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Life & Health





CONTENTMENT—

Comes from the satisfaction of feeling that one's work has been well done, his duty faithfully performed.

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The First Duty of Man

to himself and his loved ones is to preserve the health of body and mind. When the body is sick, the spirit suffers, discontent fills the mind, reacting on the physical organism, aggravating the diseased condition, and often causing it to take a chronic form.

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a rest and change in quiet, cheerful surroundings, combined with properly regulated diet and a carefully prescribed course of Sanitarium treatments, will produce a wonderful improvement in both bodily and mental conditions. A feeling of contentment and well-being takes the place of suffering, gloom, and despair.

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Let Us Help You

Come and spend a few weeks at the Sanitarium, and you will go away rejoicing in a new hold on life.

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Chamberlain, South Dakota

Life & Health

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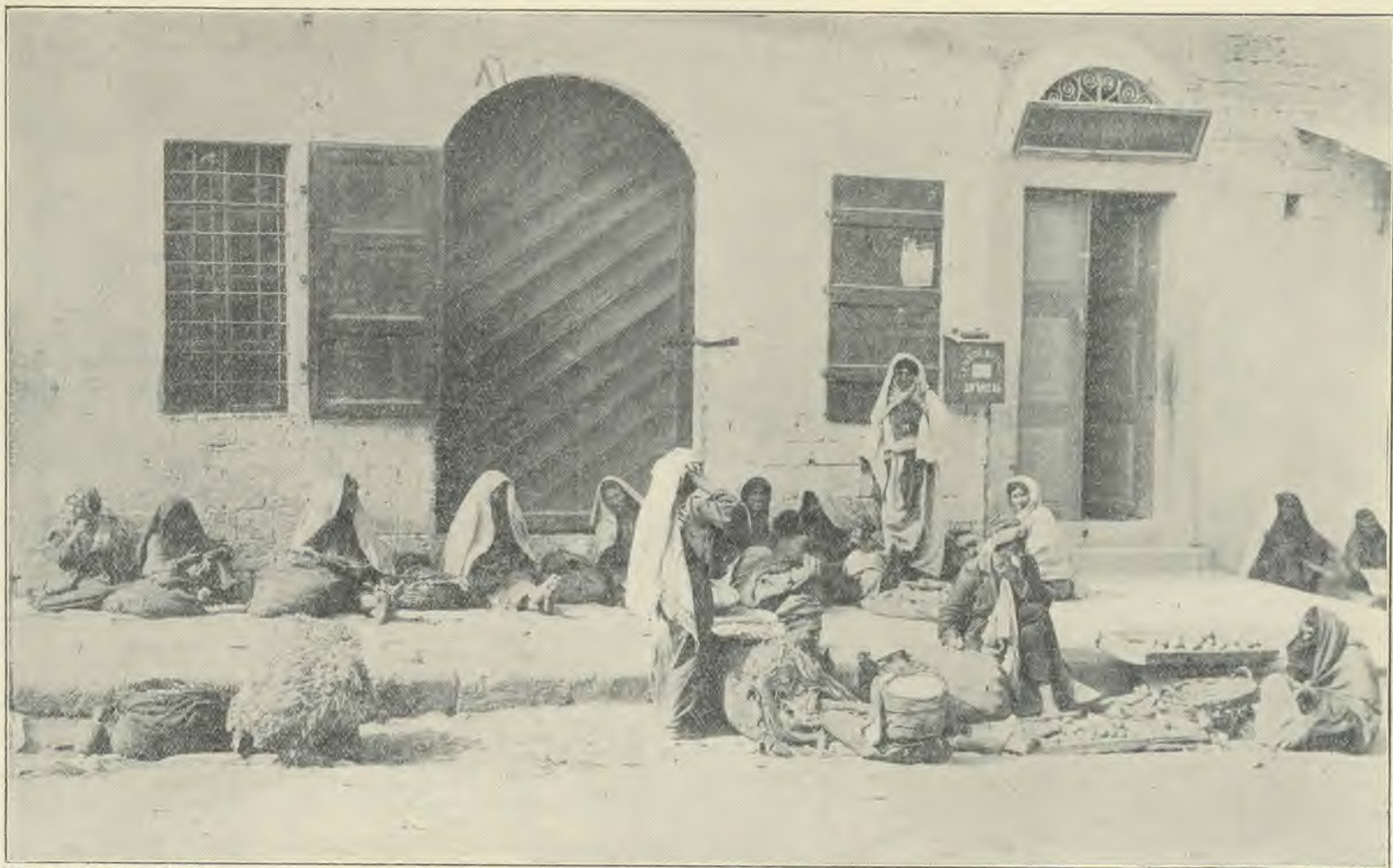
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MARKET SCENE IN JERUSALEM

Life & Health

HOW TO LIVE

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Vol. 33

April, 1918

No. 4

War Time and Our Health

L. A. Hansen

NOT all the health problems of a nation at war are confined to the soldiery. War time is a time that requires special consideration for the health of the civilian population, and it is the time when perhaps the least consideration is given the matter. So many other things take our thought. The question of who is going to war, sending off the soldiers and trying to do for them, the general preparations for war and the progress of it, Liberty Bonds, Red Cross activities, the sugar shortage, the coal famine, the wheatless, meatless, sweetless, and heatless days, and often the sleepless nights; these and many other questions of more or less intense interest hold our attention.

As a matter of fact, the first question, the one big question, should be the health of the nation, both soldiers and non-combatants. Sickness will decrease the efficiency of any nation; therefore na-

tional efficiency demands that health conditions for all be made a paramount issue. Those who go to the front, whether they do or do not return,

whether they come back sound in body or maimed, should have the assurance that the loved ones at home are in as good health as possible. Those who remain at home and have to carry extra burdens in the absence of strong ones, need, next to a good hold on God, all the good health it is possible to have.

First in health considerations comes the question of food. This is true at all times, but war time makes the question more acutely important on account of the many changes demanded in the general food situation. Much food must be sent away to our own soldiers and to the Allies. Imported foodstuffs are not available to us. Our own food production has to be greatly increased. Some things we have been used to having we



"Not all the health problems of a nation at war are confined to the soldiery."

must do without. New dishes must be devised, and we have to learn to both prepare and like them. Life-time eating habits of people are affected, and in some cases, markedly changed, a thing that is not so easy to accomplish as it is to write about.

We cannot have health without plenty of good food, so we must count on providing a supply. Gardening becomes a part of fundamental health preparation, and with it everything essential to successful raising of foodstuffs is important. The proper husbanding of food, storing, canning, drying, and everything else necessary to save food, is in the line of health and individual and national efficiency.

To the housewife the food question in war time assumes an importance never before realized. Cooking has a big meaning now, if it did not before. It is now a part of the war program, and what goes on in the kitchen is felt, in a measure, in the trenches, if we are to believe our food administrators. War economy demands a care in the manner foodstuffs are treated.

Not only is the question of national food resources reflected in the culinary end of the home, but the welfare of all turns a good deal on the way the food is prepared. Skill in the preparation of food is now put to the test. New dishes must be palatable if we are to take to them. Some sound argument as well may be needed to set forth their acceptable virtues. Mother has to read up now and get down to facts on nutritive values, food combinations, proper rationing, and so forth.

But there is more than food conservation to the health question. We need as much as ever to guard our water supply. We must remember that our fresh-air requirements have not changed. The clothing needs to be watched as ever, and a little more when it comes to adjusting ourselves to our modified fuel conditions.

There are epidemics to look out for, so as to avoid them. Children's diseases are as catching as ever, and are no better

for the children to have than they ever were. Colds, pneumonia, tuberculosis, cancer, and the whole gamut of sickness are still on the job, remember. Any degree of patriotism for the soldiers who have gone overseas or for our National Government will not keep one in health if the laws of health are not observed.

Thus far the changes demanded of us to meet the war economy have largely been such as in themselves make for health. Wheat saving has led to the use of other excellent cereals, the values of which are becoming better known by an extensive educational campaign and by actual experience. Saving meat for others is proving of great benefit to ourselves in as full a measure as we let others have the meat and substitute things just as good and even better. As we have used too much fat anyway, it is a blessing to us to learn how to live well on less. We have an awful big sweet tooth in this country, so cutting down on our sugar ration, including candy, is a health measure. The more simple living called for is just what wise men have long told us we need.

No, in itself the war régime, as we so far know it here, is not against health but decidedly in favor of it. The elements of health are in it; it is for us to get health out of it. But natural health conditions must naturally be used in order to benefit. We may overlook or ignore them, or we may spoil them by misuse.

War time is bringing to us as a nation a splendid opportunity to find big health through the simpler and saner living required. It also brings a liability to disease because of our failure to properly relate ourselves to changed conditions. The ample bill of fare available must be utilized or we shall be underfed. Our new foods must be properly prepared and must be eaten with regard to digestive demands. Wasteless meals must not mean a stinted fare. Simple living must not be foolish living. Economy must not become poverty or deprivation.

And what if the worst side of war comes to us in its full force, the return of the wounded and the word that many will never return at all? Will there not be trying ordeals for many to meet? Should not a people be in full strength to stand such and to help others stand

them? Trials of unusual weight need strong persons to bear them. Severe tests find the weak places in us.

Never before was there a greater need that we sacredly guard our health. Never has there been a more favorable time for getting health.

Fifty Years of Vegetarianism

A Personal Experience — Frank D. Starr

I WELL remember the first number of the *Health Reformer*, the pioneer health journal among Seventh-day Adventists, published in August, 1866, and how I read with approval the principles advocated in that monthly magazine, and soon became very enthusiastic in the observance of those principles. I adopted them as an experiment, as my health was not good at that time. My digestion was poor, my circulation was far from good, and I was from my earliest recollection a sufferer from frequent aching and rumbling in my head. In childhood I was so frail that my teacher told my parents I would never be strong enough to be a farmer or to do other manual labor, but would have to take a position as a clerk or school-teacher or something of that nature.

When my parents began to practice reform in diet, I thought I would try for

a time to see what the change would do for me, so I drew up and signed some resolutions, good for four months.



PASTOR F. D. STARR

Among these were entire abstinence from flesh food; two meals only a day, with strictly nothing between meals; discarding of rich cake and pie, using mostly Graham bread (which to me at that time was very distasteful); eating no butter, but cream instead; and using a limited amount of salt, sugar, and milk. These, with some regulations concerning bathing, ventilation, labor, and early retiring, I scrupulously observed. The improvement I made as a result of

these changes was so surprising and satisfactory that I was much elated over it. The headache and almost constant gnawing in my stomach left me. I was stronger, had more energy, and was much better in every way.

In the meantime I read with much interest radical articles published by a

[Having known the writer of the accompanying article for nearly twenty-five years, and knowing him as a splendid example of physical, mental, and spiritual attainment, we believed our readers would be interested in a personal word from him and asked for it. Pastor Starr is a modest man. He could tell more of what healthful living has done for him than he does. Physical tasks of considerable magnitude have no dread to him. Even at his present age, close around seventy years, he works hard. Distances do not mean much to him, for he can walk them. We have known him often to walk from one railroad station to another, carrying his baggage rather than wait for a belated train, and in order to save the fare for some benevolent work, perhaps to help some young person through school. We have seen him meet irritating conditions without getting irritated. He has mastered several languages; taught classes to a perfection; preached in the most sensible and spiritual sort of way; and has a memory that is a marvel.—L. A. H.]

celebrated doctor (not a Seventh-day Adventist), in which he seemed to demonstrate that milk, sugar, and salt were not at all necessary. I thought if the reforms I had already accepted had done me so much good, how much greater benefit would I experience if I practiced his teachings also. So, at the expiration of the four months, I set out on what I thought was the true-blue system. I allowed myself no sugar, not even with very sour fruit like currants or gooseberries; I used no salt on or in anything, not even beans or potatoes; I ate no milk or other dairy products. Neither would I eat anything that had any salt, sugar, or milk cooked in it. To my great surprise, the thing did not work well. I gradually went down and was losing in weight right along, till it seemed to me the grave was in sight, if one foot was not already in it.

I had to give up this manner of living and felt compelled to return to the standard followed the first few months of my reform experience. I began to improve, but very slowly. My system did not seem to respond to ration-diet as it did the year before. Still I was of the persuasion that the radical theory I had taken up and dropped was the correct one, it had been so clearly proved to me on paper, but there must be some peculiar condition in my case that prevented its working as it ought. I was rather discouraged, but an acquaintance told me that he knew people in New York State who had adopted the reform diet and regained their health, and if I would stick to it for two or three years, I would come out all right.

His words proved to be a true prediction. I continued the observance of rational principles of health reform, and in a year or two found myself in ex-

cellent health. I could work hard on the farm all day long, day after day, and not become weary, had no aches or pains whatever, was in good flesh, and people would inquire what made me so well and my countenance so ruddy.

A half century has passed since that youthful experience, and I am free from the aches and pains that once pestered me. I can travel all day and not become exhausted. But sometimes I wonder how much better my present condition might be if I had not for a time switched off on that line of extremes in diet till I reached the valley of the shadow of death. I made no profession of religion at that time and was not ready

to die, and the Lord in his mercy prevented my going any farther in that line.

I occasionally hear those extreme views advocated, but I do not wish to experiment in that direction any more, but continue along the line of the Heaven-sent principles of consistent health reform, including entire abstinence from flesh foods to which I have adhered for the last fifty years, with the exception of a few occasions nearly thirty years ago. As this is the relation of a personal experience, I wish to close it with the personal experience and testimony of one who never took an extreme position in regard to health reform:

"Those who take an extreme view of health reform are in danger of preparing tasteless dishes, making them so insipid that they are not satisfying. . . I use some salt, and always have, because salt, instead of being deleterious, is actually essential for the blood. Vegetables should be made palatable with a little milk or cream, or something equivalent. . . Some, in abstaining from milk, eggs, and butter, have failed to supply the system with proper nourishment, and as a consequence have become weak and

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Original Articles.

DIETETICS.
 BY J. C. WALKER, M.D.

Discipline in that general which is not of a fleshly nature, but of a spiritual nature, and which is not of a carnal nature, but of a heavenly nature, is the only way to the life and peace of the soul. It is the only way to the life and peace of the soul. It is the only way to the life and peace of the soul. It is the only way to the life and peace of the soul.

As the food consists of a mixture of various kinds, having different physical and chemical properties, it also does various kinds of work in the body, and different actions, from each other.

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unable to work. Thus health reform is brought into disrepute. The work that we have tried to build up solidly is confused with strange things that God has not required. . . . But God will interfere to prevent the results of these too strenuous ideas. The gospel is to harmonize the sinful race. It is to bring the rich and poor together at the feet of Jesus. . . . As I preach the gospel to the

poor, I am instructed to tell them to eat that food which is most nourishing. I cannot say to them, 'You must not eat eggs, or milk, or cream. You must use no butter in the preparation of food.' The gospel must be preached to the poor, but the time has not yet come to prescribe the strictest diet."—*Testimonies for the Church,* Mrs. E. G. White, Vol. IX, pp. 162, 163.

Stop That Food Waste!

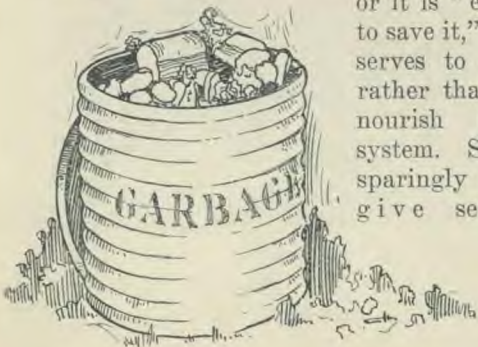
G. H. Heald, M. D.

LAST year, experts of the United States Department of Agriculture estimated as a result of dietary studies made by them, that there is in the United States an annual food waste of \$700,000,000, that is about \$7 a year, or about 2 cents a day, for every man, woman, and child. Are *you*, dear reader, contributing toward that seven hundred million wastage, and are you going to continue in the old way, or will you for the sake of your country and suffering humanity make a change?

Following are the ordinary methods by which food is wasted, every one of which can be put aside without any real sacrifice, provided the resolve is made to break up old wasteful habits and form new economical ones.

FOOD IS WASTED —

Whenever it is served in generous portions. Either a little is left on the plate, or it is "eaten to save it," and serves to clog rather than to nourish the system. Serve sparingly and give second



helpings when this is necessary.

When a dessert is served after a full meal. Often a dessert is an appendix to a full meal, which would not be tolerated were it not that it is highly sweetened and flavored. If the ordinary food has fully appeased hunger, to eat the dessert is a sin against the body as well as a waste of food needed by the starving in this country and Europe. It is a double sin.

When it is not properly cooked, so that part of it necessarily goes to the garbage can.

When left-over food is thrown out instead of being made into new dishes.

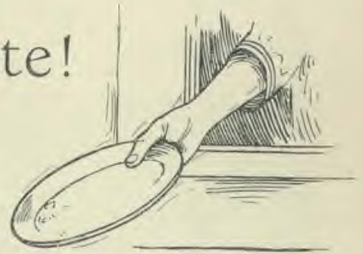
When milk is allowed to sour and is thrown down the drain, or when the remnant of a bottle of milk is thrown away. Even skim milk is a most valuable food.

When the water from boiled vegetables is poured down the drain.

When a portion of a serving of butter is left on the plate and is thrown into the garbage.

When food is forgotten, or carelessly handled, so that it spoils.

When rats and other vermin are permitted to destroy food.



When good human food goes to feed domestic animals.

When potatoes and other vegetables are carelessly pared; as much as 20 per cent of the food material may be wasted.

While every consumer of food is in a measure responsible for this wastage, the responsibility rests very largely with those who prepare and serve the food.

Much has been said about undernutrition; but the average American is not undernourished, except perhaps in those cases where a one-sided diet deprives of certain essential elements of food. Many, in fact, would be much better off physically if they had smaller servings and not too much in the way of dessert to tempt a jaded appetite.

Why not face the question frankly and settle it on the right side? Are you a food conserver or a food waster?

SUGGESTIONS

Uneaten cereal can be used to thicken soups, stews, or gravies.

Stale bread can be used in making puddings and vegetable roasts, or can be dried into zwieback or rusks.

Milk, whether whole or skimmed, can be added to cereals, soups, sauces, and other foods. Sour milk or buttermilk can be used in making bread, or can be made into cottage cheese.

The water in which rice, cabbage, potatoes, and other vegetables are boiled contains nutritive material of great value, and furnishes a basis for a fine-flavored soup.

Potatoes are most economically used when boiled in their skins; or when baked, if the skins have been thoroughly oiled first.



Photo, Boston Photo News Co.

EXTREME POVERTY IN ARMENIA

CONSERVATION RECIPES

Foods to Replace Meat and Wheat

George E. Cornforth

INSTEAD of wheat cereals, try these:

RYE CEREAL WITH NUT CREAM

2 cups water.
 $\frac{3}{4}$ teaspoon salt.
 $\frac{2}{3}$ cup rye meal.

Add the salt to the water and heat to boiling in the inner cup of a double boiler placed directly over the fire. Whip the rye meal into the boiling water and stir until thick. Then place the inner cup of the double boiler into the outer cup, which contains boiling water, and cook from one-half hour to one hour.

Serve with —

NUT CREAM

Put one-third cup light-colored peanut butter into a small bowl. Add a little cold water to it and stir till smooth, then stir in a little more water. Continue stirring in water till the mixture is free from lumps and of the consistency of thick cream. Add two teaspoons sugar and a few drops of vanilla flavoring.

Rolled rye can be bought in packages to be used as cereal. It costs more and makes no more wholesome and nutritious cereal than the old-fashioned rye meal that was common in our grandmothers' days.

NATURAL BROWN RICE WITH FIG SAUCE

Natural brown rice has the same relation to the ordinary white rice that Graham flour has to white flour. It is the whole of the grain. As it comes in packages, it is clean and requires no washing.

$\frac{1}{2}$ cup natural brown rice.
 $1\frac{1}{2}$ cups boiling water.
 $\frac{1}{2}$ teaspoon salt.

Cook in a double boiler one hour.
Serve with —

FIG SAUCE

Wash one-fourth pound of figs and cut off the stems. Run the figs through a food chopper with a fine cutter. Stir enough hot water into this marmalade to make it of the consistency of gravy. Add one tablespoon sugar and cook in a double boiler fifteen minutes.

Pour some of this fig sauce over each serving of rice, and sprinkle a few chopped nuts over the sauce.

GOLDEN GRAINS WITH DATES

2 cups water.
 $\frac{3}{4}$ teaspoon salt.
 $\frac{1}{2}$ cup cornmeal.

Prepare according to the directions for cooking rye cereal, cooking one hour in a double boiler. Before serving, stir into the cereal one-half cup dates stoned and cut into small pieces. Serve with cream or milk.

PEARL BARLEY WITH RAISINS

1 quart boiling water.
 $1\frac{1}{4}$ teaspoons salt.
1 scant cup pearl barley.

Cook in a double boiler five hours. Before serving, stir in 1 cup raisins. Serve with cream or milk.

It takes so long to cook barley that it is well to cook enough at one time to serve at more than one meal. Raisins may be stirred into only part of the barley and the remainder served with a gravy as a substantial dish for dinner.

NUT-BUTTER GRAVY

2 cups water.
2 tablespoons light-colored peanut butter.
2 tablespoons flour.
 $\frac{3}{4}$ teaspoon salt.

Dissolve the peanut butter in the water by stirring the water into the butter a little at a time. Heat to boiling

and stir in the flour that has been stirred smooth with a little cold water. Cook two minutes.

Or the barley may be served with a pea gravy made by thickening left-over pea soup with flour to the consistency of gravy.

Rolled oats and Scotch oatmeal are other cereals that should be given their share of use in replacing wheat cereals.

These cereals are nutritious, and when

served with the dressings suggested, may constitute a substantial part of the meal, no meat being required at such a meal. The rest of the meal may consist of fruit or such vegetables as cabbage (preferably raw), celery, lettuce, and spinach.

And let it be remembered that cereals contain considerable starch and require mixing with the saliva for good digestion, therefore cereal dishes should be well chewed.



Goobers

L. A. Hansen

SOME of our readers will not know what "goobers" are. They are worth about \$60,000,000 a year to the South. The goober is one of the richest foods, containing a large per cent of fat and about 30 per cent of protein. A good many of you have eaten the butter made from the goober, and there is also a very excellent salad oil made from it. In other words, we are speaking of the peanut when we talk about the goober.

The peanut is a splendid substitute for flesh food, affording food elements similar to those of flesh foods, but in higher proportion and free from any injurious elements of broken-down animal tissue. In cost the protein of the peanut compares favorably with that of other staple foods, such as bread, milk, peas, and beans.

As ordinarily eaten, peanuts are not very easily digested. This is probably due to insufficient chewing and to the fact that they are eaten between meals or after a hearty meal. They are suitable to form a part of a regular dietary.

Some people believe that the addition of salt prevents digestive disturbances, but this is not borne out by facts. Salted peanuts are probably more palatable to most people.

The average healthy person can probably eat peanuts without discomfort, while others may have spoiled their ability to digest them. When nut butter was first introduced, many well-meaning persons were tempted to eat too freely of it. They may have gotten their share, as now they seem to find that peanut butter does not agree with them.

The peanut is a concentrated food, and should be used sparingly. The use of large quantities of peanut butter or the use of the butter in too many foods, is not advisable. Being so rich in protein, the peanuts should be used in connection with bulky or starchy foods, such as fruits, breads, and vegetables. Caution should be exercised in the use of prepared nut foods, of which there are several varieties on the market.

Every one may not know that peanut butter is better when thinned with about

an equal amount of water. Work in a small quantity of water at first, thoroughly emulsifying the mixture, gradually adding more, stirring with a spoon or fork. Thus prepared, the butter is as palatable as without the water, more so to some people, and will go much farther, besides helping to prevent overeating of it.

The peanut oil has a very high fuel value. It belongs in the same class as cottonseed and olive oil, and may be used where these are used. Large quantities of peanut oil have been sold under the name of olive oil, but there is no reason

for this excellent oil's going under false names. The more it is known, the better is it liked.

It seems probable that peanut meal and peanut oil will be available in larger quantities and at lower prices than heretofore. Peanut cultivation is being urged, and in many places in the South where the boll weevil has discouraged the growing of cotton, the raising of peanuts has been found a profitable industry. Cottonseed mills have been utilized for pressing the oil. When prepared with cleanliness the oil is ready for use without refining.

Preparation for the Spring Drive

G. Henry Hale

IF nature practices a little camouflage and prepares for us a young summer in February to the extent that we are persuaded to exchange the easy chair for spade, hoe, and rake, we are not likely to continue long the process of raising blisters on soft hands, for Winter in his retreat northward will surely observe our intrusion into his domain, and will sweep down on us in fury. In middle latitudes a March garden will occasionally succeed, but oftener the first successful gardens will date from April or even the first of May. The March garden is worth while, however, for even if it is a failure, the only loss is the cost of the seed, a small item, and all the work done on the garden is that much valuable treatment for spring fever. And if the garden is a success, it will furnish some very desirable and much-needed early vegetables. The only vegetables to be tried in the early garden are the cool-weather vegetables — peas, lettuce, radish, etc.



The garden, to be successful, must be cultivated when the soil is in right condition. If it is too wet, lumps or clods unfavorable to plant growth will form and the gardener may have trouble for the remainder of the year. If cultivation is postponed until the ground is too dry, the surface, during dry weather, permits rapid evaporation of the moisture, and during rainy weather prevents its soaking in. The time to cultivate is when a handful of the soil will crumble and fall apart if squeezed. Soil that squeezes into a doughy mass is too wet for successful cultivation. If weather

and ground conditions are favorable, it is well worth while to put in that early garden in March, or as soon after as possible.

An important factor in successful gardening

which cannot be emphasized too much, is deep, frequent, and thorough tillage of the soil. Plants in general do not draw their sustenance from the upper three inches of soil, but from deeper

down. The upper three inches acts principally as a blanket to retain moisture. If the ground is not well broken up and pulverized for a full spade's depth, the plants will not be likely to secure sufficient nourishment. Plants take all their mineral food in solution, that is, dissolved in water. The water which finds its way into the soil takes up from the soil various mineral constituents. The roots take up this food-laden water, and the plant appropriates the foods as it needs them. The finer the soil is pulverized the more will the water come in contact with and dissolve plant food. Therefore, let the first preparation of the garden be deep and thorough tillage.

But something more than tillage is required. The soil possesses plant food in inexhaustible quantities when nature is the farmer, and returns to earth the decayed vegetation; but when man is the farmer, the vegetation is taken away to be used elsewhere, and unless something equivalent is returned, the soil is soon exhausted. The material returned to the soil known as fertilizer consists of plant food in available form. The substances of greatest importance are nitrogen, potash, and phosphoric acid. Other substances are needed in plant building, but these three, if not replaced, are soon exhausted from the soil. Stable manure contains all of these in good proportion, and if well rotted, it is in a condition immediately available for plant food. Fresh manure has its nitrogen in available form, but its potash and phosphoric acid are not available until the manure has fermented.

Different parts of plants require different nourishment. Leaves require an abundance of nitrogen, stems and roots demand potash, and flowers and fruits require phosphoric acid. To apply fresh manure to a crop is equivalent to giving an excess of nitrogen. Such treatment would be well for leafy crops, such as cabbage and lettuce, but if given to peas and beans, the result would be plants that run to leaves rather than to pods.

Wood ashes containing a large amount of potash are excellent for root vegetables, potatoes and the like. For the amateur gardener no artificial fertilizer is so good as well-rotted manure. It furnishes needed food elements, it lightens heavy clay soils, it helps sandy soils to conserve their water. It is best plowed in or spaded in, in the fall, though it may be spread and spaded under in the spring. One is not liable to get an excess of manure. The tendency is to attempt to get along with too little. Lime is not in itself a fertilizer, but it renders available some of the other fertilizers naturally in the soil. It is especially valuable for the treatment of acid or sour soils.

A few words regarding soils: The basis of soil is clay or sand, or a mixture of the two known as loam, with a varying proportion of decayed vegetation known as humus. According to varying proportions, soils are known as clay, clay loam, loam, sandy loam, and sandy. Sandy soils do not stand drouth and are better for spring or late fall crops. Clay soils are cold and do not do well for early crops, but are much better for summer crops than sandy soil. The condition of all soils is improved by a liberal admixture of manure. When the soil is being spaded and worked up, the manure should be turned under, and incorporated, if this was not done in the fall. At the same time, if the soil is a heavy clay, its physical condition will be much improved by spading in sifted ashes. Coal ashes have no plant food, but are valuable in the place of sand, for lessening the sticky condition of stiff clays.

TAKING THE FIRST TRENCHES

After the soil is ready for the seed, do not let the rain beat you to it, otherwise your work will be for nothing, and you will have to wait until the ground is again in proper condition to work, thus losing several days, perhaps. If rain threatens after your ground has been fully prepared for seeding, get your planting done, at all hazards, before the rain, and you will be that much ahead in your garden operations.

If it is still early and there is liability of a cold spell, do not plant beans or wrinkled peas, but smooth peas and the small seeded vegetables which will sprout as soon as the ground is warm again.

While there is still danger of frost, plant the hardy vegetables, reserving the tender vegetables for later. In general, vegetables with large seeds (the pea excepted) and those that climb or bear fruits or pods (pea excepted) are tender. The list of tender vegetables includes tomatoes, melons, squashes, and cucumbers. The root vegetables, the leaf vegetables, and the pea are hardy. The list of hardy vegetables includes the cabbage family, lettuce, chard, celery, and the salad family, beets and all roots, and

peas. Time is gained with many tender vegetables by planting the seeds in hotbeds or in boxes in the house, and transplanting after the danger of frost is past.

For directions for planting—distance, depth, time for maturing, particular care of different vegetables—see one or more of the books recommended in the March issue, or any garden book you may happen to have. Doubleday, Page & Co. formerly published an almanac containing tables of great value. Some of the garden magazines publish similar tables. The object of this series of articles is to interest the amateur in home gardening. For the details, the reader is referred to the various books and special magazines on gardening.

Tooth Formation and Decay

W. C. Dalbey, D. D. S.

A TOOTH consists principally of three parts. The larger bulk of the tooth is composed of a hard, bonelike substance called dentine. That part embedded in the jaw (called root) is covered by a thin layer, more like real bone, called cementum. The part which protrudes from the jaw is known as the crown of the tooth; its outer covering is the hardest substance in the whole body, and is called enamel. In the middle of the tooth is a soft fleshy part known as pulp, but more commonly called the nerve, because it is the part that hurts when it is misused. The pulp, or nerve, consists of a mass of minute arteries, veins, and nerves.

The first part of the tooth to decay is the outer covering, or, more properly speaking, that part that allows of lodgment of germs, formation of lactic acid from decaying substances, through breaks in the enamel. It is said that the enamel is twenty times as hard as bone. This shows how nature provides for great stress brought upon the teeth.

The enamel of the teeth is seldom perfectly formed. The weak places are gen-

erally in the sulci, or crevices, of the teeth, from which it is almost impossible to remove foreign substances by means of the toothbrush alone. These crevices, or crannies, vary in depth, and some are very small, but are large enough to harbor numerous germs and filth, and all should receive attention. The dentist, by filling properly, can make the tooth practically sound. Once an opening is found through the enamel, the decay progresses very rapidly, as the dentine is much softer than the enamel, and if not attended to, sooner or later look out for pain. After a while the pulp, or nerve, will die, and decay will continue until it reaches the end of the root, or rather, septic matter from the decay reaches the end of the tooth, when it will more than likely end in an abscess.

CAUSE OF TOOTH DECAY

It might be of interest to know how a tooth decays. When some one leaves milk in a vessel exposed to the air, it will gradually turn sour, and the warmer the weather is, the more quickly does this change in the milk take place. This

change is caused by tiny living creatures; indeed they are so small that it takes a very strong microscope to see them at all. These tiny fellows are called microbes, bacteria, or germs. Millions of them are all around us in the air, in the water we drink, and even in the ground. Some of these little fellows are useful to mankind, while others ("strafe 'em!") do much harm.

Coming under the latter group are the many pathogenic, or disease-producing, germs. For example, such germs as produce tuberculosis, diphtheria, pneumonia, typhoid fever, cancer, and other dreaded diseases, are of course dangerous, and many people are surprised to know that these deadly germs lurk in the human mouth.

Scientists have found that bacteria are more numerous in hot weather than in cold. That is why milk will sour more quickly in summer than in winter. Every time a person breathes he takes into his mouth many thousands of these microbes, and when he eats he takes in several thousand more with his food. And as it is always "summer" in the mouth, because it is always warm there, one can easily see how microbes quickly increase in numbers under such favorable conditions. And too, as they must have food, they at once attack any particles of food that may be clinging to the teeth and turn these particles sour, or acidulous. Now, some of these germs give off an acid called lactic acid, which assists materially in eating into the faulty places in the enamel or through other crevices, and soon starts decay. Once the germs of decay have a good start, they become quite proficient in their work of destruction. They feed upon the tooth substance, and at the same time their by-products disintegrate further the tooth structure, forming a hole, or cavity, in the tooth. If they are given little or no food, that is, if the cavity is cleaned out and the mouth also cleaned well, the microbes cannot obtain a good hold on the tooth, and they will in that case not be able to do very much harm.

HOW CAN TOOTH DECAY BE PREVENTED?

Tooth decay can be prevented by proper care,—principally by keeping the mouth and teeth clean. It is a fundamental law that a clean tooth cannot decay. Regular visits for inspection to a reliable dentist are advisable, and if there is occasion for treatment, have it done and done right. If work is done in the first stages of decay, the filling is quite painless. A good rule is, that when you think your teeth are all right visit your dentist. The longer a person waits the bigger the cavity becomes, and the nearer the nerve it gets the more painful the filling process is. A break in any other part of the body may grow up, but a break in a tooth constantly gets larger if not stopped. If it is not stopped, the nerve will eventually die; then you will have to look out for trouble sure enough.

The little invisible enemies—the microbes—are not the only ones that injure the teeth, however; there is another enemy, in many respects just as bad. This enemy is called salivary calculus, or tartar. This tartar, by a natural process, forms round the teeth, especially near the gums. While not so dangerous as the microbes, if allowed to remain, it sets up an irritation (as it is a foreign substance) within the free margin of the gum around the teeth, thereby causing the gums to recede. The gums become unduly inflamed, and later on the teeth loosen so much that it brings about a very bad order of things,—pyorrhea, the most baneful disease of dentistry. In very bad cases the teeth literally fall out. That is not all; the whole system is badly deranged. Rheumatism, arthritis (gout), heart disease, stomach disorders, neuralgia, neuritis, and kindred ailments have been directly caused by, and are the result of, such a condition. All tartar should be removed.

Another enemy to good teeth preservation is an overindulgence in certain kinds of food. Too much candy and sweets in general may cause havoc, because they are prone to ferment and manufacture acids quickly when left

upon the teeth. Such food is the microbes' joy.

Teeth, as well as other organs of the body, must have exercise, and they cannot get this necessary exercise unless they are allowed to chew hard food. Of course nuts should never be cracked by the teeth, as this puts undue strain upon them and is liable to crack the enamel. Neither should the teeth be picked with hard objects, as knife blades or nut picks.

CLEANING THE TEETH

A few simple rules will be in place as to how best to clean the teeth. A few minutes each day is all the time required, and the habit is soon formed, and the duty becomes a pleasant one.

Each tooth has five surfaces: the biting surface, the surface toward the cheek or lip, the side toward the tongue, and the sides toward each neighboring tooth—front and back. Each of these five sides has a perfect right to be cleaned, as each side is liable to decay if it is not.

Take a brush with few bristles in it. Most brushes have twice too many bristles. If you have such a brush, take a small pair of shears and cut every other row of bristles out, and at the same time if the bristles are long and flimsy, cut them off until they are fairly stiff. Cleanse the brush, if possible, beneath the flowing water of the faucet. Now clean out the cracks of the teeth by brushing briskly lengthwise. Then by a rotating sweeping motion, clean the sides of the teeth, both cheek sides and tongue sides. After this is done, take silk floss (regular dental floss is best) and pass between all the teeth. Be careful not to press hard with the floss upon the gum between the teeth; pass it in one direction. This will better carry out the food particles. Now thoroughly rinse the mouth, and don't forget to cleanse the tooth brush before putting it away. I think you have done well, and the time consumed has been about three minutes. But it will pay a large dividend.

Bad Teeth and Rheumatism

W. C. Dalbey, D. D. S.

THAT defective teeth are very detrimental to health has been demonstrated time and again beyond the shadow of a doubt. A recent examination of some hundreds of rheumatic patients in the hospitals of Chicago merely show once again the truth of this statement. But in a specific way the results of this examination reveal a remarkable association between abscessed teeth (pus conditions) and chronic arthritis, or rheumatism.

When it is known that from seventy-five to ninety per cent of these cases were afflicted with teeth conditions such as just mentioned, it ceases to be a mere coincidence. It becomes practically a certainty that there must be a direct relationship between the two conditions, bad teeth and rheumatism, when markedly curative results so uniformly fol-

lowed the cleaning of these mouths.

When we understand that a normal tooth cannot abscess, and that, barring violence, decay must precede the abscess; and further, in view of the fact that it is generally admitted that, if all parts of all the teeth were kept clean, dental caries, or tooth decay, would be entirely banished, it becomes very clear that prophylaxis (preventive medicine) must have a larger scope.

It is a fact, as brought out in Bulletin No. 24, United States Bureau of Education, that 10,000,000 children have defective teeth; and as these children grow older, the marked effect of bad teeth upon the health will be positively seen. Disease is on the increase, as the mortality tables show. The remedy, then, should be prophylaxis, or preventive medicine, instituted in childhood.



William Edward Furey, son of Ensign E. W. Furey, U. S. N., stationed at the Navy Yard at Washington, D. C., was born at Newport, R. I., thirteen years ago. He is patrol leader of the Boy Scouts, troop 69, and is a pupil at the Congress Heights School. He was picked for the honor of tagging the White House coal shovel because of his work in selling Liberty Loan bonds. His record now is 840 bonds of a total value of \$47,300. For this work he was awarded a medal by the Assistant Secretary of the Treasury. He is confident of leading all the Boys Scouts of America in selling the bonds of the Third Liberty Loan.

Tagging the White



PRESIDENT WILSON'S coal shovel was tagged January 30, in front of the Executive Building of the White House, thus setting the mark for Tag Day which was observed throughout the United States. The coal shovels of governors of States, mayors of municipalities, and other prominent individuals were tagged by the school-children everywhere.

The two White House shovels were tagged by William Edward Furey, patrol leader of the Boy Scouts, troop 69, a pupil at Congress Heights School, and by Miss Helen Margaret Tew, of the

Central High School. These children were escorted by a company of Boy Scouts, their school friends, and a small body of teachers. Secretary to the President, Joseph Tumulty; United States Fuel Administrator Harry A. Garfield; and P. B. Noyes, director of Conservation of the Fuel Administration, were present.

The ceremony was simple. The children were gathered in a semicircle in a blinding snowstorm; behind them stood Fuel Administrator Garfield and some of the members of his administration. The two White House firemen brought out

House Shovels



Helen Margaret Tew was awarded check No. 1 in the nation-wide contest conducted by the National Emergency Food Garden Commission for the best canned vegetables grown in war gardens. She is fourteen years old, was born in Washington, is an attendant at Central High School, and her home is at 132 W St., N. W. Her parents are Mr. and Mrs. Arthur H. Tew. She, too, will be found in the ranks of the sellers of Third Liberty Loan bonds. But at the moment the chief thoughts of William Edward Furey and Helen Margaret Tew are centered on "Save That Extra Shovelful."

the shovels with which they keep the White House warm, and Master Furey and Miss Tew attached, with nervous but eager fingers, the tags which preach the doctrine that the saving of coal will help to win the war. Fuel Administrator Garfield shook hands with the youngsters and congratulated them. When the tags were attached, the firemen shouldered their labeled shovels and marched back to their work.

Would it not be worth while to tag the pantries?

The shovel tag bears the slogan, "Save that shovel of coal," and on the reverse

side some practical suggestions regarding the saving of fuel, by care and proper management of the furnace.

A similar tag on the pantry doorknob, for the purpose of food conservation, would perhaps bear the slogan, "Save that slice of bread," or, "Use more potatoes and less bread," or, "Remember the wheatless and meatless days."

But the home card does all this and more. It tells just what we should save, when we should save, why we should save, and how we should save by substitution. A copy of the new home card will be given in the next issue.

OBESITY

G. H. Heald, M. D.

IT is desirable to have a certain amount of plumpness, but beyond that, extra weight is even more objectionable than the same percentage of underweight. Obesity is an excessive development of fat throughout the body, usually occurring after the prime of life (hence the alliteration "fat, fair, and forty"), but sometimes beginning in very early life. The insurance companies have prepared tables showing the average weights corresponding to each inch of height, at various age periods. When the weight exceeds this average by more than ten per cent, it is considered abnormal, and an applicant for life insurance whose weight exceeds the average for his height and age more than ten per cent is liable to be rejected. Experience has shown that such an excess weight retards digestion, lessens physical and mental endurance, and tends to shorten life. In the obese, fat cells, crowding the muscle fibers, interfere with muscular action, and cause atrophy, or wasting of the muscle cells. This is especially liable to take place with the heart muscle, the result being fatty heart. Owing to the crowding of the organs by deposits of fat, the heart action and breathing are embarrassed. The increase of body weight is a constant and growing burden, which renders physical exercise irksome. Very stout persons do not well endure either heat or cold. The fat acts as a blanket which prevents the dissipation of heat at the surface, so that internally the body is embarrassed by an excess of heat. In cold weather, because the blood does not come readily to the surface through the layer of fat, the stout person suffers from cold, for it is the temperature of the skin that determines one's sensation of heat and cold.

It is natural to query why some persons, apparently eating the same as

others in the family, grow fleshy while others may be underweight. What causes obesity? First among the causes is overconsumption of food, especially starch and sweets, and the use of alcoholic drinks, particularly ale, beer, and sweet wines. There are some, however, who are fat, notwithstanding the fact that they eat moderately and abstain from alcoholic drinks. But practically all overweight persons take too little exercise.

In the body the carbohydrates—starches and sugars—are converted into a form of sugar that is very readily "burned," that is, united with oxygen to form carbon dioxide and water, with the liberation of heat or other form of energy. So readily, in fact, is this form of sugar burned that when there is an excess of carbohydrates in the diet, the oxygen in the blood is utilized in the combustion of sugar, and the fats are spared, to be stored up in the tissues.

It is a familiar fact that so long as there is a plentiful supply of alcohol or oil, the lamp wick does not burn; but when the normal fuel is exhausted, the wick burns. The liquid fuel being more easily burned, and being supplied as fast as the oxygen can reach it, the wick is spared. So in the body, the oxygen first unites with the readily oxidized sugar, or the even more readily oxidized alcohol, and if these approach the limits of the oxygen supply, the fats, unburned, are stored away in the cellular tissue of the body, as tissue fat. If there is a great excess of carbohydrate, some of it may be also turned into fat.

It is a well-known fact that the beer drinker tends to fatness. Deceived by his increasing weight, he considers the beer to be nutritious. What the beer actually does, is to cover his body with a worse than useless blanket, which makes him warmer in summer and colder

in winter, interferes with his breathing and heart action, and leaves him more clumsy in the use of his muscles. If he applies to a life insurance company for a policy on his life, he learns that the "nutrition" furnished by his beer or wine has made him such a bad risk that the insurance men refuse to accept him without the payment of additional premium.

The other principal cause of stoutness is insufficient muscular exercise. Muscular contraction necessitates the consumption of sugar, just as running an automobile necessitates the consumption of gasoline. The more one exercises, the more sugar he burns, and this increased combustion necessitates an increase in the intake of oxygen. If this burning process is sufficient, there will be no fat to store up, for the fat as well as the sugar will be burned. Unfortunately, one who is overweight is indisposed to make much physical exertion. Owing to the impeding nature of the fat, and the discomfort arising from the imperfect elimination of the extra heat of combustion, physical exercise is particularly irksome for those who are overweight, and one who has begun to lay on fat is under extraordinary temptation to neglect exercise and thus increase the tendency to gain in weight.

In any case the treatment of obesity is difficult, and is not usually successful unless the patient is under the careful supervision of a physician who can arrange all the details of diet and exercise. Such supervision is best secured in a well-regulated sanitarium.

Theoretically the treatment of obesity is simple, but in practice there are many things which interfere with a successful issue. The essentials of treatment are: a dietary containing the needed tissue elements, minerals, vitamins, etc., but with the fats, and especially the carbohydrates, so reduced that the heat value will be two thousand calories, more or less, a day, according to the case, and depending on the amount of physical exercise the patient is taking. The pro-

tein intake, which is not affected by the amount of exercise, should be about seventy grams, and should include a fair proportion of the more complete proteins, such as are found in rice, eggs, and milk. If the patient is diabetic, the starches and sugars should be more strictly limited; but no diabetic patient should attempt to plan his own dietary.

Vegetables, particularly the various greens, cabbage, cauliflower, celery, asparagus, radishes, squash, string beans, and tomatoes, may be eaten freely. While they furnish little that will help to make fat, they give bulk, and help to satisfy the cravings of the patient. Potatoes, sweet potatoes, and beets should be avoided, because of their large carbohydrate content.

When one finds it impossible to limit his consumption of certain favorite dishes, it is better to omit these altogether from the menu, and to use foods to which he is indifferent. Some physicians attempt to cloy the patient by giving an excess of fat and strictly limiting the carbohydrate consumption. All physicians agree in reducing the consumption of starches and sugars.

Accompanying the reduction in food, there should be a corresponding increase in the amount of physical exercise, except in cases where the heart is weak, when exercise must be taken with caution. Walking is the original and universal form of exercise, which should be more in vogue than it is. Many stout persons would do well to walk to and from work instead of taking the street car or motoring. Gardening is another form of exercise that has much to recommend it, particularly the body bending, which tends to increase the integrity of the abdominal wall and to favor better bowel movements. For a similar reason, boating, either rowing or canoeing, is excellent exercise. But the best exercise for those who are overweight is swimming, provided it is performed vigorously enough, and the swimmer does not yield to the temptation of satisfying his ravenous appetite.

Hookworm Disease

G. H. Heald, M. D.

HOOKWORM disease, known technically as uncinariasis, or ankylostomiasis (sometimes spelled with a "c" instead of a "k"), has probably afflicted mankind for ages. There is some evidence from the description of symptoms that it was known to the Egyptians. It is only comparatively recently that the true nature of the disease has been known. Formerly it was treated as malaria or anemia, with very indifferent results, as may well be imagined. Now that the disease has been studied in thousands of cases and we have a thorough knowledge of its means of propagation and its symptoms, it is possible to go back in the medical history and show that certain severe but mysterious epidemics were probably hookworm infection. Moreover, there is more than a possibility that the hookworm may share with the malarial parasite the distinction of having assisted in the downfall of some former civilizations, such as the Greek and the Roman. There is every evidence that the backward condition of the hill people of the South — descendants of some of the most energetic and ambitious of the Anglo-Saxon race, and among the purest Anglo-Saxons on this continent — has been caused largely by hookworm infection. The "laziness" and "shiftlessness" of these people is often entirely the result of a condition of systematic poisoning caused by the hookworm.

When Professor Stiles first announced his discovery of a parasitic cause of the "laziness" characteristic of the South, there was considerable merriment on the part of newspaper writers regarding the "germ of laziness," and doubtless many were disinclined to take the matter seriously. But today there is scarcely a person of intelligence who does not know something regarding the hookworm and its deteriorating effect on body and mind. In addition to the individual loss

from invalidism, the hookworm causes an economic loss to the nation which probably amounts to millions of dollars annually.

Hookworm disease is much more prevalent than was at first suspected, being very well distributed in tropical and subtropical countries and in the mines and tunnels of the temperate regions. In British Guiana 50 per cent and in Dutch Guiana 90 per cent of the population are infected. In Porto Rico, where more than 90 per cent of the inhabitants examined were found to be infected, thirty per cent of all deaths are caused by the hookworm.

In Ceylon (90 per cent), India (60 to 80 per cent), Egypt, and China the disease is extremely prevalent. In the southeastern part of this country in the mountains and on the sandy coast regions of the Gulf and the Atlantic, the inhabitants are badly infected. According to Stiles, there are over 2,000,000 hookworm victims between the Potomac and the Mississippi, along the Atlantic and Gulf coasts. In the Philippines the disease is prevalent, especially among the natives. The Negroes and the Filipinos seem to be somewhat immune to the effects of the disease, for even when they are infected, the disease runs a mild course.

The female hookworm is a small round worm about one-half inch long and one-twenty-fifth inch in diameter. The male is a trifle smaller. There are about three females to one male. The adult inhabits the intestinal canal of man,¹ and gives off countless eggs, or ova, which pass out with the bowel contents. In a day or two these eggs develop into embryos which moult twice and grow in a week to

¹There are two species of hookworm that infect man. These do not develop in other animals. Nearly all mammals have hookworm parasites, one species of parasite being specific for each species of mammal. The human hookworm cannot infect the dog, nor can the hookworm of the dog or that of the horse infect man.

a length of one-sixteenth inch. They now become torpid, and in moist soil or muddy water can live for perhaps a year. They reach the human intestine in a number of ways: Eating unwashed ground vegetables, eating with hands soiled with dirt, and the habit of dirt-eating, give the parasite an entrance to the intestinal tract; but most commonly the worm finds entrance through the skin, as when children go barefoot in infected soil. Traversing the skin (causing the local disease known as "ground itch"), the parasite enters the blood current and eventually reaches the intestinal canal, probably by way of the lungs, bronchial tubes, and trachea. There it sucks blood from the intestinal wall, to which it is attached by the "hooks" surrounding the mouth, and perhaps injects some toxin into the blood.

Though all ages are susceptible, the young are most liable to infection.

Several factors make for readiness of transmission of the disease. One is the absence of privies, and the almost universal custom of depositing the excreta on the ground. Another is the very general custom of children going barefoot. A barefoot child walking on an infected soil is almost sure to be an infected child. In mines there are few or no means of sanitary disposal of the excreta, and the floors are apt to be in a

very insanitary condition, and, perhaps, through wet or defective boots or as a result of infected tunnel dust coming in contact with the skin, the parasites gain access to the body. In the drilling of great railway tunnels like the St. Gothard, the disease is liable to cause great havoc among the workmen.

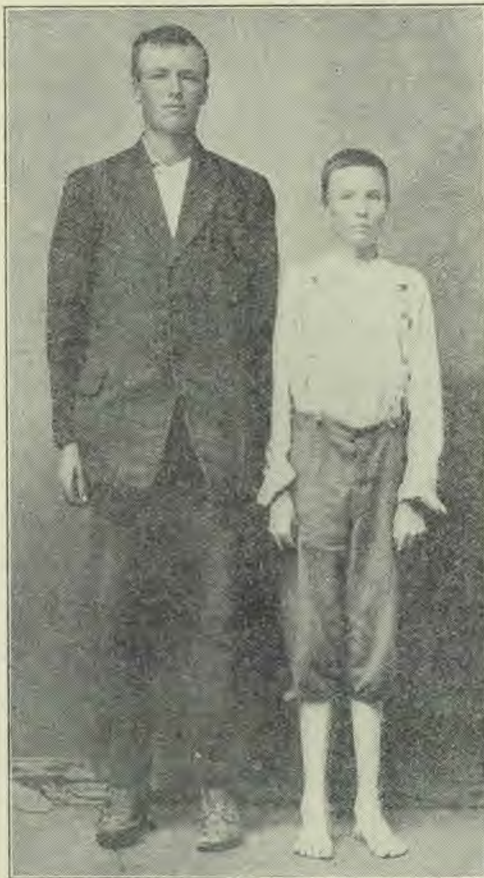
Nearly always the disease begins with an attack of ground itch, usually between the toes, appearing shortly after exposure. There are the usual accompaniments of inflammation,—swelling, redness, and pain,—with formation of pimples which become blisters if infected with pus germs, and may suppurate.

Mild cases may show little or no pallor, some dyspeptic symptoms, and a "run down" or "lazy" condition. The mind does not act well.

In moderate cases there is a dry, cold, paleskin, complaint of vague pains in various parts of the body, evidence of anemia, and an apathetic or even stupid mental condition.

In severe cases the anemia is extreme; there is swelling of the feet and general dropsy, and insomnia and headache with severe nervous and mental symptoms, even insanity may be present. These cases usually run a fatal course.

To make the diagnosis certain in any case, all that is necessary is to examine the stools microscopically. The ova, if present, will tell the story.



These two boys are brothers. The smaller, suffering from hookworm disease, is the older.

The important measures of prevention are: (1) The general installation of sanitary privies, and discontinuation of the custom of polluting the top of the ground; (2) the cure as far as possible of all who have the disease or who act as "carriers;" (3) the general use of shoes by children living in the area where the infection has spread. It is to be admitted that it is not easy to secure general compliance with either of these three

measures, though everything possible is being done by education and by free treatment to lessen the evil.

The treatment consists in the administration of poisons which will kill the hookworm. Among these are oil of thyme and oil of chenopodium. As the use of these poisons is more or less dangerous and sometimes fatal to the patient, treatment should always be under the care of a physician.

AS WE SEE IT

Conducted by G. H. Heald, M. D.

WHY DO WE NOT SAVE MORE FOOD?

NOTWITHSTANDING the thoroughness of the food conservation campaign with its food-pledge cards, the food window cards and kitchen cards, press and poster publicity, and the conservation reporting through church organizations, the net result in actual food saving has been a disappointment. Mr. Hoover undertook his work in confidence that when the American people understood the situation they would patriotically "do their bit" by conserving and substituting, so that more staple foods could be shipped to the Allies. The result shows that too many families have thought that conservation applied particularly to the family next door, and not to themselves. Too many have failed to realize that the world has reached a crisis that demands sacrifice from every individual.

To many Americans, it would seem, patriotism has meant certain commemorative exercises on the Fourth of July, the waving of flags, the use of a little gunpowder, national music and oratory, and they have failed to realize that real patriotism is manifested in sacrifice, and that the only country we can consistently be proud of is the country for which we are ready to make any needed sacrifice, even of life itself. A nation is already crumbling when its people have ceased to have the feeling of real patriotism and seek to be relieved of all national obligations.

We as Americans need to have it impressed upon us that supplying Europe with food is one of the most vital problems now before the American people, a problem for the solution of which every family and every individual is responsible. Americans eat on the average 80 per cent more protein than they need, 165 per cent more fat than they require, and 50 per cent more sugar than their systems demand. If *ten per cent of this excess* could be sent to England, France, and Italy, it would supply their needs; and we should be much better off for not eating it. This is not to say that every American eats such excesses of food, for there are many who from motives of economy or health, eat much smaller quantities of these foods.

Most Americans have been so accustomed to dealing bountifully with their

palates that they are actually frightened at a proposition to make a food reduction which will make for better health.

It should be remembered that what we like and the quantity we call for is largely a matter of habit, and does not by any manner of means indicate our real needs. One who has been on a high protein diet feels ill-nourished if he does not have his three or four eggs for breakfast, his beefsteak for dinner, and his roast for supper, with entrées and other extras for good measure, for the same reason that a man who is used to his "toddy" or his "Duffey's Malt Whisky" or his beer in the morning is "all in" when he does not get it. Nearly every injurious indulgence in like manner creates a demand for repetition.

Why can we not take the word of the physiologists that we have been eating too much protein and fat and sugar, and if we have no respect for our stomachs or for our life expectancy, at least show enough patriotism to deny ourselves for the sake of these who are on a starvation allowance as regards these foods?

We, that is *you* and *I*, must by substitution and by stopping waste, furnish the food needed in Europe. We are a nation of wasters. With us waste is so normal that anything else seems beneath us. But now we have come to the world crisis in food where we *must* reform our habits. To continue in our present way means disaster.

We appeal to our readers to save wheat by the use of other cereals; to save butter by cooking with other fats; to save fats by doing less frying; to save sugar by the use of less sweetening, the avoidance of candies, the substitution of corn and sorghum sirups and of honey; to save meats by substituting other proteins, if necessary. Often there is such an excess of protein that the meat can profitably be dropped without any substitute.

DANGER OF POISONING BY HALF-BURNED GASES

WHENEVER any carbon compound is incompletely burned, one of the resulting gases may be carbon monoxide,— a deadly poison, the more dangerous because it is colorless and odorless. Carbon monoxide is a prominent constituent of water gas, such as is used for heating and illumination in many cities; and a leakage of gas may be, and sometimes is, sufficient to cause a fatal poisoning. In other cases the leakage may be so small as to cause chronic illness.

In internal-combustion, as in gasoline engines, there is usually a sufficient proportion of carbon monoxide formed to make the practice of running a motor in a closed garage dangerous. Fatalities have occurred as a result of this practice. The victim may suddenly become unconscious, and die before help reaches him, or if he retains consciousness he may be paralyzed and unable to get to a place of safety. It is unwise to run the motor unless there is opportunity for the freest ventilation. Even in large garages, where motors are frequently run, the air may contain a dangerous quantity of carbon monoxide.

Stationary gasoline engines in basements are also a menace to life unless there is ample provision for ventilation.

When coal gas or water gas is burned in contact with a cold surface, as when the flame strikes a kettle of cold water, or strikes the cold coils in an instantaneous water heater, combustion is incomplete, and a quantity of carbon monoxide passes off. If there is no hood or chimney provided for this escaping

gas, it affects injuriously all who have to breathe the vitiated atmosphere. Fatalities have occurred from the use of instantaneous water heaters in unventilated bathrooms, and some headache and other symptoms of serious poisoning often occur as a result of using an unhooded gas range without adequate means of ventilation. The fact that plants will not thrive in houses where gas is used is significant, and speaks volumes for the slow poisoning that is going on where there are no provisions for carrying off the products of combustion. The best precaution is adequate provision to carry off the fumes of gas ranges. This does away both with unpleasant odors, which may be harmless, and with poisonous gases.

**TO CONSERVE AMMONIA
BY THE USE OF NATURAL ICE**

IN order to conserve ammonia for use of the army and navy the Food Administration has been encouraging the harvesting of natural ice throughout the country, and it is expected that a very large proportion of the ice used next summer will be natural ice.

One serious obstacle to this substitution of natural for artificial ice is caused by the fact that several large cities have restrictions against the use of natural ice.

It is obvious that municipalities should not permit the use of polluted ice, but there is much misapprehension and prejudice concerning the use of natural ice that careful consideration and study will dispel. To any boards of health, etc., interested in this subject, the Food Administration will be glad to send any of the following booklets, published by the Natural Ice Association of America, 18 East 41st St., New York City:

- "Status of Scientific Opinion of the Purity of Natural Ice."
- "The Effect of Handling and Storage on the Safety and Purity of Ice."
- "Nonrelation of Natural Ice to Typhoid Fever and Dysentery."
- "The Purity of Natural Ice."
- "The Bacteriology of Ice."
- "The Sanitary-Chemical and Bacteriological Examination of Natural Ice."
- "Melted Natural Ice Compared with Bottled Spring Water for Drinking."
- "The Study of the Purity of Natural Ice from Polluted Water."
- "Melted Natural Ice vs. Bottled Spring or Distilled Water for Drinking."
- "Bacteria in Natural Ice."
- "Natural Ice and the Public Health."
- "Factors of Sanitary Safety in a Natural Ice Supply."
- "Water from Melted Natural Ice for Domestic Use."

**INFANTILE SCURVY
AN INTESTINAL INTOXICATION**

HESS, whose studies have demonstrated that the exclusive use of Pasteurized milk in infant feeding is often followed by scurvy, presents in the *American Journal of Diseases of Children* a paper in which he gives the results of his more recent studies, which seem to show that aging of milk is a more potent factor in the production of infantile scurvy than Pasteurization. We give in substance his summary, replacing some of the technical terms by equivalent expressions more commonly understood.

One of the several factors which combine to produce infantile scurvy is faulty diet. Pasteurized milk was found to be a contributing cause if it was not fresh — if given twenty-four to forty-eight hours after Pasteurization. From this point of view milk Pasteurized in the city is preferable to milk Pasteurized at the creamery, which reaches the consumer much longer after the heating process. Aging seemed to play a greater rôle in the production of scurvy than heating, whether the milk

was Pasteurized or raised to the boiling point. It was found that even raw milk on aging loses its power of preventing scurvy.

Infantile scurvy is not, however, a simple dietary disease. The diet is at fault in allowing the intestinal bacteria to elaborate toxins. Infantile scurvy is an intestinal intoxication or an autointoxication due to the overgrowth of harmful bacteria in the intestine. It is the product of an unbalanced flora which is no longer controlled by a proper dietary.

Scanty urine is a common symptom of scurvy. The mild medicinal effect of citric acid may be ascribed partly to its action on the kidneys. Orange juice also was found to act strongly on the kidneys.

One of the striking and important symptoms of scurvy is a susceptibility to infection (boils, nasal diphtheria, grip, etc.). Some hemorrhages are due to this secondary infection. Other hemorrhages are due directly to the scurvy. Scurvy, however, is essentially a disorder characterized by malnutrition and not by hemorrhage, taking months to develop, and, from a clinical point of view, frequently latent or subacute.

SOME BOOKS

The Nurse's Service Digest, A Manual of Nursing

by Laurence Humphry, M. A., M. D., M. R. C. P., M. R. C. S., Physician, and formerly lecturer at Addenbrooke's Hospital, Cambridge, England. First American Edition, revised and enlarged by W. Myron Reynolds, M. D. Illustrated. Cloth, \$1. Menzies Publishing Company, Inc., New York.

In this day, when there is a tendency to multiply books on nursing and to require student nurses to purchase a library of books on the various phases of their chosen calling, it is refreshing to pick up a book like this one, which gives in comparatively small space the essentials of a nurses' training course, including care of the sick-room, description and management of various diseases, and the care of obstetrical, gynecological, surgical and emergency cases.

Naturally everything is treated briefly, yet in general quite satisfactorily. The section devoted to hydrotherapy is of course too brief for guidance in a sanitarium where hydrotherapy is a main reliance, and the chapter on "Cooking for Invalids," based as it is on the old notion that animal food is the food *par excellence* for invalids, contains comparatively little that would be useful in institutions which find no use for meats in the feeding of invalids.

Training and Rewards of the Physician

by Richard C. Cabot, M. D. Cloth, 153 pages, \$1.25 net. J. B. Lippincott Company, Philadelphia and London.

"I wish I might have had this book to read before beginning my medical course," was the exclamation of one physician; "the information, valuable as it is now, would have been of almost inestimable value to me then." He was not far wrong, perhaps, for Dr. Cabot has certainly compressed into this little volume a vast fund of instruction which might dissuade some from spending years in preparation for a profession for which they were not adapted, and encourage others to proceed. It warns the

young man of the difficulties and pitfalls he may meet, and yet encourages by showing that the prize is worth all it costs to win it.

He divides the profession into four classes—men devoted to research and teaching, specialists, general practitioners, and public health men, giving counsel regarding how best to prepare for each of these classes. He advises earnestly that the medical student should have one of these classes in view when he is preparing, and make special preparation for it.

He deals largely with the sociological or human side of medical practice, as contrasted with the strictly scientific side, showing that, after all, it is a man's personality, his manner of contact with his fellow men, rather than his scientific attainments that make or unmake the physician.

In doing this, however, he by no means belittles the importance of getting the best scientific preparation obtainable, not only in medicine but in the allied sciences as well.

The following chapter headings will give an idea of the general scope of the work: "The Professional Type of Doctor and the Preparation for It," "The Training of the Family Physician," "Preparation for Public Health Work," "Condition of Failure in Practice," "Factors of Success," "The Chance for the Young Doctor," "City Practice vs. Country Practice," "The Rewards of Medical Work."

The Third Great Plague

A Discussion of Syphilis for Everyday People. by John H. Stokes, A. B., M. D., Chief of the Section of Dermatology and Syphilology, The Mayo Clinic, Rochester, Minn. 204 pages, illustrated. Cloth, \$1.50 net. W. B. Saunders Company, Philadelphia, Pa.

This much-needed book, written by a man eminently qualified for the work, deals with this avoided subject in a way that can be understood by all, and can offend no one that is not morbid.

(Continued on page 124)

QUESTIONS AND ANSWERS

Conducted by J. W. Hopkins, M. D., Washington (D. C.) Sanitarium

This is a service for subscribers to LIFE AND HEALTH.

If a personal reply is desired, inclose a three-cent stamp.

If you are not already a subscriber, send also the subscription price with your question.

Replies not considered of general interest are not published; so if your query is not accompanied by return postage for a personal answer, it may receive no attention whatever.

Remember that it is not the purpose of this service to attempt to treat serious diseases by mail. Those who are sick need the personal examination and attention of a physician.

State your questions as briefly as possible, consistent with clearness, and on a sheet separate from all business matters. Otherwise they may be overlooked.

For prompt attention, questions should be addressed to J. W. Hopkins, M. D., Takoma Park, D. C.

Desserts

"Do you recommend desserts as a part of the daily menu?"

Desserts, if used, should be considered a part of the meal. They should not be taken after the appetite has been satisfied, after the individual has eaten all he needs. This is one objection to them, and is a great cause of stomach trouble. Complex dishes used as desserts complicate the process of digestion. They may perhaps be digested by a strong, hearty stomach, but such mixtures as cake, pies, and puddings are very hard for the average stomach to digest. These things should therefore be avoided.

It should be remembered that the sick do not care for sweets as much as do the well, and the desserts for the invalid should therefore be simple. Pies, cakes, and cookies should not be given to children for their school lunch. It is much better to use fruits, raisins, and those nuts which are the most easily digested. Fruit crackers and Graham crackers are also excellent for the child. Candy is a very harmful article of diet. It should not be given to children, neither should the grown person use very much of it. The sugar is in too concentrated a form, and is a great cause of catarrh of the stomach. Fruit sugars are much more palatable and are less harmful than cane sugar and candy. Sugar in the form of fruit is beneficial to school children. For the invalid the dessert should be in the form of simple junket or custards, baked, rather than boiled. Ice cream may be used occasionally. It is, however, much better to arrange the diet and the service so that the whole meal will be appetizing.

Mineral Oil

"Is the use of mineral oil or liquid paraffin a rational method of treating constipation? I am fifty years of age, am passing through the menopause, and suffer from varicose veins. Please make suggestions."

Mineral oil is an article which is not digested or changed in any way in the stomach or intestines. It simply lubricates the intestines, and softens the intestinal contents. You can get it at almost any drug store. There are certain brands which are not so good as others, depending upon the care with which it is refined, upon its freedom from by-products, and upon its specific gravity. It must not be too heavy,

and should be free from sulphur compounds and hydrocarbons or it may cause temporary or permanent irritation of the stomach or bowels. We consider Squibb's mineral oil to be excellent. It should be taken in one or two tablespoon doses at bedtime or one-half hour before meals, and is aided in its action by drinking one-half glass of hot water immediately after.

Being in the menopause, it will be well for you to get as much rest and out-of-door air as you can. You must keep off your feet a great deal in order to cure the varicose veins. You must make a practice of resting one or two hours in the middle of the day, preferably with the lower limbs elevated. Perhaps one hour in the forenoon and one hour in the afternoon will be as well. You will find that this will also build up your general health. You should not drink any coffee. Use instant postum or caramel cereal, and plenty of nourishing food. Have a physical examination to see if any pelvic condition causes the varicose veins.

Meat Substitutes

"Give the sources of protein other than meat."

The whole egg 14.8 per cent; nuts, 15 to 20 per cent; fresh legumes, 2 to 9 per cent; dried legumes, 18 to 35 per cent; wheat, 12 per cent; oats, 11 per cent; barley, 10 per cent; rye, 10 per cent; maize, 9.5 per cent; unpolished rice, 7 to 8 per cent; cow's milk, 4 per cent; cheese, Neufchatel, 17 per cent; celery, 1.4 per cent; spinach, 2.1 per cent; tomatoes, fresh, 0.8 per cent; beans, string, 2.2 per cent; carrots, 1.1 per cent; potatoes, 2.1 per cent; parsnips, 1.7 per cent; lettuce, 1.3 per cent; cabbage, fresh, 2.1 per cent. The required daily amount of protein is about ten per cent of the total diet. Many of these foods contain an excessive amount, and the vegetables and fruits should be used to lessen the proportion of protein to carbohydrate and fat.

Treatment for Hyperacidity

"What treatment would you recommend for hyperacidity of the stomach?"

There is probably no ulcerated condition present in your stomach. If there were ulcers there the presence of food would make you feel worse.

I think that you are working pretty hard at your studies, and this is probably as much of a cause as is the hyperacidity of your gastric

juice. Try to do your work with less strain and fret. Be more calm and controlled. Get a little time in the middle of the day for a complete rest. Try to lie down and sleep for ten or twenty minutes. I think that you will get benefit from the use of charcoal tablets, taking three five-grain tablets one hour after each meal. This will to a great extent relieve you from the production of the gas.

Get a bottle of Squibb's mineral oil and use two tablespoonfuls at bedtime and half an hour before breakfast. Try the use of fatty foods with your meals. Milk, cream, butter, and olive oil in small amounts at each meal will relieve the irritation, and prevent the formation of an excessive amount of acid. The use of ripe olives, Brazil nuts, pecans, filberts, and pine nuts also diminishes the acid. Foods containing their residue in a finely divided state, as lettuce, spinach, whole wheat, are to be preferred. Dextrinized cereals, as toasted wheat flakes, toasted corn or rice flakes, are beneficial, as they lessen the amount of gastric juice because they can be eaten without much mastication, thus producing little "appetite juice." Protein foods combine with the acid of the stomach, but should not be used too freely, as they stimulate the production of more acid. (See questions on sources of protein foods.) Potato gruel is valuable.

Bacon as Food

"Do you recommend bacon as a healthful food?"

No. First, because it is a food which is forbidden in the Bible. Second, the hog is very commonly affected by tapeworm, trichinae, and often by tuberculosis. These diseases are many times transmitted by the use of diseased pork. While animal fats may be utilized in the body, to produce fuel and energy, they are not stored up in the body as human fat, but are placed in the tissues as the exact kind of fat that was eaten. Hog fat is stored up as hog fat and mutton fat as mutton fat. The most healthful fat tissue for the human is that which is produced from the fats contained in and derived from vegetable sources. The body manufactures fats from the starches and sugars of both cereals and vegetables. These fats are much more clean and healthful than are those of animal origin.

Symptoms of Disturbed Circulation

"What is the cause of peculiar feelings in the lower limbs, arms, and hands of a person who has high blood pressure? My feet pain, prickle, and itch and there seems at times to be a crawling sensation in my lower limbs and arms."

This is due to poor circulation and to an irritation of nerves accompanying the disturbed circulation. It is also caused by the accumulation of poisons which accompanies high blood pressure. The causes of high blood pressure were considered in the question box of the January number. Nature raises the blood pressure for a purpose; namely, to force more blood through the kidneys and in this manner to increase the elimination of waste matter. For this reason many individuals feel worse when the blood pressure is lowered than they

do when it is at the height to which they have been accustomed. The treatment for high blood pressure should include measures which will increase the elimination of waste matters, as well as other measures to lower the blood pressure. The action of the skin, bowels, and kidneys should be increased so that the wastes and poisons of the body will be carried off in a greater measure. If this is done, these peculiar sensations will eventually disappear.

Moist Abdominal Bandage

"What is the use of the moist abdominal bandage, and how is it applied?"

The moist abdominal bandage is used in the treatment of constipation, intestinal indigestion, insomnia, and the various symptoms which accompany these troubles, as nervousness, irritability, and inability to concentrate the mind and to do satisfactory mental work. Application of the bandage is best preceded by hot fomentations to the liver and abdomen for three to eight minutes. The inner part of the bandage is made of two or three thicknesses of cheesecloth and is moistened in tepid or cool water. It should be wrung out as dry as possible. An ordinary linen towel will do very well, if not too heavy. This moist cloth is covered by a flannel bandage which is sufficiently wide to extend an inch on either side of the moist bandage, and to go once around the trunk with two thicknesses over the liver and abdomen. In many cases, as in hyperacidity of the gastric juice, the first bandage should be covered by oilcloth or oil silk, before the flannel is applied. This will retain the moisture.

Bran for Constipation

"How should bran be used for constipation?"

Bran may be taken in tablespoonful doses at one or more meals, either mixed with cereals, as corn flakes, shredded wheat, or mushes, or it may be mashed up with potatoes or served with other foods. It may be made into a porridge by the addition of hot water or hot milk, or may be moistened by fruit juices or cream. Bran may be used in the form of bran gems or bran bread.

The treatment of constipation should include more than the use of bran. One should first have regular habits. Go to stool at exactly the same time each day, even though nothing be accomplished at first. Laxative foods should be used, as string beans, celery, asparagus, figs, and prunes. Whole-wheat products are excellent. Massage, electricity, and the colon vibrators which are often sold, produce no direct emptying of the bowel. They do bring a reflex stimulation of the intestinal muscles which causes a more or less complete evacuation in six or eight hours, and they are valuable in that respect. Exercise accomplishes the same thing, and should be used more often than it is. The enema is an artificial means of relieving the bowels and should be used only in an emergency. A person who is constipated should have a barium meal and a Röntgen-ray examination to find the cause of the trouble.

Some Books

(Continued from page 121)

Popular misconceptions regarding the disease are corrected, and the general prevalence of the disease where least suspected, its curability under proper treatment, and its ravages when not properly treated, are explained. The tendency of the public to ignore the disease is deplored, and it is explained that if ever this enemy to civilization is overcome, the public must know more about it.

The fight against tuberculosis has been successful in proportion as the public has been made to understand the disease, its danger, its means of transmission, its curability, and what is required for prevention and cure. Dr. Stokes rightly believes that until the public are as accurately taught regarding syphilis as they have been regarding tuberculosis, one of the most important factors in the elimination of the disease will be lacking.

He has, accordingly, gone carefully into the particulars regarding the disease that would benefit the layman, avoiding anything which might lead some to attempt self-diagnosis or self-treatment.

He has explained fully the danger of self-exposure even by the "knowing ones" who hope to escape infection, and has dwelt at length on the folly of patients discontinuing treatment when apparently cured. He makes it plain that cure, even with salvarsan, is a matter of from one to five years, and that when one ceases treatment before the cure is thorough he is inviting, some years later, degeneration of arteries, nerves, or brain, such as contribute to make such a sad ending for the imperfectly cured syphilitic. It is the com-

paratively mild skin affections, apparently cured, that go on to arterial degeneration, locomotor ataxia, and general paresis.

Dr. Stokes speaks of personal self-control and purity as the most essential and most important preventive of the spread of syphilis, and teaches that this self-control, in order to be effective in the storm center of youth, must be inculcated, not in the high school age, but from the toddling age onward. Self-control in all that pertains to the body must be an important part of the child's education; for after nature has begun to insist, and the passions assert themselves, neither instruction in self-control nor warnings regarding the horrible danger of infection is likely to prove deterrent.

The extremely damaging effect of indulgence in alcohol or tobacco by the syphilitic is emphasized, but nothing is said of how alcohol, even in the form of wine and beer, has to do with the loss of self-control which so often leads to the sexual downfall of the young. Alcohol increases the animal passion and at the same time lessens the power of the higher moral nature. Every person engaged in the ruin of girls knows the value of this ally to his purposes.

And nothing is said regarding the influence of diet. The effort of a young person to keep pure is increased tenfold if he is on a heavy animal diet with condiments. Such a régime is very likely to undo the effect of all the moral instruction the young may be subject to. This is not to say that vegetarianism will make people pure. It will not. But a diet rich in fish, flesh, and condiments, especially if to this are added alcoholics and tobacco, will induce a physical condition that will make it extremely difficult to live a right life.

NEWS NOTES

British Army Free from Typhoid

According to a statement from the British war office, the British army is almost entirely free from typhoid fever,—a total of 24 cases altogether in France, Egypt, Saloniki, and Mesopotamia. In the South African war there were 60,000 typhoid cases with 8,227 deaths. The improved condition is doubtless due to the general use of antityphoid vaccine.

Bread Restriction in France

All in France except the hardest-working men and women are limited to 7 ounces of war bread (4 or 5 slices) a day. This sacrifice has been accepted uncomplainingly by the people, as it has been explained to them that the wheat they get must come through reduced consumption of wheat in America, and that any larger supply would call for the use of ships needed to transport American soldiers to France. The war bread consists of nearly the entire wheat, to which is added a large percentage of other grains.

Cocaine in Soft Drinks

In 1907 the Bureau of Chemistry found that thirty soft drinks contained small amounts of cocaine. Practically all of these were suppressed. The Food and Drugs Act is regarded as having been an important factor in bringing about passage of the Harrison antinarcotic law, which more effectively controls habit-forming narcotics.

To Increase Crops in France

To increase France's crops and to lighten the burden of toil on her old men, women, and children, the United States Food Administration will ship 1,500 farm tractors to that country. The whole number will be in France by March, in time for the spring plowing. They are expected not only to be of immense service to France, but to release added tonnage for the Allies and the American troops by increasing the amount of food produced there, thus decreasing the amount of food that must be shipped from America.

To Control Venereal Disease

Following the California program, the Pacific Coast cities, Portland, Tacoma, and Seattle, have undertaken to isolate and treat at public expense all cases of venereal disease. The larger cities of California, Oregon, and Washington are now fully committed to a program of control of prostitution and reduction of the opportunities for venereal infection.

Federal Control of Vital Statistics

Asserting that the United States cannot have a system of vital statistics comparable to that of foreign countries until all the States enact proper laws, or until the Federal Government assumes control, Director S. L. Rogers, of the Census Bureau, in his annual report, recommends Federal control and supervision of birth and death registrations. Active preparations are under way for beginning the next census in 1920.

Conservation of Waste Fat

The kitchen waste of the British army camps in England and France now being conserved is sufficient to make soap for the entire requirement of the army, navy, asylums, workhouses, and other institutions, with a substantial balance for public use. The glycerin which comes as a by-product from the manufacture of the soap is sufficient to provide the explosive for 17,000,000 shells per year.

Labels Must Now Tell Truth

Ten years ago there was no ailment to which human flesh is heir that some maker of patent medicines did not claim to be able to cure with such ease that it seemed almost the height of foolishness not to part with the price for his nostrum. Today, because of the operation of the Federal Food and Drugs Act, the extravagant promises of cure that characterized the labeling of the patent medicines of ten years ago have practically disappeared from the preparations that enter interstate commerce. The law, however, cannot prevent the use of fraudulent and lying statements in newspaper advertisements or in circulars.

War-Emergency Formulas

According to a paper by F. A. Upsher Smith, in the February *Northwestern Druggist*, the British Pharmaceutical Society has recently worked out changes in the formulas of the British Pharmacopœia, in order to reduce the consumption of glycerin and sugar. Smith in his paper makes detailed suggestions for changes in the preparations of the United States Pharmacopœia and National Formulary for the conservation of glycerin, sugar, and alcohol. Sugar, he says, should be largely replaced by glucose; tinctures (alcoholic) should in many cases be dropped; in others replaced by aqueous solutions. Many of the sirups (in which the sugar is used largely as a preservative) should be produced extemporaneously when needed, using a minimum of sugar or glucose. Most of the spirits are extravagant to use and should be dropped. The detailed suggestions occupy about eleven pages of the *Northwestern Druggist*.

Canada Forbids Liquor Importation

According to the *Canada Gazette*, "the necessity for conserving all the energies and resources of the country for the prosecution of the war by promoting thrift and economy and by increasing the national efficiency, has led to the enactment of regulations prohibiting the importation of intoxicating liquors into Canada." Exception is made of sacramental wine, and of liquors for medicinal purposes.

Misbrandings Now Corrected

According to the annual report of the Bureau of Chemistry, United States Department of Agriculture, which reviews the operation of the Food and Drugs Act in the safeguarding of the health of the American people, misbrandings, in regard to healing value of hundreds of alleged cancer cures, so-called "cures" for coughs, colds, consumption, kidney diseases, epilepsy, St. Vitus's dance, and the like, have been corrected.

Medical Frauds

Much has been done to control the indiscriminate use of so-called headache remedies containing dangerous, depressing drugs, and of dangerous cosmetics making claim to healing value, and in raising the quality of the supply of crude drugs through the examination of imports. As a result of co-operative work with the Post Office Department a number of fraud orders were issued by that department preventing the use of the mails in promoting the sale of fraudulent medicines.

Infantile Paralysis in 1916

Acute anterior poliomyelitis, commonly called infantile paralysis, caused 7,130 deaths in 1916 in the registration area, representing a rate of 10 per 100,000 population. This disease developed in epidemic form in that year, and the resultant mortality showed an enormous increase. The rate from infantile paralysis declined from 2.7 per 100,000 in 1910 — the first year in which this malady was reported separately as a cause of death — to 1 per 100,000 in 1915, the decrease having been continuous from year to year except for an increase between 1911 and 1912. The rate for 1916, however, was ten times as great as that for the preceding year.

Value of the Soy Bean

The soy bean, which has been an important food of the Chinese for about five thousand years, has only recently been seriously considered as a food in this country, though in protein and fat content it ranks high above all other beans. An effort is now being made to introduce it more generally. In the South, the soy bean has been raised for its oil, and the by-product from the oil presses — containing nearly fifty per cent protein — has been sold for fertilizer. Mr. Hoover has interested himself in the matter, and this protein is now ground into a soy-bean flour, which is being put on the market. The Department of Agriculture and other agencies are attempting to educate the people regarding the value of the soy bean and its products.



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BY D. MACDOUGALL KING, M. B.

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THERE ARE 258 PAGES OF PRACTICAL ADVICE written by a doctor who knows both the patient's and the doctor's viewpoint. It would seem, says the author, that when 84 per cent of people infected with tuberculosis make a successful recovery that it is not such an incurable disease as is supposed. On this sound basis Dr. King proceeds step by step through the whole plan of a successful campaign. He shows what the chances to recovery are and how to take advantage of them. No point is overlooked, and everything is so clearly explained in such simple, lucid language, and so interesting withal, that the most discouraged tuberculous patient will be charmed and encouraged into making immediate and successful efforts toward recovery.

8 illustrations. Publishers' price, \$1.50 net, postage extra.

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Order from LIFE AND HEALTH, Takoma Park Station, Washington, D. C.

Food Situation in Europe

A cable from British Food Controller Rhondda to the United States Food Administration declares that the food situation in England and France is critical. "Compulsory rationing of essential foodstuffs is probable," said Rhondda, "and I view the situation with grave anxiety."

Cause of Washington's Death

In the *Medical Record* of December 29 is a copy of a letter dated Jan. 10, 1800, addressed to a medical student of the University of Pennsylvania and signed Dr. Cullen Dick, from which it seems that Washington died from diphtheria, the immediate cause of death being strangulation, which might have been avoided had the other physicians present acquiesced in Dr. Dick's proposal to open the trachea.

Helping Child War Victims

Nearly 25,000 children in France are receiving aid from the American Red Cross. Seven hundred children are receiving complete medical care at the hands of American Red Cross doctors, and 3,060 are being treated at the medical dispensaries of the American relief society. In addition, there are 20,300 orphans and other children in France who are being aided by the Red Cross, directly or indirectly. The American Red Cross is also aiding 6,000 Belgian children, of whom it has 1,000 in complete charge.

Suicide in 1916

The number of suicides reported for 1916 in the registration area, was 10,162, or 14.2 per 100,000. This rate is the lowest for the past ten years.

Food and Infant Death Rate

According to *Vorwärts* (Berlin), "Infant mortality is unusually high this year in Berlin." The actual number of infant deaths is below that of recent years, but this is owing to the extraordinary decline in the birth rate. "The proportion of the number of infant deaths to the number of infant births is considerably more unfavorable this year than last."

Protein and Work

R. G. Anderson and G. Lusk (Proceedings National Academy of Sciences, 1917, p. 389) state as a conclusion of certain experimental work reported by them that "protein in the dietary is primarily for the repair of the tissues. It is not beneficial for the economical performance of work. In excess, it largely increases the heat production which a working organism is called upon to eliminate." This is distinctly contrary to the commonly received notion that a high-protein diet is essential to the proper performance of heavy muscular work. Increase of work does *not* demand an increase in the protein intake; and if more of such food is taken, its influence is injurious rather than beneficial.



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Utilization of Waste Fats

According to a consular report from Stockholm, a new process has been developed, owing to the shortage of soap-making materials, by which soap is manufactured from fat recovered from sewers. It is also proposed by the same process to utilize for soap manufacture the fats from beech mast, horse chestnuts, etc.

Prices in Berlin

Butter is selling in Berlin at \$2.25 a pound, sugar at 56 cents a pound, ham and bacon at \$2.11 a pound, and soap — five ordinary bars — for \$1.12. This information was received by the United States Food Administration through a reliable source from a responsible person, who had charge of his own apartment in Berlin, as to food prices current in that city previous to his return to this country about October 1.

Pasteur Institute and the War

The Pasteur Institute has almost completely mobilized its forces and facilities for the manufacture of serums and vaccines by means of which epidemic diseases at the front such as typhoid and cholera have been kept at a remarkably low level. We are told that "there never was a war in which epidemics were so rare as the present one, so far as France is concerned." The two hundred or more military laboratories of France, as well as many of the laboratories of the Allies, are supplied from the Pasteur Institute. Hundreds of thousands of sachets have been sent to the front to destroy vermin in clothing.

Sailors to Hooverize

Since February 1, the crews on Atlantic and Gulf steamers flying the American flag have had a menu containing much less beef and salt pork and a greater variety than had been the rule aboard ship. The new menus are well balanced, and all that could be desired from a health standpoint, and will effect a material saving in beef, pork, sugar, and fats. Among other conservative measures, the program calls for ten wheatless meals each week, substituting corn, rye, and other breads for white-flour bread. The Food Administration also requested passenger steamship companies to co-operate in the saving of foods needed for transportation to Europe.

Hunger and High Death Rate

Mortality statistics from Germany compiled for the *Monthly Review* of the United States Bureau of Labor Statistics, January, 1918, "show a startling condition of affairs" in Germany, apparently the result of food shortage. A comparison of the mortality figures for lung diseases for the three spring months of 1917 and 1918 show that deaths from phthisis (consumption) increased 56 per cent; from pneumonia, 62 per cent; from other lung diseases, 77 per cent; and from all lung diseases, 60 per cent. German comment admits that these increases "can only partly be explained by the inclemency of the weather." The compiler of the article in the *Monthly Review*, suggests that "a more plausible explanation is underfeeding and bad food."

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as reported by the nurses' periodicals; the active measures taken to increase the number; the public interest aroused by the demand for more nurses, owing to present war conditions, all point to a large sale of this book. The United States Government, which has now about 4,500 in the service, is asking for 34,000 more nurses.

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contains 409 pages of text, 84 illustrations, and about 800 index notations. Size of page, 4 x 6½ inches. Extra cloth bound. Price, one dollar. Published Jan. 1, 1918.

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HOME NURSING

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