painter for Phillip the IV of Spain, often included one or two dwarfs in his royal portraits. In the Boston Museum is one of his paintings of Phillip's little son, Don Baitazar Carlos and his Dwarfs, and another painting of the Infanta Margharita and her Maids of Honor, also includes a dwarf.

The great goiter regions of the world include the Alpine country, the Andean Plateau of South America, the Himalayas, including the Plateau of Tibet and northern portions of India, and, in our own country, the Rocky and Cascade Mountain regions, certain parts of the Appalachians, and the Great Lakes region.

Dr. Remington, authority on the thyroid gland, explains its function as follows: "Translated into popular language, our picture of the thyroid gland is that of a chemical factory which requires as raw materials substances derived from the protein of our food, and iodine. Unlike an industrial plant, which shuts down if raw material is lacking, the gland, in case of iodine deficiency starts to enlarge, apparently in the attempt to collect more iodine from the blood which supplies it. This enlargement we call simple goiter. The finished product of this factory is a substance named thyroxin, which is delivered to the blood, and carried by it to the most remote parts of the body and acts as a timer for the fundamental activities of the body. If too little of the timer substance is produced, the body machine runs slow—mental and physical processes are less active, body temperature and pulse rates are apt to be lowered, and the subject lays on fat, and in extreme cases the skin becomes thickened, dry and rough, the eyes lose their lustre, and a condition of myxedema exists."

During the World War the draft showed a large percentage of men to be goitrous (yet men are far less susceptible than women) but this condition was less frequently encountered among the drafted men from the South and the Atlantic Coastal states.

The ratio per thousand men in Florida was .25, in Texas .30, in Arkansas .40, in Georgia .52, in Alabama .56, in Louisiana .62; compare those with Idaho's 26.91, Oregon's 26.31, and Washington's 23.40.

Nor are thyroid troubles limited to mankind. The disease extends to live stock, and constitutes a big problem in certain parts of the country. Smith, writing of conditions in the Yellowstone River Valley, says: "There is a loss of approximately one million pigs, and numerous lambs, calves, and colts each year as a result of thyroid diseases."

Keith's account of conditions due to iodine deficiency in the Pemberton Valley in British Columbia is interesting. He writes: "Many of the women and every child born in this district had an enlarged thyroid. Pigs were born hairless, calves were goitrous, mares became goitrous and many colts were carried beyond full term and showed traces of myxedema. Many of the eggs of fowls, while fertile, failed to hatch, the apparent reason being thickening of the white envelope within the shell."

Some cities in the goiter belts, as Rochester, New York, and Sault Sainte Marie, and Pontiac, Michigan, have adopted the plan of putting enough sodium iodide in the municipal
water supply to insure everyone getting an amount sufficient for the prevention of such diseases. However, though the results are generally thought satisfactory, there is some opposition, some considering the cost excessive, others complaining that the water tastes, and still others not believing it at all efficacious.

Iodized salts, too, have become popular, and they have their defenders and their opposers. In certain cantons of Switzerland the iodized salts are required by law. On the other hand, Dr. Stuart McGuire, of St. Luke's hospital, Richmond, considers there is danger in these salts, as some types of goiter may be benefited, but others harmed, by its administration.

The most rational method, then, as Dr. G. M. Cooper, Director of the North Carolina Bureau of Health Education, suggests, is direct from Mother Nature, getting the iodine naturally through drinking water, fruit, vegetables, and sea-foods that have high iodine content. This seems the most sensible and efficient way of solving the problem.

The amount necessary as a daily ration has been variously estimated. The only careful experiment is that of Dr. Von Fellenburg of Switzerland, who stated the amount as 0.0143 milligrams a day—an equivalent to 5.22 milligrams a year. Translated into simple terms this means the daily consumption of one root vegetable, as beets, carrots, turnips, asparagus, one leafy vegetable, as cabbage (raw cabbage is especially good) lettuce, spinach, turnip or beet tops, and a potato—all grown in a region where the supply of iodine has been shown to be adequate. Drs. Cooper and Remington both especially advocate that the diet of young children, and of pregnant and nursing mothers, should contain each day these amounts, to insure a supply of the necessary calcium, iron, iodine, manganese, etc., during the important formative period of the physical organism.

Practically all authorities are agreed that the leafy vegetables in particular are the preeminent supply of those vitamins without which rickets, scurvy, pellagra, beri-beri, and other forms of malnutrition result. In general, the diet that helps protect from one disease, helps protect from others.

It has long been known that sea-foods are highest of all foods in iodine content, and that sea-faring people are seldom troubled with goitrous diseases. In a recent radio talk Dr. Royal Copeland stated that sea-foods contained 32 of some 80 elements needed by the human body. Marine fish and shellfish contain much more iodine than fresh-water fishes. According to the U. S. Bureau of Fisheries, their data indicates that marine fishes, mollusks, and crustaceans contain a higher percentage of iodine than any other common foods. Oysters, clams, and lobsters contain more than any other marine food, with the exception of marine algae, which, unfortunately, does not enter into the dietary of many Americans. As a matter of comparison it is shown that oysters, clams, and lobsters contain about 200 times as much iodine as milk, eggs, or beefsteaks; shrimp 100 times as much; and crabs and most ocean fishes 50 times as much.

It is thus evident that shellfish ought to be in the diet at least once a week. Sea-foods taken from southern waters have been shown, by careful analysis, to contain a much higher iodine content than those from other sections of the country. The oysters from the South Carolina coastal waters, were shown, by Dr. Remington's analysis, to contain 15,799.5 (parts per billion) while those from Louisiana waters, as analyzed by their State Board of Health, show 13,000. These are over double the iodine contents of oysters from other bedding,
grounds, as furnished by figures from the United States Bureau of Fisheries. Many parts of the southern coastal waters are also freer of pollution. According to Dr. H. E. Miller, of the North Carolina State Health Department, a recent survey of the Carolina coastal waters has shown them to be freest of pollution of any coastal waters. This is because there are no great coastal cities.

With good roads and rapid transportation sea-foods are now being shipped daily to most of the inland cities and villages, and are accessible to most parts of the South. From a health standpoint, they should be eaten freely. Louisiana feels that this analysis of her sea-foods should not only be of great interest to all interested in public health, but also, commercially, to the oyster and shrimp industries of the state.

The South has been slow to establish great canneries, yet it has everything in its favor—longer hours of sunlight, a longer growing season, cheap labor, nearness to the great markets of the country, and most important of all, the highest iodine content of the country, in its waters, soils, vegetables, fruits and sea-foods. Its chief need seems to be to advertise what it has. South Carolina has already taken to itself the advice Cobb gave to its sister state, and is making itself iodine conscious to the world. Her auto license plates for the year 1930 bore the word "IODINE;" her Natural Resources Committee has put out some creditable scientific bulletins on "Foods and the Goiter Problem" and "South Carolina Iodine," etc. She is following this up in her advertisements. Her strawberries have been shown to be high in iodine content, and so she sends out her berries with the word IODINE printed on each of the four sides of the berry boxes. She is starting new canneries which are known as "Iodine Vegetable Canners..." Other southern states have done more or less research along this line. North Carolina has done some intensive work under the direction of Dr. E. E. Randolph, professor of Chemical Engineering State College, and James Whitney Perry, in the same department. Their findings were very similar to those found by the South Carolina workers. Louisiana is working through the Bureau of Food and Drugs in her State Health Department; Mississippi, working through her State Chemist, Dr. W. F. Sand, is analysing her vegetables and finding them higher in iodine content than those of other sections of the country; Florida is at work under Dr. R. W. Rupricht of the University of Florida, and Dr. Charles Northern, Ocala, Florida.

With an estimate of thirty million people in the country suffering from a deficiency of iodine, it seems rather an important subject; if not, as some claim, our foremost health problem. And although it has been proven that canning does not detract a great deal from the iodine efficiency of vegetables, still, wherever possible, fresh vegetables are always preferable. Many of these, especially the broad-leaves "greens" as spinach, lettuce, turnip tops, broccoli, are procurable in the South throughout the winter. And According to today's National Farm and Home Hour broadcast, Texas alone, raises enough spinach to furnish the entire country.

With the right kind of publicity, and sufficient capital and interest behind it, there seems no reason why the South should not give the great canneries and the produce houses of the North and the West, a run for their money. Nor must we underestimate the contribution in the health-giving qualities of iodine, that the South has to offer.
SOURCES OF INFORMATION

Henry O'Malley, Commissioner, U. S. Bureau of Fisheries.
Mr. H. E. Miller, State Board of Health, North Carolina.
Dr. G. M. Cooper, Director of Health Education, State of North Carolina.
Dr. E. E. Randolph, Head Dept. Chemical Engineering State College N. C.
Mr. James Whitney Perry M. S. Chemical Engineering State College N. C.
Dr. Roe E. Remington, Ph.D., Director of Laboratory South Carolina Food Research Commission, Charleston, S. C.
Dr. William Weston, Chairman South Carolina Food Research Commission.
Dr. Royal Copeland
Dr. J. A. O'Hara, Department of Health, Louisiana.
Dr. W. F. Hard, State Chemist, A. & M. College, Mississippi.
Texas wrote back there had as yet been no examination of foods grown in the state to ascertain their iodine content.

National Farm and Home Hour Broadcast.

THE WOMAN'S CLUB ESSAY CONTEST

The Hospital Committee of the Raleigh Woman's Club will sponsor a contest among the High School students (white) of the Eighth Club District, that is, in the counties of Wake, Durham, Orange, Person and Chatham.

The committee offers the following cash prizes:
$10.00 to the student sending in the best paper.
$5.00 to the student sending in the second best paper.
$2.50 to the student sending in the third best paper.

Subject—"The Value of a Hospital to a Community."

RULES

Articles must contain not less than 500 words nor more than 850 words.
All papers must be signed by the Principal of the High School which the contestant is attending.
Articles must be written on one side of the paper only.
Name and address of contestant must be plainly written on each sheet of paper.
Papers will be graded as follows:
Knowledge of subject...60%
English......30%
Neatness......10%

All papers must be in the hands of the Committee by April 25, 1931.
Awards will be announced National Hospital Day, May 11, 1931.
Address all papers to
Mrs. Garland C. Norris,
Chairman of the Hospital Committee,
Woman's Club,
Raleigh, North Carolina.

Wanted: OLD COPIES OF THE HEALTH BULLETIN

We are very anxious to secure a few copies of the following issues of the Health Bulletin:
February, 1928
April, 1929
May, 1929
We would be grateful to any friends having copies of the above issues, who would send them to us.

Visitor in county jail: "What terrible crime has this man committed?"
Warden: "He didn't commit any crime at all. He was going down the street a few days ago and saw one man shoot another, and he is held as a material witness."
Visitor: "And where is the man who committed the murder?"
Warden: "Oh, he's out on bail."
One year old son of a member of the Gaston County Health Department successfully vaccinated against diphtheria and smallpox. Has never been sick.
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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) "Our Babies"
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- 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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The phrase quoted above is from the official Child Health Day proclamation of Governor Pollard of Virginia. The statement is so practical as well as so exquisitely beautiful that we are quoting it in full from the Community League News of Richmond, so that our readers may appreciate it along with the Editor of the Health Bulletin.

“No life can be truly happy or develop normally that is handicapped by ill health. The time for conserving and promoting positive health is in childhood, and child health problems should be the foremost concern of all thinking people.

“As Governor of Virginia I urge all educators, health officials, nurses, teachers, State and local agencies and our citizens generally to join together to make Child Health Day this year not only a fit celebration of achievement for the children, but also a day for so co-ordinating the interest in child health in every locality as to secure a sense of community responsibility towards those who are freshest from the hands of God.”

Again this year the May issue of the Bulletin is devoted to the cause of the mothers and the babies of the State. Our State still occupies a far from enviable position in the matter of infant deaths. Only a few states lose more babies per thousand births under one year old than we do. We are apparently doing a bit better by them now than we have in the past but we have a long way to go yet. When we come right down to straight thinking all of us are compelled to admit that much of this serious waste in baby life is utterly useless. We know that many of the deaths of helpless infants must be charged up against the neglect, indifference and carelessness of their adult guardians. A considerable proportion is due to ignorance, but that more or less worn out cloak does not account for all of the criminal waste by a long shot. No one knows how many children die each year as a result of sheer laziness on the part of their parents, but the number is evidently considerable. A stock raiser who would go to all the trouble and expense of breeding a supply of cattle and hogs, and then manifested the indifference to raising and caring for his stock, that so many parents display toward protecting the health of their infants, would starve to death on a Texas ranch. Not one of those parents who neglect their children by failing to provide protection against diphtheria, smallpox, bowel diseases, and numerous other preventable diseases which cause death, would admit to a lack of abounding love for their little ones. They simply fail to assume the direct responsibility in a practical manner which would galvanize them into the necessary action.

Let us by our efforts this year better our standing in the eyes of the outside world, by doing more for “those who are freshest from the hands of God.”
FOOD VITAMINS

By ALDERT S. ROOT, M. D.

The death rate among infants and young children has been steadily decreasing as time has gone by, particularly in recent years. Infant mortality in the registration area of the United States in 1915 was 100 per 1000 babies born alive. In 1929 it was 67, a decrease of 33 1/2 percent. Many factors are responsible for this but by far the most important one is a broader knowledge of the essentials of diet.

No diet is properly constructed unless it contains the proper ingredients.

It has been known for many years that a child must be fed fats, carbohydrates, protein and mineral salts in adequate quantities in order that growth and development may take place properly. Generally speaking, the chief function of fat is to furnish energy for the human machine. The fatty tissues of the body are largely reconstructed from carbohydrates, which include starches and sugars. In the body there is a constant breaking down and building up of the tissues and especially of the muscle tissue, and from protein is derived the muscle building material. Mineral salts are essential for the formation of bones and teeth and for keeping the fluids in the body properly concentrated, and they have other vital roles to play. These facts have been known for a long time, but in recent years another vital component of the diet has been discovered, a group of so-called vitamins, which are essential to health and growth.

These vitamins have never been isolated but we know that they exist by experiments which have been carried on upon animals. Life is impossible with a diet completely lack-ing in these vitamins, and the complete absence of one of them will cause serious disease. Fortunately it seldom happens that any child's diet is totally free of any one of the four food vitamins. But unless an adequate quantity of all of them is given, then the development of the child is retarded.

The essential food vitamins are four in number and are called Vitamins A, B, C, and D.

Vitamin A occurs chiefly in the fat of milk, egg yolk and liver. The germ of grains contain an appreciable amount. It is not found in vegetable oils, as for instance, olive oil, coconut oil, cotton seed oil. For this reason it is seen at once that substitutes for butter made from cotton seed oil and coconut oil should not be used for young growing children. The cream of cows milk contains practically the same amount of this vitamin as does human milk, but the quantity in either is variable. A stall-fed cow has much less vitamin A than one permitted to graze, and given ensilage. The milk of the nursing mother who has milk, eggs, liver and green vegetables in her diet is far richer in this substance. This vitamin is not affected much by ordinary cooking.

When Vitamin A is deficient or absent from the diet certain changes take place which may not become apparent at once on account of the supply which has been stored in the body. Gradually however there is a slowing of body growth and a cessation of gain in weight. A change in the mucous membranes of the body occurs which renders them susceptible to infection. This applies especially to the eye. At first there is an inflammation which leads to
complete blindness. This disease, called xerophthalmia, is the characteristic end result of a diet totally deficient in vitamin A. It is important to remember that vitamin A not only guards against this serious eye disease, but also guards against infections, especially of the upper respiratory tract, which are manifested by frequent “colds” throughout the winter months.

**Vitamin B.** contains two separate elements—one which prevents a certain kind of paralysis (multiple neuritis) and one which promotes growth. We do not see this paralysis in this country, but in certain parts of China, where almost the sole article of diet is polished rice, it occurs quite frequently. Vitamin B. occurs widely in nature in all green leafy vegetables, to a less extent in fruits, also in milk and in the germ of grains and yeast; it is especially rich in this vitamin. When vitamin B. is completely withdrawn from the diet growth quickly stops. The muscles become flabby, there is nervousness and irritability and finally paralysis. Recovery rapidly takes place with the administration of abundant vegetables, fruits, milk and yeast.

**Vitamin C.** occurs in special concentration in orange, lemon and tomato juices, and in smaller amounts in leafy vegetables and some fruits. The absence of vitamin C. leads to the developments of scurvy, the characteristic symptom of which is spongy, bleeding gums. The rapid cure when orange or tomato juice is given in large quantities is spectacular. This vitamin is rapidly destroyed by heat, as by boiling, except in acid solutions. Tomato Juice being acid does not lose this vitamin in the proper canning process.

Breast milk contains usually enough of this element for the baby provided the mother has in her diet vegetables and milk. Since boiling destroys and pasteurization partly destroys vitamin C. in cow’s milk, and since it is unsafe not to boil cow’s milk for the infant under 2 years of age, vitamin C. should be added in the form of orange or tomato juice in every one of these cases as early as the second month of life.

**Vitamin D.** is the one which prevents and cures rickets. Its chief sources are cod liver oil and ergosterol, or a combination of both. Ergosterol is derived from yeast but to be effective must be treated by artificial sunshine, (ultra violet rays.) It is from this that the preparation on the market “Viosterol” is made. Cod liver oil then is rich in two vitamins—A and D. The first fortifies against infections and the second (D) prevents rickets.

There is a tendency to substitute “Viosterol” for cod liver oil for the prevention and cure of rickets. This is a serious mistake for “Viosterol” does not contain the valuable Vitamin A. and experiments show that infants with pronounced rickets respond to cod liver oil more readily, rapidly and completely than to “Viosterol” alone. So plain cod liver oil from a reliable manufacturer is to be preferred to “Viosterol” or to a combination of cod liver oil and “Viosterol.” The dose of this latter is too small to furnish enough of the cod liver oil. The dose of a standard cod liver oil should be 60 to 90 drops from birth to six months of age and two to three teaspoonfuls from six months to one year and of “Viosterol” 6 to 10 drops daily to 6 months and 10 to 15 drops from 6 months to 12 months. All infants and children under two years of age should have cod liver oil throughout the winter months (sunbaths being given in summer) as a prevention against rickets. This is particularly necessary during the last half of the first and first half of the second year as rickets develops most rapid-
ly at this period. Large or rapidly growing infants require relatively large doses.

After three years of age there is no danger of rickets. It is therefore a waste of money and effort to give these older children "Viosterol" under the mistaken idea that it is "concentrated" cod liver oil. It is far better to give them plain cod liver oil for the Vitamin A which it contains. Any of these older children who have a tendency to catch "cold" easily should have it daily through the winter months.

A very brief discussion of the practical application of the facts given above might be in order. Every effort should be made to nurse the infant, certainly for the first few months of life, for the breast milk from the mother who has abundant vitamins in her diet contains all these vitamins in sufficient amounts to protect the child, with the possible exception of Vitamin D which should be supplied at an early age by cod liver oil to prevent rickets.

Every artificially fed baby must have the anti-scurvy Vitamin C in the diet, preferably in the form of orange or tomato juice.

The milk formula of every artificially fed infant must not only be well balanced as to the fat, carbohydrate, protein and mineral salts, but also must contain enough of Vitamin A. This is supplied in whole cow's milk, evaporated milk, (not sweetened condensed milk), some of the dry milks and by a very few proprietary preparations, as S. M. A. Sweetened condensed milk should play no part in infant feeding except for a very short period of time.

Green vegetables contain Vitamin B whose most important function is to stimulate growth. In addition to this they are rich in easily assimilable iron. Vegetable soup should be started at the age of six months and shortly afterwards strained spinach or carrots may be added. Babies who do not receive vegetable soup or strained vegetables at this early age usually become pale before they are a year old.

The germ of grains contain not only vitamins A and B but also the valuable salts of calcium, phosphorus and iron. For this reason non-degerminated cereals and whole wheat flour should be used. Oatmeal, wryco, and wheatena are preferable to cream of wheat, farina and most of the dry cereals. Brown rice is preferable to the white polished rice.

Older children should have 1½ pints of milk daily, a full glass with each meal, a green vegetable or vegetable soup, non-degerminated cereals, whole wheat bread, an egg in some form daily, fruit, and some form of meat—steak, lamb, poultry or fish. Many of these children are undernourished—not because of the diet in the home but because of eating between meals. This is a vicious habit and should be corrected and the three meals a day plan strictly followed.

**PEDIATRIC EMERGENCIES**

By C. R. BURG, M. D.

This general subject is too broad to permit a complete discussion in one paper or essay. It is my intention to mention briefly five or six conditions occurring in children and properly coming under the head of emergencies, going somewhat more into detail on certain very vital facts in two of these conditions.

I have chosen the following conditions for this discussion.
Diphtheria (with special reference to laryngeal diphtheria.)

Retropharyngeal abscess.

Appendicitis.

Intussusception.

Hemorrhagic Disease of the newly born.

Asphyxia of the newly born.

Diphtheria. Every case of diphtheria is an emergency in that every possible hour should be saved in the early administration of antitoxin. Where there are symptoms of laryngitis, associated with visible membrane, or where laryngitis is progressive without visible membrane a genuine emergency exists. Laryngeal diphtheria is not a rare condition in this section as evidenced by the fact that my associate Dr. Root, and I have had between 80 and 100 intubated cases in the past four years. Study of these cases brings out several points one is not impressed with by routine reading of textbooks. In brief they are as follows: (1) there is frequently no pharyngeal membrane and often a negative culture. (2) The voice is often not lost and in many cases little affected. (3) Many of the cases show slow progression of symptoms so that intubation became essential only on the fourth or fifth day. (6) Antitoxin given subcutaneously is very slow in its effect and most cases show no improvement under 24 hours even when antitoxin is given intramuscularly. For several reasons the intravenous administration of antitoxin is not a procedure that the practitioner can use as a routine measure, but it has obvious time saving advantages and will save intubations in the laryngeal cases. (7) The deaths do not occur directly from asphyxia but from circulatory failure due to exhaustion, and sudden deaths in cases that have not been intubated, often occur even though the child is still breathing without complete obstruction. (8) Marked restlessness with rapid pulse and signs of general exhaustion are often more definite indications for intubation than the apparent degree of laryngeal obstruction.

Retropharyngeal Abscess. This condition is due to suppuration of the lymph glands of the posterior pharyngeal wall—It comes on gradually and produces a type of obstructive breathing which is often mistaken for laryngeal obstruction. The type of breathing is totally different from that of laryngeal obstruction, when properly observed. It is obvious to the good observer that the obstruction is pharyngeal, that the head retraction is much more marked and on digital examination of the throat the fluctuant mass on the posterior pharyngeal wall is easily felt. The emergency here consists of the possibility of spontaneous rupture with aspiration of the pus into the trachea and bronchi with sudden death, or pulmonary abscess, or pneumonia. These abscesses should be opened either with forceps and the free use of suction, or with a sharpened finger nail followed by rapid inversion of the baby to allow the pus to run out of the mouth by gravity. There are unquestionably some death certificates with a diagnosis of laryngeal diphtheria that were really cases of undiagnosed and untreated retropharyngeal abscesses.

Appendicitis will be passed over with only brief mention of three facts. First—the disease must be suspected in any case of abdominal pain in a child even though the pain is intermittent and "colicky" in character. The cardinal symptoms of appendicitis are often lacking. Second—the frequency with which persistent vomiting is so prominent a symptom as to almost overshadow the abdominal symptoms. This is especially true in children with a previous history of recurrent vomiting attacks, and thirdly—the fre-
quency with which rupture of the appendix is seen following violent purgation on the assumption that the child is suffering with acute gastrointestinal indigestion.

**Intussusception** deserves special consideration—It is probably the most urgent emergency in pediatrics in the importance of early diagnosis. Practically all of the cases of complete obstruction of this type die if the operation is delayed beyond 24 hours from the onset of symptoms. Toxemia is very rapid and, in the writer's experience, even those whose general condition seems to warrant optimism before the operation never do as well as hoped for. The clinical picture is too well known to require description. The sudden onset of intermittent cramp-like abdominal pain associated with vomiting and toxemia in a baby from 2 months to 18 months old is suggestive, and the later passage of bloody intestinal contents and appearance of the easily felt sausage shaped abdominal mass is practically diagnostic. The majority of these infants are between 3 and 8 months of age. The saving of these babies' lives is dependent on early diagnosis and prompt surgical treatment. Early diagnosis does not necessarily require unusual clinical acuteness or intuition. It requires simply a fundamental knowledge of the condition and that the physician never fail to think of intussusception in every case of intermittent abdominal pain in an infant and eliminate it before arriving at any other diagnosis. Especially is this important in connection with apparent cases of dysentery or ileocolitis where we are too prone to accept the diagnosis of dysentery on the appearance of blood in the stool. Each one of us will some day see our case of apparent "colitis" properly and promptly diagnosed intussusception by a consultant, if we fail to eliminate in our own minds the possibility of intussusception, for many of these cases of intussusception show, for a while, an apparent diarrhea before bowel movements stop. Large enemas, inversion of the child and all other measures are simply wasters of time. Prompt operation with reduction of the intussusception is the only treatment.

**Hemorrhagic Disease of the newly born** is often an emergency—Any tendency to abnormal bleeding in a baby under 2 weeks old should suggest this condition. Bleeding from the gastrointestinal tract is the most frequent site, and some of these infants will bleed to death into their intestinal tract before the gravity of the situation is realized. Rapid exsanguination in a few hours may occur. Where there is evidence of abnormal bleeding in new borns, whole adult blood (20 c. c.) should be immediately given intramuscularly if the bleeding is slight, and then a close watch kept for continued bleeding. If the bleeding is at all profuse or if slight bleeding does not stop promptly following intramuscular blood, no time should be lost, and an intravenous blood transfusion promptly given. This is a real life saving measure.

(6) I wish to discuss several points about the asphyxiated newborn. Much has been written recently about this and Dr. Yandell Henderson has pointed out the physiological points involved in advocating carbon dioxide-oxygen inhalations—Many methods have been described. Unquestionably we are entering upon a period of new interest in the problem. These men decry the old methods of resuscitation by external stimulation, hot and cold water, spanking and mouth insufflation, and maintain that carbon dioxide, the natural respiratory stimulant should be used by one of several methods. Certainly every hospital should be equipped with tanks of 5 Percent Co 2 in oxygen with inhaling masks small enough to
be used with an infant. Following this principle the idea of the intratracheal catheter has been suggested, on the principle that the expired air of the physician contains CO₂ and oxygen in proportions that will stimulate the depressed respiratory center. In addition it is essential that the gases be introduced into the larynx and trachea which, in many cases, is impossible by ordinary methods, because the glottis collapses and air pressure by breathing or chest manipulation tends to go to the stomach rather than into the lung. I recently had occasion to use this method and the result is worth reporting. The infant was born at 12:40 A.M., and made no effort to breathe when stimulated by the usual methods. Mouth to mouth breathing served only to inflate the stomach and pressure on chest caused no passage of air either in or out. A No. 14 soft rubber catheter was introduced into the trachea by the "intubation method" and it was found that after aspirating the mucus from larynx and trachea, it was possible with very gentle blowing to expand the lungs and to breathe for the baby—"so to speak." The heart action quickly improved, the pulse became palpable at the wrist and after 2 hours and 40 minutes voluntary respiration started. The baby breathed well for 3 hours and then the circulation gradually failed. There must be many cases where some such gentle method will prolong heart action to actually save life. I do not believe we have reached the end of this movement toward more rational resuscitation, and mention this subject to direct attention along this line.

THE YOUNG MOTHER WITH HER FIRST BABY

By SUDIE PYATT MILLER

"Lawdy massa, you musn't let de baby's diapers fall on de flo'!", the colored girl, who did my cleaning for me after I had returned from the hospital following the birth of my first baby last December, said to me as she retrieved one of my baby's diapers that had fallen on the floor of my combination bedroom and nursery.

"No, Mattie," I agreed with her, "they should not be allowed to fall on the floor, as they might collect germs that would be injurious to the baby."

"Germs, nothing! Lettin' dem diddies fall on de flo' will make de baby cross," Mattie snorted, showing her disgust at my ignorance of what she considered an important fact of babycraft.

Like Mattie every young mother is willing to do everything and anything that will help to keep her baby well and happy, even to keeping "diddies" off the floor, but many young mothers have as hazy ideas as Mattie did as to the proper methods of care for young babies in such a way as to result in the best of possible health, and a maximum of happiness for the new arrival.

Despite the fact that some extremists have advocated that all babies be taken away from their mothers at birth and reared in institutions, statistics show that in the best institutions, under the most scientific care, the death rate for babies in the important first year of life is greater than among babies that are cared for by their own mothers.

Passing up improper methods of child care, and all of our lack of knowledge, somehow we mothers—I proudly class myself as a mother now—must do a good job of caring for
the little lives we are responsible for bringing into the world.

As we learn to adjust ourselves better and better to our modern civilization, I believe courses in homemaking, and child care will be included in the high school and college courses pursued by every girl and young woman. To make a good job of a woman's most important business in life, making a home and rearing her babies, we women need just such courses.

To return to my baby girl, and my first week of experience with her, with which this article will deal. The first fourteen days after my baby was born were spent in the hospital, and her care did not present itself. Baby was brought to me every three hours for nursing. The only problem that arose was in keeping her at the breast long enough, or keeping her from staying there too long. I left the hospital with six things in my mind as essential for the care of my own baby, or any other baby. Those six things were:

1. Regularity in feeding.
2. A cleansing bath daily.
3. Fresh air.
4. Adequate sleep.
5. Suitable clothing.

My ideals for the care of my baby were simple, but as everyone knows who has had the care of a little baby, they are complete, and followed to the letter are calculated to make a healthy, happy baby, the ambition of every mother.

Regularity of feeding was begun for my baby at birth. Though I made a twenty-four hour railway trip with her when she was eight weeks old, and a three hundred mile automobile trip with her at ten weeks, and even more than that in her first two weeks, not a single feeding for her was ever varied from the old schedule. Arguments against feeding babies on a regular schedule by both men and women who adhered to the old-fashioned school of raising babies, but these arguments had no effect on me. I had enough respect for regular habits forconducting my own life, or any adult's life, that I felt regular feeding habits at the beginning of life would be one way of giving my baby the best start possible.

Still a very young mother, counted in the number of months I have been a mother, I fail to see how our mothers and grandmothers, who brought up their babies in the old-fashioned, haphazard method, feeding the baby every time it cried, ever managed to make as good a job of bringing up their little ones as they did.

Every adult knows that a grown-up person feels better, and has better health if meals are taken regularly. Why these same adults will come out like crusaders, defending the right of little babies to be fed every time they cry, I totally fail to understand. The digestive organs of the young infant of the human species are not timed for the digesting of irregular meals any more than are those of its father and mother.

Milk is the only food of the young infant, but time is required for the digesting of that as well as for any other food.

The baby's daily bath looked sufficiently simple. I had never bathed a baby until the first morning I bathed my baby after we had both returned home from the hospital.

Before my baby came I had familiarized myself with the routine of a baby's bath, and the necessary articles for that bath.

My bath routine consists of four main parts; preparing for the bath, the bath, dressing baby, cleaning up after the bath.

I have never bathed my baby on my lap as some mothers do. A folding card table has served for my
baby's bath practically all of her young life. To begin preparing for her bath I unfold the card table and place on it her bathtub, soap, boric acid solution, cotton wrapped sticks, some extra cotton in a jar, powder and oil. These articles are placed on one side of the table.

Next an improvised bed is prepared for receiving the baby after she is taken from her crib. The bed is made by folding a blanket for her head, and spreading another one for her body. Over the latter blanket I spread a terry cloth bath kimona to absorb moisture from soaping the baby. Table and bath articles placed, and bed ready, baby is lifted from her crib and undressed on the table, ready for the second part of her bath routine, the bath itself.

Baby's bath begins with some happy remarks addressed to baby, which usually start her crowing and laughing, and begin the bath happily for both mother and baby. First, her head is soaped, washed and rinsed, with baby lying on her little blanket bed on the card table. Ears, face and neck are washed at the same time her head is bathed. Eyes, ears, nose and mouth all receive special attention later. No stop is made for these now, but baby's bath is hurried to completion to keep from tiring and chilling her little body.

Her "upper story," as I term it to baby, taken care of, the "lower story" is next in order. I soap her from neck to toes while she is lying on her bed on the table. After her body is soaped I lift her by placing my left arm under her head, and along her spine, with my hand supporting her buttocks. I take her feet in my right hand and lower her gently into her bathtub. In the tub baby is rinsed rapidly from head to feet, removed from the tub, and transferred, stomach down to a dry towel waiting for her on the little bed on the table.

The towel is large enough to wrap around baby, and with a few quick pats she is dry. Opening up the bath towel, another dry one is placed around her, and she is powdered front and back, lightly with a good baby powder, her genitals cleansed with cotton dipped in boric acid solution, and baby is ready for her shirt and diaper.

Her shirt and diaper on I bathe her eyes with cotton dipped in boric acid solution, attend to her mouth, using the same solution, being careful always to use a fresh, wooden stick, wrapped in fresh, clean absorbent cotton, see that each nostril is opened and left clean by using a bit of cotton dipped in sweet oil. Last of all I take care of her little pink, shell-like ears with cotton dipped in the same sweet oil used for her nose.

It is best not to wrap the cotton used for cleansing the ears on a stick, as the stick might hurt the delicate organs of hearing. Simply use the cotton, grasped between the mother's thumb and forefinger.

With the cleansing of her ears baby is ready for the remainder of her dressing, which for my baby is finished with her dress, and gertrude are slipped on over her head together, flannelette kimona placed over the dress, and bootees slipped on eagerly kicking little feet.

Baby's 9 o'clock feeding is next in order. Her bottle is placed in a pan of hot water for heating, and her bath things put away while the milk is getting ready for her feeding. The routine of baby's bath has been happily gone through with for another day.

When I first began placing baby in the bathtub she acted in a frightened manner. By holding her tightly, talking to her gently, and bathing her quickly and deftly while in the tub her fear of it soon vanished and she seems to like it now.

I find that a washtub of the old-fashioned variety makes an excellent
cabinet for storing the baby's clothing. The top of the stand I use as a receptacle for her toilet and bath requisites. In the two drawers of the washstand I place the baby's clothing. The large lower portion accommodates her diapers and bedding.

There are chests of drawers that may be purchased for the purpose of keeping baby's clothing. If these special chests are not available for either financial or other reasons, the washstand will make a good substitute. The washstand should be placed in the portion of the room occupied by baby's crib, and other furniture and necessities used for the baby, if the baby shares its nursery with its father and mother as a bedroom.

Fresh air, I knew, was essential for my baby. She was born in December, when the day's are shortest, and there is a scarcity of sunshine, but as soon as the first warm sun of spring came with March my baby has spent a good part of every day when the weather was suitable—and some days when my neighbors did not consider the weather at all suitable—on the front porch in her carriage in the sunshine. On cold days I see that she is warmly dressed, wrapped in a warm blanket, and well-covered with blankets while in the carriage. When the weather is too bad to take her on the porch I dress her as if she were going out, place her in the carriage, and roll it in front of an open window.

With the arrival of the warm days of summer I expect to let her live in little sun suits on sunny days, allowing her little body to absorb as much as possible of the sun's life-giving rays.

An eminent baby specialist says in his book on the care and feeding of infants that if a baby is well fed, dry, comfortable and clean it will sleep as much as it should for its age without any coaxing.

During the first year of a baby's life a large part of its time is spent in sleeping while its body grows at a rate that it never again exceeds. Sleep in the child's first year is all important.

Place the baby to sleep, the same baby specialist says, in a room by itself, or in a room occupied only by its mother or nurse, both day and night. If unable to give baby a room by itself place it in one corner of the room farthest from the center of activities, and put a screen about the crib. Never talk loudly while the baby is sleeping, and do not allow sudden, sharp or loud sounds to occur in the room.

A standard child's crib with good springs and mattress, large enough for the baby to use until it can occupy a grown-up person's bed is most comfortable and economical to use for the young baby. Bassinettes of both the basket and crib type may be purchased more cheaply than a crib, and will serve the baby for the first six or nine months of life.

As bedding for the baby the young mother will need to prepare sheets, pillows, pillow cases, blankets and spreads, just as she does for her own and the baby's father's bed, except on a small scale. I am mentioning bedding because preparing the baby's bed was something of a puzzle to me until I secured a book on infant care that gave a list of the things necessary for an infant's bed. All of the bedding used should be washable, and the mother should provide enough to allow for frequent changes, and the laundering of all of the pieces, including blankets.

Previous to my baby's coming I worked, and I bought her first clothes all readymade in an assembled layette. The ready assembled layette I purchased was complete, but because I did not know a great deal about baby's clothing, she soon outgrew the size 0 baby's shirts provided in the layette.
At six weeks I had to buy new shirts for her. This time I profited from experience and bought size 3 shirts, which she is still wearing.

The young mother can assemble her own layette from readymade clothes, selecting sizes that will fit the infant at birth, yet not be so small that the child will outgrow them in a short time.

If the mother has plenty of time and can do simple sewing she can make the layette. Patterns for making the complete layette may be secured from any store that carries standard patterns. A list of the articles needed, if the mother does not already know what they are, may be secured from the North Carolina State Board of Health.

It is not necessary to tell any mother to love her child, but love like other things can be done in a right and a wrong way. Love is as necessary to the baby's growth as food, fresh air, shelter and clothing.

Love that prompts a mother to spoil her child, taking it up every time it cries, needlessly fondling it and kissing it on the mouth when it should be in its crib sleeping is not the wisest type of mother love, though some may take issue with me on this. A mother's love should be of the type that makes her do for her child what is best for its welfare, though as many parents correctly or incorrectly say: "This hurts me more than it hurts you."

As this article deals with a young mother with her first baby I shall give here a list of the things that came up as problems for me during the first day I cared for her. They were:

1. Constipation.
2. Nursing too long, thirty to forty minutes.
3. Too warm.
4. Chewing fingers.
5. Bath, creases between legs, ears and neck.

For the constipation my doctor told me to give an enema of warm soapy water, using an infant's bulb syringe for the purpose. The bulb syringe may be bought at any drug store, and might well be included in the articles purchased before baby arrives, for the young mother will find it one of the necessities for the care of her baby she will almost be sure to have to use.

Giving baby an enema I find a small chamber an indispensable aid. The chamber is placed underneath the baby between the mother's knees as the child is held on its back, legs elevated. Placed in this manner the chamber will take care of the discharge when the syringe is removed in a neat, cleanly manner.

Nursing too long in the case of my baby, also the finger chewing was caused by my failure to supply her with sufficient milk, and was used as an indication by my physician that she should be given additional feedings.

In my zeal to make sure that baby did not become chilled I overdid matters on the first day I brought her home from the hospital, dressing her too warmly, and placing too many blankets on her. In order to determine the temperature of the room at all times it is wise to keep a thermometer in the room, and use your commonsense in dressing and covering the baby.

Another one of my discoveries in those first days was that a twelve-quart, galvanized bucket makes an excellent boiler for the baby's diapers, and could be purchased cheaply at any grocery or hardware store.

It did not take me long to distinguish my baby's different cries, though at first to me, as to most people unversed in baby lore, all baby's cries sounded alike.

I know now when to go to baby, when to take her up, or leave her alone in her crib to "cry it out."
Baby's weight, and the gain from week to week in pounds and ounces, is all important during its first year. If a baby scale is not available a pair of household scales, weighing up to twenty-five pounds, on which ounces as well as pounds are indicated, costing about a dollar, will serve. A large market basket in which a pillow has been placed may be used to place the baby in while weighing. Keep a record of the weight from week to week.

To mothers who have brought up one or more children many of the things in this article may seem like very amateurish babycraft, but they are things that I had to learn, and I am sure the majority of mothers with their first baby have to learn them as I did.

My baby is growing up everyday. It is a delight to watch her development and growth. I am learning new things everyday. She is a whole college course in child care for me. I have on hand now all of the baby literature published by the North Carolina State Board of Health, as aids in caring for my baby.

I would suggest to every mother with her first baby—or her twelfth for that matter—who does not already have them, that she secure free of charge from the North Carolina State Board of Health:

- Baby's Daily Time Card.
- Breast Feeding.
- Infant Care.
- Save Your Baby.
- Sunlight for Babies.
- What Builds Babies.
- Table of Heights and Weights.
- Our Babies — North Carolina's Health.

The last named bulletin is an attractively illustrated and printed booklet that I consider one of the best and most complete books on the care of infants that I have read since I became interested in this matter of raising healthy, happy babies—and I have read quite a number of them.

It is time for me to stop and give my baby her 12 o'clock feeding; so wishing all of the mothers who read this the healthiest, happiest babies possible, I will go to care for my baby. As my baby grows up, and I learn more about little men and women in the making I will perhaps write some more about babies, for at the present time there is no subject that is of more interest to me than healthy, happy babies, and how to keep them so.

ARNOLD BENNETT'S DEATH POINTS FAMILIAR NEGLECT

The literary world has recently been making up its estimate of Arnold Bennett, the English novelist and playwright whose versatility and genius have been accepted for a quarter century.

He was only sixty-three years old at his death and after he had found his feet as an author was a prodigy of industry plus care. His novels succeeded each other rapidly, but they showed high craftsmanship and a careful attention to detail. His plays were thoughtful satires. Arnold Bennett had become perhaps the foremost author in the world.

He died of typhoid fever.

A man in the full possession of his powers, at the top of accomplishment and fame, died as uselessly as those babies to whom in America we used to feed infected milk!

A shot of serum, a five-minute pause for a preventive measure against one of the preventable diseases, and Arnold Bennett would still be looking forward to a decade of active work.

In North Carolina this service is every year furnished free.—Raleigh Times.
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Total No. Deaths 6,112
Total State Rate 79.2
The Caswell Training School was established in 1911 through the efforts of Dr. Ira M. Hardy, of Kinston, who is now a State Senator and still deeply interested in all phases of work for the helpless.

The institution now cares for 635 children. It employs 85 persons, headed up by Dr. W. H. Dixon, the superintendent, and it owns about one and one half millions of dollars worth of property. It is one of the State's most necessary institutions.
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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
- Constipation
- Colds
- Clean-up Placards
- Chickenpox
- Diphtheria
- Don't Spit Placards
- Eyes
- Flies
- Fly Placards

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)
- "Our Babies"
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- Hints to North Carolina Mothers Who Want Better Babies
- Table of Heights and Weights

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FAKE REMEDIES FOR PELLAGRA

We are quoting here some extracts from a letter from a home demonstration agent in Eastern North Carolina with reference to one particular concern located in Alabama and which is reported to be selling large quantities of their worthless nostrum in that section.

We quote: "Did you know that there is a company in Alabama selling in this section of the State at least, a pellagra treatment for $50 or $10 per month. If the purchaser is not cured in five months further treatment to be free?"

"I visited a case yesterday of an old man 76 years old, supporting a widowed daughter with five children on a run down farm. Both father and daughter have pellagra. The old man had paid $50 as per original 'guarantee' but had just been notified by the sellers of the nostrum that they could not keep their contract and give them the promised free treatment (neither had been helped by the mess), but that they would let them have it at half price, or $5 per month."

"Now this company may be operating within the law, but it seems as though something ought to be done to protect people like this, old, and poor and sick."

"I visited another home last week where a young married woman told me she had just completed taking $50 worth of this same stuff. She lived in a two room shack, and of course was no better."

A health officer from that section told the Editor of the Bulletin recently that he knew of at least two thousand dollars worth of this worthless concoction which had been bought and paid for last year in one part of one county alone. So it goes. The old and poor and ignorant and helpless have always been exploited by the unscrupulous and probably always will be. Alabama seems at present to be headquarters for this class of fake mail order nostrums.

This class of sharks could not survive twenty-four hours if they were denied the advertising columns of reputable newspapers. Newspaper advertising is literally the breath of life to them. Reason it out any way you will, but the fact remains that a very large majority of people still believe everything they see in print. This is especially true of advertising.

At first blush most of us are inclined to blame the government for negligence in procuring fraud orders which would deny the use of the mails to such frauds. But on sober thought we must realize that in this land of free speech and liberty, no man or concern can or should ever be denied all the rights and privileges due him until full investigation with his right of appeal to the courts proves him to be unworthy of such privileges. Such investigations require time and money. Thus it is frequently the case that a concern will disband, go out of business, move to a new location, reorganize and be doing business again about the time the government is ready with the evidence to close them up. As they retain their sucker list which is their capital stock, with the newspaper
advertising columns open to them, government action bothers them not a bit. The editors and the advertis-

ing managers of the newspapers are the only "authorities" who can put these gentry out of business.

THE CASWELL TRAINING SCHOOL

The State Board of Health frequently has requests for information concerning the origin and development of the Caswell Training School at Kinston. A writer from Western North Carolina some months ago requested us to publish an article in the Bulletin setting forth in brief some of the known facts about that institution. We passed the request on to Dr. W. H. Dixon, the superintendent of the school and we are pleased to able to publish in this issue a splendidly written article by Dr. Dixon setting forth a great deal of information about the conduct of the school at this time, as well as its origin and development. We hope that all of our readers will enjoy reading this article, which appears elsewhere in this issue.

MRS. SUDIE PYATT MILLER

The large number of readers of the Health Bulletin who have found interest and pleasure in reading the excellent articles in the Bulletin for the last several years written by Miss Sudie E. Pyatt, we are sure, have been interested in the change of Miss Pyatt's name. Miss Pyatt founded the Sanatorium Sun, published at the State Sanatorium for Tuberculosis, and was its first editor. A few years ago she left that work, to become a member of a newspaper staff in Aliquippa, Pennsylvania. She continued, however, to write her regular monthly articles for the Bulletin. She is a native of Duplin County and is a thorough-going Tar Heel. About two years ago Miss Pyatt married Mr. E. F. Miller of Pennsylvania. Her article in the May issue of the Bulletin, entitled "The Young Mother with Her First Baby," is a classic in every respect. We are sure that mothers of young babies in the State who have been privileged to read that article have found it intensely interesting and helpful. Mrs. Miller is continuing to write her monthly articles for the Bulletin during this summer, which she is spending with her baby at her old home in Duplin County. We trust that she will be able to favor the Bulletin readers with her helpful articles for many years to come.

PERTINENT FACTS ABOUT CASWELL TRAINING SCHOOL

By

W. H. DIXON, M. D., Superintendent

In North Carolina, the mental defective become a noticeable part of our population, so much so that a movement was inaugurated by Dr. Ira M. Hardy of Kinston in 1911 to establish an Institution for the care, segregation and training of the mental defective. The Institution was named the North Carolina School for Feeble-Minded and maintained this name until 1915 at which time the name was changed to that of the Caswell Training School.

We own as an Institution, farming land and buildings that are valued at about one and one-half million dollars.

I was elected Superintendent of
Caswell Training School June 19, 1925. At that time, there were three hundred and forty-one children in the Institution and about sixty-five employees. We have gradually grown since then up until now, we have six hundred and thirty-five children and about eighty-five employees.

It has been found from statistics of those states that have made a study of mental defectives that the ratio of the types are two, three and five; e.g. the low grade imbecile or the idiot type constitutes about twenty per cent of the mental defective population. The mid-grade imbecile type constitutes about thirty percent and the high grade imbecile or the moron type constitutes about fifty per cent. In the admission of children to Caswell Training School, we are trying to preserve this percentage. The reason the moron type is the largest in the Institution is due to the fact that a majority of the trouble that arises in homes, communities, counties and states in the behavior problems, misfits and crimes is due to this particular class of mental defectives. It has been our experience that if we can have children of this type admitted when they are very young, not less than four years and not more than six years old, we can, in a great many cases, convert these children into partial assets rather than liabilities from the standpoint of behavior and crime problems. To conform to an old saying: "If you train a child up in the way he should go, when he becomes old he will not depart from it."

The reason for the admission of mid and low grades as well as the high grade is that they are more or less social, economic and behavior problems in the home rather than criminal.

The social is this, there may be one mental defective of the mid or low grade type in a home. There are two, three or five normal children in the home that it disturbs socially because of his presence. If that mental defective child can be removed or placed in an Institution of this sort, it leaves the family to move in the social status of the community, whereas, if the mental defective is in the home, it is a constant burden to them as well as a humiliation.

The economic side is this, where a family has one or more mental defectives in a home of the low or mid grade type, it is almost necessary for some member of the family to take care of this particular individual. In other words, be a nurse for him. In a majority of cases, they are not financially able to have a member of the family do nothing except care for this child. If he is placed in an Institution, it gives that family a chance for all members to be producers in the home rather than for two to be supported instead of one with the presence of the mental defective in the home.

From the standpoint of behavior, the average parent or guardian is in sympathy with the low or mid grade child so much that they do not enforce proper behavior or training that the child might get due to the fact that the sympathy of the parent or guardian is greater than the ability to control that particular child. When this type of child is brought to the Institution, he is placed with a group that has the same mentality. He naturally finds an atmosphere that is very congenial and he gets some enjoyment out of life, whereas, in a home he is denied this privilege.

In 1925, I found the per capita cost at Caswell Training School $1.15 per day, that is, it costs $1.15 to take care of a child at the Institution for one day. This has gradually been reduced until now we are taking care of one child for one day for the sum of fifty-eight cents.
This includes board, clothing, nursing, laundry and everything that is given to the child for his comfort, happiness and pleasure. I can safely and truly say that he is being cared for much better today than he was when he was costing us $1.15 a day.

At that time, there seemed to be almost as much unrest among the employees at the Institution as among the children, certainly among the matrons and attendants, such as complaints and frequent resignations. Now it is rare to have a resignation among the employees. They are as a whole, apparently contented and satisfied with the work. It goes without saying that there are times when there is a general unrest with some of the children, but it does not last very long and they are soon satisfied and contented. The way that we have been able to remove so much of this discontent and dissatisfaction among the children is that we have tried to employ a sympathetic personnel. They in turn act in a corresponding manner with the inmates and are trying to see the progress of the children from their standpoint as well as from the standpoint of the employee, consequently, a happier condition exists between them.

There are some conditions at the Institution with reference to training of the children that can never be as they should be until the Legislature sees fit to make proper appropriations for the necessary buildings at the Institution, so that proper training and care for them can and should be given. We are woefully short of adequate buildings for the training of boys at the Institution in some industrial training that should be given to them which will be of help to the Institution as well as to the child, for instance, there are several items that we could use here that we are now having to buy that the child under proper supervision could make, such as brooms, mattresses, chair bottoms, ordinary painting of tables, chairs, etc., that we have to use. We need a well-equipped shoe shop and many other things that I do not have space to mention.

The objects of the Institution are to segregate, care for and train mental defectives from the lowest to the highest in intelligence quotients. The moral and disciplinary training is under the direct supervision of the Boys and Girls Supervisors. The academic training is under the principal of the academic department which includes the three R's, kindergarten, arts and craft and physical education. The training given includes such activities as their mental capacity can take, namely: kindergarten, athletics, various forms of gymnastics, art and craft work, milking, carpentry and kitchen aide work. There are also various kinds of farm work from cultivating to harvesting, time that the boys and girls can and do help with the work. Some of the boys are engaged in wagon driving, some plowing and a number with hoes to help cultivate the crops. The girls are engaged in picking fruits and gathering vegetables on the farm.

We make, in a general way, a study of the causes of mental defectiveness and give treatment for these causes when it is deemed advisable and a possible improvement is expected. In those cases that seem to be chronic, nothing is done except to make them comfortable and care for them.

From our observation, we find as a cause for mental defectiveness, conditions such as disease, heredity and environment. In making studies of these conditions, we can, a great many times, improve the health of the individual that comes to the Institution.

In the training of inmates at Caswell Training School, we can train only that part of the mind that the child has. We do not change the mentality. I find that a great many
people who bring or send children to Caswell Training School are in error in regard to the possibilities of the improvement that may be made in an inmate. For instance, I have had people to ask me how long my child has to stay before he is all right (well, or normal). Before answering these questions intelligently, I have to ask what he means by the uses of the above terms. Once a mental defective, always that. We do not change mentality. We do, however, train that mentality that they have so that they may do quite a number of things that normal people do. For a mental defective to properly function after leaving the Institution whether on parole or a permanent discharge, it will always be necessary for that inmate to be supervised by some normal person that has a sympathetic understanding of the wants and needs of the individual inmate, if they desire him to get the most out of life from the standpoint of happiness for himself and usefulness to other people.

I might say in passing that the academic training at Caswell Training School is not given by grades, but by groups. They are trained academically just so far as it will help them to understand and fit them for the Institution activities and any possible help that it may be to them if they leave the Institution.

Caswell Training School has never been able to do paroling with any degree of success as there has never been a definite program outlined by the State for the paroling of inmates. There are two conditions that should be inaugurated at the Institution before paroles in a way could ever take place. First: an educational program should be put on so that the people could know the real possibilities of a trained mental defective. Second: a social worker should be added to the Institution to make proper investigations and work out a system of parole for the inmates that are prepared and able to go if the proper place could be found for them. The paroling has never gotten under way because of the above mentioned needs. We have no cotton mills, large laundries or manufacturing industries in our city that could give us an outlet for the training of boys and girls. Those that could use them are already supplied with an abundance of labor, consequently, we would have to compete and let them work with types that would be undesirable from such standpoints as morality, low types of citizenship and poor environment that is usually found around industries of this kind.

The classes of inmates received at Caswell Training School are high, mid and low grade imbeciles. The first term is sometimes designated as moron.

The procedure in having the child committed to Caswell Training School is as follows: See the Welfare Officer of the county; state known facts to him. He will get in communication with the Superintendent of the Institution and will later receive an application blank which he will fill and return to the Institution for their files. When the proper investigation is made in regard to the child both from the standpoint of intelligence quotient and family history, etc., he will then be advised if there is a vacancy at the Institution for the admission of the child. If there is no Welfare Officer in the county, then it will be all right for the parents or guardian to make direct application to the Institution. They will be advised just what course to take in having the child admitted.

For the benefit of those that are in doubt as to the mentality of the children, there are two clinic days a week at Caswell Training School—Tuesday and Thursday. Mental examinations are made for those that are interested in knowing the intelli-
gence quotient of a child that is thought to be mentally abnormal and they are advised whether or not any help or benefit can be given the child after the examination has been made.

There are in North Carolina, in my opinion, between seven and ten thousand children in the public schools that are mentally defectives. They are known as repeaters when they have to take their work over two or more years before promotion. They are not promoted because of any real work accomplished, but to encourage them in their school work. Caswell Training School will never be large enough to take care of this number, so the question naturally arises, what are we to do with this group? The only solution that I think of now is to have special trained teachers and class rooms set apart in our graded schools for the training of this particular group. In my opinion, a great number of them could be advanced to that degree that they would be able to make enough progress to fit them to care for themselves economically and, at the same time, relieve the State of the burden of taking care of them.

We have quite a number in Caswell Training School that if such an arrangement could be made, could be returned home and attend these schools as above mentioned and fit in with their families. This in turn would make room here for a class that could not function in the home or school that could be properly taken care of here.

PRACTICAL HEALTH TEACHING IN WAYNE COUNTY SCHOOLS

By
F. M. REGISTER, M.D., Health Officer

One of the best pieces of work that our Health Department has done was the inauguration of classes in "Home Hygiene and Care of the Sick." This is real public health work, because it primarily teaches prevention rather than curative medicine, as the title might imply. The motto for this piece of work should be "An ounce of prevention is worth a pound of cure."

Miss Mary DeLasky, North Carolina and South Carolina Supervisor of Red Cross nurses helped organize these classes. Our public health nurse, Miss Marie Farley, who is also an accredited Red Cross nurse, conducted the classes. The course is usually given to the girls in the Home Economics Department of the high schools. One course was given to 20 girls in Grantham High School, a rural high school, Miss Faison, teacher. The other class was given to 20 girls in the Home Economics Class, Mt. Olive High School, Miss Yelverton, teacher. We had splendid co-operation from these splendid teachers. The course consisted of 20 lessons of 1 1/2 hours each, spread over a period of several weeks. Such subjects as the following were studied: Individual Health and Hygiene, Health and Home, Practical Bed Making for sick and well, Cause and Prevention of Sickness, Indications of Sickness, Babies and Their Care, the Care of Children, Equipment and Care of the Sick Room, Baths and Bathing, Feeding the Sick, Community Health, Care of Patients With Communicable Diseases, etc. Many practical demonstrations were given. From time to time other people taught the classes for Miss Farley, as follows: Miss Lelia Cobb, Supervisor of County Schools, Dr. Donnell Cobb, Surgeon, Mr. Farning-
ton, Boy Scout leader, Dr. A. H. Kerr, with the State Agricultural Department, in charge of Dairy Products Division, Dr. W. H. Potts, County Milk and Food Inspector, and Dr. F. M. Register, Director of Public Health for County and City.

After the course was completed, examination was given, and splendid marks were made by the individual members of the classes, showing that they had really appreciated the course and had learned a great deal about preventive medicine.

Here are some quotations from the papers of the girls. One question asked was “what did you get out of the course?” Here are a few answers to this question taken at random. “This course has meant a lot to me. I have really been interested in this course. I have learned many, many things that will help me greatly as I go on through life.” “I have learned how to live better and more happily. I have enjoyed this course and have learned so many things I never knew before and am thankful I had the opportunity of taking this course. I have enjoyed this course very much and I am sure it will help me very much in my future life. If I were to tell all I have learned I would be writing a week.” “Above all we learned how to stay well and how to build strong bodies. I am sure everyone in the class got something out of it and I am sure it will be helpful to all of us in our future lives.” “Since I have been in High School I have never had a course as interesting and helpful as this one. Miss Farley, I want to tell you, I certainly do appreciate everything you taught us and enjoyed every lesson we had.” “Home hygiene and care of the sick, I think, is one of the greatest courses that has been put on for high school girls. It has been a pleasure as well as helpful.” “In this course I have been taught things that I did not know before, some things that my parents did not know. One of the most important things I learned is how to protect my family from preventable diseases.”

I could go on and on with these extracts from the papers of the girls. It took 60 hours to put these classes on and travel of 1300 miles. It was well worth the time and travel. Every health department should put on every year as many of these classes as possible. The time of the nurse is well spent in this work.

A HEALTH HOUSE

And

OTHER ACTIVITIES IN HEALTH OF INTERMEDIATE SCHOOL CHILDREN

GREENVILLE, NORTH CAROLINA

By

MRS. ANNE G. ROBESON Teacher of a Second Grade

The health of the child is a vital thing, and we all realize that an unfit physically, or a hungry child, can not do good work in school.

In the fall of each year we devoted a half hour to health lessons each week, and incidentally we bring up health rules and habits as often as opportunity permits all through the school day.

Usually by January first we can gage whether the general health of our children is improving or not.

January 1, 1931, we reweighed “our” children and found still a large per cent of underweights. Twas
time for a more intensive health program. Of course everyone this winter has talked hard times. The problem before the teachers was to help these children gain without throwing more burdens on the parents.

A teachers' meeting was held in the intermediate school and it was decided to try serving hot cocoa at recess each day. Each teacher donated enough to start this recess lunch period with. Anyone in the school who was 5% underweight was entitled to a free ticket each day. Those who care to could be served for a nickle. The menu was: One-fourth of an orange, then half a pint cup of hot cocoa made of rich milk, cocoa and sugar. Two small graham crackers went with each serving and more sugar allowed to taste.

Our principal fitted up a lunch room. The 7th grade boys made the tables and covered them with white oilcloth. The high school cafeteria loaned us cups and benches. One mother loaned us an oil stove and furnished the oil for cooking. Our utensils came this way, too. We received many, much appreciated donations, from two commercial food companies and a reduction in price from another one. Blount's dairy gave us a large jar of their Grade A milk each day. We also had several individual gifts which helped out so much. By selling cocoa to any child who wished it for 5 cents a serving and the cost not quite that much we came out about even on all servings.

It proved to be quite a social hour in the school, each teacher busy with a special duty. The 7th grade girls and our group of college teachers helping by turns. All tables full of laughing, happy children. We looked forward to the recess hour each day.

Dish washing was over in a hurry. Each cup washed twice, then dipped into two vessels of boiling water, covered up from the dust till tomorrow.

We averaged 80 cups served each day during January and February. Every two weeks the children were weighed. After two months we found gains of from one to six pounds in each child.

The Pitt County Health Department has cooperated with the intermediate school, helping us find other causes for underweight, etc.

Since the warm weather the school is serving milk at the lunch hour to those still wanting to gain weight to normal.

All the grades are working out some special health activity.

The Health House.

The teacher told the children a story about a little brown box that wanted to become beautiful. It met the Health Fairy, "Why are you crying," asked the Health Fairy. "I am crying because I want to be beautiful, how can I be beautiful?" The Health Fairy told the little brown box that children grew roses in their cheeks and became beautiful by keeping health rules.

So the little brown box traveled on and on. It had windows cut to let in fresh air and sunshine, it accumulated first a healthy breakfast, then other meals until at last it had become beautiful. We discussed how
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''Ie could grow in good looks just as it did and what was needed. One child suggested that we get a little brown box and see if we could feed it health rules. The activity was on. The very next day a little brown box was brought and we went to work on it.

Free discussions were held daily to find out the needs, also to criticise work and progress. These were summed up in composition form, first written on the black board, then printed on charts for reading lessons. Discussions of food values and sources were also held. Live at home week played a very important part in this activity. Each child in the room had some part in building the house. The teacher in the background to help only when needed.

The house is made of a brown cardboard box. The walls are of cream lacquer dashed with oatmeal. (Stuccoed).

The doors and windows are faced with raisins. The doorknob is a raisin also.

The roof is shingled with small graham crackers guttered with dried peaches. The chimney is a pint milk bottle, lacquered for effect.

The porch is tiled with graham crackers. The porch pillars are oranges; swinging baskets are lemons, with cocoa for soil, one has celery, the other parsley for ferns.

The front door steps are two sizes ivory soap cakes, the back steps made of raisin bread.

The foundations of the house are made of prunes to represent stones. Peanut dolls grace the porch reclining in brown bread porch furniture, while little lettuce curtains can be seen hanging in the windows.

In the yard collard and cabbage leaves look like grass from the distance. Rice and grits are used for gravel in the walks and around the drinking fountain of fresh water, these are bordered with raisins and dried apples. Arbors and rustic benches are here and there, they are carved from brown bread, trees and bushes are of celery, also for yard decorations there is a nest of snap beans with three white eggs in it.

The walls around the little brown house are made of many kinds of vegetables and fruits and the gates are of bananas.

This Health Activity provided a complete unit of school work as well as teaching health as its major function.

Here are some of the outcomes in the regular school curriculum: Reading, word drills, language and composition.

The children wrote many short stories about lessons learned from studying how to build a real health house.

These stories were written on the board, printed and read by all; this involved word study of all the new words.

MAKING THE MOST OF THE YEARLY TWO-WEEK VACATION
By
SUDIE PYATT MILLER

The modern health program of every successful man and woman includes a two-weeks' vacation every year, spent in healthful surroundings as different from those in which one lives and works the other eleven and one-half months of the year as the city and the country, the mountains and the seashore.

Rest, recreation and sightseeing, is
an ideal combination, which allows persons who must concern themselves with the necessity of making a living, incidentally saving for the two weeks of vacation the remainder of the year, to make the most of the yearly two-weeks' vacation.

This year, when the financial depression has to some extent touched everyone, should see no diminution of vacation plans. In periods of depression, such as the present owners of businesses, professional men and wage earners are all inclined to worry more than in those times when conditions are more favorable, hence a vacation is more than ever important to permit the tired worker to escape from problems and tasks for a bit, and store up new energy to aid in surrounding future difficulties.

To meet depression conditions the vacation may be planned on a simpler scale, to cost less than it would in more prosperous years, but by all means include the vacation in the program for this summer.

Vacationers making the most of the yearly two-weeks' vacation will spend it in surroundings as far removed from those in which one lives and works through the year as one's financial and physical condition will permit. The seashore makes an excellent vacation spot for people who live in territory remote from the sea coast. Vacationers from the flat country enjoy the mountains for the change in scenery, and the stimulation of a higher altitude.

Lakes and springs, if these places are properly protected by sanitary laws, make splendid places at which to spend the vacation. For the small city dweller, or the farmer, a large city is a change, and the farm has always been the place to spend quiet, restful vacations for everyone except those who live on them.

When one would a-vacationing go, there are as many kinds of housing and living conditions to choose from as there are places to go. A cabin in the mountains, a cottage at the seashore, boarding houses at both places for those who do not care to keep house, and at the same time do not wish to pay the prices demanded by good resort hotels, tourist homes and hotels.

The state of one's purse and one's personal tastes will determine the selection of a place at which to live during the vacation. Wherever the vacation is spent, particularly in the country, away from municipal water plants, the prospective vacationer should make careful inquiry into the sanitary facilities, and the state of the water at the place where one anticipates spending the vacation.

If not recently inoculated against the typhoid fever germ the vacationer should visit his or her physician for the inoculations before going on a vacation. No matter where the vacation is spent, cases of typhoid fever are likely to develop. Every vacation season there are people who contract typhoid during the time because of negligence in having themselves inoculated with the typhoid fever serum. Healthy persons should receive the inoculations every three years.

If not satisfied about the water supply while on a camping trip always boil it before drinking.

A vacation that takes one away from familiar scenes and permits one to visit many places and strange cities is the ideal vacation of an increasing number of vacations each year as the automobile makes traveling easy and cheap. However, a vacation spent rushing hither and thither over the country in a high-powered car, or perhaps one not so high-powered, can hardly be said to fulfill the requirements of the rest part of a vacation.

A few days of the two-week vacation period given over to traveling either by train or bus, or in one's
own car, certainly adds to the novelty and enjoyment of the vacation. An entire vacation period spent in this manner is likely to leave one more tired at its conclusion than at the beginning, and to make the most of the vacation a large part of it must be devoted to quiet recreation and rest.

While traveling by auto it is better to go to first-class hotels than stop at roadside camps, and eat at roadside stands, unless the vacationer is sure that these places are inspected by the boards of health in the states in which one is traveling.

Some states have strict sanitary laws regarding the water, housing, sewage and garbage disposal at tourist camps. Pennsylvania is one of these states. At all tourist homes and camps in that state that are approved by the State Board of Health, one will find prominently displayed somewhere about the place a certificate from the State Board of Health certifying that the water at that home or tourist camp has been examined, and found to be safe for human usage, containing no typhoid fever germs.

When traveling in North Carolina always look for signs showing state or county health board approval of eating and camping places while traveling, and avoid those that do not show them.

Those visiting great natural attractions, such as the Western North Carolina mountains, will find that availing themselves of sightseeing buses and tours will be to their advantage. Tours are specially planned to allow the sightseer to view as much of whatever the attraction is as can be easily seen, at a minimum cost. Despite the fact that some sophisticated travelers and writers poke fun at tours they provide an inexpensive and interesting way for a large number of vacation travelers to see the sights of great cities and wonderful natural attractions.

It is a good thing for families to spend their vacations together if the father sees little of his family while working, while on the other hand if husbands and wives get on each other's nerves, and the children bother the father, it is best to let father take his vacation alone, mother and the children staying home, taking theirs earlier or later. The same applies to the mother.

Many mothers feel that they can not leave their children for one day, much less for two weeks. If the mother is not well it is best for her to leave the children for a few weeks' vacation than for a long period of illness in a hospital, that the vacation might prevent.

The separation of mother and children for the vacation period is often good for both. Visiting vacations, which so many people make in the summertime are all right if one has the type of friends and relatives who do not mind visiting vacationers. If the visiting vacationists cause friction it is better to arrange for some other kind of vacation, though a vacation spent away from the homes of friends and relatives may cost more.

The place at which one spends the vacation will in large measure determine the kind of clothes one will need. More money should not be spent on vacation clothing than the family, or individual purse will allow. Purchase clothes for the vacation trip that may be worn throughout the year. Special vacation clothes, such as bathing suits, walking shoes, leggings and khaki shirts and trousers for men and boys may be saved from season to season. In that case it pays to buy a good grade of these articles.

To make the most of the yearly vacation the mother and housekeeper must not make herself ill making
clothing for herself and her children to wear during the vacation.

The vacationer who will secure the greatest advantages from the vacation thinks more of the advantages to the health of themselves and their children while on the vacation, than of the appearance made by themselves and their families. If one has neat, clean clothing in reasonable style, they need have no fear of their clothing causing vacation snubs.

At the seashore bathing suits should be provided for all members of the family. The time spent in surf bathing, and in the sunshine on the beach are the greatest health and pleasure returns of a seaside resort. These can not be enjoyed to their fullest without bathing suits.

In the mountains stout shoes for climbing, and clothing for outdoor wear that will stand rough usage, for all members of the family are advisable.

The yearly vacation for the physically under par is a necessity that can not be neglected. People who suffer from the after effects of a former tuberculosis breakdown, weak hearts, or any chronic ailment, frequently find in a vacation, wisely spent, just the means of storing up the needed mental and physical energy to keep them moving along through another year, meeting the exciting demands of modern life.

The physically underpar are wise when they plan for a vacation, the larger part of which is spent resting, preferably in an environment removed from that in which they live and work. Everyone who has ever tried it knows that it is not easy to rest at home, or in the homes of friends and relatives. If the physically underpar can meet the expense of a vacation spent away from their own homes, and the homes of friends and relatives, such a vacation will pay the largest dividends.

If the vacation away from home is not possible do not give up the idea of a vacation, but take it at home, observing such rules, and a schedule that will allow a maximum of rest.

Sometimes it may be necessary to make members of your family, or friends and relatives believe one really ill in order to get the rest one feels is necessary, but if one needs a rest vacation, and staying at home, or with friends and relatives is the only way to get it, the sick story will work, and the results are worthwhile.

Securing the money to defray vacation expenses is frequently a problem for both the individual and the family. One way to have money for the vacation when it is needed is to plan each year for the vacation, and save for it systematically, putting aside a certain sum each week or month in a savings account.

Another way to raise funds for the vacation is to give up clothing, or some luxury not as important as the vacation. Some extra work, the income from which goes into a vacation fund is still another way of providing cash for the vacation. In families all of its members may contribute to the vacation fund.

Last year I spent one of the most pleasant eighteen-day combined rest and visiting vacation I have ever spent. Four days of the eighteen were spent visiting at Niagara Falls, and Toronto, Canada. The remaining fourteen days were spent at a country place resting. The two weeks rest period enabled me to store up energy that I felt helped carry me through unusual demands that were made upon my physical strength some months after the vacation.

Those who have not already planned for a vacation this summer should begin planning now for a two weeks' vacation for one's self and family before the vacation season is over in September, and planning it include a period of rest for everyone from father to baby.
ANOTHER “CURE”

If medicine makers could always back up their claims, what a happy, diseaseless world this would be!

The Sanatorium Sun is in receipt of an attractively mimeographed circular letter addressed to “my dear friend” in which the virtues of an alleged “cure” for tuberculosis are described. This “cure” is not the well-known treatment of the disease by rest, more rest, good food and fresh air. It is more magical and wonderful than that. It is something you buy at so many dollars a bottle and take while you happily continue your exhaustive work, or, if you are socially inclined, keep up the merry round of all-night parties and dances.

It is to be hoped that intelligent patients, and especially the other kind, will not be led to spend good money and endanger their chance to get well by taking such treatment. There are all kinds of suckers, and a goodly portion of the population gets an excellent living from taking advantage of the human impulse to obtain wealth or health by the shortcut route.

Whenever a medicine that will cure tuberculosis is discovered, reputable physicians will be glad to recommend it. It will not have to depend upon circular letters to reach those it seeks to help. Until such time, a letter of the kind just received by The Sun should be read carefully and studied as another attempt to get rich by selling medical moonshine—and then promptly forgotten. As a study in psychology, such letters are valuable. As a cure for human ills, they are worse than worthless.

The Sanatorium Sun.

EGGS HIGH IN FOOD VALUE

Is the little red hen overproducing or is the usually well-fed American family underconsuming?

A rural merchant sent two bushels of eggs to one of the state’s larger cities recently and was unable to sell them at any price. He wanted $6 a bushel for them but would have taken $5.40. But dealers in hen fruit were so overstocked they wouldn’t even make him an offer. Eggs run about 30 dozen or 360 to the bushel.

Considering their cheapness, their high food value and the ease with which they must be prepared, the small demand for eggs is to be wondered at. Undoubtedly many families that should be using eggs are not buying them any more, with their failure to do so probably prompted by a desire to economize but would it not be economy to use more eggs and less of other foods?

Eggs are composed of almost equal parts of proteins and fats, thus providing muscle, blood and bone building material, as well as heat and power, consequently, eggs eaten with wheat bread or corn meal muffins furnish the body with almost an ideal ration.

With eggs at 20 cents a dozen and bread at five cents a loaf the cost of a wholesome, well-balanced breakfast for six, not including coffee or milk, would not exceed 35 cents, or about six cents each. With coffee and butter added the cost would not be much over ten cents each. The person eating such a breakfast, moreover would be well fortified against the vicissitudes of the day.

Many farm families, possibly, are eating too few eggs and selling too many. They are doubtless exchanging eggs for other articles of food that are of less value as body builders and strength producers. This would be true of almost anything they exchanged eggs for except beans.
Home Hygiene and Care of the Sick Class at Grantham School, Wayne County
This "perfect baby" was adopted when a few weeks of age by its Foster Mother who is now living at Chapel Hill. The picture was taken when she was 19 months old. This was in March. At the time she weighed 32 pounds, and was 35 inches high. Her foster mother writes that she sleeps 13 hours at night and 4 in the day on a sleeping porch. Takes one and one-half quarts of milk a day with other proper food for her age, and a daily ration of cod liver oil. Up to May 9th she had never been sick although exposed to measles, colds and influenza through contact with inmates of the same household. Her foster mother calls her an "Optimal Child" the "kind we are hoping to have as the rule instead of the exception one of these fine days."
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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
- Constipation
- Cold
- Clean-up Placards
- Chickenpox
- Diphtheria
- Don't Split Placards
- Eyes
- Flies
- Fly Placards
- German Measles
- Hookworm Disease
- Infantile Paralyisis
- Influenza
- Malaria
- Measles
- Pellagra
- 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)
- "Our Babies"
- Prenatal Letters (series of nine
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- 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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ASLEEP AT THE WHEEL

In parallel columns in one of the morning dailies of the State there recently occurred reports of serious automobile wrecks near Davidson and Goldsboro, respectively, as a result of the drivers momentarily falling asleep at the wheel. In the case of the Davidson wreck, the driver of the car was a minister on his way to Davidson to receive an honorary degree at the commencement exercises held there. After he was fished out from the wreck and regained consciousness, he stated that he “was unable to explain the accident, but he believes that he momentarily dropped off to sleep, having arisen at an early hour in order to be here (Davidson) in time for the exercises.” In the case of the Goldsboro wreck, a Connecticut woman, driving the car and accompanied by a 15 year old boy, was seriously injured when the car turned over, off the highway, near Goldsboro. The boy was not seriously hurt, and explained that “she went to sleep at the wheel. Her car ran a hundred yards down a field, hit a ditch, jumped a small branch, and landed wheels up.” In further explanation, it is said that she had driven her car all night.

It is a common occurrence for the reports of serious automobile wrecks to be explained in the same manner as the foregoing accidents; that is, the drivers went to sleep at the wheel. There is no doubt that many more such accidents occur, in which the cause is reported as unknown, on account of the drivers momentarily dropping off to sleep. It is probably the cause of as many accidents as any other one thing, with the exception of drunken and irresponsible or reckless drivers.

Upon the least sign of excessive fatigue or a sleepy feeling, any driver of an automobile should immediately stop the car, and if no one is riding along with them who is able to take the wheel, such a driver should get out by the roadside, lie down and sleep it off, or take some other method to shake off the fatigue and the drowsiness before starting the car again. In many of such circumstances, when there is collision, loss of life and damage to other and innocent people on the highways is the result.

For safe driving of an automobile on the public highway anywhere, the following specific requirements are necessary: first, good eyesight; second, a steady hand and good judgment; third, strict sobriety; fourth, a mind and body that is not fatigued; fifth, a wholesome respect for the rights of other people on the highway.

FOOD FALLACIES

Not long ago Dr. Walter C. Alvarez, an eminent physician, published an article discussing the subjects of bran and roughage and also paying his respects to the vitamin propaganda. In the opinion of this writer, it is highly necessary that the public have its information concerning such matters on straight. At the present time there is a vast amount of misin-
formation on these subjects being disseminated throughout the land. Every newspaper and magazine is filled from cover to cover with propaganda heading up every time in the effort to sell products supposed to contain special vitamins that are especially necessary for the further enjoyment of health by any of the people. The radio is even worse. The air every day and night is literally screaming everywhere with talks by so-called nutrition experts, patent medicine exploiters, various representatives of the quack and cult tribe, all leading to the confusion of the people, and every solitary one of them having something to sell, and in ninety-nine per cent of the cases which the people do not need. If Barnum were living today, he would revise his statement that "a sucker is born every minute" to read that "ten suckers are born every second." It is bound to be the case, or there would not be sufficient income for all these sales artists and propagandists to even pay their advertising bills and radio charges, let alone to enable them to pile up the big dividends most of them accumulate.

The discovery of vitamins and the part they play in health has been an important contribution to scientific knowledge and to the better health of the people. The over-doing of the idea is, however, more than counteracting all of the good that the information concerning vitamins has accomplished. Any normal individual in average health gets a plentiful supply of roughage, bran, and vitamins in the general diet which he has the opportunity to eat three times a day. There is never any necessity for a person purchasing any commercial product purported to contain an excess supply of any vitamin needed for him particularly, unless such a person is sick and has been advised to do so by a competent physician. A diversified diet consumed daily and which comprises such things as fruits, vegetables, eggs, milk, butter and meat, which any normal family has throughout the year, affords all the vitamins necessary for any person or family.

As an editorial writer in the Johnston-Willis Hospital Bulletin recently pointed out, even a horse does not do well if given much bran, and yet this particular item is advertised throughout the world and sold in every grocery store in the land as a specific remedy for constipation. The fact is that a few people troubled with habitual constipation may find the use of a small amount of bran occasionally not harmful, but the majority of people who suffer from the constipation habit do so because of some gastro-intestinal or nervous complication, and in all such cases the use of bran, if continued for any length of time, will undoubtedly prove harmful and exceedingly injurious to such a person.

VACCINATIONS

Under the above heading the Barium Messenger, published by the Presbyterian Orphans' Home, for the information of its friends, presents the following inspiring and encouraging article concerning the success in that institution of their efforts to prevent the easily preventable diseases, such as smallpox, typhoid fever, and diphtheria. This article is an inspiration to every health department everywhere. It indicates definitely what intelligent cooperation may do toward eliminating the reduction of all preventable diseases. There is nothing finer in this issue of the Bulletin than the following:

"Some one made a very sage remark one time, to the effect that there was nothing permanent about a
bath. He might have enlarged on this and said there is nothing permanent about a meal, and vaccination and such.

"We have had this very forcibly brought to our attention at this time, because the time has just rolled around when it is necessary to vaccinate practically every child in the institution. And we have just finished this very unpleasant and uncomfortable job. A fair proportion of Barium's population are still carrying their left arms straight out, and giving their neighbor on the left plenty of room when they sit down. In fact, we have had difficulty the last two Sundays getting our congregation packed into Little Joe's Church on account of sore arms. If the weather had been as pretty as it usually is at this season of the year, there would have been standing room only.

"We are glad to report that all vaccinations are getting well, with no ill effects following, and we are all proud of our new made scars. ('Just two months from now will be the time to inoculate for typhoid fever. The last time being in 1928; and then some time during the year, we will check up on diphtheria antitoxins. All of these things seem to be a lot of bother, but when we check up and see the results of these precautions, we are not inclined to grumble over the discomforts of undergoing these various treatments.

"There has not been a single case of smallpox, typhoid fever or diphtheria among the children since these preventive measures have been in use; while prior to that time, typhoid fever and diphtheria were both dreaded diseases."

THE CONTROL OF CANCER

Cancer is said to now rank second among the causes of death in the United States. There are many societies and organizations existing in the country, which are expending great sums and making every effort to control the high mortality caused by cancer. The largest of these organizations is the American Society for the Control of Cancer. This society issues a bulletin at frequent intervals giving information about the ravages of the disease and how, in their opinion, it may be reduced. The society is authority for the statement that, although the deaths from cancer rank second, cancer is apparently on the increase, and the rate rises a little each year for the country as a whole.

Cancer is not a reportable disease, because it is not regarded as contagious or communicable in any way. For that reason accurate information as to the exact number of persons suffering in North Carolina from cancer is not available. A large percentage of the deaths from cancer could be prevented provided the primary trouble could be located and the cause removed before it eventuates in active cancer. Probably some of the increase, or apparent increase, in the death rates from cancer can be accounted for by the falling birth rate, the increasing span of life resulting in more people now living to the age of fifty years, and longer, than probably ever before. At present, regardless of all the quacks that are exploiting the people, all the newspaper advertisements of remedies purported to be cures for cancer, and all the experiments going on in scientific circles throughout the world, there is no known cure for cancer except radium or x-ray treatment in certain types of the disease, or surgical operations, all of which must be done during the very early stages.
As in any other disease, the prevention of deaths from cancer, through proper scientific treatment in the early stages, depends upon a knowledge on the part of the person having the trouble that the affection may turn out to be cancer, and therefore the prompt consultation of a competent physician. Everybody now knows, or ought to know, that large numbers of primary sores which may bear a certain resemblance to the early stages of cancer are not cancer, and may readily yield to simple treatment. Such lesions afford the chief basis of prosperity for the quacks. At the same time many simple lesions that are apparently doing no harm at first, if allowed to remain untreated, may result in cancer later on.

We can best sum up by advising all persons who suffer with decayed or jagged teeth which cause irritation and sores in the mouth and on the tongue, and, in women, especially those who suffer from affections of breasts around the nipples, and who have irregular menstrual troubles, not to lose no time in consulting a competent physician. Do not try to make your own diagnosis, and do not risk your life in the hands of a quack or advertiser of salves and lotions; these things are dangerous to fool with. But it is too late to do anything about it when a cancerous lesion becomes well established.

IS YOUR BABY'S BIRTH RECORDED?

The North Carolina State Board of Health is supposed to receive a report of the birth of every baby born in the State. Such reports are expected to be mailed not later than the fifth of the month following the baby's birth. There are some fourteen hundred registrars of vital statistics in the different incorporated towns, cities, and townships in the State whose duty it is to secure these reports and mail them to the Vital Statistics Bureau of the State Board of Health at Raleigh. It is the duty of every midwife or physician practicing in the State to make prompt reports to the local registrar of vital statistics following any births which they attend. Within a few weeks after receiving these reports the parents of every baby are mailed a card notifying them that a report of their baby's birth has been received, and it is recorded in the Vital Statistics Department in a fireproof vault, to be a part of the permanent records of the State Government for all time to come. Any mother who fails to receive one of these cards within a few months at least following the birth of a child should write to the State Board of Health and make inquiry as to whether or not a report of the birth has been received. In this way the recording of all births may be accomplished.

Every year marks a great increase in the importance of keeping proper and accurate vital statistics records. There is no need to try to enumerate here all of the reasons why an official birth certificate, when needed, should be procurable. It is impossible now for a beneficiary of a life insurance policy to receive payment until the official record of death is received. A majority of the states in the Union require a birth certificate before a child is allowed to matriculate for the first time in the public schools. The laws governing the employment of child labor are very strict on this point. The laws of inheritance also require accurate birth records, and there are many other situations equally as important as the ones just enumerated, which make it imperative for everybody at this time, whether rich or poor, to see that the births of
their children are properly recorded.

For several years North Carolina has been recording the highest birth rate of any state in the Union. The birth rate, however, in this State has been falling in recent years. In one city of ten thousand population in this State during the month of April there was not a birth reported. This is a rather unusual occurrence and is to be explained in a number of ways which are not pertinent to this story. If the State is allowed to remain a part of the registration area, and continues to be recognized as an integral part of the registration area of the United States Government, it is necessary that ninety per cent or more of all births occurring in the State must be reported.

EIGHTY-SIX YEAR-OLD MAN DIES OF SCARLET FEVER

In the latter part of May the newspapers reported the death of a man eighty-six years old, his death being caused by scarlet fever. This occurred at his home in Iredell County. At this writing the death certificate has not been received at the State Board of Health office, but it is assumed that the newspapers correctly reported the cause of death. This is more than apt to be true because according to the newspaper accounts other members of the same family had been ill with scarlet fever, and as the aged man’s health had been good previous to the attack, which proved fatal, and with other symptoms, afforded the physicians sound basis for a diagnosis.

From an epidemiological standpoint, this item is of considerable interest. Scarlet fever is generally recognized as a disease of early childhood, although physicians have always been careful to point out that it may attack persons of any age. This, however, is one of the oldest citizens to suffer attack and death from such a cause heretofore recorded in North Carolina.

For the last two or three years scarlet fever has been rather largely prevalent in all sections of the State. In 1929, 54 deaths were reported, but there were several thousand cases of the disease. Most of the cases, however, being of a mild character, which did not cause death. In 1930, while there were only 37 deaths reported, 3,066 cases were reported to the epidemiological division of the State Board of Health. This fact indicates, again, that the disease was of a mild character and the mortality very low. At the same time it cannot be emphasized too clearly that even a mild case of scarlet fever always carries the possibility of death.

There have been many deaths every year from very mild cases of scarlet fever, in which the eruption and other characteristics of the illness were very slight, but which later developed kidney complications which caused death. There is not available any accurate statistics as to just how many deaths in the past have been due primarily to scarlet fever in which the disease was so mild that the services of a physician was apparently not needed, and perhaps six or eight weeks later, without giving any history of scarlet fever, the little patients succumbed to nephritis. There are, also, no accurate statistics as to how many cases there have been of serious illness, and even deaths, which have resulted from other complications, such as mastoiditis, following the mild cases of this disease. In short, it is a treacherous disease, and one of great danger to everyone exposed.

Isolation and prompt and competent medical service and good nursing is essential for every case of scarlet fever, no matter how mild apparently and no matter what the age of the patient.
SILK DRESSES OR PELLAGRA

We are quoting below a recent editorial from the Lumberton Robesonian, which mentions the instance of a citizen of Robeson County consulting Dr. Hardin, the health officer of that county, for advice on account of pellagra. We wish to call especial attention to the fact that in the interview with Dr. Hardin, as mentioned in the editorial, this girl at first denied being guilty of eating a one-sided diet.

Many physicians understand that, unless a patient is specifically urged to tell the truth about this one point, there seems to be a tendency on the part of many patients to cover up this most important item. There is no doubt that some physicians have gained the impression that diet has nothing to do with an attack of pellagra in certain people because of this very fact. A physician cannot be too insistent on a straight, truthful statement of dietary history, not only for the patient, but for the patient's family, running back as long as the patient can remember.

We would also like to emphasize the mention made in the editorial of the fine plan in effect this year by the McNair Investment Company, operating twelve thousand acres of farm land, with three hundred tenant families, situated in Robeson and Scotland Counties. This description was recently sent out by Mr. Guy A. Cardwell, the agricultural and industrial agent of the Atlantic Coast Line Railroad. It is one of the most interesting and encouraging stories emanating from any locality this year.

As described by Mr. Cardwell, each one of the three hundred tenant families is being required this year to have a first class garden. The company is advancing the seed, plants, fertilizer, and taking the risk of collecting the cost from the tenant, independent of the usual chattel mortgage arrangement. A tenant family operating one horse is required to have one-fourth acre of garden, this to be selected from the best land in the allotment. A two-horse tenant family has one-half acre in garden, and the three-horse tenants or over are required to cultivate three-fourths of an acre in a garden plat. Any tenant who refuses or fails to cultivate this garden in first class order is required, in his contract, to vacate the premises. The company expects next year to require the tenant to add pigs and poultry, and as soon as possible a cow.

When such a system of farming becomes general in North Carolina, pellagra and other similar diseases and conditions will be rapidly reduced to a minimum.

The Robesonian editorial follows:

"A WISE PROGRAM"

"If all large farm owners would adopt such a program as has been put into effect on the farms in Robeson and Scotland counties of the McNair Investment Company, agricultural conditions would be improved wonderfully and pellagra would be an unknown disease in this section. Every one of the 300 tenant families on these McNair farms, embracing 12,000 acres, is required to plant and cultivate a garden. It is compulsory. If the tenant refuses he must move out. And this is only a part of the program. It is the purpose, as related in an article in the last issue of the Robesonian by Mr. Guy A. Cardwell, agricultural and industrial agent of the Atlantic Coast Line railroad, as rapidly as conditions warrant, to require tenants to have pigs, poultry and a milk cow.

"If such regulations were in force on every farm in Robeson county agricultural and health conditions would be far better. A landowner stated the
other day that he simply could not get a certain tenant family to keep a cow or have a garden. They said it was too much trouble and they did not have time. So they would go to town every week and buy white flour and molasses and meat and subsist on that diet, which is suicidal as a regular thing. As a consequence, the ravages of pellagra were all too evident in that family. The other day an Indian girl dressed in silk and suffering from pellagra came into the office of Dr. E. R. Hardin, county health officer. She at first protested that she ate the right food, but when pinned down she confessed that her steady diet is white bread, molasses and meat. She knew better but wanted to save money for silks.

“When there is a garden and there are poultry and cows on every farm, and proper diet is the rule, pellagra is unknown and no real want is felt when cotton and tobacco are low in price.”

THE FOOD WE SHOULD EAT

By

U. S. PUBLIC HEALTH SERVICE

The question of what to eat is one of our daily problems that, too frequently, is decided on the basis of convenience instead of logical thinking and accurate knowledge. The food we eat has much to do with whether we shall have a healthy body or a sick one, and improper food selection often leads to conditions that can be corrected only by long periods of proper food adjustment.

A little too much fat or carbohydrate in the diet may eventually result in obesity, which is frequently never properly corrected. An insufficient amount of certain of the vitamins may produce serious disease, permanent deformity, and sometimes death, if not corrected in time. It is indeed fortunate for our well-being that the selection of the proper foods is not difficult. The foods we should eat can be determined without the aid of a dietitian, and are available in every American city.

In addition to water, there are five groups of substances that must be present in our diet if we are to remain healthy. These are as follows: (1) vitamins, (2) minerals, (3) proteins, (4) fats, and (5) carbohydrates. American diets, when deficient at all, are most likely to be deficient in minerals and vitamins, and the American housewife should be particular to secure an adequate supply of these substances.

We now know of several different vitamins, all of which must be in the diet if health is to be maintained. These can be conveniently considered in three classes: First, those obtained with fats—such as butter, cream, and fish-liver oils; second, those which are destroyed by cooking and which are obtained with fresh, uncooked vegetables and fruits, such as lettuce, cabbage, tomatoes, oranges, apples, etc.; and, third, the vitamin not harmed by cooking and obtained principally with lean meats and milk.

Minerals are necessary for the proper formation of bones and blood. Milk is one of the most important foods we have for richness in minerals and vitamins. It supplies most of the vitamins and all of the minerals we need, except iron. It is especially rich in lime. Oatmeal is fairly rich in vitamins and minerals. Dried beans contain iron, phosphorus, and calcium. Spinach, lettuce, cabbage and other green leafy vegetables pro-
vide minerals and vitamins. Tomatoes, oranges, and apples are also to be recommended.

After an adequate supply of minerals and vitamins is assured, the next most important thing to be considered is the protein. The proper kind and amount of protein must be present or normal growth and development will not take place. It has been estimated that the daily diet of an average man should contain about 3 1/2 ounces of protein. If we secure our protein in the cheapest manner (that is, in vegetables, particularly beans of various kinds), we obtain a protein of poor quality, and in order to make the diet correct we must add protein of higher quality, such as that from milk, milk products, meats, fish, and eggs. Those who can afford it usually prefer to have most of their protein in the more costly form of eggs and meat on account of their palatability. Protein from milk and meat is known as complete protein, on account of its good quality, and the fact that it does not require the addition of protein from other sources.

After attending to these items, the energy value of the diet should be taken into consideration. We must know how much to eat in order to have enough fuel to do our work without using the body tissues. In order to know this we estimate the fuel value of the diet in calories. The calorie is simply a convenient unit of measure. One ounce of protein or carbohydrate supplies about 115 calories, and one ounce of fat about 264 calories; and so all that we have to do is determine the composition and amount of the food we eat in order to know the fuel value of our diet. Most books on nutrition and dietetics give tables showing the caloric value of definite amounts of the common foodstuffs. It has been estimated that an American man or woman living a quiet life at home, with little exercise, needs about 2500 calories a day; if working, without much exercise, 3000 calories; on light work, 3500 calories; and if doing hard work, 4000 or more calories are necessary.

Fats are important additions to the diet on account of their high energy value. They supply about twice as much energy as an equal weight of protein or carbohydrate, and thus relieve the body of the necessity of dealing with an excessive amount of material in order to obtain a large number of calories. The most important fatty foods are butter and cream, because of their palatability and ease of assimilation, and because they carry vitamins with them. It is difficult to obtain a sufficient caloric intake in a diet which is without fat. However, an excessive amount of fat tends to cause digestive upsets in certain individuals and gives a disagreeable feeling of heaviness after eating. On the other hand, a proper quantity gives a desirable feeling of comfort and well-being. Improperly fried foods should be avoided, since grease soaked through the food tends to obstruct the work of the digestive fluids.

Carbohydrates are necessary in order for the body properly to use the protein and fats in the diet; and for this reason the bulk of the diet should be made up of carbohydrates, which may be obtained from the large number of starchy and sweet foods.

In addition to making the diet nutritionally sound, there are other important things to be considered. One of these is roughage. A certain amount of roughage seems to assist the body in handling the waste products of digestion. A sufficient quantity is usually obtained from the green vegetables in the diet. If enough of these are not eaten, bran or other cereal may be added to the diet, unless there is some condition.
which makes it inadvisable to include such items.

Another factor is palatability. An attractive table of well-prepared food tends to increase food consumption. The diet may also be planned so that there will be no feeling of hunger at the end of the meal. Certain foods are known to have a greater satisfying value than others. Meats of various kinds are most important in this respect. Butter and other fats, and soups containing meat extractives are also valuable; and a dessert, or other sweet food taken at the end of the meal, increases its satisfying effect. Thus, a prominent American nutritionist states that a meal consisting of, first, a soup containing meat extractives; second, meat and potatoes, to which may be added starchy vegetables, then a salad with an oil dressing, and ending with a dessert, gives the greatest degree of satisfaction.

Some of the leading nutrition experts in the country have summarized a man’s normal dietary needs, in order to enjoy health, as follows: One quart of milk, two salads, two liberal helpings of the leafy portions of green vegetables, one small helping of any meat, and two eggs. He may add to this anything within reason that his appetite demands, including a liberal supply of bread, butter, fruit, and various vegetables. It should be remembered, however, that if we eat more food than we need, the body stores up part of the excess as fat, and continued overeating leads to unsightly deposits of fat in the body. On the other hand, an insufficient amount of food leads to emaciation, even if all of the necessary dietary factors are present. We must, therefore, watch the quantity as well as the quality of the food we eat.

BABY ELEANOR TAKES A TRIP

By SUDIE PYATT MILLER

Author’s Note: Under one year baby’s trips are best confined to trips in its baby buggy, and in the family car. Those taken in the family car must not be too long and tiring. Trips disturb the important routine of the baby and, for that reason alone are not good for the baby, but many mothers may find it necessary, as I did, to take their babies even as young as ten weeks on a twenty-four hour train trip, or perhaps a longer trip.

For the mother who feeds her baby from the breast the baby’s food supply for a trip offers no problem. The milk supply for the bottle fed baby does. Pasteurized milk may be purchased on most pullman cars and all trainmen will help a mother by allowing her to use the dining car kitchen in preparing the baby’s milk. The trip I had to make with my baby did not last but twenty-four hours, and I made up enough milk for the baby’s regular feedings before leaving home, and took the milk along in two thermos bottles. On the train the thermos bottles may be given to the porter with a request to place them in the refrigerator of the dining car kitchen. However, it is well to bear in mind that some dining cars on pullman trains do not go through for the entire journey, and it is just as well to ask the porter about this when the milk is given into his care.

Do not make any changes in the baby’s milk for the trip without first consulting your physician.

Eleanor watched her mother with questioning, bright blue eyes. She was just ten weeks old, but she was old enough to know that something out of the ordinary was occurring, for everyday since she could remem-
nothing about it Eleanor had not been bathed when she first awakened before the early morning bottle she found so satisfying, but later in the morning before she was given a second feeding that she was as eager for as she had been the first one.

Mother was dressing her in the simple little white frock she wore on days when she wasn't bathed before six o'clock. Perhaps nothing was going to happen. Maybe mother had forgotten about the time, but mother was very careful about feeding and bathing her at the proper time. Something must be going to happen.

"Mattie, hand me Eleanor's rubber panties, booties, and sweater," mother said to the colored girl who came in each day to help her, and who was here earlier than usual this morning, "Baby will need them on our long trip."

So that was it! She and mother were going on a trip, but what was a trip? Eleanor wrinkled her smooth, little brow thoughtfully, and mother looked at her and smiled:

"You darling, solemn little baby!"

"Don't pack the pillow and blanket in the bags," mother was saying to Mattie, "I'll need them for Eleanor on the trip. Nothing rests a little baby while traveling more than a pillow, and a blanket always comes in handy."

"Now, Mattie, you may bring me baby's bottle," mother instructed, as she tied the ribbons on Eleanor's white and blue sweater.

The milk Mattie brought for Eleanor had been prepared the night before from a fresh supply, according to the baby's regular formula, placed in a sterilized jar, and then in the ice box alongside the ice, where it had remained all night in company with the two thermos bottles, that were to be used for taking Eleanor's supply of milk along on the trip.

Both of the thermos bottles had been left open so the interior could become as cold as the temperature of the ice box could make them. Shortly before leaving for the train Mrs. Thomas would pour the milk from the jar into the thermos bottles, corking them to take along on the trip. There was enough milk in the two thermos bottles to last the baby for a twenty-four hour trip.

Packed in the brown handbag were six, sterilized, corked bottles, each wrapped separately in a clean towel. In a small covered jar were freshly sterilized nipples for each feeding, another jar for soiled nipples and corks, a tiny funnel for pouring milk from the thermos bottles into the nursing bottles, wrapped in a clean cloth, a bottle of boiled water, another of orange juice, a small stove for use with canned heat, and a saucepan. The small stove, can of heat, and the saucepan, were to be used to heat the baby's milk during the trip.

In the same bag were a couple of Eleanor's washcloths, towels, a cake of soap, box of baby talcum, and a small jar of boric acid solution. Little baby girls must be kept clean on a trip, and on leaving the train to meet relatives they've never seen before they must look as sweet and dainty as only a pretty little girl can look.

Breakfast over for both Baby Eleanor and her mother and father, Mr. Thomas went to call a taxicab to take them to the station to meet the train.

Mattie, who was remaining to clear up the apartment for Daddy after Eleanor and her mother were gone, took Eleanor down to the street, and handed her to mother, after mother was seated in the cab. Mother's arms about her Eleanor noticed a tear slipped out of Mattie's kindly eyes and down her honest, black cheeks. Mattie did not seem to want them to leave.

"Take good care yo'self and baby, Miz Thomas. That's a long trip for a
little baby, and you ain't any too
strong yo'self," Mattie said.

"Thanks, Mattie, I will," mother
smiled, and Eleanor smiled, too, in
the sweet, little baby way she was
just beginning to know about.

Daddy held her on the trip to the
station. "It will be the last time in
some weeks, Daisy. Let me have her,"
and mother had given her to Daddy.

Mrs. Thomas’ ticket and pullman
reservation had been taken care of
the day before by her husband, and
arriving at the station there was
nothing to do but check her baggage,
which Daddy attended to, leaving
Eleanor with mother, and wait for
their train to be called.

"Washington train!"

Mr. and Mrs. Thomas went out to
the gate, a redcap taking Mrs. Thom­
as' bags. Mr. Thomas reluctantly sur­
rrendered Eleanor to her mother, first
giving her a kiss on her plump, little
cheeks, and then kissing his wife.

"I am sure we will make the trip
safely, dear," Eleanor heard her
mother say in response to Daddy's
anxious goodbye, and a few minutes
later Daddy was left behind, and she
and mother had joined the stream of
people pouring through the gate.

Mother had her ticket out in the
hand that was facing the gateman,
and there was no delay there. Moth­
er had also remembered the name and
number of the parlor car that they
were taking for the day trip from
Pittsburgh to Washington, and there
was no difficulty in finding their car.

It was nice on the train. Baby
Eleanor lay on a pillow in mother's
lap for awhile, and then mother ar­
ranged her to lie on the pillow in
the big, comfy chair just across from
hers at the porter's suggestion, as
no one was occupying the chair.

A pretty woman, but not nearly so
pretty as mother, Eleanor thought,
came and said:

"Is there anything I can do to help
you with the baby? I have six chil­
dren, and I know what it is traveling
with a baby."

"Thank you," mother said, "you
certainly are kind. It is time for
baby's nine o'clock feeding. If you
will watch her for a few minutes for
me I will go to the rest room and
heat her milk."

The lady was nice and Eleanor gave
her a couple of her best and newest
smiles, to which the lady responded
by saying:

"You darling!"

Mother returned with her milk.
Eleanor had been wondering if it
would be as good as the milk mother
had prepared at home for her every­
day. One taste of it was enough. It
was, and she drank the whole bottle,
going to sleep in mother's arms when
it was finished.

Asleep Mrs. Thomas gently trans­
ferred her baby from her lap to the
pillow on the opposite chair, and sat
back to read the morning paper while
the baby slept.

Eleanor slept, and awakened to find
herself and mother still on the train.
Lunchtime came, and mother fed her
again, and ordered her own lunch sent
in from the diner. Mother ate her
lunch at a little table the porter ar­
ranged for her, holding Eleanor on
her lap as she did so.

Around four o'clock the train near­
ed Washington and Mrs. Thomas got
her baby ready for getting off the
train, powdered her own nose, and got
her bags ready for the porter to take
off. They were stopping over in
Washington from four o'clock until
seven, when the journey south would
be resumed.

A kind lady, a matron in the ladies'
waiting-room, who said she adored
babies, cared for Eleanor, after
mother had fed her again from the
never failing milk supply in the ther­
os bottles, and mother went to get
her own dinner at a restaurant in
the station.

The lady was fine, Eleanor decid-
ed. She knew lots of new ways to entertain babies.

Mother came back, and she was glad to see her again. There really was no one like mother, not even Daddy, no matter how many tricks they knew for entertaining babies.

A redcap obligingly held her for mother, while mother got her ticket from her purse, which she had forgotten until they reached the gate. Once through the gate a train man helped mother down the long flight of stairs to the waiting train, and saw them safely seated, the redcap looking after their bags.

The traveling public, Eleanor thought, was certainly good to mother and herself. All along the way someone had been doing something to make traveling easier for a little girl on her first trip with her mother.

Mother had their berth, which she had had Daddy request near the women's rest room, made down as soon as the train got under way, and Eleanor was undressed and put to bed in the funny little bed that did not seem much larger than her crib, but which she and mother both were going to occupy for the night.

Her own little pillow under her head, the blanket mother had taken along wrapped about her, with the pleasant, slight motion of the train, Eleanor dropped off to sleep as quickly as if she had been in her own little bed.

Seeing that her baby was safely asleep Mrs. Thomas undressed and got into a dark kimona that she had packed in a hat box that Mrs. Thomas had available, along with a rubberized bag for soiled diapers. Mrs. Thomas knew that special traveling kits could be purchased for packing baby's clothes, but she did not feel that the cost of the special traveling kit, for the one trip would justify its purchase.

Uneventfully the night on the train passed.

To make sure she would have time to dress both herself and the baby before they reached their destination, Mrs. Thomas arose and dressed herself a full hour before their train was due at Goldsboro.

Eleanor awakened at mother's gentle touch, crowing and happy. Mother did not give her a regular bath, but sponged off her face, hands, and dried her, putting on a fresh diaper and dress, the rubber panties, the boottees, and sweater she had worn yesterday.

That satisfying six o'clock bottle had been finished when the train pulled to a stop. Eleanor was lifted in mother's arms, and they followed the black porter, who had smiled so nicely at her on the trip out to the platform.

"Hello! Hello!" A man who was not Daddy, was greeting mother.

"And how's the little lady?" he was saying.

Mother said: "Eleanor, here's Uncle Jack, and Aunt Mary, and Little Jane."

Uncle Jack took the bags from the porter, and Aunt Mary took Eleanor. Jane, who was a little person, too, but large enough to be running about all by herself, followed between Mother and Aunt Mary.

They all got into Uncle Jack's automobile and drove to Uncle Jack's house where everybody talked and talked.

"I will give Eleanor her bath before her nine o'clock feeding," mother told Aunt Mary, "and before then I'll
sterilize her bottles, and make up her milk.

Eleanor was placed in a big crib, larger than her own, Jane's crib. Bath time arrived at eight thirty, and her bottle followed at nine, then she went back to Jane's crib for a long nap, and mother sat down to write to Daddy.

"We made the trip safely without a mishap," Mrs. Thomas wrote. "Eleanor is sleeping now. She is a wonderful little traveler."

Mrs. Thomas was very modest and she did not add that her own and her husband's careful planning for the trip, scheduling it so she and her baby started the trip and arrived at their destination at the most favorable hours. Keeping the baby to a regular schedule had aided in making her a wonderful little traveler.

The packing of her own and the baby's clothes for economy of baggage and convenience, dressing herself and baby simply and comfortably for the trip, and her watchful care of Eleanor's milk, both before beginning the trip and during its course had all contributed to a happy and successful trip for the two.

PERSONALITY DEPENDS UPON SLEEP HABITS

One third of our life is spent in sleep. What we do and what we are during the other two-thirds of our life depends on how well we sleep. Personality as well as physical health are affected to a great extent by the amount and kind of rest that we get. There is more to sleeping than just spending from seven to nine hours in bed. These are the statements of Dr. Donald A. Laird in an article on sleep in Hygeia, the Health Magazine.

Our minds do some of their best work while we sleep. Before retiring it is well to think not only of pleasant past experiences but to review some of the things that we want to do on the following day. The person who keeps his mind at work on a constructive problem while asleep does not have disturbing dreams as long as his emotions are stable and he faces life with a smile.

The world's leaders are well rested people, Dr. Laird points out, citing numerous examples of famous persons who carefully watch their quota of sleep by making up for lost sleep either before or immediately after they are out late.

A few of the questions asked by Dr. Laird will evaluate your sleep habits:

- Do you wake up in a good humor?
- Do you go to sleep as soon as you go to bed?
- Can you have bad dreams without worrying about them?
- Do you hit upon new ideas and solutions to problems during your sleep?
- Do you go to bed early enough and sleep well enough that you can awaken naturally in the morning without an alarm?
- Do you feel rested when you awake?
- Can you calm down after an exciting evening and go right to sleep?
- Do you sleep through the night without waking up?
- Can you go to sleep when you go to bed earlier than usual?
- Can you remain awake in a dark room without being apprehensive about intruders.—Hygeia, the Health Magazine.

Early to bed and early to rise, cut the weeds and swat the flies; mind your own business, tell no lies; don't get gay and deceive your wife; pay your debts, use enterprise and buy at home from those who advertise.—Monroe Enquirer.
THE MEANEST MAN IN THE WORLD

I think I can understand the feelings of a man who commits murder. I suppose most of us have felt that impulse though all of us have not obeyed it—as yet. I can even realize that there are such creatures in the world as those who would burn an orphan asylum or rob a blind man of his pennies. Mental experts can explain these things, and also why men generally steal and rob and commit all the vile crimes on the calendar.

However, as Henry Ward Beecher said: "I have great hope of a wicked man; but only slender hope of a mean one. A wicked man may be converted and become a saint. A mean man should be converted six or seven times, one right after the other, to give him a fair start and put him on an equality with a bold, wicked man. Even then I have my doubts."

The meanest, most cruel, most heartless, most fiendishly selfish thing, however that crawls on the face of this earth is the man who will make money for himself by running a fake cancer cure establishment.

CULTURE

Any professional man is hardly doing his full duty to himself and to the profession he represents unless he gives some time to education and cultural improvement. I am convinced that by so doing in medicine one will make a better physician. Even a doctor is partly judged by his general information of affairs, and, therefore, cannot afford to neglect all the better things in general education. Eben Holden was right when he said "Got t' judge the owner as well as the hoss. If there's anything the matter with his conscience it'll come out in the hoss somewhere." A doctor cannot afford to be substandard in things educational or the evidence will crop out somewhere and his shortcomings be made evident. Education keeps us out of a rut, it demands respect, and, of equal importance, it is a lasting pleasure. Education and culture go hand in hand. Culture is quite difficult to define, and I am confident that many times it exists in outward show and mannerisms only. A mother may teach her son to tip his hat to women and to stand in the presence of her guests, but he will not be cultured if he lies to her about his escapades or steals from his neighbors. Most men of science are led to believe that many of the qualities that go to make up an educated and cultured gentleman are inborn and cannot be the result of environment only. Such a heritage does not mean family wealth or social position. "The creature we call a gentleman lies deep in the hearts of thousands that are born without chance to master the outward graces of the type." (Owen Wister.) If the qualities that lead to education and culture are born in a man, he is fit to become a doctor.—Thomas G. Orr, M. D., in The Diplomate.
A WORTHY ENTERPRISE

CHILDREN OF THE CABARRUS COUNTY PREVENTORIUM

Again this year the Red Cross, cooperating with the Cabarrus County Health Department, is conducting a Preventorium at Concord for children who are underweight and who have reacted to the tuberculin test for tuberculosis. In the above group are seven sets of brothers and sisters. Twenty-five children are being cared for this year.
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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
Constipation
Colds
Clean-up Placards
Chickenpox
Diphtheria
Don't Split Placards
Eyes
Flies
Fly Placards

German Measles
Hockworm Disease
Infantile Paralysis
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Sanitary Privies
Scarlet Fever
Smallpox
Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Veneral 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)
"Our Babies"
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Hints to North Carolina Mothers Who Want Better Babies
Table of Heights andWeights

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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Preliminary Announcement
The News and Observer in a recent issue quoted Mr. Louis Graves, editor of the Chapel Hill Weekly, in the following interesting commentary on his boyhood days in Chapel Hill:

"Sometimes my memory carries me back to the time when the alleviations of the summer heat in Chapel Hill were fewer than they are today," says Louis Graves, editor of the Chapel Hill Weekly. "In my boyhood days here there was not a house in the village that had screens on the windows, and flies and mosquitoes swarmed through the rooms. Nobody had running water, and sanitary arrangements were as primitive as in the era of the Crusades. If you wanted to read at night you sat by an oil lamp that was like a stove.

"Ice, instead of being always easily handy as it is now, was a luxury. Dave McCauley used to cut ice from the creeks in the winter and pack it away under sawdust in a great hole-in-the-ground covered by a roof. This was in the big yard on Cameron Avenue, since acquired by the Chi Psi fraternity. Ice cream was a big event in our family, and when my mother prepared for it she would send me up the avenue to the McCauley's with my little toy wagon, and Mr. McCauley would descend into the ice-hole, brush away some of the sawdust, and emerge with a block of the precious article. The price, as I remember, was three cents a pound. And now, when a housewife is to have ice-cream, she simply pours her mixture into a pan, puts it in the frigidaire, and forgets about it until dinner-time.

"In these times, on a night when the heat is oppressive, I place an electric fan on a stool by the side of the bed, push a little shaft sidewise, and presently I am as cool as though I had gone to bed in a cottage on the coast of Maine. In the old days electric fans were unknown.

"But people complain of the heat now as much as they did then. And of course, they always will. After all, the freedom to complain is one of the most treasured alleviations."

Every adult who is more than forty years of age can surely agree with Mr. Graves in the observations he makes concerning the period of twenty-five years or more ago. The point we would like to emphasize in this note, however, is that there are considerably more than a million people in the State of North Carolina today whose living habits and mode of life in general are just as primitive as that described by Mr. Graves. The sanitary privy law and the installation of sewage and water-works systems have done much toward making life tolerable and safe in the villages, towns, and cities, but the large masses of the poorer class of people in the rural districts have to a great extent not been benefited by these modern achievements. It is true that the use of screens and the availability of local light systems have helped a large number of home owners in the country districts to live comfortably and safe from flies and insect pests.
and the diseases they carry, but this applies only to the more prosperous class of people. The households of tenant farmers, both white and colored, and the majority of the smaller farm owners all through the State have received no benefits from these improvements. Governor Bickett used to vision in his speeches of the day when running water, screened houses, and sewage disposal would be a common place in every rural home in the State. We probably have a long way to go to achieve such a desirable state of affairs, but it is none the less important that we keep hammering away on the idea.

PELLAGRA RARE IN HOMES WHERE PRODUCTION OF FOOD SUPPLY IS AMPLE

Doctor Floyd Johnson, health officer of Columbus County for several years, in a letter to the Editor of the Health Bulletin a few days ago has the following arresting statement concerning pellagra:

"I find very little pellagra in homes where the home produced products are used altogether, and I should say none where such products are plentiful."

Doctor Johnson further goes on to say that "I am more convinced every day that there is a great need for keeping up the drive by an educational program which teaches the production of a very complete food supply at home."

Doctor Johnson has promised the Editor of the Bulletin an article on his experience in dealing with pellagra in Columbus County, for publication in an early issue of the Bulletin. We hope that he will be able to find the time to prepare the article. Columbus County is a rural county, situated in the southeastern section of the State, where the farming interests have been adversely affected on account of lower prices for farm products produced in that territory during the last two or three years. Pellagra has been no more prevalent in that county than it has in a number of other counties, but it has been prevalent enough to cause much concern among the people.

Doctor Johnson's experience, together with his advice and recommendations, will be looked forward to with interest.

RESUSCITATION OF DROWNING PERSONS

As the time is now midsummer and swimming one of the prime outdoor recreations all over North Carolina, we deem it important to call attention again that many lives from drowning could be spared if prompt and intelligent attention be given such victims at once and continued for many hours.

One of the most interesting newspaper headlines published in the United States this summer occurred under an Associated Press headline from Philadelphia on July 8. The headline was as follows: "Works on Man for Nine hours and Bring Him Back to Life."

So far as we know, this is a record in the time given to efforts at resuscitation. We recall that here in Raleigh two or three years ago a man was electrocuted while at work on a power company pole within a block of the State Board of Health office. Raleigh physicians worked repeatedly on this man for about seven hours without being able to revive him.

The efforts at resuscitating a victim of electric shock is similar in many respects to the resuscitation of a drowning person. Each requires the application of artificial respiration. The approved method is the method
devised by Schafer, an eminent physician. The method has been described before in the Bulletin. A few years ago a machine known as a pulmoter came on the market and had great vogue for a while, until it was found that it was of little use. There is at present, however, a machine known as an inhalator, which is of great value. This serves to force a mixture of oxygen with a small percentage of carbon dioxide gas into the patient's lungs.

The Philadelphia story is so unusual and fascinating that we feel sure the Associated Press will forgive us for quoting in full their description. The article follows:

"Believed drowned after five minutes at the bottom of Laureghlake, New Jersey, William Dugan was alive and well today. For nine hours physicians and nurses at a hospital made efforts to revive him although his heart and pulse had seemingly stopped.

"He was wrapped in blankets, lined with hot water bottles, was given frequent hypodermics and inhalators were used. Finally he sighed and opened his eyes.

"'It was so comfortable just resting in space,' he said. 'Yet I had a feeling I had to rouse myself, to make an effort to go somewhere. Then, from a great distance I heard my mother calling and I had to answer her. After a great effort I opened my eyes.'

"He had a feeling of 'oblivion—peaceful oblivion and a long sleep in which there were no dreams' before he heard his mother calling and rallied.

"Describing his sensations on falling from a boat and being stunned, Dugan said:

"'I felt myself going down and down and down. Brilliant lights danced before my eyes, flashing in varied colors. Then I hit the muddy bottom and all went black.

"'I don't know another thing that happened until I had the sensation, hours later, of floating in air and that someone wanted me to do something, someone I couldn't disappoint. Then I came out of it'.”

"FIFTY DOLLARS FOR A FAKE REMEDY"

Mr. Upton G. Wilson, who writes a most interesting column in the Winston-Salem Journal, sometime ago published in the Journal, under the above heading, a comment on an article occurring in the June Health Bulletin. His comment is so interesting that we take pleasure in passing it along to the readers of the Health Bulletin.

It will be remembered that the editor of the Bulletin insisted in the article referred to that advertising is the life blood of the fake remedy business. Mr. Wilson takes the position in his article that while that is true to a certain extent education and more education repeated continually is the only permanent medicine for the quack remedy business.

Following is Mr. Wilson's article, which I hope all of our readers will find time to read:

"North Carolina Health Bulletin for June quotes portions of a letter from a home demonstration agent in Eastern Carolina in which the home agent tells of unfortunate pellagra victims in her county paying an Alabama concern $50 for a worthless treatment for pellagra.

"The editor of the Bulletin believes that if promoters of worthless remedies were denied the right to advertise in reputable newspapers they would be unable to obtain customers and thus would be forced out of business, but while the closing of newspaper columns to them would doubtless cut into their revenue, so long as
there are suckers men will find some way to fish for them.

"It is obvious, therefore, that the deadliest enemy of the quack, charlatan and grafter is education. When the people become educated this trio of public enemies will find it impossible to survive. For no educated and informed person will send $50 for a remedy which he knows is not only worthless but also scandalously overpriced. He will go to a reputable physician for advice, if he be ill, and then endeavor to follow the physician's instructions.

"And since through education alone the people may be saved from the conscienceless rascals who peddle worthless remedies at exorbitant prices, it is gratifying to note that the Health Bulletin, in cooperation with the State Board of Health, is making an earnest effort to carry enlightenment and hope into every community in the state. The work the state health department is doing is a credit to North Carolina.

"When its message has been heard and heeded pellagra and other nutritional diseases will speedily cease to exist. But many will refuse to hear and some who hear will not heed. There still exists among numbers of persons a belief in magical cures. Almost universally regarded as the surest indication of His divinity, the miracles of Christ have been the innocent cause of much humbuggery and suffering. Many have presumed to cast out the devils of disease in His name and by His power, when as a matter of fact they were miserable charlatans.

"But when one remonstrates with the credulous and warns them that it is better to trust to responsible medical men rather than to those who make vainglorious claims of their power to heal through some amazing discovery that local physicians know nothing of, he is met with the same logic that miracles have occurred and therefore nothing is impossible. But there is one thing at least that is impossible, namely, the curing of pellagra with medicine.

"Doctors have described pellagra as a form of starvation. Those who eat the right sort of foods never have it. And time after time health agencies have explained what the right sort of foods are. There is nothing mysterious about them. They are neither expensive nor difficult to obtain. Eggs, green vegetables, butter, milk, whole wheat bread, lean meat and fresh and dried fruits are some of them. On the other hand, a diet of fat meat, corn bread, beans and coffee is to be avoided unless liberally varied with the foods mentioned above.

"Instead of spending $50 for worthless medicine, a pellagra sufferer would do well to spend that amount for a cow. A cow will come nearer to curing the disease than any medicine ever dispensed by a quack. But a cow makes no claim for herself, so of course she is ignored, while $50 is sent off to Alabama for a treatment that probably contains a few cents worth of arsenic and maybe a little dried buttermilk.

"Physicians are informed of all known remedies and cures. If there was a medicinal cure for pellagra they would know about and also prescribe it. The reason physicians don't cure pellagra with medicine is because they can't. It is not a disease that can be cured with drugs. If he gets well at all, the pellagra sufferer eats himself well.

"The educated person knows this. The uneducated person has it yet to learn. It is education, therefore, which will put the quack out of business, though it must be admitted that if he couldn't advertise he'd have his style cramped somewhat."
During the first five months of 1931, 1162 cases of scarlet fever were reported to the North Carolina State Board of Health. For the same period in 1930 only 1005 cases were reported. Thus it can be seen that scarlet fever has been considerably more prevalent this year than last.

Scarlet fever is a dangerous and treacherous disease, and every effort possible should be exerted all the time to locate any patient having the disease. Its chief danger consists in its extreme mildness in frequent cases, but these mild attacks often result in serious complications several weeks after the acute stages of the disease have passed off. Also the infection from a mild case may result in a virulent attack in some other person, with death ensuing.

In connection with the regulations concerning scarlet fever, it will be interesting to note a recent declaration by the health department of the city of Detroit, Michigan. This has to do with the quarantine regulations, and it affords material for careful thought by health officers in North Carolina. Following is the extract from the Detroit Weekly Health Review:

"A careful study of the records of scarlet fever during the last four years seems to justify a modification of our regulations. The object of restriction is to prevent the escape of the inciting agent. It is noted that the incidence of scarlet fever among contacts rarely occurs when patients are over 15 years of age, and further it is observed that cases among contacts rarely occur during the summer months. Patients with certain complications are noted to be the greatest source of infection. Our complicated cases will be quarantined as heretofore; but uncomplicated cases in patients over 15 years of age will be released at the end of three weeks; and during July, August and September, all uncomplicated cases will be released at the end of three weeks quarantine. No patient will be released until the attending physician has reported to the Communicable Disease Division that he has recovered, and until the terminal cleansing of the quarantine area has been completed. Children may not return to school until one week after release from quarantine.

"These regulations will be returned to their former requirements at once if the severity of scarlet fever should increase.

"Parents will keep in mind that scarlet fever is a treacherous disease, and the best interest of the patient, immediately after release from quarantine, will be served by talking with his physician about rest, food, and exercise for the patient."

"FATHER, GIVE THEM AN UNDERSTANDING HEART?"

By

SUDIE PYATT MILLER

Sally Lou coughed and spat on the white sand under the oak tree where she sat in a shuck bottomed chair. With unnaturally bright blue eyes she watched a hen with a flock of small chickens eagerly scratching on the spot where she had spat a few moments before.
and her brother John had suffered with before they died. Her mother had been dead five years, John had followed her four years later. Of the family only herself and her father were left.

Sally Lou was "po'ly" the neighbors said, and Sally Lou knew that she was not well. That tired, draggy feeling that made living a burden, her already slender figure growing more so every day from the steady loss of weight, her lack of appetite, the indigestion she frequently suffered from when she did eat, the pains that were as sharp as knives darting through her chest; pleurisy pains the doctor had told John they were, and most convincing of all, the cough that had started some months before and steadily grew worse, were all Sally Lou's symptoms of tuberculosis.

She had not asked her father to take her to the doctor. Times were hard for tenant farmers that second summer of the world-wide business depression. It was only because Henry Frazier was known in the community as steady and dependable, paying his debts in years when his crops would allow, that Sally Lou's father had been able to secure the necessary provisions from the time merchant in the nearby town to provide for himself and Sally Lou, during the growing and harvesting of the year's crop.

Sally Lou was a good, thoughtful daughter. She did not wish to impose any more expense upon her father's already overburdened shoulders, so she had asked for neither a physician, nor medicine. But last night while reading one of the cheap little magazines that came into the home she had seen an advertisement of a remedy, which the convincingly written advertisement said was a sure cure for tuberculosis no matter how ill the person taking the treatment.

The cost of the treatment was twenty-five dollars, and the advertisement stated if after taking them the patient was not benefited the money spent on the treatment would be refunded.

Sally Lou did not know that nothing that ever came in a bottle has never yet cured tuberculosis. She did not know that the advertisement had been written by a trained advertising man as part of his day's work, whose knowledge of the disease was limited to the fact that people with tuberculosis coughed, for a company of unscrupulous scoundrels who knew little, and cared less about the fundamentals, rest, fresh air, good food and proper medical care, of the cure of tuberculosis. The remedy they sold to trusting souls like Sally Lou for twenty-five dollars a treatment did not cost the company five dollars, including their heavy advertising, and mailing expenses, the salary of the advertising man, and their own spurious doctors' titles, leaving them a clear profit of twenty dollars on every treatment sold.

Sally Lou was ignorant of all of this, and trembling with hope she took the advertisement to her father. With anxious eyes through the spring and summer Henry Frazier had watched his daughter grow more and more frail, refusing food, dropping out of the affairs of the young people of the community that she had so loved, and coughing as John had coughed before he died, and her mother before John. He read the convincing advertisement, and knowing no more than his daughter knew of the tactics of businesses that thrive on the trustful ignorance of hopeful sick people, and their relatives and friends, he told Sally Lou that the advertisement read well, and that with some of the first returns from his tobacco crop he was now harvesting, he would purchase the treatment for her.

With her father's promise Sally Lou's checks flushed with hope, and
her eyes grew bright in happy antici-
pation. To be rosy cheeked, round figured, never tired, hungry again, and rid of the cough once more—for the first time in weeks life seemed worth living again.

Today Sally Lou had prepared the noon meal for her father, and the half dozen persons who were helping to "barn" that week's "curing" of tobacco. Her doing the cooking had saved her father from having to hire an extra woman to do it.

Neither Sally Lou nor her father considered the work too heavy for a girl who was running a temperature of one hundred degrees from a lung infected with the tubercle bacilli, not to speak of the risk of infection from the droplets of sputum that escaped from Sally Lou's mouth every time she coughed, as she went about preparing the meal.

Dinner over Sally Lou sat in the front yard and rested. The work had exhausted her. She had made the effort to get the meal that she might help her father as much as possible. Next week the tobacco market would open, and her father would be there offering some of his first "curing" for sale.

She reached into the pocket of her dress and took out the carefully clipped and folded advertisement that offered hope—a sure cure for tuberculosis for twenty-five dollars.

"Good afternoon."

Sally Lou wakened with a start, for she had fallen asleep in her chair, the advertisement clasped tightly in her hand.

A tallish woman in the gray field uniform of a Red Cross nurse was speaking to Sally Lou.

"Howdy do," Sally Lou returned, and wondered how the woman had reached the yard. She must have walked for there was no vehicle in the yard, or in the road that she could have ridden in.

"My car stopped back on the road," the nurse explained. "Hot weather. I think it needs water in the radiator. Could you loan me a bucket, and give me some water?" she concluded pleasantly.

"Be glad to," and Sally Lou arose to get a bucket, coughing as she did so.

"Tuberculosis, moderately advanced, or perhaps worse," the nurse decided listening to Sally Lou's cough, and watching the girl's thin figure, and feverishly bright eyes. "If I can secure admission for her to the State Sanatorium we may be able to arrest her disease," she continued, thinking to herself.

When Sally Lou returned with the bucket, the nurse asked, "How long have you had your cough, dear?"

"About four months, ever since about six months after my brother John died with a cough."

"Member of the family has already died with the disease. I have no time to lose," Miss Bell, which was the nurse's name, made note.

"Have you ever thought of going to the State Sanatorium for your cough?" she asked the girl, who watched her as she drew a pail of water from the well.

"No," Sally Lou's eyes clouded with the fear of the unknown that is characteristic of the inexperienced. "Pa would not have the money to send me, and I would not want to leave home, even if he did have," she added.

"You would find many pleasant friends there, girls of your own age," the nurse said, "and as to funds to pay your expenses, I think I could arrange that."

"Here's something that'll cure a cough," Sally Lou said, innocently holding out the carefully clipped copy of the advertisement.

Miss Bell saw in one glance what the advertisement was and she sighed. All day she had found situations like this, people whom she was trying to teach modern hygiene, clean-
liness, the use of fresh air and good food, who persisted in believing some cleverly written advertisement, advertising medicine selling at so much per bottle or treatment, which would work miracles in cases hopeless, or practically so.

At the last farm at which she had stopped there had been an old man, eighty years of age, spending his last five dollars for an advertised treatment for rheumatism, guaranteeing to cure or your money back, which he insisted he could not live without, while he did without food he needed to keep his feeble body existing. His married daughter, a victim of pellagra, had asked the nurse if she could not help her secure fifty dollars with which to purchase a pellagra treatment, disregarding the nurse's instructions to eat fresh vegetables and fruits, drink milk, and use butter.

Very gently Miss Bell spoke to Sally Lou. "Dear, that treatment will not help you. Rest, fresh air, and good food taken in a sanatorium under competent physicians, are what you need now. I shall not forget you, and if you and your father will allow me to I will arrange for you to be taken care of."

Uncomprehendingly Sally Lou's eyes met the nurse's. "But the advertisement says it will cure in four weeks, the worst cough," she insisted.

The nurse did not attempt to argue with Sally Lou. Returning from the trip to her car with the bucket of water, she gave Sally Lou a package. "Cover your mouth with one of these paper napkins every time you cough, and use the paper cups to expectorate in, and burn them everyday. By doing that you will protect your family. Drink all of the good whole sweet milk you can get, and eat plenty of other good food. Rest as much as you can every day. It would be a good idea for you to go to bed, and remain there until I can secure admission for you to the Sanatorium."

"I will use the cups, but I don't like milk, and I couldn't think of staying in bed all of the time," Sally Lou answered, intending no disobedience to the nurse and her instructions. She was sure that the treatment the advertisement told about would cure her in four weeks as it said, and she saw no reason why she should drink milk which she did not like, and stay in bed when she did not want to.

"I'll see you again in a few days," was Miss Bell's parting to Sally Lou.

The few days became weeks, and finally lengthened into three long months before Miss Bell drove her little car up to the Frazier home again.

Returning to her office at the county seat the afternoon she had met Sally Lou, Miss Bell found a telegram from her brother. Her mother was very ill and she was needed at home. She had gone, and had nursed her mother through a long and difficult illness.

A substitute had looked after Miss Bell's work while she had been away, but she had not been able to do anything with the case of the little Frazier girl, she told the regular nurse when she returned to her duties. "Refused flatly to go to Sanatorium. She found an advertisement telling of some fake remedy for TB. She has confidence in the treatment. The last time I saw her, her father had given her the money to purchase the treatment with, and she was elated."

"You don't know how she is now?" Miss Bell asked.

"No, I haven't seen her in two months."

"I am going out there today," Miss Bell said. "Those trusting, blue eyes of Sally Lou's keep troubling me. I want to see her. By now she has probably used the treatment and discovered that it is no good. If her trouble is not too far advanced I may be able to get her into the Sanatorium yet."

The little house where Miss Bell
had found Sally Lou three months before stood amid the quiet of the autumn countryside more quiet than the surrounding country.

There was no Sally Lou in a shuck bottomed chair under the big oak in front of the house.

Miss Bell knocked at the unscreened porch door. A man, tall, gaunt, answered her knock. Without introduction Miss Bell knew he was Sally Lou’s father.

“Mr. Frazier, I believe. I am Miss Bell, the county Red Cross nurse. I met your daughter here last summer. I was working out here today, and decided to stop in and see her again.”

“You’re too late, Miss. Sally Lou died a week ago yesterday.”

“Oh! I am so sorry. I knew she was ill, but did not think she was that sick.”

“Neither did we,” the man’s voice broke. “The doctor said it was gal-l opin’ consumption. Her mother died with it when she was just growin’ up, and a year ago her brother followed her mother. She was my little baby. My pretty, little, trusting blue eyed baby. I don’t see why she had to go,” and Sally Lou’s father wiped the tears from his eyes with the back of a big hairy hand.

“I wish so much we could have sent Sally Lou to the State Sanatorium early enough to cure her trouble,” Miss Bell said. Frazier shook his head. “Treatment did not seem to do her any good. I spent twenty-five dollars, and the poor little thing was so sure it would cure her, she told the young folks they could plan a party for her on the very week she died.”

“It was too bad about the treatments, Mr. Frazier. Unfortunately nothing sold in bottles or in treatments for twenty-five dollars will cure tuberculosis. The cure for tuberculosis is rest, fresh air, and good food with the proper medical attention.”

“I did not know,” the farmer said simply. “Sally Lou was just a trusting little child. She read the advertisement to me. It sounded all right, and the letters and testimonials they sent made her believe she would be well in a few days. Instead of that she’s out there alongside her Ma and her brother on that cold hillside, she who loved warm, pretty things.”

Years of service, and the witnessing of many tragedies and near tragedies had taken the keen edge of feeling off new cases of suffering for Miss Bell, but now her own voice trembled.

“If you and Sally Lou had been able to see that advertisement as it was, cleverly written to steal not only money, but life itself, the child might still be with us. No good doctor ever advertises his treatments for five or twenty-five dollars for sale in cheap little magazines. Only quack doctors who sell fake medicines use the columns of newspapers and magazines for advertising themselves and their medicines, and few reputable magazines and newspapers take their advertising now, though to our sorrow some does slip into them.”

“I know, you can’t say anything too bad about the scoundrels,” Henry Frazier made his first show of a fighting spirit. “I wish you would print me a letter, telling what a lie that advertisement is. My crop is finished. For the next month or two I have nothing to do. I will take that letter, and by gum, I’ll go all over this county telling people not to answer that advertisement, that it killed my little girl, and if they will see you at the court house you will see that they get the right kind of treatment, and get well.”

“Your spirit is truly wonderful,” Miss Bell spoke sympathetically to the stricken father. “I do not know if your idea is not a good one. You can reach people I never can, and talk to them in a language they might under-
stand better than my own slightly technical terms. Come into my office tomorrow and I'll give you the letter, and other literature telling about tuberculosis, cancer, asthma, pellagra and other diseases that unscrupulous people sell medicines for, claiming to cure, that do not cure."

"I'll be there, and I'll talk to 'em about Sally Lou, and make 'em understand, as old King Solomon said in his Proverbs, tell them to get understanding."

Miss Bell went quietly from the room, leaving Henry Frazier looking at a picture, a picture made years before of himself, his wife, the tall son who had been his pride, and the pretty little Sally Lou who had been his chief joy, all gone now, all stricken down with tuberculosis, all of them depending for cure upon advertised cures for tuberculosis that did not cure.

Passing down the steps Miss Bell heard him repeating: "I'll make 'em understand it's no good. By gum I will!"

Miss Bell went to church regularly, but listening to Henry Frazier she had never before made such an earnest plea:

"Father, give them an understanding heart?"

LET US GIVE OURSELVES THE ONCE-OVER *

By

D. E. FORD, M. D.

The proof of the prescription is in the taking. The proof of public health is in its application.

A brilliant diagnosis and a masterly choice of remedy will satisfy the medical student and win admiration from colleagues but they do not cure the patient. The prescription must be filled and taken as directed. The remedial procedure must be so selected to fit the mental, social and financial environment of the patient that they will be used. A prescription for "Adex Tablets and orange juice" will not build up the broken resistance of the job-hunter with a starving family. "Absolute rest in bed, freedom from worry and a list of nourishing foods!" will not cure the consumptive mother with a brood to cook for and little to cook. It is not the knowledge that cures but its application.

As with the individual, so it is with man as a social group—with preventive medicine. Of the practice of Preventive Medicine there are two rather distinct divisions mutually depend-

ent for results: the division of Research and the division of Application. The first has been functioning for many years—Pasteur and Jenner shining as pioneer luminaries. A host of brilliant workers have added to the fund of facts. From time to time so-called "discoveries" have caught the popular imagination and "heroes" have been proclaimed, and semi-scientific popular writers have pounced upon others for magazine and book material. But nearly all of the work has gone quietly on adding to the bulk of knowledge for the prevention of sickness.

As a result of this work we already know how to eliminate rabies, typhoid, diphtheria, smallpox, tetanus, tuberculosis, hookworm and malaria and, probably, pellagra, as well as other diseases seldom seen in this country. We have almost secured a strangle hold on measles, whooping cough and scarlet fever and we know a lot about the prevention of syphilis.

This fund of knowledge is piling up

* President's Address, North Carolina Health Officers' Association, Durham, April 26, 1931.
steadily year after year. The research division is efficient. It attracts some of the best minds in our medical schools. Its growth is steady. It lays its plans far ahead with reasonable certainty of opportunity to see them through. The caliber of its personnel attracts legacies and endowments.

But in the use of the facts of preventive medicine given us by the research division—in their application to the good of humanity—we have muddled and are still muddling. We are not efficient. We are not thorough.

In our own State, which ranks high in the practice of preventive medicine, yellow fever is the only one of the preventable diseases that we have eliminated. Hundreds of thousands of our people are still unvaccinated and smallpox epidemics are possible. Two-thirds of our children are still susceptible to diphtheria. We allow ourselves and our children to be mangled by rabid dogs, and the distribution of Pasteur treatment is still a big part of the work of the State Laboratory. In large areas of the rural sections of the State anti-typhoid measures are unpracticed, almost unknown. Syphilis and gonorrhoea—the most devastating diseases of them all—we haven't yet dared to attack openly, except in spots.

Many thousands of our children are mal-nourished, ill-fed or semi-starved, not because of poverty but because of ignorance or neglect. Their efforts to assimilate an adequate education are hopeless to themselves and a frightfully expensive drag upon the school system.

Sanitary conditions in the majority of our schools are primitive. Heating, lighting and seating are left to chance. Few teachers are trained in health management and in the training of children in social habits.

Not that we have not made marvelous progress. We have. But we bump and skid and spin the wheels. The engine stutters and misses with inferior gas. The urban centers have far outstript the rural, and both lag far behind in results the progress of the research division in preventive medicine. The application of preventive medicine has not kept up with the facts at its disposal, except in favored spots. Why? My answer is "Men—and the opportunity to work out constructive plans over a period of years."

The practice of preventive medicine is a distinct specialty, as is research, or obstetrics or pediatrics or eye-ear-nose-and-throat, or orthopedic surgery. And it embodies the very essence of the ideals of our medical training. Yet how many of the best students in our medical schools are choosing preventive medicine as their prospective specialty? Only the occasional missionary minded idealist.

"What has it to offer?" they ask.

"A laborer's wage, a tenure of office too often controlled by a small politician and little of honor among the profession." What a goal for four or five years of special training!

What can be done about it?

I beg to suggest some things that can be done.

Establish Public Health Districts to cover all rural as well as urban areas in the State. Have them large enough to be attractive but not too large to destroy that personal touch of Health Commissioner with parents and children that is absolutely necessary to success. Let the tenure of office be dependent upon results as measured by men who can judge results.

Establish a comprehensive alliance of Public Health and Public Education.

Under this alliance protect all children from epidemic diseases.

Eliminate unhealthful school environments.
Give teachers training in school-health management.

Attack malnutrition in the elementary grades by supervised lunch, and by feeding concentrated vitamins to all under-weights.

Concentrate the program upon the children—all the children. Let the big army of school teachers help. They want to be shown how to help effectively. It is they that most of all realize the pedagogical difference between a room with careless, dirty, ill-nourished children, and one where there is pride in neatness, in cleanly personal and social habits, and a minimum of physical handicaps. It is the difference between drudgery and joy in the day's work.

The young children are the bearers of progress in preventive medicine. Benefit the children and you get the cooperation of their parents. Children, healthy and able to assimilate an education, trained to healthful living habits, will prevent most of the morbidity of middle-age, this morbidity that is the arch foe of human happiness.

It is against this foe that we are using with unpardonable lack of skill the weapons fashioned for us in the laboratories of medical research.

**HOW TO GET RID OF FLIES**

*Feeding and Breeding Places Must Be Cleaned Up to Kill Pest*

By

THURMAN B. RICE, M. D.

It won't be long now. In fact one lit on my paper only a moment ago and began his morning toilet in that intimate way he has. He didn't ask if he was welcome—that's his privilege. I should have crowned him with a swatter, but what good would that do? A million of his brethren were ready to take his place. The eradication of flies by swatting is a fool's dream. There are too many of 'em.

Time was when flies were not in such bad repute as is more recently the case. In those good old days one of the kids of the family was expected to stand behind the guest of honor wielding a red, white, and blue fly brush. Dinner in those times was mostly a pitched battle to see who got the food—the folks or the flies. As a rule the folks did very well but the flies got there first and sampled everything. If, perchance, they left their tracks, the tracks could rarely be seen, and it was supposed that "what you don't know won't hurt you." Of course we now know that it is what folks don't know that kills.

Many is the time I have stood swinging a leafy limb knocking the flies into the gravy. Mother would seize a convenient fork and rescue the perishing and the merry program of eating a peck of dirt went blithely on. Why, I even had a teacher that taught us that it was a sin to kill a fly. "Are they not God's creatures?" she would ask with the naiveté of a high grade moron. It seemed more likely to us unimaginative kids that they were creatures of the Devil, and I am inclined to think that most folks of the present will agree that the kids were nearer right than the teacher.

In trying to understand this fly business we shall need to get the fly's view of the matter of living. In most important respects his problem is much like that of the rest of us. He must eat, and he must have a place to raise the young 'uns. We can hardly suppose that feeding himself and the family has become quite such a stunt in mathematics and chemis-
try as has human nutrition but there are points that the house fly must observe if he eats.

In the first place our little neighbor, Musca domestica, has no biting or chewing mouthparts. It is true that many of the flies bite and suck blood but the house fly is not one of them. Those flies that bite our ankles through thin socks are commonly some of the stable flies—quite a different breed. Since the house pest cannot bite or chew he must find his food already to be lapped up. It must be in liquid form or readily soluble.

There are commonly about three places where these qualifications may be met: about stables and privies, about garbage cans and related areas, and on our dining tables. The food requirements of the fly explain why we may expect him to pass from excrement to food, to garbage and back to food again—if we are so foolish as to allow him the privilege.

In the matter of birth control the flies seem not to have been instructed. The female may lay from one hundred to several hundred eggs. The eggs hatch rather promptly and indeed a new generation under favorable circumstances may arise in the short space of twelve days. This means that a single female fly can have a perfectly prodigious number of offspring in the course of a summer. Sometimes simple folk think that by killing a few flies in the spring they are preventing the coming of millions more of them later. Such is by no means the case. If every fly in a neighborhood save just one were killed but that one and her progeny were permitted proper breeding places, the community would be a swarm with flies before the end of the summer. The fly cannot be controlled by direct methods aimed at the individual insect. Feeding and breeding places must be cleaned up and kept cleaned up. The larvae, or maggot must have filth, preferably the excrement of horses, in which to develop. If everything is spick and span Mrs. Fly is out of luck.

Now is the time for all good men to come to the aid of the party—speaking in terms of anti-fly measures. "Hard times for Mr. Musca" is a slogan for campaigners who want to give the flies a taste of the worldwide depression. Clean, well-covered garbage cans frequently emptied, sewer connections instead of privies, garages instead of stables, clean and neat premises, well screened doors and windows are the various planks in the platform of the Anti-fly Party. The party symbol is a swatter triumphant on a field of tangle-foot rampant.

The fly is always a nuisance, but whether or not he is actually a menace depends entirely upon whether or not he has access to human excrement. Flies do not in themselves cause typhoid fever and other diseases, they serve only to carry the germs when they become contaminated with filth and then gain access to our food. If every home had sewer connections and there were absolutely no privies in the neighborhood; or if the privies were constructed in such a way that flies could not get to the contents; if screens and tanglefoot, and swatters were effective; if the pesky fly had no place to find filth in which to feed and breed, there would be an end to this business of flyborne disease which has in the past caused an enormous amount of suffering and expense.

Come to think of it, even if flies didn’t cause disease, common decency should compel us to do the very things that we have named as being effective measures against the fly. Folks that are so careless as to permit a flock of dirty flies to crawl over their food deserve no less than to be made sick by it, and commonly will get what they deserve.—Everybody’s Health.
PRELIMINARY

The Eighth Conference of the International Union Against Tuberculosis will be held at The Hague and Amsterdam, September 6 to 9, 1932. The President of the Conference is Professor W. Nolen of The Hague.

The opening session will convene at 11:00 A.M., Tuesday, September 6, at The Hague, with a meeting of the Council of the Union in the afternoon. The scientific sessions will take place September 7, 8 and 9; those of the last day being held in Amsterdam with a general assembly of the membership late in the afternoon.

Subjects to be discussed at the Conference will be decided at a meeting of the Council of the Union at Paris in July. In accordance with the usual custom, one day will be devoted to a pathological subject, another to a clinical subject and the third day to a sociological subject. Following the plan so successfully carried out at the Seventh Conference at Oslo in 1930, there will be a reporter for each subject and then ten formal discussions by representatives from various countries. This will occupy the mornings and in the afternoons, the subjects will be open for general discussion. Members of the Union and other delegates will be given an opportunity to take part in the general discussions.

ANNOUNCEMENT

The American delegates who have attended the seven previous conferences have expressed themselves enthusiastically over the value of attending an international meeting of this character where one may listen to distinguished representatives of the world-wide movement and also meet informally hundreds of delegates coming together from all parts of the world. Delightful entertainments of various kinds are always arranged by the local committee and an unusual opportunity is given to learn of and observe tuberculosis work in the country acting as host to the Conference. The local arrangements for the 1932 meeting will be in the hands of a committee in Holland and doubtless will be available at a later date.

After investigating and comparing various steamships with the object of securing the most comfortable accommodations consistent with reasonable rates, it has been decided that the SS WESTERLAND of the Red Star Line is the best ship with respect to comfort, speed and lowness of rate. The round trip rate from New York to The Hague via Antwerp and return to New York in the highest class on the ship is only $228.50.

For further information write to your State Tuberculosis Association.

THINGS TO REMEMBER: That smallpox, typhoid fever, diphtheria, malaria, and many other diseases may be prevented. That only a little reasonable care is necessary to avoid most automobile accidents.
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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
- Constipation
- Colds
- Clean-up Placards
- Chickenpox
- Diphtheria
- Don't Spit Placards
- Eyes
- Files
- Fly Placards
- German Measles
- Hookworm Disease
- Infantile Paralysis
- Influenza
- Malaria
- Measles
- Pellagra
- Public Health Laws
- Sanitary Privies
- Smallpox
- Teeth
- Tuberculosis
- Tuberculosis Placards
- Typhoid Fever
- Typhoid Placards
- Venereal Diseases
- Water Supplies
- Whooping Cough
- Scarlet Fever

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)
- "Our Babies" Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- 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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NEW STATE HEALTH OFFICER
By
A MEDICAL FRIEND

Doctor James Marion Parrott of Kinston on July 1st assumed the office of Secretary of the State Board of Health and State Health Officer, the office to which he was unanimously elected at the first meeting of the "New" State Board of Health held in Raleigh, Thursday, May 28th, 1931. He succeeds Dr. Charles O'H. Laughinghouse, who died August 28, 1930.

Doctor Parrott was born in Lenoir County near Kinston fifty-seven years ago. His preparatory education was obtained in the local schools. He attended Wake Forest College and the University of Maryland and was graduated in medicine from the Tulane University School of Medicine in New Orleans in 1895. He received his license to practice medicine by the North Carolina State Board of Medical Examiners at Goldsboro in 1895. He immediately joined the State Medical Society and has been one of its most loyal and devoted members ever since, never having missed but one annual meeting and that was in 1898 while he was a member of the U. S. Army of Occupation in Cuba. He served as a sanitary officer under Gorgas and Carter in the Spanish-American War. He has practiced medicine in Kinston during all the intervening years where from the first he has been a leader in the profession. About twenty-five years ago he built the Parrott Hospital in Kinston, which was one of the first hospitals in that section. He successfully operated the hospital until four years ago when he retired from that service.

Doctor Parrott has held every office within the gift of his profession in North Carolina. He has been President of the State Medical Society; Member and President of the State Board of Medical Examiners; Member of the State Board of Health; Member of the Board of Trustees of the State Hospital for the Insane and at one time President of the Board. He is at present a member of the various medical associations, such as the American Medical and the North Carolina Medical Society. He has taken numerous post-graduate courses in this country and abroad and has kept abreast of the rapid progress in medicine. He is an active member of the Missionary Baptist Church and was at one time President of the Board of Trustees of Wake Forest College.

Doctor Parrott has always been an advocate of progress in health and education consistent with economy and efficiency. He was for several years, early in his career, official county physician of Lenoir County, so the fundamentals of public health work are familiar to him.

The writer of this sketch has known Doctor Parrott well for twenty-six years and has always found him to be a man of the highest personal integrity, fine moral character, and in his dealings with friend and foe alike, the very quintessence of honor. In his
relations with his patients as a physician he is known to them by the affectionate title of "Doctor Jim." He has a high sense of duty and will not hesitate to cut to the bone when he thinks heroic measures are necessary for the best interests of the State Board of Health and the people of North Carolina. He brings to the leadership of the public health forces of the State at this time a fresh outlook, a new viewpoint and a broad vision which lends hope for better things.

In the fifty-four years since the State Board of Health was organized in 1877, there have been only four permanent State Health Officers. Doctor Thomas F. Wood of Wilmington, who organized the first Board and who was the first State Health Officer, served until his death, August 22, 1892. Sixteen days after Dr. Wood's death Dr. Richard H. Lewis of Raleigh was elected Secretary. Dr. Lewis served until the Legislature of 1909 made the office a full time one and increased the annual appropriation from $2,000 a year in 1892 to $10,500 a year in 1909. When Dr. Lewis resigned, effective July 1st, 1909, Dr. W. S. Rankin of Wake Forest was elected secretary. Dr. Rankin served until his resignation, effective June 1st, 1925. On June 21st, 1926, Dr. C. O'H. Laughinghouse was elected and assumed office October 1st, 1926, serving until his death, August 26th, 1930. During the interim between the resignation of Dr. Rankin and the assumption of office by Dr. Laughinghouse, and after the death of Dr. Laughinghouse before Dr. Parrott assumed office the affairs of the Board were administered by acting officers.

HEALTH EDUCATION NECESSARY

This month, when schools are opening for another year's school work and thousands of children are entering school for the first time, it is expedient that the question of health education be emphasized as never before.

Sometime ago we saw a statement which carries more truth in fewer words than has come our way in a long time. The author and the publication carrying the paragraphs we have unfortunately forgotten, but here is the statement, pertinent to all public health workers:

"In education, particularly in health education, it is necessary for teachers, health officers, and physicians to always bear in mind that we are speaking to a parade and not to a mass meeting. In a mass meeting the people all get together. There is some subject of towering interest to be discussed and decided upon. After thorough debate, much talk, and many resolutions, the questions are generally settled to the satisfaction of everybody. Information is disseminated to all those attending the meeting, who are capable of understanding anything. In short, the question is settled; everybody goes home prepared to take up some other matter at the next convenient time.

"Now, note the situation in addressing a parade. The platform is erected on which the announcers take their stand. The parade comes down the street from around a corner two or three blocks away. Any statement made to one section of the parade is confined to that particular group of people. Those coming behind around the corner know nothing of what has gone before. The announcements must be made all over again for each section."

So it is with educational progress of every description. The children in the schools coming on, a new grade every year, represent the people in the parade around the corner. They must be told over and over again the truths which are supposed to be
known, even the simple facts about disease prevention and the promotion of health, which everybody ought to know.

We are constrained to set forth these musings on reading the column which Mr. James R. Daniels conducts in the Raleigh News and Observer every Sunday. The title of his column is “Manhattan Kaleidoscope.” In other words, he writes of the doings in and around New York which might interest the people of North Carolina. In his Sunday column, on the day before these lines were penned, the editor of the Health Bulletin received a large sized jolt on reading the following paragraph, supposed to be the comment of a girl from western North Carolina visiting in New York. Here is the paragraph:

“One of the nicest things about New York to me,” said the Girl from the Carolina mountains, “is the absence of flies. I have seen only two flies on Manhattan Island and I have been here for a week. Down home we have to use screens on every door and window and the consumption of fly-paper is tremendous. Here, there are no screens on apartment houses. Swampy breeding places are missing in the Western Carolina mountains, yet we have flies in swarms. New Yorkers are certainly lucky in this respect. The money they save on screens they can spend on taxis. They are so cheap and plentiful here that I ride in them constantly.”

Now, folks, you see it do you not? If the North Carolina State Board of Health has been preaching any doctrine consistently for the last forty years, it is that the breeding places of house flies is in stables and around garbage cans. The swamps of this State, just as the swamps of New Jersey, just across the river from New York City, are just about as free from house flies as any section of the universe could be. The swamps, of course, are excellent breeding grounds for mosquitoes, which are much more a menace to health than house flies. This is a fact so well known that we thought even school children of the elementary grades in this State would know about it, and yet here is an intelligent girl, with money enough to afford the expense of riding in taxi-cabs over New York City and with sufficient prestige to command the services of a New York City columnist in describing her opinions and her whereabouts while visiting in New York, who makes the naive statement that “while western North Carolina is free from swamps, it does have house flies.”

The Health Bulletin has many readers in western North Carolina. For fear that there are other high school girls who will be leaving that section this year and going to New York to comment about the house fly situation in our mountain section, even though the swamps are absent, it would be well for us to repeat from an article in a former issue of the Health Bulletin, under the heading “Where the House Fly Breeds.”

“These breeding places may be all around us. The term 'fermenting organic matter' includes the excrement of man and all the domestic animals. Where horses are kept, horse manure is the favorite food, and the manure pile is apt to give off flies in countless numbers. It also includes all kinds of garbage, rotting vegetables, and rotting trash of many kinds.”

Let us repeat again, house flies breed in filth on our own premises or close by. They do not breed in swampy places unless the swampy places have human habitations situated therein. Western North Carolina could be as free from house flies as Broadway New York provided the information that is now available concerning the prevention of the breeding places of house flies and their control could be imparted to all the people in that section, as well as
all the other sections of the State, or in the whole country for that matter, and provided the knowledge was utilized.

Yes, health education is necessary, more and more necessary, as the population increases and as health problems become more and more complex. The eight hundred thousand school children being enrolled for school this month affords one of the grandest parades imaginable, and the teachers, health officers, physicians, newspapers, and other agents supposed to know and proclaim the truth about such matters should realize that they are speaking to a parade, that the information must be repeated every day of the year as the children pass by on their way from babyhood to old age.

SOME MORTALITY RECORDS FOR MAY AND JUNE THIS YEAR COMPARED WITH THE SAME MONTHS LAST YEAR

It is a common custom among a certain class of newspapers, when circulation is growing, to publish each day or week or month, according to the frequency of publication, the circulation figures for the day before, the week before, or the month before, as compared to a similar period the previous year. If such a procedure is good policy for a newspaper, it ought to be equally good policy for health authorities, in order to show the people just what progress, if any, has been made in preventing unnecessary deaths.

The world over, the figures on infant mortality are used more and more as an index to estimate the living conditions in any city, county, state, or nation. A high infant mortality rate over a period of years indicates, among other things, a high birth rate, much extreme poverty, ignorance, carelessness, and lack of health and medical facilities for the successful rearing of healthy children.

In this particular comparison unfortunately North Carolina has been held up by the health authorities in nearly all the other states as a bad example. This State has had the highest birth rate of any state in the Union for several years. It has also had, with a few exceptions, the highest infant death rate of any state in the Union, only five or six other states being in a more disgraceful position in this respect. It is, therefore, with a feeling of pride and satisfaction that we compare the records for two months in this field, the months being May and June of this year, compared to May and June of 1930. We will let the specific figures speak for themselves.

In May of this year there were 445 deaths of infants under one year of age reported to the Bureau of Vital Statistics. For the same month last year there was a total of 591 deaths so recorded. These figures being provisional, there may be a few additions for this year, but, even so, the reduction is a material one. In May this year there were 54 deaths recorded under the heading of maternal mortality. Last year 61 similar deaths were recorded for the same period. In June this year 565 babies under one year of age died; in June last year the number was 645. In June this year 140 babies died from diarrhea and enteritis; in June last year 246 babies lost their lives from the same cause. Thus we see that 105 fewer babies died from summer diarrheas this year than did last in the month of June. In May and June last year 1528 babies died under two years of age; in May and June this year 1223 babies of the same age died. Thus 305 babies are living this year which would have been dead had the same mortality rates prevailed that prevail-
ed last year. This is one of the most
material reductions in infant deaths
that has ever been recorded in this
State for the same period of time.

Sometime in July we started in-
vestigating the mortality reports
coming into the State Board of
Health in order that we could keep
the public informed as to conditions
this year. We happened to see an item,
tucked away down in a newspaper re-
port, in small type, in a Greensboro
paper commenting on the report of
the city health officer of Greensboro
for the month of June. The state-
ment was made that there were no
deaths from summer diarrhea in that
city for June. It struck us immediate-
ly on reading the paragraph that it
was a news item of prime importance.
So we sent out a cheerful comment
citing the fact that here was a city
of more than fifty thousand people
which could report that not a death
had occurred in its borders from sum-
mer diarrhea during one of the hot-
test of the summer months.

Within twenty-four hours after
the health officers of Durham and
Winston-Salem had read our report,
each wrote us a letter giving addi-
tional encouragement. The health of-
icer of Durham, city and county, was
able to report that only one death
from summer diarrhea had occurred
in the whole of Durham County, in a
population of 67,000 people, between
the first of January and the first of
July. This is indeed a proud record.
The health officer of Winston-Salem
reported that during the month of
June in that city of 76,000 people not
a death from summer diarrhea was
recorded. He went on to say that
“This is a condition that has not pre-
vailed here during a hot summer
month for a good many years.” These
two letters from the health officers
of Winston-Salem and Durham are
herewith published in full. The first,
from Dr. Carlton, city health officer
of Winston-Salem, follows:

“I am sending you herewith a clip-
ing in which I think you will find
an interesting item or two. Your
Health Bulletin for Press use came
in this morning. The fact that Greens-
boro had no death in June due to sum-
der diarrhea is fine indeed. We are
gratified that in Winston-Salem there
was no summer diarrhea death in
June. This is a condition that has not
prevailed here during a hot summer
month for a good many years.

“You will note from this article at-
tached, which appeared in The Journ-
al of Sunday, July 12, that June this
year showed a saving of 33 human
lives from the record of 1930. Quite
significant also, I think.”

In addition to his letter, Dr. Carl-
ton attached a clipping from one of
the local Winston-Salem papers which
closes with the following significant
paragraphs:

“It is significant that no death was
caused by measles, although the city
has been experiencing a mild epidemic
of this disease for the past three
months.

“It is noticeable also and very
gratifying to health authorities that
there was no June death charged to
ileocolitis or ‘summer complaint.’
This, in spite of the extremely hot
weather, is a better condition than
has existed for many years.

“The month as a whole showed a
decided saving in human lives. A de-
cline of 33 from the same month last
year is a remarkable showing, it is
declared.”

Following this up the next day, Dr.
Carlton sent us the following editorial
from the Twin City Sentinel of
July 14:

“The North Carolina State Health
Department has something else to
boast about. And Winston-Salem is
furnishing the material.

“A few days ago, the state officials
broadcast the proud fact that Greens-
boro, a city with 50,000 population,
reported that not a death from sum-
mer diarrhea had occurred there during June.

"And now comes the Winston-Salem health department’s report that there were no deaths from summer diarrhea, or ileocolitis, here during June. And Winston-Salem is a city of 76,000 population. So the record is even more impressive. The state health officials are expected to take due cognizance of the new basis for boasting.

"The local health department is quite proud of the record for June, in that it indicates the efforts to help the babies are bearing fruit. Particular attention is paid to the welfare of the little folks; a close study has been made, over a period of many years, to determine the need of the babies and to surround them with every protection possible. The health department has been untiring in its work for the babies and the entire community, in fact, the entire state, rejoices in the record that has marked its success during June."

**DURHAM REPORT**

Dr. Epperson, superintendent of health of Durham, wrote as follows:

"In your weekly health letter I note with interest the splendid record of Greensboro with respect to ‘no deaths from summer diarrhea during the month of June.’ You may add to this record that of the entire County of Durham which includes Durham City, the fact that only one death from this disease has occurred since January 1st.

"We have seven baby clinics in operation at the present time with an average monthly attendance of approximately 400 babies. Two whole time maternity and infancy nurses are constantly in the field doing home conference work. Lactic milk has also played an important part in the reduction of deaths from colitis.

"I feel that you will be pleased to know of this achievement of which we locally are truly proud, especially in the face of the black record we had a few years ago."

It is therefore with pardonable pride that we publish the record, as above set forth, from three of the larger cities in the State of North Carolina. If this record can be maintained, and if it can be equalled by some of the other larger centers of population in the State by the end of December, 1931, our State should be able to move up toward the head of the class with as much pride as any youngster forty years ago ever moved up head in spelling the “Horseback Column” in Webster's Blue Back.

**INTERESTING LETTER FROM DR. SMITH**

Doctor L. J. Smith, who was health officer of Wilson andWilson County for several years and who resigned there early in this year to become commissioner of health for one of the important localities in Rhode Island, writes us a most interesting and helpful letter, which we are herewith publishing.

We appreciate Dr. Smith's comments, and we feel sure that many other intelligent readers have found the story about “Sally Lou,” so well told by Mrs. Miller in the August number of the Health Bulletin, of absorbing interest.

We earnestly hope that the two things necessary to bettering such situations may soon be brought about. The first is to better the education of the public so that they will discriminate against the advertising of fake remedies, and also the adoption by the press of a policy refusing advertisements of this character.

Doctor Smith's letter follows:

"I have read with much interest and thoughtful consideration, 'Father,
give them an understanding heart,' appearing in the August issue of the Health Bulletin, which you so kindly sent.

"This story of Sally Lou, so well related by Mrs. Miller, is being enacted and re-enacted by thousands all over our country. We, as physicians, nurses and health officials, know only too well that this story relates a tragedy applicable to thousands of unfortunate human beings each year, and yet we are more or less helpless in our efforts to stamp out this outrage against the welfare, health and happiness of the people. I partially agree with the writer of the article in the Winston-Salem Journal, that the remedy lies in the better education of the public, but education is a slow process at best and we who see these fakes prosper at the expense of the uninformed, become impatient and often lose sight of the fact that intelligent persistent effort on our part will eventually win the fight. God, in His dealings with the Children of Israel, took many, many years to accomplish this purpose. How can we, poor finite beings, expect to change the thought and conduct of our people over night. You and I can look back over a period of ten or fifteen years experience in public health work and see marked improvements in the things that promote and protect health, but I venture to say that there have been days when we felt that our efforts were fruitless and not worth while. No school child is perceptibly better educated at the end of each day or week than he was at the beginning of that day or week, but if we compare his school work at the end of the year or five years, we can readily perceive that he has made marked progress. The more intelligent persistent effort he makes, the quicker he becomes educated. In like manner the intelligent persistent efforts we put forth, along with the sympathetic understanding of those we are trying to teach, the quicker will we be rid of the dispensers of dangerous, cure-all nostrums and make this a safer place for all the 'Sally Lou's' of America. Therefore let us take courage and proceed with the fight with renewed energy with a determination to win, and we will win!"

PREPARING THE WILSON CHILDREN FOR SCHOOL
By
SUDIE PYATT MILLER

"Sorry, Ad, I won't be able to help you today. School starts next month, and we're taking the children to the doctor for the physical examination we have made every year before school opens," Tom Wilson, told his neighbor, Ad Davis, who had asked Wilson to assist him for the day in some pressing farm work.

"Examine your children before they go to school? Why, what's the idea? Minnie and I dress ours in clean clothes, see that their faces and hands are washed, give them a basket of something to eat, and buy books when the teachers ask us to. I think that's all that's necessary for parents to do. If teachers can't do anything with the children I don't see what a doctor can do for school children," Davis freely expressed himself.

"The doctor can help your children as neither you nor the teacher can, Ad," Wilson leaned back against the radiator of the automobile he was getting ready for the trip into town. "It's estimated that in the United States two million children will enter
school for the first time this fall. Those among the two million who are suffering from physical defects, such as diseased tonsils, bad teeth and gums, and enlarged adenoids, will not have the chance they would have had if these defects had been attended to before they entered school. The better the material teachers have to work on the better the results the teachers will secure. It's the responsibility of every parent to see that their children enter school in good physical condition. Teachers can continue to develop only what the parents have begun. That's where the doctor's part in the education of your children comes in. He can discover physical defects and correct them as neither you nor the teacher can."

"Suppose that's so," Davis slowly admitted. "Our Mary Jane spent two years in the first grade before we had her tonsils taken out. We would not have had them removed at all, but the county health officer examined her in a school clinic, and said they must come out. After that neither the doctor nor the teacher gave us any peace until they were out."

"If you had taken her to the doctor for an examination before she started to school he would have found the trouble then, and she wouldn't have spent two years in the same grade," Wilson observed.

"That may be true, Tom, but it's expensive for a poor farmer, and we're all poor hereabouts, to pay a doctor for examining anywhere from one to half a dozen kids every year."

"Yes, it is expensive," Tom Wilson replied, but May and I long ago decided that any money that was spent in our family on preventing disease was well spent. Our three youngsters are our greatest assets. We want them to have the best chance our limited means will allow. Keeping them healthy and giving them a good education we calculate is the best preparation for life that we can give them. Health and education go hand in hand. If a child has a sound healthy body and mind, and is placed in school and kept there, no parent need worry about the child's ability to learn."

"You're sure interested in the health of your children," Davis said in evident admiration of his neighbor's knowledge of health, and his defense of his viewpoint. "You have three fine young ones. Everyone says there are no finer looking children in the neighborhood, make good grades in school, too, my children say. They're all among the best in their classes."

Here the conversation was interrupted by Mrs. Wilson, a pleasant looking woman in her middle thirties, who came from the house.

"Good morning, Ad. Tom's talking to you of his favorite subject, health. We are proud of our kiddies, and in keeping them well I see that they receive a balanced diet, one that contains all of the carbohydrates, proteins, fats, mineral salts, vitamins and water that the children need."

Mrs. Wilson laughed warmly as she saw the look of bewilderment that spread over her neighbor's face, as she named them to him, high sounding words, carbohydrates, proteins and vitamins. "Forget about the difficult words, and remember that if your children receive plenty of fresh milk, vegetables, fruits, eggs and butter with some fresh meat, their systems will obtain from these all of the high sounding words and phrases in diets that the most highly paid doctors and dietitians have discovered. Badly nourished children, that is children who are not properly fed, are more likely to have diseases of the teeth, bones and tissues, than are well-nourished children," Mrs. Wilson completed her little talk on diets for school children.

"May's very careful about the children's school lunch," Tom Wilson
supplemented his wife's statements on school children's diets. "In many schools now they have hot lunches for the children who can afford to pay for them, and free ones for those who can not. Of course, Merry Hill has never had anything like that, but May bought a thermos bottle when our children first started to school, and they take milk with them for their lunch everyday. We have plenty of milk, and a thermos bottle that holds a pint, enough for a good sized cupful for three children, costs very little, and will last several school terms if it is well taken care of. The children say they don't know how they would manage about their lunch without their milk. We try to give them some fresh fruit, too, everyday during the wintertime."

"I know it's expensive," Wilson said as he caught the look of surprise on his friend's face, "but we have apples and pears grown on our own farm until Christmas every year. After that I buy apples by the barrel. I consider them the cheapest food with which I can feed my family. This idea farmers have that money spent on fruit for eating is wasted should be corrected, I think. When you and I grew up, Ad, we never saw fresh fruit in the wintertime except at Christmas. I know our folks were always hard put to it to give us food and clothing, but there were lots of things we had that I consider less important than fresh fruit in the winter."

"After having your children examined every year before they start to school, taking care of the things the doctor says are wrong, and feeding them like prize cattle, what do you think the next most important thing for your children?" Davis asked his neighbor.

"Immunization against smallpox, diphtheria and typhoid fever," Mr. and Mrs. Wilson answered in unison. "When a child is in school they are much more likely to take any of these diseases than they are remaining at home. Immunization against smallpox, diphtheria and typhoid fever is safe, and a sure preventive of these diseases. Children should be immunized against diphtheria as early as six months, but if it has not been attended to at that time, by all means have it done before the child enters school for its first school term."

"Minnie Ray is six. She starts to school this winter. She has never had the diphtheria treatments. I'll have to take her out to Dr. Goodson, and have him give them to her before she starts to school," Davis said.

"Better have him give her the smallpox and diphtheria treatments, too," Mrs. Wilson suggested.

"Good idea!" Davis agreed.

"Another thing we teach our children is that they must cooperate to the fullest with their teachers and fellow pupils. A school child gets a great deal more happiness and joy out of school life when it likes its teacher, and helps make things pleasant for the teacher than when it is always fighting with the teacher the way some pupils did when we were in school, Ad. A child does not have to be a teacher's 'pet' to cooperate with the teacher, and be popular with both teacher and pupils. He can be courteous and obedient to his teacher, courteous and obliging with his fellow pupils, and they will like him a great deal better than they will if he does not make any effort to like his teacher, and the girls and boys he goes to school with."

"I like your idea of teaching your children to cooperate with their teachers and the other pupils, Tom," Davis said. "We have had some trouble with our Lon ever since he started to school. Guess I'm to blame. I always told him to stand up for his rights, and he's always getting into fights with the children, and disobeying his teacher. I never thought of
telling him to help the other fellow. I am going to start teaching him that, see if it won’t make him a better pupil.

“Capital!” Mrs. Wilson exclaimed.

Just then the Wilson children, Tom, Jr., Lois and Buddy, who was to begin school for the first time when the session opened in four weeks, came out of the house, ready for their trip into town to see the doctor for their annual checking up before school began.

“Like to go to see the doctor?” Davis asked, as the youngsters packed into the back seat of the car, while their father was washing his hands at the pump, and Mrs. Wilson had gone into the house for her hat.

“You bet!” Tom, Jr., answered in a quick, manly voice. “We kids wouldn’t think school had begun if Dad and mother didn’t take us to see Dr. Goodson every year before school opens.”

“I have not been taking my children to the doctor,” Davis confided to the luckier Wilson children, but you kids and your father and mother make me think that I should. I will be too busy to take them today, but I am going to see that all four of them have a good checking up, and I’m going to have everything corrected the doctor says should be attended to.”

“Good for you, Mr. Davis,” the three Wilson children cheered.

FEEDING THE CHILD TO GROW TEETH

By

ERNEST A. BRANCH, D. D. S.

We boast of our civilization, but starve our children. Do you know we can buy a balanced ration for our hogs, chickens, or cows in nearly every town of any size in our State? And it is well enough, but how about the children of the same families who are intelligently feeding their stock but paying little, if any, attention to the diet of their children?

Too often we start our children on some widely advertised milk, or malted milk, feed them on breakfast foods, and continue on hot, soft, rich foods. It behooves us to urge more breast feeding of infants, and with older children to go back to the sensible supper of our grandparents, of whole wheat or corn bread and milk.

The laity is aware that there is some connection between diet and the overwhelming prevalence of decay of the teeth in childhood, and is questioning the profession in its endeavor to save the children unnecessary suffering. Every child has a right to perfect health through a healthy mouth. Unfortunately nearly every child has imperfect teeth. Examination reveals that 85% of those enrolled in our schools need dental attention.

Environment plays by far the largest part in tooth decay. We have as example the American Indian as shown by the skulls of both the adult and the child, as compared to his present day descendants. The early Indian had a diet of meat, some grains and vegetables, but only a little sugar, mostly derived from dried fruit and honey. Perhaps the greatest mistakes to be placed under environments are soft foods, sugar, and white bread.

A child is an animal. Is it not a mistake to feed a child with teeth on mush when other young animals are given hard foods at an early age? The selective diet of the average child does not include hard foods and vegetables. For this reason the wise mother begins in babyhood to train
the infant’s appetite by including in its first food the puree of vegetables, later with sticks of dry toast of zweiback. If a child is allowed to drink cocoa or chocolate, he will refuse vegetables and will very soon stop masticating his food, which will result in poor development of his jaws, also in a deposit upon the teeth that will very quickly permit growth of caries in all grooves and fissures on the surfaces of the jaw teeth. Such cases usually show a coated tongue and the teeth more coated and the membranes around the teeth softer and more hyperemic than cocoa and chocolate drinking. Children with such habits are often more or less anemic. The chief danger is because the hot, stimulating, rich, sweetened drink easily satisfies the appetite, and not enough hard wholesome food is eaten to nourish the body.

For the child before the school age, we are almost limited to bread for developing the teeth and jaws. For that reason all the child’s bread should be given in the form of toast of whole wheat bread or crusts of whole wheat bread. In the milling of white flour, two-thirds of the lime salts and nine-tenths of the iron and phosphorous are removed. These are very necessary mineral salts for developing the body. The child who does not get sufficient lime salts is lacking in the food element that builds bone and teeth, and for every function of the body—the beating of the heart, the development of the brain, the digestion of the food, and the formation of healthy saliva. In fact, the child is being starved, resulting in malnutrition. Milk is the most valuable of our protective foods in early childhood and should be clean. When uncooked vegetables and raw fruits cannot be used, it is the chief source of vitamins.

In refined sugar some of the valuable elements are lost and children thrive much better from a dental standpoint when they receive their sugar from raisins, prunes, and other fruits, and honey.

As the child needs ten times the amount of lime salts he will need in adult life, the certainty of its source must be assured. If he will drink a quart of milk a day and eat sufficient raw vegetables, the source of lime salts and vitamins will be assured. The child before school age is not allowed raw vegetables by many dieticians, but is limited to cooked vegetables. There is some loss of both lime and vitamins in the cooking, but a large part of the valuable mineral salts can be obtained by serving with the vegetables the water in which it has been cooked. Sometimes called “Pot licker.”

Sweet juices (without sugar) should be a part of the infant’s diet. If oranges are lacking, tomato juice is a good substitute. Canned tomatoes are one exception to the rule that cooking destroys the vitamins.

WHY REGISTER BIRTHS?

By

URSULA PELLETIER

Sooner or later the question of “Why Register Births” will answer itself, but we don’t want you to wait that long, as that may be too late.

Just a few days ago we received in the office of the bureau of vital statistics a request from a young man for his birth certificate. It was never recorded, and all of his people who knew anything about his birth are now dead. A birth certificate was an absolute necessity to this young man in order to get some business transaction settled, and he was unable to get one. This was an unfortunate experience, and no parents want their children to grow up and have a similar one.
You often hear people speak of the obligations children are under to their parents—this is granted, but remember parents also have obligations to their children, and seeing that every child's birth is recorded is one of the first obligations you should fulfill.

Parents are not required to fill out birth certificates, but we want you to be sure that the doctor or midwife in attendance at the birth fills out correctly and files with the local registrar a birth certificate within five days after the birth occurs. Don't wait until you need a certificate in order to get veterans' compensation or to enter your child in school before finding out if the birth has been properly recorded.

Registration of birth notices are sent out from this office each month. If you do not receive one within two months after the birth has occurred, then you may know that the notice has either been lost in the mails or that the birth has not been recorded here. Be sure to mention the matter to the doctor or midwife in attendance, requesting that your child's birth be registered promptly.

Birth registration has always been very important, but as time passes it gets more so—why? Well several years ago, when a father or mother stated their child was six years old it could enter school without further proof. Now, in most schools a birth certificate is required before they can enter. Before a World War veteran can get compensation for a child, a birth certificate has to be presented. A birth certificate is required to prove the age and legitimacy of heirs; as evidence to prove the irresponsibility of children under legal age for crime and misdemeanor, and various other matters in the criminal code. These are just a few reasons why births should be recorded.

Don't let your child begin life with a handicap when it can be so easily avoided. Some people get the idea that their child is different, and that in some way he will get along all right without his birth being recorded, but sooner or later the time will come when a birth certificate will be an absolute necessity, and we, in this office, want to be in a position to furnish a certified copy of all births upon request, and with the cooperation of the parents, doctors and midwives of North Carolina we will be able to do so.

PUBLIC HEALTH IS A GREAT THING

A negro shanty on a winding trail far from concrete roads. Fifteen persons, including a mother thirty-six years old with nine children, and grandchildren, one a week old, living in the five rooms. Three typhoid fever patients on as many beds, leaving two beds only for the rest of the family. The emaciated form a negro boy showing the ravages of six weeks of typhoid. Two negro girls in the throes of the disease. An old hound dog with three young hound pups wallowing before the doorstep. Windows void of screens, and hundreds of flies swarming throughout the rooms, over the typhoid patients, and over the bread tray in the kitchen. Surface toilets and stables nearby.

This was the picture which the County Health Officer showed the editor this week as he completed the vaccination of the twelve remaining well persons in that Johnston county rural home.

"It is in conditions like these," stated the health officer, "that typhoid develops and takes its toll. In cities and towns where the water supply is regularly analyzed, where the houses are screened from flies, where outside toilets are not allowed, where education for immunization is effective, typhoid fever is no problem. It is in
rural districts where unsanitary conditions prevail that typhoid thrives.”

The negro tenant house just described has one redeeming feature. It is situated on top of a knoll, and the well, though open, is lined with terra cotta pipe. Its location permits no polluted drainage, and the health officer when the water was examined, did not find there the source of the typhoid.

But whatever doubt about the source, there is absolutely none as to preventive measures. Before the days of typhoid vaccination, there is hardly a doubt but that several deaths would have resulted in that negro shanty. Now the chances are that no other cases will develop. That row of negroes with their sleeves rolled up ready for a last shot is a vivid picture. The cries of those pickaninnies as they dreaded the hypodermic needle are still in our ears. The stolid determination on the part of the parents as they rounded up the scattered members of the family to cooperate with the health officer, is a lesson in itself. Vaccination meant to them protection from a dread disease. It meant more; it was protection to the health of all that community. No man liveth to himself. If we would save ourselves, we must save our neighbor no matter what the color of his skin.

—The Smithfield Herald.

COUNTY HEALTH WORK

Some of the officials and citizens suggested last week of cutting down the budget for the county health work. This would be a mistake. The total budget is $5,500 and of this amount the State has been paying $2,500. It is conservatively estimated that the work last year was worth directly to the people of the county $16,500. If the county can get $16,500 worth of good preventive work in medicine for $3,000 per year, it seems that this is a good business proposition.

The vaccination campaign alone last June and July was worth $9,000 to the citizens of the county as 6,000 people were vaccinated. This work done privately would have cost the people $1.50 each, or $9,000.

The County Physician looks after the County Home, Jail and Chain Gang population. He does this in addition to the vaccination campaigns, examining school teachers for health certificates, examining candidates for matrimony, orphans to be admitted to institutions, boys and girls who go to schools of correction, feeble minded folks who go to the State Hospitals, and school children of the county. Dr. Twitty visits practically every school in the county during the school year and makes helpful suggestions to the parents and teachers, after students have been weighed, measured, eyes, ears and throat examined. Many parents respond to these helpful suggestions, according to next year’s records.

Since much of the County Health Work is education it is hard to measure its value in dollars and cents or to see direct results for good. Health is most essential to wealth and happiness. We should do nothing that would cripple the county health program.—The Rutherford News.
KNOCKING OUT PELLAGRA

We have just completed the tabulations of the reports of pellagra deaths for the month of July. It will be joyous news to everybody interested in the welfare of North Carolina to know that pellagra seems to be definitely on the way out. The provisional reports for July, as may be seen from the table published below, record only seventy deaths from pellagra compared to one hundred and thirty-nine deaths for July, 1930. Only one month this year recorded an increased number of deaths over the corresponding month last year, and that was the month of March. As the peak of deaths are always reached during the months of May, June, and July, it may be definitely considered that there will be a material reduction in the number of deaths occurring from this disease this year.

We are publishing below the comparative tables for the first seven months of this year. Both tables are provisional in order to make the comparison exact. A reduction from six hundred and seven deaths for the first seven months last year to four hundred and thirty deaths for the corresponding period this year indicates definite progress in the right direction. At the same time these four hundred and thirty deaths are just four hundred and thirty times too many from this preventable disease. If the same vigilant efforts shall be continued over a period of two or three more years, the disease may be easily eradicated, root and branch, from the State.

This favorable showing this year indicates several things: in the first place, it indicates that our people have been making something to eat and that they have been eating it this year; in the second place, it shows that the agitation carried on throughout the state for the past four or five years at least, in order to inform the people of the nature of the disease and how to prevent it, is being accepted by the people everywhere; and in the third place, and most important of all, these figures point to the fact that people are consulting their physicians to a greater extent than before upon the first appearance of symptoms of pellagra, and also that the physicians are handling their cases in a superb manner. This results in fewer people contracting the disease and still fewer dying of it. If we could only succeed in eliminating the advertising for fake remedies purporting to cure the disease, much more rapid progress could be made.

Following are the comparative tables:

PELLAGRA DEATHS
JANUARY-JULY, Inclusive

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<th>1930</th>
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<td><strong>Total</strong></td>
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A MILK COW FOR HEALTH

The value of a good milk cow is appreciated by this Western North Carolina family. The mother, who is a teacher, attended school this summer in one of our western colleges. She moved the entire family, including the cow, from another county for the term of the summer school. The cow furnished sufficient milk and butter for the family, and in addition a surplus supply was produced, which brought more than seven dollars per month.
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ERNEST A. BRANCH, D.D.S., Director Division of Oral Hygiene
JOHN H. HAMILTON, M.D., Director Division of County Health Work and Epidemiology

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
- Constipation
- Cold
- Clean-up Placards
- Chickenpox
- Diphtheria
- Don't Spit Placards
- Eyes
- Flies
- Fly Placards

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)
- Prenatal Letters (series of nine monthly letters)
- Minimum Standards of Prenatal Care
- What Builds Babies?
- Breast Feeding
- Sunlight for Babies
- Hints to North Carolina Mothers Who Diet Lists
- Want Better Babies
- Table of Heights and Weights

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SOME ORGANIZATION CHANGES

Since the election of Dr. James M. Parrott as State Health Officer on May 28 and his acceptance of that office June 11 under the dispensation of the reorganized State Board of Health, there have been several important changes made in the executive staff of the Board. In the first place some material changes, or consolidations in organization, became effective on July 1 when Dr. Parrott assumed his duties as State Health Officer. The new organization as set up may be outlined about as follows:

1st. The State Laboratory of Hygiene. All laboratory work, including the distribution of biologicals of every description, is carried on from that division. Dr. C. A. Shore, for more than twenty years director of the laboratory, continues as the official head of that division in his capacity as director.

2nd. The Division of Preventive Medicine. Under the foregoing designation the work of school health supervision, heretofore known as Medical Inspection of Schools; the infancy and maternity work, heretofore constituting a separate bureau; cancer control work; the vital statistics division, and the health education work, both of which have previously been separate bureaus, are all consolidated into this division, the director of which is Dr. G. M. Cooper, who has been a member of the executive staff for about seventeen years.

3rd. The Division of Sanitary Engineering. This important work is now under the direction of Mr. Warren H. Booker as chief engineer. Mr. Booker, it will be remembered, organized this bureau work in 1911 and was the first chief engineer employed in that capacity as a staff officer by the State Board of Health. He remained constantly in this capacity until 1918, a period of seven years and three months, when he secured a leave of absence to join the International Health Board staff in special war work among the civilian population of France.

4th. The Division of County Health Work and Epidemiology. On September 1 Dr. John H. Hamilton, who has been for the past eleven years health officer of New Hanover County and the city of Wilmington, accepted the position as director of this division. Dr. Hamilton has had wide experience in the character of work for which he is now the responsible head.

5th. The Division of Dentistry. As a natural sequence to legislation enacted during the last legislature, which resulted in requiring a dentist to be added to each of the one hundred county boards of health in the State, the Division of Dentistry has been created. Dr. E. A. Branch, who has been with the State Board of Health for several years, was made director of this division. Previous to his coming with the State Board of Health Dr. Branch had had several years experience as director of the
Dental Clinic of the Raleigh and Wake County Board of Health.

In addition to the above mentioned divisional organization, there have been some other important progressive measures effected in line with the general progress of public health work throughout the country. The State Board of Health, effective September 1st, employed Dr. M. E. Coyle, of Greensboro, who is a graduate of the United States College of Veterinary Science of Washington, to be in charge of the important work of milk regulation and food inspection. Dr. Coyle will work under the direction of Mr. Booker in the division of Sanitary Engineering. For the past seven years Dr. Coyle has been in charge of the dairy and food and meat inspection, including inspection of restaurants, bottling plants, and bakeries in the city of Greensboro, being an official of the Greensboro Health Department. His services are expected to be of great importance to the dairy industry of the State. His selection is an official recognition of the important place trained veterinarians are now occupying in the public health work.

The position of Assistant State Health Officer and that of Assistant to the Secretary have been abolished.

The foregoing changes have been effected not only without any extra expense to the taxpayers, but through means of consolidation of bureaus and the elimination of some positions the arrangement has resulted in considerable saving in overhead expenses. Dr. Parrott and the Board of Health believe in fewer divisions with authority and duties commensurate with the gravity of the responsibilities involved.

Doctor Hamilton and Mr. Booker, the two new divisional heads are both well enough known to the people of North Carolina for little more to be said concerning their qualifications. Dr. Hamilton is a graduate of Harvard Medical School and has had experience not only as a city and county health officer but as a teacher of health subjects in the Albany Medical College while he was Assistant Bacteriologist in the New York State Department of Health. This followed his graduation from Harvard. But previous to his taking up the study of Medicine, and following his graduation in the State College of Pennsylvania, he was a teacher of Nutrition in that institution. In his academic work he specialized in Chemistry and Bacteriology. He was later connected with the International Health Board for sometime, and during that service was detailed to the State Board of Health of Kentucky as Assistant State Director in the organization of whole time county health departments in that state. He has been eminently successful in all his undertakings and is now only 43 years old, and we are confident that his administration of the important division of County Health Work and Epidemiology will be successfully executed.

Mr. Booker, having been with the State Board of Health for a period of more than seven years, as stated above, is better known to the older health officers of this State. Mr. Booker is a graduate of the Ohio State University, where he specialized in Sanitary Engineering. Immediately following his graduation from college he served one year as Assistant Engineer in the Ohio State Board of Health. He voluntarily left that service to join the Standard Oil Company for two years as an engineer in that organization. He resigned from that work to accept the position as Chief Engineer of the North Carolina State Board of Health in 1911. His seven years work with this Board was highly successful, not only in the department of engineering but in the educational work of the Board. He obtained leave of absence from the State Board of Health in 1918 to do special
war work among the civilian population of France, as a member of the Field Forces of the International Health Board. Mr. Booker is now in the prime of life and by reason of his special qualifications and his wide experience in the work of the important department of engineering he should carry on with unqualified success.

UNION COUNTY MEDICAL SOCIETY ASSURES DEFINITE RESPONSIBILITY FOR TYPHOID VACCINATION IN THAT COUNTY

We take pleasure in quoting below an item from the Monroe Enquirer, published in August and credited to the Union County Medical Society. As will be seen from reading the item, the physicians of Union County have come together and agreed to offer typhoid vaccination to all the citizens of Union County at regular periods, closing on September 15, at the very low cost of ten cents per dose.

So far as we are aware, this is one of the first definite organized arrangements made by any medical society to assume full county-wide responsibility for this important work. For several years the physicians in different counties have offered vaccination as low as twenty-five cents for the three doses, to be paid for, however, by county appropriations. In many other counties the physicians have given office vaccinations at the same price, making their own collections. Many of the counties have also employed special physicians to do this work, paying for their service through county funds; but, as just stated, this is the first definite arrangement that has come to our knowledge of any county society originating plans, outlining the work covering a whole county, and assuming full financial responsibility at the low cost of thirty cents for the three treatments.

It seems to us that this is an excellent plan and should deserve wide emulation. The charge has frequently been made, unjustly of course, that lay organizations are forced to assume leadership in these matters because the physicians refuse to do so. This action of the Union county doctors is a definite answer to that challenge, and it is a plan that can be successfully carried out anywhere. We earnestly hope that a large majority of the people of Union County have, before this is published, availed themselves of this opportunity. Any other course would show a lack of appreciation of the efforts made by the physicians.

Work of this kind can be successfully carried out by physicians everywhere. It is the safest kind of arrangement, because responsible practicing physicians alone perform the vaccination, and they are men who are known to everybody in the county. It is the nearest approach to the family physician performing an important public health service yet undertaken.

The article from the Enquirer follows:

"VACCINATIONS OFFERED AT LOW COST"

"Union County Doctors Agree to Vaccinate at Ten Cents Per Dose In Absence of Immunizing Campaign"

"In view of the fact that Union county will not conduct a free immunizing campaign against typhoid fever and diphtheria this year the members of the Union County Medical Society have agreed to vaccinate from now until the 15th of September..."
at a cost of ten cents per dose. This must be cash and paid with each dose when service is rendered. Everybody is urgently advised to take advantage of this opportunity as there will not be another campaign conducted in this county under three years. There will be no appointments in the city of Monroe, North Monroe, Benton Heights and Icemorlee as heretofore. These people are advised to go to the office of their family physician. The physicians of Marshville will take care of that town and immediate community. Appointments at the various schools of the county will be filled by some member of the Society. Dates and places to be announced later.

"Typhoid fever, diphtheria and smallpox are three diseases that can be eliminated from any community if everybody would be vaccinated. Every year there are several cases of diphtheria in Union county. Every case is one too many. Every child between six or eight years of age should be vaccinated against diphtheria. Older children can be. You owe it to your children to protect them from this dreaded disease. Again every year we have several cases of typhoid fever occurring in those who have not been vaccinated. These cases are preventable and indicate neglect on the part of some one.

"The members of the Union County Medical Society are making special efforts to place these preventative measures within reach of everybody and we advise everybody to take advantage of this opportunity. Go to your doctor or one of the appointed places and be vaccinated, see that your family is vaccinated, and use your influence in convincing your neighbor of the importance of this."

A HUNGER STRIKE

On September 1 the Pennsylvania State Board of Health in their "Weekly Health Talk" struck a responsive chord in the minds of a multitude of parents when they described a situation existing in so many families, which they termed a "Hunger Strike" among the children.

What they found in Pennsylvania applies just as accurately to North Carolina. It is a problem that parents cannot discuss too much or too often. Think of the number of children in North Carolina who have been physically examined and had defects corrected this summer and whose parents assumed that their obligation is at an end when they have this attended to and equipped them with clothes and books and sent them to school.

One of the most important things, however, is so frequently neglected that it constitutes this big problem, and that is teaching from babyhood on up the daily observation of correct eating habits. How often the children refuse to eat such food as bread and butter, meat and potatoes, and give as the reason that they are not hungry. They leave the table with some item of sweet, and this habit the Pennsylvania Board of Health calls "putting on a hunger strike."

It is natural for children to prefer sweets and tasty foods in preference to the plain substantial food that they should have every day. For example, an ice cream cone on the way home will dull the appetite for a glass of milk or hot potato or a substantial piece of bread and butter, and the child is thus deprived of a sufficiency of protective and building foods. The result is undernourishment and a form of malnutrition.

Sweets and ice cream and all such foods have their place in the diet of children, and they should have them, but they should be always given aft-
er the child partakes of a sufficient quantity of the plain protective foods needed for the maintenance of good health.

GRANDMA BENTON SHOWS UP A SMART YOUNG FELLOW
By SUDIE PYATT MILLER

Grandma Benton was mad, mad clean through. She was mad because a man who called himself a cancer doctor had managed to get by Beth, her daughter, and into Grandma’s room, where he had taken up a good half hour or her time telling her of the “Wonder of the Age,” a new cure for cancer, which he claimed he and a group of doctors studying in New York, had discovered. He said they were selling for fifty dollars a treatment the new cure, at a great loss to themselves in order to help suffering humanity.

Up to that point Grandma had said nothing, nor did she until the man who called himself a physician said that Dr. Nelson, Grandma’s own doctor, was old fashioned and behind the times, because he had told her that the cancer on her left breast was incurable.

“Why, madam,” the man said, “the Wonder of the Age will cure the worst cancer that ever grew on a human body.”

That was too much for Grandma. With all of the first-hand information she had about cancer, and all Dr. Nelson had told her, she knew that the “smart young fellow,” as she termed him to herself was worse than a liar. She ordered the young fellow from her room, flinging after him the handbills, printed in large black type, telling of his discovery, that he had handed her when he entered the room.

“Dr. Nelson may not be as young, nor as smart as you think you are, but there is nothing that happens in science or medicine that he does not know about. He has made a special study of cancer, but he doesn’t go around handing out fancy, printed bills telling about what wonders he and the medicines he prescribes are. You’ll never be in his class, young fellow, if you hand out a million hand bills.”

The “smart young fellow” looked at Grandma in pained surprise.

“Dr. Nelson told you your disease is incurable, madam, and I have here a positive cure.”

“No such thing!” Grandma flatly contradicted the man. “A surgical operation, or radium, and X-ray treatment, are the only things that will cure cancer, and they have to be taken in the first stages of the trouble or they will not cure.”

“Oh, no, no!” the man who called himself Dr. Graydon, protested.

“Yes sir!” Grandma was positive. “Dr. Nelson says so, and I know it is true. We have talked my case over many times. I waited too long to tell him about the affection on my breast, we decided. Even then Dr. Nelson tried an operation. It was too late as we had feared. I know what to expect, and I am not afraid,” Grandma finished in a matter-of-fact manner.

“Mrs. Benton,” the man again spoke, “you need not lie there, resigned to your fate and die, when for fifty dollars the healing powers of the Wonder of the Age are available to you.”
"I do not want any of your Wonder of the Age, and if you don't leave this room I will have my daughter call Dr. Nelson, and he will see that you leave. He is secretary of our Medical Society, and I would not be surprised if he would not like to know about your work in town."

At the mention of Dr. Nelson's connection with the medical organization, the manner of the man who called himself Dr. Graydon, became a little less sure, and he moved toward the door. He had rather not have a run in with that man.

"You ought to be ashamed of yourself," Grandma continued talking, "going around raising false hopes in people's hearts, making them think you can cure cancer, when you can not cure it, and you know that you can't. There is nothing meaner or more common that a man can do than lying about a fake cancer cure to get some poor woman's last, hard earned dollar. The meanest men in all history are not to be compared with him," Grandma finished triumphantly.

The man had reached the door now. As blandly as if he had not heard one word of Grandma's accusations he turned back to speak.

"If you should decide, Mrs. Benton, that you wish to try The Wonder of the Age, our address is on the bill I handed you, and anyone you send to our office could not miss it. We are located on Main Street, and there's a big advertising signboard outside: "Drs. Graydon and Whitaker, Cancer Specialists, Discoverers of the Wonder of the Age. If you have cancer do not fail to see us."

"Umph!" Grandma snorted. "You'd never hear of Dr. Nelson, nor any other real medical doctor, putting a big advertising sign outside his door, and claiming to cure serious disease quickly and easily with some new discovery that no other doctor has ever heard of. Only a quack doctor would do such a thing as that."

"If you were not an old and ignorant woman I should make you regret saying that," Graydon said as he left Grandma's room with an air of injured dignity.

"Old and ignorant woman, umph!" Grandma snorted again. She'd make that young fellow regret saying what he had if he was what she felt in her heart that he was, a quack doctor, who was selling a cure that was no cure.

"Beth, call Dr. Nelson, and tell him that I asked him to investigate those new doctors that have opened an office on Main Street with a big signboard in front of it, claiming they can cure cancer," Grandma told her daughter, who came into the room, at the moment.

"Dr. Nelson says he will look into the work and record of those doctors today, Mother," Beth reported after her talk with Dr. Nelson, "and he will come up tonight and let us know what he finds out."

Grandma had eaten a satisfying supper, and was preparing to enjoy a few chapters of an interesting book she was reading when Dr. Nelson knocked on Grandma's door and entered.

"Congratulations, Grandma!" he extended his hand. "You helped the doctors of this town rid it of one of the biggest bunch of swinders we have ever had here. Arrested them both this afternoon for practising without a state license, and they're in jail now. Neither of them being able to arrange for bond."

"That's fine!" Grandma's old eyes twinkled. She had shown up that smart young fellow all right. Wonder how old and ignorant he would think her now if he knew of her part in lodging him behind the walls of the town jail. "They won't be allowed to get out and practice their rotten quackery in this town, will they?"
"Not if the combined efforts of the County Medical Society can prevent it, Grandma, they will not," Dr. Nelson promised.

Grandma reached over on her bedside table and handed Dr. Nelson several sheets of writing paper that were closely covered with her old-fashioned handwriting. "I want you to read this and if you approve of it take it down to Bill Swanson of The Record, and tell him I said publish it in this week's paper."

Dr. Nelson read thoughtfully what Grandma had written:

"There are lots of mean people in the world, always have been, and always will be, but one of the meanest of all mean people is a man who will claim he is a doctor when he is not, and claim that he can cure serious disease like cancer in a short time. In spite of all of the progress that is being made in the world these days in medicine, there is nothing yet that has been discovered that will cure cancer after it has reached an advanced stage. The man who claims that he has found a cure for it and tries to sell it to the public, particularly the old and ignorant public, is worse than a liar and a thief, and life imprisonment would be too good a punishment for him.

'How shall I know,' you ask, 'that the doctor who comes to sell me a cure for cancer is a fake?' In the first place no good doctor tries to sell medicine, and no good doctor will claim that he can cure serious disease.

'No good doctor advertises 'cures' in newspapers, passes out handbills, or posts big advertising signboards outside his office.

'No good doctor makes any claims that he can cure serious disease like cancer quickly and easily.

'No good doctor moves from town to town, as most of the 'quack' cancer doctors do.

'No good doctor, or group of good doctors claim they have discovered some new cure that other physicians know nothing about. Great discoveries of science, such as the discovery of the cure of cancer would be, are never kept secret.

'I have told you enough about the quack doctor for you to be able to recognize one if he comes trying to sell you some of his 'cures' that do not cure. Now lets see if we can get a line-up on the good doctor, the kind of doctor we all like to have. Right in the beginning I will say that one of the first things to ask about your doctor: 'Is he liked and trusted by the kind of people whose opinions I respect?'

'Next, find out if he graduated from a recognized medical school. All good doctors graduate from medical colleges that are recognized as such.

'They keep in touch with the most recent scientific discoveries. If a real cure for cancer is discovered every good doctor in this country will know about it, and one will not have to depend on quack doctors to tell about the cure.

'A good doctor will belong to his county, state or national association of doctors of medicine. The fake cancer doctor may belong to some sort of association, but it won't be an association of doctors of medicine. Such as he are not allowed to join these associations.

'If you are in doubt about whether a man is a real doctor or not your hospital can tell you, the secretary of the county medical association, and the county or state department of health."

Dr. Nelson looked up as he finished reading.

'You like it?' Grandma asked, and was as pleased as a girl when Dr. Nelson told her that he certainly did like it, and that if she wished he would see that not only Bill Swanson published her little article, but that every paper in the county did. with
the full endorsement of the County Medical Society, and he would send a copy that day to the secretary of the State Medical Society, and ask him about having the State Medical Society endorse it, and have it published in all of the papers of the state, of course giving you full credit for writing it."

"O, I don't mind about the credit," Grandma said, "if we can only prevent a few old and ignorant people from getting stung by these liars and thieves who call themselves cancer doctors."

**WHAT EVERY WOMAN SHOULD DO ABOUT CANCER**

*By THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER*

Women play an indispensable part in the war against cancer. There is hardly a division of the work in which they are not actively and helpfully employed.

One of the most valuable contributions which women make is in the care of the sick. This is particularly true of advanced cases, those for which there is little or no prospect of cure. Here the sympathy and ingenuity of the nurse are taxed to the utmost to make the patient as comfortable and cheerful as possible.

Women carry a heavy responsibility in regard to cancer because it is to them that men naturally turn when they are ill; it is the women who send the men to the doctors and who tend them when they are sick. Women look after the old people, also, and it is to be remembered that cancer shows a preference for the aged.

Women have taken a prominent part in the organized war against cancer, aiding the American Society for the Control of Cancer by working on its committees and helping to get the money required to pay the cost of the work which is thus carried on.

Women have played and are still playing an important part in cancer research and are thus helping to unravel the tangled threads of knowledge which will eventually lead to a full understanding of this disease.

There are good reasons why women should be interested in cancer on their own account. More women than men die of cancer because it so frequently attacks the female breasts and uterus. Fortunately in these organs it can often be permanently cured if it is discovered in time.

**How Cancers Start**

The symptoms which cancer produces are entirely local to begin with. The cancer itself is a local instead of a general disturbance at first. Later, when the general health of the patient is affected, it is because of the development and extension of the cancer from the original site.

The patient's chance of cure depends upon the discovery of the cancer before it has grown so large as to do irreparable injury to the part originally affected or has extended to some other part. The smaller the cancer is when discovered the greater is the possibility of cure. In the words of an eminent physician, "Every cancer is at first a miniature cancer and at that time is no more to be feared than a tiny splinter."

A miniature cancer is, however, unlike a splinter in two respects. First, it is not a foreign substance and second, it has unlimited capacity for growth.
A cancer is an abnormal development of a part of the body of which it is composed. Something goes wrong with the orderly and healthy regulation of this complicated mechanism and a cancer begins. Once the regulatory power of the body is lost, it is seldom if ever regained. The cancer begins to grow and, having started, it cannot stop.

To cure a person of cancer calls for a surgical removal of the growth or its destruction by radium or x-rays. Pastes and home remedies are sometimes mistakenly employed to destroy cancers on the surface of the body, but compared with the scientific methods of the surgeon and radiologist they are painful, disfiguring and unreliable. It is to be remembered that every particle of the cancer must be destroyed or the cancer will recur. The extermination must be complete.

Cancers differ a great deal in malignancy and other respects, so that each case requires special study in order that the best possible treatment for that particular case shall be applied.

How Cancer Can Be Cured

Many cases of cancer can be cured. It is a mistake to think that a cancer is always and necessarily fatal. A wrong impression has been produced by dwelling on the fatal cases and failing to note how many patients have been made well.

Many years ago, before methods of diagnosis had been developed as far as they have today, the situation was different. Then cancers were not looked upon as cancers until they reached what is now known to be an advanced stage. It is not strange that in those days to say that a person had cancer was to declare that she would certainly die of it.

A much more helpful situation now exists. Diagnoses can be made much earlier. By discovering it in its early stages and promptly applying the particular treatment which each type requires, it is often possible to free a patient of every trace of cancer.

There should be relatively few deaths from cancer of some parts of the body because the symptoms are noticeable from the first. Consequently, medical aid can be called in early and the proper means of cure employed. In cancer of the skin, lip and mouth, the signs are apparent almost from the beginning, and so they are with cancer of the breast. Enough of these cases are on record to show that the chances of course are good if the patient will apply to a capable physician at the first indications of danger. Cancer of the uterus also can often be cured if taken in time.

Speaking generally, it is more difficult to discover a cancer of an internal organ than one on or near the surface of the body, but a thorough medical examination may reveal it if it is there.

Signs of Danger

Inasmuch as it is so necessary to discover cancers at the earliest possible moment, it is important to know by what signs they may be recognized. There are few symptoms which point infallibly to a cancerous condition until it is well advanced; this is particularly true of internal cancer. However, cancers in some locations do cause symptoms which may lead to their early recognition.

On the skin or lip, any sore that does not heal within two weeks should be looked upon with suspicion.

In the breast, any lump which does not disappear within two weeks must be considered as possibly cancer. Any irregular or unusual discharge from any of the orifices of the body demands an immediate explanation.

In the feces or urine, any evidence of blood, no matter how slight or occasional, points to possible danger, and should be immediately investigated.

When any of the signs of cancer are discovered, there is one thing and
only one thing to do. The patient must go immediately to a physician and have the trouble investigated. There must be an examination made which will bring out the facts. In most cases cancer will not be found to be present. In certain instances some other condition may be revealed which needs correction. Now and then cancer will be found and in such cases its early recognition may save the patient's life.

A good many persons are now taking steps to prevent cancer. They are not waiting to see whether cancer will develop before going to a doctor. They are having periodic examinations with the idea of finding whether any cancer is present. This is an excellent plan, for when such an examination is made there is a chance that a cancer may be found in such an early stage that it can be entirely and permanently eradicated.

**What Women Can Do**

Women are doing much toward the control of cancer, but they can do still more.

Here are some practical suggestions:

1. Every woman should make it her business to learn the practical facts and sound working opinions about the disease in order to apply them to herself and spread this knowledge among her associates.

2. Every woman who belongs to a club should see to it that a qualified speaker is invited to give a lecture on some aspect of the cancer question at least once a year.

3. Every woman should see to it that a copy of this pamphlet is sent to every member of the club.

4. Every woman should have a medical examination once a year by a physician with an eye alert for cancer.

5. Every woman should see that the members of her family are protected as far as possible against cancer and, if attacked, that they are promptly provided with the best medical attention.

6. Every woman should beware of advertised medicinal treatments, serums, vaccines and the like and understand that such preparations are not only useless but by causing a delay in the application of proper treatment make the cure of cancer more difficult if not impossible.

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**BLOOD PRESSURE**

By

VERNE S. CAVINESS, M. D.

During the past several years the subject of blood pressure has received a great deal of attention in the newspapers and popular journals. It has also become quite a favorite topic of discussion, especially among people whose blood pressure deviates from the normal. In some respects it has been rather unfortunate that it has secured a position of such prominence in our daily life. We shall consider the reasons for this later.

A great majority of the people consider that any deviation from the normal blood pressure is dangerous, but blood pressure is not a disease. It is merely a symptom of something that is abnormal about the human make-up. Whenever blood pressure is abnormal it is to be classed as a symptom along with fever, pain, headache, nausea and other symptoms and its treatment must be managed on a basis of the cause just as when treating other symptoms.

There are several factors which enter into the production of blood pressure whether normal or abnormal:
1. The condition of the heart and the force of heart beat.

2. The amount of resistance offered to the circulation of the blood in the blood vessels, especially the smaller arteries.

3. The elasticity of the arteries.


It is well to remember that the quality of the blood has nothing to do with the pressure. Persons can be very anemic and have a normal, high or low blood pressure.

Blood pressure often varies normally in a normal individual and is easily influenced. Any change in the position of the body will produce some change in the blood pressure. Exercise and excitement or any strong emotion, especially fear, anxiety or worry will elevate the blood pressure and in abnormal individuals may raise it to a great height.

This is especially true in persons who have a tendency towards high blood pressure. Normal blood pressure may be defined as an average pressure for normal individuals. There is not much change in pressure on account of age. In general people who live to a ripe old age are those who have always had a normal or slightly low pressure.

The actual cause of high blood pressure is unknown. However there are a great many factors which enter into the production of high blood pressure and which are of considerable interest:

1. Persistent over-eating is known to play a part in high blood pressure. In many cases the type of food eaten receives all the blame and has some casual relation, but excessive habits of eating do more than the type of food eaten. Many people who eat excessively develop high blood pressure and there is no doubt that eating excessively will raise blood pressure that has a tendency to be too high.

2. Excessive use of tobacco is said by some people to be a cause. This is a mooted question but probably plays some part.

3. Alcohol possibly plays no part in the production of high blood pressure but will very likely intensify any existing tendency toward an abnormal elevation. We often see high blood pressure in habitual users of tobacco and alcohol. Coffee, alcohol and nicotine are expected to raise blood pressure temporarily but in many cases such a rise is slight and usually not permanent.

4. Persons who work in lead, mercury and zinc often have high blood pressure. This is due to getting particles of these metals in the mouth and swallowing them. Such persons develop a hardening of the arteries which in turn raises blood pressure.

5. Similar conditions result from habitual constipation and from abscessed teeth, infected tonsils and other foci of infection of long standing; however removal of the foci of infection after high blood pressure has developed may not result in a satisfactory cure. Infection makes the condition worse but is probably never the direct cause. All foci of infection should be removed or treated for hygienic reasons and to prevent aggravation of high blood pressure.

6. Endocrine disturbances often produce high blood pressure; however other types of endocrine disturbance may produce low blood pressure.

7. Hardening of the smaller vessels may be a cause or a result of high blood pressure. Causes of this condition are similar to the causes of high blood pressure.

8. The stress and strain of modern life, especially if many of one's ambition and desires are not attained is a potent factor in the production of hypertension. Here the action is doubtless one of high nervous tension with an associated spasticity of the
muscle in the walls of the small arteries.

9. Heredity plays an important part. While high blood pressure is not inherited many persons inherit an inherent tendency towards hypertension. This probably results from a long continued spastic condition of the muscle tissue and replacement by fibrous tissue and later followed by hardening. Thus there is loss of the power of relaxation and loss of control over blood pressure.

There are several causes of low blood pressure. The most frequent cause is shock no matter how produced. The sudden relaxation of large blood vessels especially in the abdomen, gives a transient drop in blood pressure. Pressure rises again as the tone and control of the blood vessels are restored.

Another frequent cause is hemorrhage that is due to a loss of the blood volume.

Weakness of the heart muscle also causes low blood pressure. It is seen when the heart muscle becomes unable to maintain the needed pressure behind the blood columns.

There are also a few disease conditions in which the blood pressure is abnormally low.

It is impossible to tell with any degree of accuracy by the way you feel whether your pressure is high or low. For that you must rely upon your physician. When you are having your annual health examination your physician will test your blood pressure and if it is abnormal he will prescribe treatment.

Many people worry a great deal about low blood pressure. Such worry is unnecessary and does no good. Unless the pressure is quite low and attended by an obvious cause it is better disregarded unless there are distressing symptoms. If your physician thinks any treatment is needed he will prescribe it but low blood pressure very rarely does any harm.

If you belong in the class of patients who live a sedentary life indoors, are constipated and have headaches, if you are run down, nervous, feel weak at times and have lost some of your appetite your blood pressure may be too low. If you will consult your physician he will doubtless find the cause of such symptoms. If it is due to low blood pressure there is no occasion for worry or alarm. Your physician will prescribe more outdoor exercise and sunlight and if you follow all of his advice you may be reasonably sure of a speedy cure.

The treatment of high blood pressure is quite different. Here again it is well to remember that by having careful, regular examinations made many changes in blood pressure can be detected, and usually remedied before the condition passes beyond the stage of control.

High blood pressure itself is not so serious a condition as many people have been led to believe. If it is not treated properly life will doubtless be shortened but a person who has a moderately elevated pressure may live for many years in comparative comfort. Patients should bear in mind that worry only helps to develop an anxiety complex which acts as part of a vicious circle to raise the pressure to higher levels. Worry and anxiety will raise not only abnormally high pressure but it also raises normal blood pressure. It does no good and any seriously minded person who really is interested in doing so can refrain from worry.

Rest is the most important single phase of treatment for high blood pressure. This includes not only physical rest but much more important mental rest and relaxation. The rest must be rational. It would be useless for any one to stay in bed for life on account of high blood pressure. One or two hours rest in bed after the noon meal is usually sufficient when associated with a full night's sleep.
The amount of rest actually required can be determined by frequent medical examinations.

Regular hours of living are very important and include retiring moderately early at night. Sleep should not be disturbed and everything possible should be done to secure mental and physical relaxation. Some exercise is essential but should not be drastic. The laborer may find it necessary to follow his usual type of employment, but if so, he can usually spare himself undue strain. Persons who have sedentary occupations often must be cautioned that they do not take too much exercise. Even golf is too strenuous for some people. Anyone with high blood pressure should limit himself to nine holes two or three times a week. What ever exercise is used must be stopped before the stage of fatigue is reached.

Diet is interesting. Nothing definite is known regarding the role of diet in high blood pressure. Many people live on almost exclusive diets of meat with normal blood pressures. However, many Asiatic people eat purely vegetable diets and for some unknown reason seem to have a general lower blood pressure than other people. But it is far safer that meat be reduced in the diet, unless the patient is a vegetarian. It is my custom to eliminate hog meat of all kinds from the diet in high blood pressure and prescribe beef for two or three meals each week. Fish, chicken and eggs may be safely taken in moderation. The diet should be simple and the amount small. The lowest caloric diet that is consistent with necessary activities should be eaten. Diet is more to be feared on account of large bulk than from its nature.

Fats and starches should be correctly balanced, and neither consumed to excess. Vegetables should constitute the chief bulk of the diet. Condiments are largely taboo, as well as alcohol in all forms.

Salt may be taken in moderation in all cases unless there is a retention of chlorides in the blood.

Tobacco should be restricted in amount but ordinarily need not necessarily be stopped except on the order of the physician. The most important consideration in the treatment of high blood pressure is its prevention. In America life is lived at great speed and under high tension. Both of these factors are conducive to the development of high blood pressure. We are sacrificing health and long life for the accumulation of wealth or for the achievement of other pet ambitions. If we can rest a reasonable amount each day, work a reasonable amount and eliminate worry and anxiety from our schedule it will greatly decrease the danger of developing high blood pressure.

But since most of us will not do this, a frequent health examination will be necessary in order to discover high blood pressure while it is still in the incipient stage. At such a time the condition can usually be cured; but after the condition is allowed to progress until it becomes far advanced there is no need to abandon hope altogether, because even then with the proper care and supervision it is possible to arrest the progress of the process and help the individual adjust himself to a changed mode of living.

The best results in treatment of high blood pressure are obtained in early cases and depend to a large extent on the amount of cooperation that exists between the patient and physician.
DISEASES PRESAGING DISASTER

There is no group of diseases comparable with that formed by the venereal diseases in disastrous effects on individuals, on the state and on posterity. Gonorrhea and syphilis undoubtedly are the world's greatest menace today, sapping as they do the health, vitality and physical progress of all nations and races and more especially of those that have reached the higher levels of civilization.

Iritis, tabes, half of all abortions and miscarriages, hemiplegia, paresis, 10 to 20 per cent of all insanity, 18 per cent of the deaths from organic heart diseases, optic neuritis, gonorrheal arthritis and 75 to 80 per cent of the many pelvic diseases of women are but a few of their effects.

They are an ever-present menace to the clean-living as well as to the licentious and their effects on posterity are shown by such manifestations as deafness, mental defectiveness and interstitial keratitis.

Congenital syphilitic infection causes:

(1) A cessation of the fetal development and abortion, or

(2) The fetus grows but is born before the normal expiration of intrauterine life (premature birth), or

(3) The child goes to term but is born dead (still births), or

(4) The child is born with unmistakable signs and dies shortly, or

(5) The child shows no symptoms at birth but develops them in a few weeks (80% of these die—the real tragedy is that 20% live), or

(6) The child shows no symptoms for possibly years, and then the disease manifests itself usually in a tertiary form, or

(7) The child may be a puny weakling, under weight, show a lack of stamina, and be susceptible to any infection—a "runty" specimen of humanity, yet without other obvious signs of the disease.

Sixty per cent of blindness of the newborn and 10 per cent of all blindness can be attributed to gonorrhea and syphilis.

Records of cases and deaths from these diseases are notoriously inaccurate and can only be approximately estimated, but according to Dr. Taliaferro Clark, U. S. Public Health Service, there are probably 425,000 fresh infections of syphilis in the United States each year and in the area in which syphilis has been reportable since 1920 there have been 35,000 more cases of syphilis than of scarlet fever, 79,000 more than all forms of tuberculosis, 500,000 more cases than of diphtheria, three times as much syphilis as smallpox and five times as much as typhoid fever.

Any estimate of the cost of syphilis and gonorrhea must also be approximate but the time of disablement, which may be weeks, months or even years, usually occurs at an age period when the individual should be at his best so far as public usefulness and productiveness is concerned, so it must be enormous.—Ohio Health News.
Each year, from Thanksgiving to Christmas, the National Tuberculosis Association and its affiliated organizations in the several states, including our North Carolina Tuberculosis Association, sell the familiar Christmas Seals to raise funds for their continued participation in the fight against tuberculosis, which has been so successfully waged for twenty-five years.

Statistics prove that the campaign against tuberculosis has achieved gratifying results. The deaths from this disease have decreased more than 50 per cent in twenty-five years, and the decrease in the last few years has been particularly gratifying. However, tuberculosis still takes a terrible toll in illness and death, and this presents to us a challenge to continue along the lines that have been so successful.

Therefore, I commend this Annual Seal Sale of the National Tuberculosis Association and the North Carolina Tuberculosis Association to the people of North Carolina, and urge them to cooperate in this splendid work by generous purchases of the "double-barred cross and the Christmas Seal," the emblem of the fight against tuberculosis.

Governor of North Carolina.
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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 follow-
ing subjects. Ask for any in which you may be interested.

Adenoids and Tonsils  German Measles  Smallpox
Cancer  Hookworm Disease  Teeth
Constipation  Infantile Paralysis  Tuberculosis
Chickenpox  Influenza  Tuberculosis Placards
Diphtheria  Malaria  Typhoid Fever
Don't Spit Placards  Measles  Typhoid Placards
Eyes  Pellagra  Venereal Diseases
Flies  Prenatal Care  Water Supplies
Fly Placards  Sanitary Privies  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)  The Runabouts in the House of Health
"Our Babies"  (pamphlet for children from 2 to 6
Prenatal Letters (series of nine years of age).
monthly letters)
Minimum Standards of Prenatal Care  Baby's Daily Time Cards: Under 5
What Builds Babies?  months; 6 to 6 months; 7, 8, and 9
Breast Feeding  months; 10, 11, and 12 months; 1
Sunlight for Babies  year to 19 months; 19 months to 2
Years.
Hints to North Carolina Mothers Who  Diet: List; 9 to 12 months; 12 to 15
Want Better Babies  months; 15 to 24 months; 2 to 3 years;
Table of Heights and Weights  3 to 6 years.

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The November Issue

FOLLOWING a custom dating back for many years, we are devoting this issue of the BULLETIN entirely to the subject of tuberculosis. With the exception of the statistical figures, prepared by the Vital Statistics Department of the State Board of Health, and which appear on page 16, the material for the entire issue was prepared by Dr. L. B. McBrayer, managing director of the North Carolina Tuberculosis Association.

Doctor McBrayer directs the sale of Christmas Seals throughout the State every year. He also conducts the Extension Service from his office at Southern Pines in the work against tuberculosis for his association.

In years to come this annual stock-taking, we might say, concerning the tuberculosis situation in North Carolina will afford an interesting comparison from year to year, and a fine historical record of the efforts directed toward the control of this serious disease.

We feel sure that the readers of the BULLETIN will join with the editor in appreciation of Dr. McBrayer's contribution.
The Tuberculosis Christmas Seal

The Tuberculosis Christmas Seal has become an institution. For twenty-five years the people of the United States have bought Tuberculosis Christmas Seals during the period from Thanksgiving to Christmas. Like many other good things, it had small beginnings. The first year the amount was only a little more than $3,000, but it kept growing and expanding until the Christmas Seal is known and sold and used in every nook and corner of every state and the total sale last year was a little more than five million dollars, and it is spreading to other countries. This same Seal is now being sold in Canada, Porto Rico, and in several other nations. And so the influence of the tiny penny Tuberculosis Christmas Seal gives promise of spreading to all the nations of this earth.

The work done by these accumulated pennies is of equal import with the growth of the Seal Sale. The National Tuberculosis Association, which heads up both the Seal sale and tuberculosis work, has made itself a real leader in the winning campaign against tuberculosis these twenty-five years. It has connected with it by membership and on its board of directors and on its committees the ablest physicians and scientists in the United States and Canada, and in this way has been the real leader on the scientific side of the tuberculosis campaign. Again, it has collaborating with it the sociologist and social workers generally, and again it leads in the social side of the campaign; and so with the educational forces and on through any group or groups whose knowledge and services are needed.

It has organized in every State a State Tuberculosis Association, and they in turn organize local groups by counties and smaller groups by communities.

It was the National Tuberculosis Association, with its State Tuberculosis Associations, who worked out Health Education in the Schools and the importance of proper nutrition in children, which is at once the most important, most satisfactory, and most worthwhile piece of work that has ever been brought to the attention of our people.

From reports received from one hundred and fifty Seal Sale chairmen throughout the State, the expenditures of Seal Sale funds received last year were in round numbers as follows:

- Summer camp for undernourished and infected children: 15%
- Undernourished children in schools unable to pay for milk and lunches: 55%
- Tuberculosis nursing: 10%
- Treatment of patients in sanatoria: 15%
- Children clinics in connection with Extension Department of State Sanatorium: 5%

100%

The Tuberculosis Christmas Seal is a handsome little sticker, changed each year, and should adorn every envelope and package put in the mails between Thanksgiving and Christmas. "Tuberculosis is everybody's fight." Buying Christmas Seals is one way for "everybody" to join in the fight.
The Message of the Christmas Seal

Ho, Little Seal, with your message of hope,
Flung to the world as a life-saver’s rope,
Seek you the palace and seek you the shed—
Soft little pillow for Suffering’s head!

Ho, Little Seal, with your message of cheer,
Building up courage and casting out fear,
Shed you God’s sunlight in castle and cave—
Bright little beacon of lives that you save!

Ho, Little Seal, with your message to men,
Lifting them back to life’s highroad again,
Keep you the air of God’s heaven above
Flowing in gently to heal them we love!

—WALTER GREENOUGH.

FOLLOWING THE BLUEPRINTS

Editorial in Salisbury Post:

"Science has informed us that we can wipe out tuberculosis. It has told us how to do it. And as far as we have gone in following directions we have proven the accuracy of the prescription. Intelligent attack is bringing results, the best and most hopeful results. Without bringing into play any conspicuous portion of our resources we have produced results that are most encouraging.

"Will we go through with the program? Will the states and the smaller units fight, and fight hard and intelligently? Will we put money and intelligent efforts into the fight? Will we set up a campaign of attack at our own door and do our part in the good work? Or will we shirk and leave the few Georges enlisted to go through?

"In Rowan we have made a start. The city and county have double-teamed and furnished a lot and a house in equipment. All is ready for taking care of nearly a half hundred children with the great threat overhanging. The camp is well constructed and will very likely be turned into a tuberculosis hospital for all-year service.

"In the meanwhile there is need of something like $1,200 to carry on the summer campaign in behalf of these half-hundred children who need this loving care and attention. It would help if some of us were to undertake the expenses of one child, about $60; it would also help to join the tuberculosis association and pay a $10 annual membership fee."

They got it. And a fine piece of work they did and are continuing to do. They have set a fine example that every other county in the State should follow."
One of the greatest factors in the recovery from tuberculosis of Dr. Edwin A. Alderman, president of the University of Virginia, was the inspiration he received from the weekly letters of his friend, Walter H. Page, our ambassador to Great Britain during the World War, one of the real educational statesmen of this country.

Only a few of these letters are preserved; they are to be found in Burton J. Hendrick's "The Life and Letters of Walter H. Page." The first one ends with these paragraphs:

"Your brave note came today. Of course you’ll 'get' 'em — those small enemies. The gain of twelve pounds tells the story. The danger is, your season of reverie and philosophy will be too soon ended. Don't fret; the work and the friends will be here when you come down. There's many a long day ahead; and there may not be so many seasons of rest and meditation.

"I've a book or two more to send you. If they interest you, praise the gods. If they bore you, fling 'em in the snow and think no worse of me. You can't tell what a given book may be worth to a given man in an unknown mood. They've become such a commodity to me that I thank my stars for a month away from them when I may come at 'em at a different angle and really need a few old ones — Wordsworth, for instance. When you get old enough you'll wake up some day with the feeling that the world is much more beautiful than it was when you were young, that a landscape has a closer meaning, that the sky is more companionable, that outdoor color and motion are more splendidly audacious and beautifully rhythmical than you had ever thought. That's true! The gently snow-clad pines out my window are more to me than the whole Taft administration. They'll soon be better than the year's dividends. And the few great craftsmen in words who can confirm this feeling — they are the masters you become grateful for. Then the sordidness of the world lies far beneath you and your great democracy is truly come — the democracy of Nature. To be akin to a tree, in this sense, is as good as to be akin to a man. I have a grove of little long-leaf pines down in the sandhills of North Carolina and I know they'll have some consciousness of me after all men have forgotten me; I've saved 'em and they'll sing a century of gratitude if I can keep 'em saved.

"A conquering New Year — that's what you'll find begun before this reaches you, carrying all good wishes."

Five months later, on his way to England, Mr. Page wrote:

"My congratulations, my cheers, my love, old man. Now when you do take up work again, don’t take up
all the work. Show the fine virtue called self-restraint. We work too much and too hard, and do too many things even when we are well. A little work must henceforth go a long way with you. A sermon? Yes! But since it’s a good one, I know you’ll forgive me, for it is preached in love, my dear boy.”

All that is mortal of Ambassador Page now lies in the Betheda Cemetery near Aberdeen and Southern Pines, among the pines he referred to in his letter to President Alderman, and no doubt they have a “consciousness of him”—but the people of North Carolina and the United States and England and the world will never forget Walter Hines Page, and the influence of his life and work will go on forever. Perhaps—who shall dispute it—he rendered as great a service in his letters of love, encouragement, and advice to Dr. Alderman during his illness with tuberculosis as he did as ambassador to the Court of St. James during the World War.

“ Heavy Trucks Prohibited”

If they would only reduce the strain to something below the ability to bear, they could continue to live happy and serviceable lives. But if they won’t, they don’t, and that’s the end of them. And one more figure is added to the columns of preventable deaths from heart disease.

EXPLANATION OF PICTURES ON FOLLOWING PAGES

1. Children admitted to the open-air camp of Durham Woman’s Club on June 8, 1930.

2. A group of children who attended the Gaston County Preventorium, west of Gastonia, during the summer of 1930. Thirty boys and girls spent six weeks at the camp and gained a total of 154 pounds, or an average of slightly more than five pounds each. A girl tied one of the boys for the record, each gaining 12 pounds during the camp period.

3. The children in picture 1 are shown here at the close of camp period on August 15, 1930. The group gained a total of 214 pounds.

4. A negro schoolhouse provides a preventorium for negro children in Cabarrus County. A negro teacher is in charge. Rock Hill is the first of its kind in the State.

5. Four years ago the Rowan County Preventorium was a big tent. Last year the excellent building pictured here was opened.

6. Nurses who have taken a leading part in preventorium work. Left to right: Miss Hilda Merryman and Miss Naomi Moore and the matron, Mrs. Roy Miller, of the Montgomery-Sunderland Preventorium at Concord. Miss Moore was responsible for the opening of Rock Hill.

7. Patients treated at the Rowan County Preventorium last summer. They numbered 42 with a total underweight for the group at entrance of 434 pounds. When the Preventorium closed the group had gained 536 pounds.

8. Children treated this summer at the Rowan County Preventorium. 10. Children treated this summer at the Rowan County Preventorium.
CLUB WOMEN CO-OPERATE IN CHRISTMAS SEAL SALE

Club Women Sell Seals for 25 Years; President Hoover's Utterances Quoted By Mrs. Saidie Orr Dunbar, Chairman Department of Public Welfare, G. F. W. C.

"To probably no other group of organized women will there be greater appeal than to the members of the General Federation of Women's Clubs, who have so universally co-operated in the Christmas Seal Sale during the past 25 years and in developing local health programs financed by Christmas Seal funds. It has been a matter of great satisfaction to the chairmen of Public Health divisions within the Federation to cooperate with the organized forces that are combatting a preventable disease. When the question of health, particularly so-called public health campaigns, can be brought to the place where it receives the same recognition and same support as our American system of education, then many of the child health problems and the community health problems will be placed on a plane that will command the proper recognition of home, school, and community.

"It is a matter of great satisfaction to the club women of America that President Hoover in his pronouncements, policies, and plans is placing public welfare, particularly as it relates to the child, well in the lead in his great program for the promotion of human happiness and well-being. I particularly like these words of his:

"'This is an era of service. The best minds are devoting energy to the improving of mankind. America leads in the work... These complex problems cannot be solved by any ironclad system of governmental action. When all public interest has expended itself, child development still rests with the parents, and parents need much bringing up. Much can be done by the waking of public conscience in every community. Much still remains to be carried out by action from the state in local as well as national phases.'"

MILK

Milk is the best single article of food of which we have knowledge. In addition to that, it is more and better food than can be bought for the same amount of money in any other article of diet or group of diets, and milk is more important for the growing child than for adults, though the statement above is true for adults.

Prof. G. B. Phillips, superintendent Greensboro Public Schools, boasts, and he has a right to, that the children of Greensboro consumed 254,-

608 bottles of milk last school year at lunch time, purchased by those who could pay and donated to those who could not, through the school cafeteria, and he was advertising for bids for the delivery of milk in similar quantity for the school year 1931-'32 when this statement was made. Let us hope that these same children used twice this amount of milk at home for supper and breakfast, for every school child should drink a minimum of a quart of milk a day.
We may wonder whether a single one of the founders of the National Tuberculosis Association could have had any idea of what they were really doing for public health when, more than twenty-five years ago, they brought to life the National Tuberculosis Association. How the tuberculosis movement has become the center and foundation of all public health work is now so well understood and frequently mentioned that the circumstance needs little elaboration here. Anti-tuberculosis effort has itself received much from all broad public health measures. It has had its task made so much the lighter by every regulation that makes for better medical practice, whether this has aimed at improved medical instruction or the more accurate and complete reporting of diseases and deaths; by every requirement that seeks to limit infectious disease, a field where public health can be peculiarly effective because of its interference with the individual is perhaps least open to question; by every act that has contributed to the comfort and enjoyment of life and the performance of daily work—to the light, space, air, and cleanliness of street, home, and shop—to relief from the grind and hazards of toil; and in this latter respect our generation, veering gradually away from the moorings of the Manchester School, is working a revolution in the daily round of the people.

But tuberculosis has given back to public health as much as it has received; surely as much, and, it would appear, much more. All of us like to grow eloquent ament the revolution wrought by tuberculosis propaganda in the sleeping habits of a nation; how in a few short years a people, holding age-long fears of the dangers of night air to health, opened its bedroom windows and accustomed itself to a restorative that must, in the large, be having incalculable effects for good. This sleeping in the fresh air of night, but a single unchallenged result of the tuberculosis movement alone, has been said on high authority to have been worth more in newfound fitness, translated into pecuniary terms, than all the vast sums poured into the combat against tuberculosis.

A second boon that active tuberculosis prevention has passed on to public health has dwelt, of course, in the broader results of the supervision of cattle and of milk supplies. Perhaps the close watch on herds and dairies and the pasteurization of city milk would have come as soon and as effectively without the ghost of consumption—a spectre that was plain to every man—to spur them on. But one must doubt it; just as one must doubt whether thousands of children would be alive today had not their milk, in their babyhood and later, been treated for the germs of tuberculosis, and in the process cleansed of other germs of far less tenacity of life, yet of greater immediate virulence.

Briefly stated, the whole prophylaxis of tuberculosis—the prevention which the founders planned and later knowledge expanded, and which organized effort undertook to practice—would, if carried on to perfection, comprehend cutting the chain of contact of many of our other major infections as well as adding vastly to the sum total of human health and fitness. In thinking of tuberculosis this must never be forgotten: that, in addition to being originated by one of the hardiest of all germs, it is the sole example of understood infections that can be conveyed by an intermediary in every conceivable way as
well as by every kind of direct contact, and it is the only infection that can be received by the body in every conceivable way and still eventuate in characteristic disease. But this is only the beginning of the story; for, with infection established, only part of the necessary etiological factors are by the event satisfied; of decisive importance in rounding out the cycle are the so-called contributory determinants of disease, most of which reside in all the countless incidents that are capable of depressing bodily functions and impairing health. These are the reasons why, fundamentally, efforts to affect tuberculosis in the mass must touch public health endeavor at innumerable points; why, in any effective control of the sources and avenues of tuberculous infection, links in the chain of many other infections must likewise, and as a corollary, be broken; why, too, in the effective control of tuberculous infection within the person the level of bodily health must be raised—a process that must become general when we act upon the significance of the next great fact, that the greater part of mankind, with indwelling tubercle, becomes ipso facto the soil in which active tuberculosis is to be prevented.

The principles and plans of the founders, as outlined at the very first meeting, were simple: to prevent infection by striking at the germ; to provide treatment for the early case; and, in order to ensure the latter, to hunt out the early case.

How the prevention of tuberculosis came to prevent disease in general, or postpone the onset of inevitable physical decay, has just been mentioned. Whether the founders realized it or not, to prevent tuberculosis would mean the casting of lines into perhaps the greater part of activities that might affect human health adversely. Perhaps one of them, a "thinker through" like Hermann Biggs, might have foreseen in shadowy outline what took shape later; we would expect this of a man who, twenty-two years earlier, visioned the future with a thesis on "The Duty of the State in Regard to Public Hygiene," presented for his bachelor of arts degree. But we may doubt whether even the imagination of Hermann Biggs could have glimpsed what those first plans for the treatment of tuberculosis would lead to.

The fifty or so sanatoria of the time have multiplied to well on toward seven hundred. Four thousand beds have increased to upward of seventy thousand; and the annual "turnover" of patients must now approach one hundred and fifty thousand. Perhaps the hopes of the founders, that carried to the people the promise of the curability of consumption, has not been fulfilled—at any rate, not in just the way that they pictured the future. Various influences have combined to make even the average sanatorium patient only a partial and quite imperfect "cure" at best, and the average "cure," who is restored to active life and holds his ground against further threats of phthisis, a handicapped competitor for the favors and rewards of achievement. But has there ever been anything to match the sanatoria in furthering the cause of public health?

Much has been said about the sanatoria as educational institutions; about how they train their patients in the care and disposal of their infectious fomites, and in the ways of recreative and healthful living—in all details that may contribute to that upbuilding and upkeep of the body that are such necessary bulwarks against the inroads of phthisis. But this personal instruction must play far the lesser part in the whole educational influence of sanatoria.

We may believe that the really potent effect of sanatoria reaches to
the myriads of those in comparative health who take an interest in the patients. Every year new hundreds of thousands of friends, relatives, and acquaintances behold the transformation wrought in enfeebled frames by a regimen of simple elements that are accessible to all. With attention sharpened by interest, they learn of an incomparable hygiene from the living example. It needs no scientific inquiry to demonstrate how often and how deeply these lessons are taken to heart; the pupils have come under the observation of every one of us. And, though in the main the lesson is learned imperfectly and though much of it is forgotten or sunk in the limbo of neglect, we would venture that through patients returned from sanatoria the people of our generation have received their most effective information on the infectiousness of consumption, on the common ways of spread of an infection, and of defense against contagion, on the reversed prognosis of a formerly hopeless malady, on the curative and preventive merits of a simple and easily employed hygiene. In other words, standing as object lessons, the sanatoria and their patients have been gratuitously creating what all of us have ceaselessly been maintaining must be the impulse behind a solid public health movement—they have been shaping an informed public opinion. Have we had any more effective or more widely diffused education of the people?

Or have we had any more cogent or powerful agent than the sanatoria in enlisting the sympathy and support of the people in the aims and practices of public health? The master whose memory we honor tonight [Hermann Biggs] blazoned the motto, "Public Health is Purchasable," in a way that allowed no misunderstanding as to the nature of the actual immediate solvent of our problems of disease. He must have known, too, that sufficient funds would be approved by the public only after the masses were made to see and understand that public health pays; and he did his part in spreading this information abroad. He must have experienced what we all feel—that only too often the appeals for support of forward plans for the control of disease must, of necessity, deal in abstractions or refer to evils that are, at the time, just a little remote to the average man, and therefore leave him cold and unimpressed. Besides, the ready and adequate support of public health must have behind it the sanction of long usage and custom.

It is in just these two respects that the tuberculosis movement, as typified and expressed in the sanatoria, has been preparing the ground for the much-desired development and perfection of the civic shaping of general health. As it happened, tuberculosis enjoyed the distinction of being at once the most representative, the most impressive, and the most widely and intimately felt of all diseases. To cope successfully with tuberculosis undoubtedly appeared to the neophyte, the man of yesterday, as the "acid test" of public health practice. That the average man had this demonstrated to his satisfaction is proved by the tens of millions of dollars that he has voted for the construction and maintenance of our public sanatoria. This support is now becoming habit, and is being taken as a matter of course; the general principle of Biggs' maxim is, through anti-tuberculosis effort, on the way of being taken for granted; and the historian of the future, in recording the politico-economic evolution of the public health movement, will trace out how, through the millions devoted to the care of tuberculosis, the public was led to devote—may we say billions?—to the harnessing of its disease.

This whole process—this slow and
at times painful enlightenment of the people on the necessities and merits of the case—is fundamentally not a whit different from the movement for public school education in this country. In the opening up and settling of new territory all energies and resources must be turned to the work at hand; and to this both body and mind must be wholly applied, and indeed sacrificed if need be. But with stability comes security, and with security the desire to cultivate all stirring talents in the achievement of comfort and leisure. When (whether rightly or wrongly is not to the point) our philosopher and doctrinaire forbears had convinced the people that all men are by nature free and equal the field was sown for universal education out of public funds. The laborer and the mechanic became certain that the fruits of this new land were to be garnered by those of superior training and education and that, given these, their children would indeed be put on even terms with the sons of fortune; and the time came when they demanded public education and the privilege of being taxed for it. This great experiment in the United States was the marvel of foreign visitors in the middle nineteenth century, and the movement has been one of growth and expansion ever since, with, be it remembered, always the same impulse behind it—the conviction in the breast of the common man that education pays, and this conviction translated into action by a deep-seated feeling that the position of his family line is elevated by it.

It is plain that public health must found its appeal to the common man on a similar basis. Once it enters his head that public health pays, he will demand it also, and, as with public education, leave the costs to discussion later. It is conceivable that the present enormous demand for higher education at public cost will so crowd the ranks of the highly skilled and technical and professional workers as to render more obvious the disparities and handicaps that inferior physical stamina engenders. There are indeed signs that an appreciation of this fact is already beginning to take hold of the popular mind—how else explain the nervous and almost exhausting race to keep "fit" and youthful that characterizes our day?

At any rate, Health for Health's Sake is surely an outworn call to action, if indeed it ever had its proper time and place. Health as an End?—no, it never was, never will be, and never can be for a healthy man of normal outlook on life. But Health as a Means?—yes, because it pays, because the man of normal outlook needs it to gain his heart's desire. Such will be the appeal in the future, when our labor for public health will have lost much of its toil because the people of the United States had already seen fit to dot the land with sanatoria for tuberculosis; and, through these and the multifarious activities of the anti-tuberculosis movement, had sown in the mind of the common man the same convictions, the same hopes, the same dreams, the same determination that stirred the Gorgases, the Trudeaus, the Biggeses, and their kind, to point their bark toward a shore where new-found health waits on fiscal sacrifice, and untold comfort and achievement on both.

A few concrete examples of leadership in public health by tuberculosis associations may be mentioned: In one instance a state tuberculosis association assumed the task of procuring the establishment of a state health department by the legislature, with final success. In another the state tuberculosis association took for its task the securing of larger appropriations for the state health depart-
ment, with much success, and the organization of county health departments which has had quite a degree of success and continues. In another the defense of the county health department as a basic and fundamental idea in public health work, when it was in danger of being abandoned—successful.

In New York State today, with only four county health departments, the State Tuberculosis Association is entering on a large program of securing the organization of county health departments, and has issued an extensive manual showing in detail methods of approach and procedure. You will readily perceive, after reading Krause’s essay, that tuberculosis work meshes with public health work as represented by the state and county health departments, and where either of these does not exist the tuberculosis work well organized soon feels and sees the imperative need for such organization. It is proper that we should go further and say, that before this dread and devastating enemy is ready to capitulate on any given sector, a well-organized, well-manned, well-financed county health department must come into action and go “over the top,” and with the cooperation of the tuberculosis workers, properly manned and financed, the winning of the battle against tuberculosis in that area is assured beyond a doubt.

**PRESIDENT OF THE STATE FEDERATION OF WOMEN’S CLUBS SPEAKS**

Mrs. J. M. Hobgood, Farmville, president North Carolina Federation of Women’s Clubs, writes:

“I thank you for your reference to the good work done by the women of our Federation through the sale of Christmas Seals. It is a service of love—one in which each club, no matter how small, may participate. With appreciation of your letter and all good wishes, sincerely yours, Mrs.

Mrs. Charles R. Whitaker, Chairman of Health, North Carolina Federation of Women’s Clubs, Southern Pines, has been Chairman of Health for several years, and has been wonderfully helpful with the Seal Sale every year, the local clubs likewise. For all of which we are duly grateful.

**DURHAM SETS A GOOD EXAMPLE**

The Durham Preventorium at Durham is owned by the Woman’s Club, and its health department features the Seal Sale every year, the proceeds from which are used for maintenance. The total capacity is 32, but they have the money in sight to double the capacity; then they are planning to run it for three months next summer, taking two entirely different groups for six weeks each. This would enable them to take care of 128 children for six weeks next summer—another fine example.

If you don’t “Say It with Christmas Seals” now, you may have to “Say it with flowers” later.
DEATHS FROM TUBERCULOSIS OF THE RESPIRATORY SYSTEM BY COUNTY AND RACE: 1930
TOTAL DEATHS (Tuberculosis, All Forms), 2,425

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THESE CHILDREN KNOW SANTA CLAUS

The mother of these three fine Mecklenburg County children writes that the boys are twins and were three years old last May, and that the baby girl was one year old in September. She says that they have been so healthy that it has not been necessary to call a physician in more than a year.

Here is where Santa Claus comes in: The mother says that before their birth she read carefully all the prenatal literature sent out from this office, and that since the babies came she has read all the literature we have "about children," and that she "has been greatly helped."

May we suggest that the prospective parents of the seventy-five thousand babies destined to be born in North Carolina next year follow the example of these Mecklenburg parents and avail themselves of this helpful service the State Board of Health maintains for them?
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.

Adenoids and Tonsils Cancer Constipation Chickenpox Diphtheria Don't Split Placards Eyes Flies Fly Placards

German Measles Hookworm Disease Infantile Paralysis Influenza Malaria Measles Pneumonia 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)
"Our Babies"
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
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.

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What Christmas Brought to the Sales Family
Boys
Nurse's Note
Health in the Country
Pellagra Deaths
Fear of the Dark
Infant Deaths
Notice
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December

December is the closing month of the year and the month in which all sensible people review with infinite care the course of their lives during the year and analyze the profits and losses, the successes and the failures, and plan a better program for the coming new year.

At this season we cannot help but revert again to the condition of so many aged and infirm people whose best years are behind them and whose outlook on life at this time is dreary. While we are making efforts to please the children and to make them happy, those of us in mid-life should not forget that it is just as necessary to the happiness of the old for us to pay the same attention to those who are in second childhood as it is to spend lavishly on the children.

By all means we should make the children happy. There is but one childhood for any of us, and it is one of the tragedies of the world that so many children have unhappy childhoods and are denied the kind of lives and opportunities that all of us would like for our children to have. At the same time we should do our best for old people who have done the best they can—although that best may not have amounted to much—and who have nothing to look forward to but a more infirm old age than they are at present enduring, and whose only outlook on life is backward, looking over their joys and sorrows, their good times and their hard times, or looking forward to the sunset and the grave.

It is only necessary, in passing by the homes on any city block or through the neighborhoods in any rural section, to look about us to see poking around some of the homes—in fact, nearly all of them, on sunny days—some old woman with her head wrapped in a shawl, peeping timidly, looking on the activities of the world which have passed her by; or some old man with his walking-stick and his heavy overshoes trying to extract whatever of comfort he can out of the present situation.

We of this Christian State could very profitably take a leaf out of the practices and customs of some pagan countries and treat with more respect and more deference the older members of our citizenship. Those who are unable to longer maintain homes of their own and who must of necessity be domiciled with sons and daughters, whose homes perhaps are full and overflowing with children who demand care and food, should be provided for when necessary in some way in order to make their last days comfortable and as happy as possible.

So our greeting to the readers of The Health Bulletin everywhere this year is to remember the old folks as well as the children, and a Happy Christmas and better New Year to all.
Conference of School Dentists and Nurses

On September 28th and 29th there was held at the offices of the State Board of Health in Raleigh a very important meeting of nurses and dentists employed by the State Board of Health, together with a limited number of county health officers and the nurses representing county and city departments who found it convenient to attend on short notice. This meeting was arranged by Dr. James M. Parrott, the State Health Officer, in cooperation with Drs. Branch, Hamilton, and Cooper, and Mr. Booker, of his staff.

The purpose of the meeting, as stated by Dr. Parrott, was to study the problems which confront the school dentists and nurses, and to correlate their activities with other county health workers, and especially with the whole-time and part-time county health officers.

The meeting was very largely attended and enthusiastically received by everyone present.

It was agreed, and made very plain, that the time had come to reevaluate our ideas of school inspection and school professional service. The chief address was made by Dr. Parrott, who set forth the fact that the State Board of Health is taking the definite position that its duties may be specifically stated to be a disease-prevention agency in the strictest acceptation of that expression.

Dr. Parrott very plainly outlined some of the activities that in no way constitute a function of the State Board of Health. He enumerated them as follows: (1) The State Board of Health is not a law enforcement agency; (2) it is not a diagnostic agency; (3) it is not a curative agency; (4) it is only in part a personal health promotion agency; always when functioning even in a limited way as a personal health promotion agency, it must work hand in hand with the physician in all such matters, if undertaken at all.

The conference was participated in by many of those who were present. In addition to the address of Dr. Parrott, formal papers were presented by Drs. Verne S. Caviness, W. B. Dewar, John B. Wright, and A. S. Root, of Raleigh; Mr. W. H. Booker and Dr. John H. Hamilton and Mr. J. W. Kellogg of the staff, and by Dr. L. B. McBrayer, secretary of the North Carolina Medical Society, and Miss Hattie S. Parrott of the State Department of Education. Among those taking part in the discussion of important problems relating to the dental program of the Board of Health work were Dr. J. N. Johnson, of Goldsboro, a member of the State Board of Health; Dr. E. A. Branch, director of the Bureau of Oral Hygiene of the Board; and Drs. J. Martin Fleming of Raleigh and J. S. Betts of Greensboro.

The State Board of Health, under the leadership of Dr. Parrott, is determined to make the work of the Board conform in every way with the fundamental principles of preventive medicine and public health work. Its activities are to be confined to its logical functioning, and it is hoped that in a short time public health work in North Carolina may be moving forward in a manner which will be pleasing to all the friends of progress and advancement in this State.
May Sales stifled a cry of pain as she straightened out her knee injured in a fall down the back-door steps of her home that morning, the day before Christmas. Christmas Eve, and Arthur coming in off the road in a few hours, her Christmas cooking to be finished, decorations put up, the children's stockings to be prepared; and here she was laid up in bed with an injured knee and foot, all because she and Arthur had been careless about having those steps repaired.

Arthur could easily have done the work when he was in from one of his selling trips, or she could have secured one of the many unemployed men in the city to repair the steps with only a small outlay of cash. They had been careless about the steps, and now she had spent more on a doctor's bill, and for medicine, than the work would have cost, not to mention the pain she suffered and the inconvenience both she and her family would have to stand until the injured member was well again, for Dr. House had said very firmly:

"No walking on that leg, Mrs. Sales, until those strained muscles and ligaments have healed."

The leg was not broken, but considering the pain she was suffering, May Sales felt as if it might just as well be broken, for no one except someone who has suffered an injury to the delicate mechanism of the knee can realize just how painful an injury in this region of the body can be.

"Arthur, I am here, in bed," May called, when a door opened and footsteps sounded in the outer hall.

"Why, honey, you are not ill?"

Arthur cried, when he saw his pretty young wife's flushed face on the pillow.

"No, dear, only the back steps."

"Back steps?" Arthur was puzzled.

"Yes, I fell down them this morning, getting some evergreens for Christmas decorations in the house. You know we have been talking of having them repaired for some time, but never got around to it."

"You are right, May." Arthur Sales' voice was serious. "It should have been attended to long ago. I was reading, coming in on the bus, an article in the newspaper. Accidents took 100,000 lives in the United States last year, not to speak of those who were seriously injured, some 10,000,000 of them. Suppose"—young Sales' voice dropped before he uttered the words—"you had been one of the 100,000 who lost their lives, for falls were listed in the article as the second cause of deaths, next to automobiles."

"Oh, Arthur!" May clung to her husband, as the three children crowded into the room to meet their daddy.

The children's happy greetings over, Arthur turned to May. "Among those killed by accidents last year, 18,000 were children under fifteen years of age. I am going to spend this Christmas holiday making my home safe for my wife and children," Arthur declared. "Those back-door steps are where I begin. I am going to call the city employment service and have one of the unemployed men sent down to help me. When you are able to be up again there won't be any chance of your falling down steps because of their needing repair."
Left alone, for the children had followed their father, May reached for the article on accidents that Arthur had read on the bus, and which he had left on her bed. She read slowly and thoughtfully:

"Many accidental injuries and deaths are due to uncontrollable circumstances, nevertheless many accidents which happen each year could be avoided if the proper precautions were taken.

"Automobiles are the greatest single cause of accidental deaths in our country, but there are some bright spots in the dark record of steadily rising automobile accidents. These bright spots are:

"Better traffic regulations in a large number of cities that are reducing the percentage of automobile accidents, and the toll of killed and maimed children.

"The training police officers and school teachers are giving children to be careful.

"Foremost industries are installing safety appliances and methods that are saving many lives. 'Safety first! Be careful!' signs can now be found around the premises of all big businesses. Safety meetings, classes in teaching accident prevention, and the pride of men in industry over the safety records of their particular companies are all doing their share to help reduce accidents in industry.

"But it is in our homes, where supposedly we are safest, that the largest number of preventable accidents occur, and where systematic accident prevention is most needed. Systematic accident prevention in the homes of our country has hardly begun.

"Of the 100,000 deaths caused by accidents last year, 19,000 occurred in homes. Falls in homes caused 8,000 deaths; burns, scalds, and explosions, 5,400; asphyxiations, 3,600; fatal poisonings, 2,000. From these figures it can be seen that much can be done to check home accidents caused by recklessness and thoughtlessness.

"Caution is much better than accident.

"'Drive slowly. Death is so permanent,' is a grim warning, but it has been heeded by thousands of drivers over dangerous roads.

"'Better be safe than sorry' is slang, but it expresses an attitude toward care to prevent accidents that might well be a motto for every home, every individual, in the matter of care for the prevention of accidents."

May lay back in bed after she had read the article and began making a list of all of the things she might do to make it safer for her little ones, herself, and her husband about their home when she was able to get out of bed again.

Falls in homes led the list of causes of death, and she knew just how painful and inconvenient a fall could be, though it caused only injury and not death. Heading her list May wrote:

"Repair all inside and outside steps and stepladders used about the house.

"Do not stand on chairs and tables that are rickety, and therefore unsafe, for hanging curtains, doing housework, or reaching for things.

"Keep everything that might cause burns, scalds, or explosions out of the children's reach, and teach them to let these things alone, and be careful in handling them yourself.

"Call in the gas man and have him test all gas connections to prevent asphyxiations.

"Label all poisons with fresh 'Poison' labels.

"Impress upon the children that poisons will kill, and that children are not to tamper with bottles that have the big white labels on them."
May had completed her list when Arthur came into the room, the two older children tugging at his coat-tails, the youngest boy riding on his father's shoulders.  

"Bet you can't guess what daddy has, mother!" Eva, her eight-year-old daughter, called.  

"You'll never guess, mother," ten-year-old Arthur, Jr., added to his sister's attempted mystification of her mother, and two-year-old Tommy, riding on his father's shoulders, called out, "Never des, muvver!"

"Why, what have you all been doing?" May asked, and then in alarm at the secretive looks on their faces, "None of you are hurt?"

"Oh, no, May, I told the youngsters not to tell; that they might put them in your stocking as a Christmas gift from Old Santa; but I guess they've given the show away." Arthur reached into his coat pocket and brought out a long, legal-looking envelope, passing it over to May.  

"Accident insurance policies!" May exclaimed, as she drew not one or two for herself and Arthur from the envelope, but five of them, one for every member of the family, from two-year-old Tommy to his father.  

"Those accident insurance policies are extra gifts from Santa Claus to the Sales family," the husband and father explained.  "I don't think any program of accident prevention in either the home or industry is complete without accident insurance policies for all of the members of the family, or the workers in an industry.  

"These policies aren't very expensive. In case of death from accident they insure a fixed sum paid to the beneficiaries of the deceased, and what the average family needs even more than death benefits is the amount paid for doctor's, nurse's, and hospital bills in case of accident, and the insurance of a continuance of income in the case of accident to the breadwinner of the family."

"Arthur, what a wonderful 'extra Christmas gift' you have given all of us!" May exclaimed.  "I've just been writing out a program that will help us make our home a safer place to live in, but I never thought of adding, 'Secure accident insurance policies for every member of the family,' but I am going to add that this minute."

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Boys

What is a boy?

He is a person who is going to carry on what you have started.

He is to sit where you are sitting and attend to those things you think are so important, when you are gone.

You may adopt all the policies you please, but how they are carried out depends on him. Even if you make leagues and treaties, he will have to manage them. He is going to sit at your desk in the Senate, and occupy your place on the Supreme Bench.

He will assume control of your cities, the State, and the Nation.

All your work is going to be judged and praised or condemned by him. Your reputation and your fortune are in his hands. All your work is for him, and the fate of the Nation and of humanity is in his hands.

He will carry on what you have started; so it might be as well to pay him some attention.—San Francisco Examiner.

Nurse's Note

One of the State public health nurses sent in a report a short time ago stating that in the county in which she was working they had already completed the preliminary examinations of school children and would spend the next week doing scabies work. Evidently there is a busy time in that section and there will possibly be an increase in the sulphur sales. You have heard about an Ill wind and so on.
Health In the Country

By ROBERT D. WARWICK

QUITE often we hear it said that the country is a more healthful place in which to live than the city. Do you think this always so? It is commonly supposed that good health is the invariable accompaniment of country life; that children who are brought up in the country are always rosy-cheeked, chubby, and free from disease; that men and women are strong to labor. What a misleading statement!

If we are honest in our observation, or have lived on the farm, or have kept our eyes open when visiting in the country, we will remember, one by one, certain facts which will persistently suggest that after all life on the farm is not as healthy as we have been taught to believe. We will remember the frequency of funerals, especially in the winter, and the few families in which all children have reached maturity. We will remember the wornout bodies of men and women, bent and aged while yet in middle life. This erroneous statement, we must admit, is based upon general impression more than upon actual figures. The registration of deaths and undertakers' permits are more incomplete than those in the city; often there are no records at all of illnesses, even communicable ones. During the examination of drafted men for our army and navy the newspapers gave alarming figures concerning the relative fitness of rural and urban men. The men from the urban areas surpassed the men of the rural areas by a very wide margin for physical fitness. Investigations in army camps showed that men from rural communities were more susceptible to pneumonia.

Country life has its advantages over city life in many respects. It is true that in the country one may breathe air made clear by blowing over woodlands, fresh fields of growing grass and grain, and clean white snow; one may, if he wishes, have plenty of sunshine, open spaces, and pure water. But you know that one can pollute the air and water and make home and its surroundings just as unhealthy in the country as in the city. A country home situated away from the highway dust, surrounded by clean, well-kept premises, and supplied with pure water is surely a more healthful home than one in the crowded quarters of most cities.

Like most things, country life has its disadvantages. Now, you may remember that water is one of the chief causes of diseases. In cities the health board watches to keep the water supply safe. In the country each farmer provides his own supply, and often it comes from a dug well into which all manner of impurities may drain when it is not properly located. The typhoid-laden fly is likely to be more numerous in the country than in the city because of more favorable breeding. The house on a farm is often the center of a circle of buildings, barns, chicken houses, sheds, and pens in which are kept horses, cattle, sheep, pigs, and poultry. So it happens that, even though no other people dwell very near, the farm homestead is a sort of colony of living creatures, each helping in some way to defile the air and pollute the soil about the house. The sewerage system of a town or city usually disposes of its organic waste in some manner. The farm community has no such provision. Ordinarily the household refuse (waste) as well as that from...
the barns is left on or near the ground surface. With no means provided for the outflow of the foul liquids that soak into the ground from the manure heaps, earth closets, all the near-by soil becomes saturated and contaminated with filth, bacteria, and with eggs of harmful parasites. With such conditions allowed to exist, one can see how easily the water in the shallow well may become impure. Every rain may wash the filth a little deeper, until it reaches the well itself, or the underground vein by which the well is fed.

It is the purpose of your State and county health departments to serve such an unhealthful condition. Our water supply has control over our health and life; so why not protect it and prolong our life? At a very small cost in proportion to the benefit received, we—I mean we who drink from open wells and springs—can fix that old, open, insanitary water supply so that there will be no ambiguity in our minds as to its purification. Go to your health department and secure the literature which gives all information regarding a sanitary and healthful water supply. Guard your water supply and you guard not only your health, but your child's, and your neighbor's. Have pure water by protection and help yourself to good health.

In all these things about which we have been talking you see that cleanliness is one of the first needs in promoting health in the country as well as in the city. Many who live in the open country take great care in this respect. No domestic animals are allowed about the house and grounds, and the animals' quarters are kept very clean. Deep wells furnish the drinking water, and good sanitary conditions afford protection from disease.

It is strange that people will live in crowded quarters in the country, where there is plenty of room for everyone. Badly built houses, with few and small windows, in which several people live, make bad air. In winter-time even those few windows may be nailed shut in order to save fuel. Thus people may starve for fresh air inside a country house, while everywhere outside there is an abundance of it. It takes healthful living conditions and health habits to make good health the accompaniment of life in the country.

The country has many natural advantages over the city. It has, also, disadvantages. If the disadvantages are recognized and handled intelligently, country homes will be so clean and beautiful that they will make those that live in them healthier and happier.

### Pellagra Deaths

#### First Nine Months 1929 to 1931

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WHERE does fear of the dark come from? Is it instinctive? It would seem as if it must be, for it is very nearly universal among children—yes, and among adults, too! Then it must be instinctive; otherwise it would not be encountered so often. Besides, children who have been most carefully brought up, in such a manner that there has been no opportunity for them to have been frightened by foolish adults, manifest it, too.

Right here science steps in with a decided veto. It is not instinctive; it is not inherited; it is not one of those things to which flesh is heir by virtue of being poor human nature. No, it is always implanted; and it is always implanted by someone, or by many persons; it is not a product of spontaneous generation.

The real instincts are so few that scientists are beginning to fight shy of calling almost anything instinctive. This is a far cry from the psychology of our school and college days, when many of us remember learning long lists of so-called "instincts." We may have gone too far in the other direction—as science has a way of doing when she gets hold of a new idea—in which case we may have to go back and add a few to our present very meager group of sure-enough, bona fide instincts. But even if we do, we may rest fairly well assured that fear of the dark will not be among those added.

No, fear of the dark is manufactured; it doesn't "just grow." And if a thing is manufactured, then it is reasonable to conclude that someone must be responsible for its manufacture. And this is distinctly the case with fear of the dark. If it be remembered that a fear can be generated in a second that may last a lifetime, even those parents who feel that they have been unusually careful about the upbringing of their children may hesitate to say with absolute certainty that there has never been an opportunity for someone to instill this terrifying emotion in their child's mind.

But who would be so lacking in ordinary common sense, not to say common humanity, as to deliberately conjure up such a powerful emotion in a little child? Ignorant servants? Yes, that is one very common source of this fear; and this fact forms a very powerful argument in opposition to the practice of many otherwise sensible mothers, who seem willing to do anything under the sun for their children except to associate with them! Such parents cannot conceive of bringing up a child without the aid—and the pretty constant aid, too—of some ignorant, cheaply hired person whom they might well hesitate to trust with money, easily broken treasures, or precious goods of any sort. That a child is far more precious and far more easily harmed than almost anything else in the world they would probably agree to in theory; but when it comes to asking mothers of this sort to look carefully and intelligently into the antecedents—physical, moral, or intellectual—of a nurse girl, they are completely at a loss for any earthly reason why they should be more particular than acquaintances of theirs who are similarly careless and thoughtless.

But it is not only ignorant servants who conjure up this very potent incentive to childish action. After all,
are not all of us adults who deal with children constantly on the alert to find something that we can count upon to make our children do what we want them to do? Volunteer assistants, grandparents, uncles and aunts—it is surprising how often some of these trusted familiars will expedite matters by an appeal to the aid of the Big Black Man, the Bogey Man, or some other mythical being who takes a hand in the affairs of little children when they are unnecessarily slow about doing the things we want them to do. Oh, of course they don’t mean any harm; and equally of course the children know perfectly well that there is no such thing as this mythical figure, thus invoked sometimes as much in fun as in earnest!

Unfortunately, that is just what they do not know! Or, even, if they do know it with their minds, they do not know it with their ‘emotions, which is quite a different matter, if we will stop to think it over a bit. Many a lifelong fear of the dark has had its rise in just some such apparently innocent, even joking, reference to a personality which the child knew perfectly well did not exist, but which has nevertheless dogged him, awake or asleep, across half a lifetime. Let’s be careful how we let careless, inconsiderate people have the opportunity of influencing our children, no matter how well-meaning we may believe or know them to be.

But let’s come a little closer home, still. Did you never hear a parent frighten his child with tales of what the doctor, or the policeman, or some other character equally harmless in himself, but equally open to such baseless charge, will do to him if he doesn’t do thus and so? If you have not, just spend a while in the waiting-room of any physician you know who has many children in his practise. “You’d be surprised!”

Whatever the cause, the parent whose child is afraid of the dark is faced with a very real problem; and he wants to know what he is to do about removing this fear and curing the child. What are we to tell him? How can he accomplish this task?

First of all, let’s tell him what not to do. Let’s assure him, with all the emphasis we possess, that punishment, ridicule, shame, threatening, and the usual devices resorted to by exasperated parents, are all worse than useless. If anything is needed to fix, or confirm, this fear, these ill-advised methods may be counted upon to do just that. The less that is done to make the child self-conscious in this matter, the better it will be for all concerned, and the sooner a real cure can be attempted, with some prospects of success.

One of the first steps to take is to choose some time in the day, when there is no immediate prospect of night’s coming on, and when the youngster is in a good mood, for talking about this matter freely and without any emotion whatsoever, just as any other interesting and somewhat puzzling phenomenon might be discussed. It may be that he remembers with perfect distinctness when the incident happened, and what it was, that started this paralyzing fear. Talking about it may be all that is necessary to rid him of the obsession.

In any event, do not reason with him. The chances are that he knows quite as well as you do how unreasonable it is. It is his emotions, not his mind, that must be convinced. Sitting by his side may be of help; or it may be harmful. Trial alone will demonstrate whether this may be necessary as a temporary expedient; it rarely works permanently. Leaving a light in the room, or in the hall,
is quite as apt to lead to increased demands as to lessened requirements.

A clever device that has been used effectively consists in letting the youngster have a small flashlight to take to bed with him. "The expulsive power of a new affection" turned night-time from a terror into a longed-for period.

Suggestion may help the thought of night-time as a soothing, restful period, and the bed as a gentle mother that holds the child comfortably and at ease, may be of help with a certain type. Careful, unhurried experimentation is the safest course to pursue.

Needless to say, wild tales and blood-curdling adventure stories the last thing at night had better be dispensed with. Horrors of any sort make the poorest of bedfellows!

Patience will work wonders; and the cure of this condition is well worth all the time and forbearance that it costs.

| TOTAL NUMBER OF INFANT DEATHS UNDER TWO YEARS OF AGE |
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| First Nine Months 1929 to 1931 |

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**NOTICE**

Beginning about the first of September and running entirely through the winter months, the State Board of Health receives an average of about one-half dozen letters per day from people living practically in every section of the State who have been asked to write papers for women's club meetings, parent-teacher associations, or before other gatherings on some health topic. They write us for information and literature, which we are glad to provide.

This is a very fine practice, and we wish to encourage it in every way possible. There is one feature of this custom, however, which gives us no little worry and which militates against a thorough preparation and consequently against an intelligent discussion of the subject. The practice we refer to is that almost every one of these writers puts off writing us until the last minute. Numbers of the letters state that they are preparing the paper to read at a club meeting the date of which is frequently the very day or the day after on which we get the letter.

It is manifestly impossible for us to send them an intelligent letter, getting up information which sometimes requires the services of a clerk two or three days to assemble, and to get the literature that we have already in pamphlet form to these people even by the time their lecture is to come off. Essayists on such programs should write us at least two weeks in advance of the scheduled date of delivery of the paper. In this way we will have time to give them an intelligent answer and to send them the desired information.

We earnestly hope that all program committees of clubs and associations of every description will read this notice and bear it in mind.
Rickets

By THE UNITED STATES PUBLIC HEALTH SERVICE

In recent years few diseases of childhood have attracted more attention than rickets. Many able investigators have studied the subject by the most modern methods of scientific research, and even among the general public interest in it has been widespread.

Rickets is a nutritional disease in which the chief difficulty seems to be related to the adequate utilization of lime and phosphorus. If these two elements are not present in the blood in the proper amount and proportion, deficient calcification of the bones will result, and the characteristic bony deformities of rickets are produced.

The deformities include knock-knees, bow-legs, enlarged joints, deformities of the spinal column and pelvis, enlarged head, chest deformities, and similar conditions, and are associated with a prominent abdomen, flabby muscles, sweating of the head, and delayed teething.

At the present time rickets is a milder disease in the United States than it was formerly, and cases with marked deformity are becoming rather rare.

There seems to be little doubt that the development of rickets is intimately associated with climate. It occurs most often and in the severest degree in the temperate zone. Apparently it is more prevalent in cities, particularly in large industrial centers, than in the country.

Though rickets may begin earlier, it is rarely evident much before the third month of life, and the active process is usually over by the eighteenth month. There is, however, a form of late rickets which appears in older children; but it is the widespread common, or infantile, type of rickets which is so much discussed at the present time. In this country the more deeply pigmented dark-skinned races are more susceptible to the disease.

The most striking symptom of rickets consists of the various bony deformities mentioned, which are due to a defective hardening of the bones. In order to have perfect bone formation, the body must have sufficient lime and phosphorus in proper proportions. It is possible, however, for the food taken into the body to contain these elements; but in rickets, owing to the absence of some factor or factors, they are not mobilized so as to bring about proper calcification. This mobilizing factor is apparently vitamin D, and in the absence of this vitamin the body is not able to use the lime and phosphorus in such a way as to insure normal bone development. It is possible, and even probable, that there may be other circumstances in addition to a lack of vitamin D which are partly responsible for the development of rickets; but at the present time we have no definite knowledge on this point. In order to prevent the occurrence of rickets or to cure the disease when it does occur, the antirachitic substance must be supplied in addition to an adequate intake of calcium and phosphorus.

Rickets in itself is not a fatal disease. In view of this fact, one might naturally inquire why the medical profession and a large part of the general public are so concerned about the matter. If children never die of rickets, why take so much trouble to prevent it?

While it is true that children very rarely, if ever, die of rickets, this dis-
ease seems to render them more susceptible to infectious diseases. This is particularly true of respiratory diseases. The ordinary rachitic child does not die of rickets, but he may die of pneumonia if his rickets is of a severe type. Not only is there an increased general susceptibility to infection, but the severe deformity of the chest accompanying the disorder seems to add a special hazard in the case of the pneumonias. This, of course, is true only of the severer types of rickets, which, fortunately, are now much less common than formerly.

Happily, there is a tendency for the child to outgrow the conditions of bow-legs and knock-knees—the most common deformities of rickets. On the other hand, in some cases these may increase.

One of the most important results of rickets is the deformity of the pelvis. Severe rickets may cause serious malformation of the pelvic bones; their growth may be arrested so that a rachitic pelvis is smaller than normal; or there may be abnormal and unequal growth resulting in deformity. Pelvic deformities may have serious consequences in connection with childbearing, and may lead to the death of the infant, so that rickets must be reckoned with as a factor in infant mortality.

In addition to the hazards of rickets already mentioned, there is apparently an intimate relationship between infantile rickets and infantile tetany. The latter is a disease characterized in its severe form by convulsions. Unlike rickets, tetany may be the immediate cause of death, as a result of heart failure or respiratory failure. Since even a mild case of rickets may be complicated by tetany, the prevention and cure of rickets become matters of importance.

The same factors which will cure most cases of rickets will also prevent the disease if they are made available for the infant before the condition develops. These antirachitic agents are sunshine, ultra-violet light (artificial sunshine), cod-liver oil, viosterol, and irradiated foods.

About ten years ago it was demonstrated that sunshine has a definitely curative effect on rickets, and it is now generally recognized as a most important factor both in the prevention and cure of this disease. However, not all of the light rays which go to make up sunshine are antirachitic; only the short ultra-violet rays have this property. These light rays are effective because they enable the organism to make use of the calcium and phosphorus in the food in such a way as to bring about normal hardening of the bones. It must not be forgotten that these minerals must be present, since the best antirachitic substance in the world cannot make bone without bone ingredients. They must be supplied in the diet.

The effect of sunshine on rickets depends more upon its quality and intensity than upon the actual number of hours of sunshine available in any locality. The quality of sunshine varies with altitude and latitude, and other physical conditions. Winter sunshine in the latitude of Washington, D. C., is poor in ultra-violet rays, and should not alone be depended upon for protection. Smoke, dust, and moisture tend to sieve out those antirachitic rays of the sun; and when passed through ordinary window-glass, sunlight is without any prophylactic or curative value, because they can not penetrate this substance. Neither can the ultra-violet rays exert their healing effect through clothing, for the same reason.

Since we do not always have sunshine of the proper quality and intensity, we have learned to make use of artificial sunlight—the ultra-violet
rays produced by special lamps. In this way we can secure irradiation whether the sun shines or not.

The second great natural preventive and curative agent in rickets is cod-liver oil. The effect of cod-liver oil seems to be due chiefly to its content of vitamin D, the factor which mobilizes the calcium and phosphorus in combination essential to the calcification of bone.

Vitamin D, however, can be produced by exposing the chemical substance ergosterol to ultra-violet radiation. This irradiated ergosterol is a very powerful agent in the prevention and cure of rickets. It is given to the child in very small doses. Overdosage, on the other hand, causes disastrous results; therefore it should only be administered on the advice of a competent physician.

Certain foods that ordinarily have no antirachitic value can be activated by exposure to ultra-violet rays. These irradiated foods also exercise antirachitic properties and may become useful adjuncts in the prevention and cure of the disease. Cod-liver oil contains both vitamins A and D, and some irradiated foods contain other vitamins besides D.

No matter what antirachitic substance is used, one should be careful to see that the diet is well balanced and contains adequate amounts of calcium and phosphorus.

INSIDIOUS ONSET OF DISEASE

Dr. L. E. McBrayer has supplied us with the very striking cut printed this month on the outside back cover of THE HEALTH BULLETIN. The North Carolina Tuberculosis Association, of which Dr. McBrayer is managing director, has paid for the extra expense of publishing this drawing in colors. We think it very well worth the price and the effort. The idea is, of course, to emphasize the fact that tuberculosis does not attack suddenly. Some diseases come on with sudden onsets and quickly terminate either in death or recovery, but the most of the diseases which afflict mankind are diseases of insidious origin and give full warning to the individual long before the stage of serious impairment is reached. This applies for the most part to heart disease, to cancer, diseases of the blood vessels, and kidney diseases, as well as to tuberculosis and a large number of other less common diseases.

The diseases just mentioned are responsible for a great majority of the deaths to people in this State every year. Each and all of them give warning signs, and if an individual is wise and sensible he will consult a competent physician at the very first sign of the presence of one of these diseases. When a competent physician makes a thorough examination and locates the trouble in its incipiency, nine times out of ten the further onslaught of the disease can be stopped permanently, or at least postponed, giving the individual often a long number of years to live in comparative comfort and safety.

No, most diseases do not strike like lightning, but they come on slowly, gradually, and insidiously, and the worst aspect of such a situation is that such a large majority of people pay no attention to the warning and make no effort to prevent the further damage done by such diseases until it is too late.
Tuberculosis does not strike like lightning. Every case comes from another.