Life & Health

Sometimes

the human machinery becomes exhausted from overwork, the bodily functions become sluggish, and the tissues and blood are loaded with the waste products of mental and physical activity. Then comes disease in one or more of its many forms, to torment the suffering victim.

You

or your friends may be having this experience today. Why suffer on when relief is at hand? At the Chamberlain Sanitarium you can have the benefits of the famous " Battle Creek System " of treatments, together with an abundance of sunshine, pure air, and quiet, cheerful surroundings. Thousands of sufferers have here found quick relief, and have become enthusiastic friends of the institution.

Think

what it means to be well, strong, vigorous, free from pains or aches, and prepared to attack the most difficult problems of life. Then pack your suitcase and come to the Sanitarium on the first train.

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CHAMBERLAIN, SOUTH DAKOTA

Life & Health

Published monthly by the
REVIEW AND HERALD PUBLISHING ASSN., TAKOMA PARK, WASHINGTON, D. C.

Entered as second-class matter June 24, 1904, at the Post Office at Washington, D. C., under the Act of Congress of March 3, 1879

VOL. 33 AUGUST, 1918 No. 8

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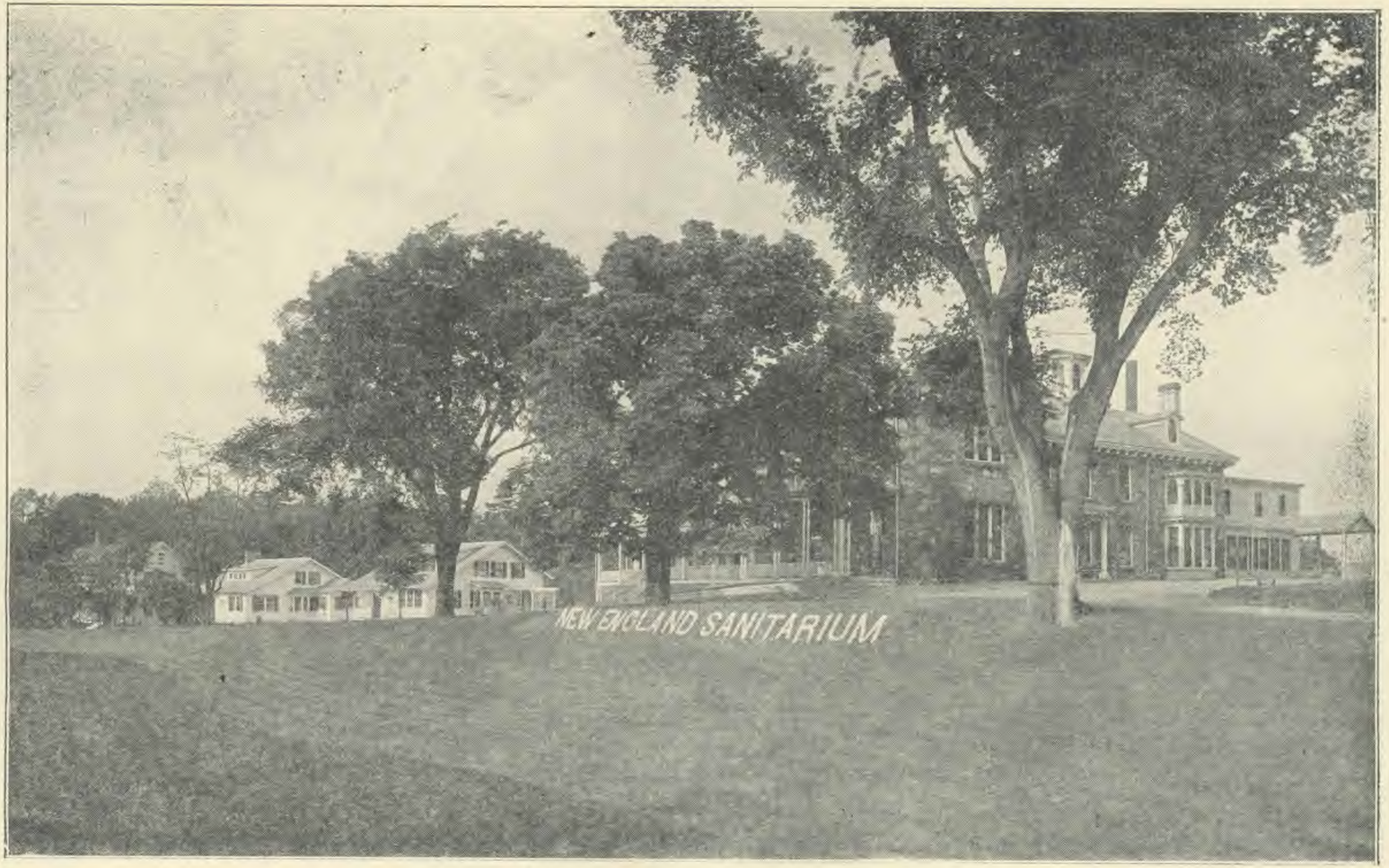
SUBSCRIPTION RATES.— One year, $1; six months, 60 cents. Remit by Post Office Money Order (payable at Washington, D. C., post office), Express order, or Draft on New York. Cash should be sent in Registered Letter. When a change of address is desired, both old and new addresses must be given. No extra charge to foreign countries.


NEW ENGLAND SANITARIUM

Life & Health

HOW TO LIVE

Editor H. W. MILLER, M. D. | *Associate Editor* L. A. HANSEN | *Office Editor* G. H. HEALD, M. D.

VOL. 33 | AUGUST, 1918 | No. 8

Making Food Conservation Count Most

L. A. Hansen

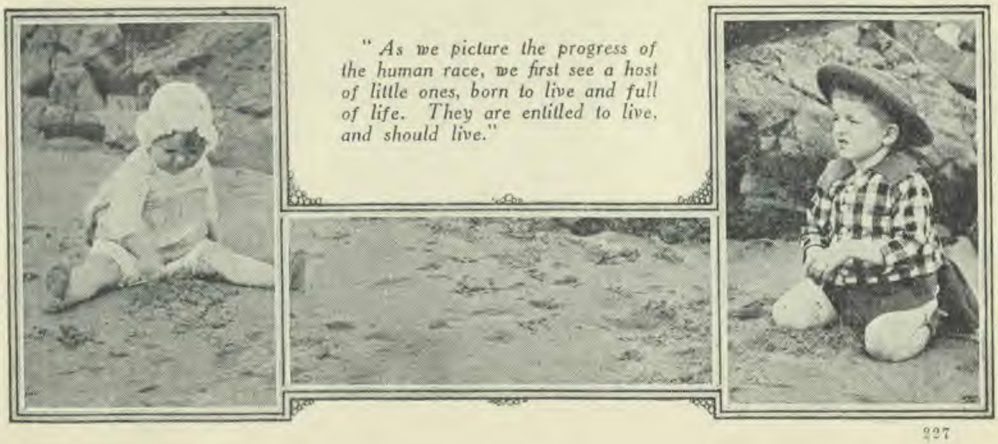
THE number of killed in the present World War,— eight million in four years,— is a record eclipsing every other war casualty list. It is a terrible loss of life, and makes us stand aghast as we try to comprehend its enormity. It is beyond us. We cannot understand it.

But do we realize that in the various nations engaged in the war, over 6,500,000 die every year, or 26,000,000 in four years, from diseases that could be prevented? That means loss of life just the same as when men are killed in battle, and it means bereavement and suffering and hardship for those who are left.

A HEAVY TOLL

As we picture the progress of the human race, we first see a host of little ones, born to live and full of life. They are entitled to live, and should live. Statistics grimly tell us that a large number die before they are two years old. Why? Because fate has decreed it or Providence wants it so? — No. Many of the poor things have to give up life because of "summer complaint," or diarrhea, or cholera infantum, or some other sickness that could have been prevented.

Children's diseases continue to decimate the ranks of the little beings.



"As we picture the progress of the human race, we first see a host of little ones, born to live and full of life. They are entitled to live, and should live."

When adult life is reached, the original multitude has been reduced to a comparatively small number. Disease continues its ravages through middle life and onward, till at last but a small remnant is left to know what full life really means. We are hardened to it, and scarcely ask why it is.

Should we blame nature for this sacrifice of human life? Is it ordained that only a small percentage of the species can be brought to maturity? Is it a part of nature's plan to kill off most of us before we can enjoy nature's gifts? Is nature, after all, cruel and stingy? Who could consistently make any such charge?

No, sir; a cold, calm study of vital statistics, carefully compiled from the intelligent and scientific investigations of a hundred years, reveals that nature is not killing off the human race, but that because of our neglect of her laws we are destroying ourselves. The lower animals, by following natural instinct, continue in their perpetuation. Man, who should stand highest in everything in animal life, and more, cuts short his race by a failure to observe the common laws of health.

"Is it a part of nature's plan to kill off most of us before we can enjoy nature's gifts?"

A GREATER WAR

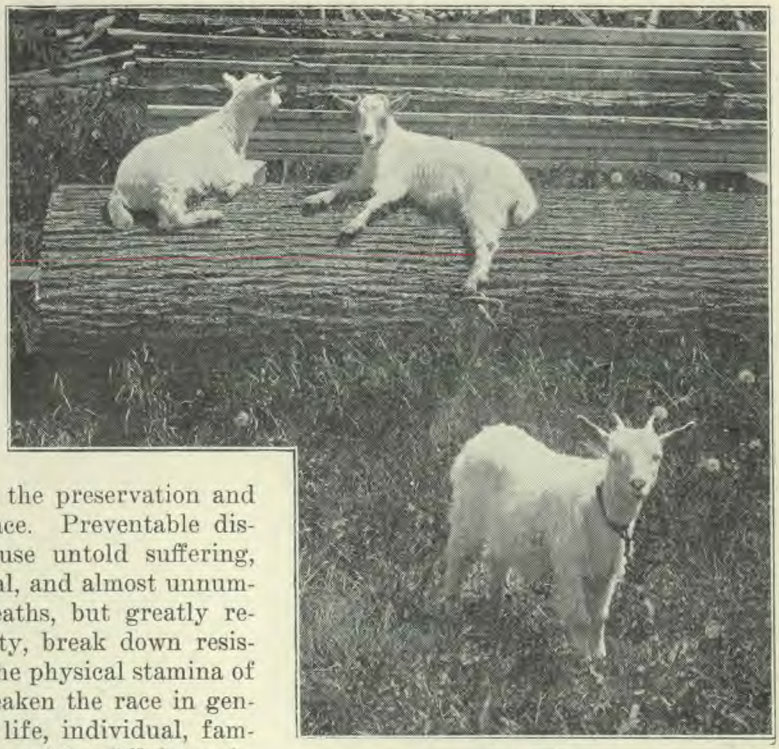
Clearly, then, there is a fight for the cause of humanity that is to be fought in times of peace as well as of war. The struggle began long before 1914, and will last indefinitely. It is a warfare that is actually greater than the one that is now tearing the world asunder. Every man, woman, and child should enlist in a defensive war against disease, for disease is making war against humanity. It is a battle that may be won, but it takes fighting to win it.

And what is more, nothing is so essential to the winning of a war for a nation as the health of its people. All the measures now being taken to speed up production, transportation, and conservation are in vain unless the health of every one concerned is protected. Disease would destroy efficiency at its very foundation. Hence, care is being taken by the Government to recommend only such measures as will make for the health of the people.

But should we not work for health anyway, war or no war? Is not individual and national efficiency worth while in time of peace? What would it profit any nation to gain the whole world and then lose its own being by self-destruction? If health conservation is good for carrying on the war, is it not also good in reaching attainments in other directions?

In health conservation the old

adage, "An ounce of prevention is worth a pound of cure," is particularly applicable. Economists the world over recognize that the prevention of disease, in both human and animal life, is a first essential to the advancement of modern civilization and to the preservation and progress of the race. Preventable diseases not only cause untold suffering, physical and mental, and almost unnumbered untimely deaths, but greatly reduce human vitality, break down resistive power, lower the physical stamina of the people, and weaken the race in general. This affects life, individual, family, social, and industrial. Efficiency in all lines is reduced, and everybody suffers.



Just Kids

When we know that there is an epidemic in the community, that everybody is subject to a contagious disease, we take measures to protect ourselves. We see the need of quarantining and of disinfecting. We adopt vigorous preventive measures. But very few epidemics, indeed, not all epidemics taken together, cause the loss of life and lay waste communities as does the constant, steady, ever-present disease, of one kind or another, that people seem to regard as a matter of course, but which could, as well as not, be prevented just as effectually as the one we regard as a scourge and place barriers against.

THE STRUGGLE

The human body is the battle ground of a fight between the forces of conservation and of destruction. It is naturally endowed with health, strength, vitality, and energy to withstand all ordinary attacks of its enemies. A few persons may be born with a handicap of inherited low vitality, but most persons have a fair start physically.

But nature has certain laws which must be followed if health and longevity are to be assured. Obedience to her laws is the cost of defense against disease. In fact, one who pays strict heed to all of nature's health laws may be assured of immunity against all disease.

It is when we violate the laws of health that we begin to break down our fortifications against disease. Any weak spot may give way to the forces of destruction, and then we become subjects for increasing the death rate. The grim reaper has many allies, and it is pretty certain that one or the other will score a victory if we give the opportunity.

REAL CONSERVATION

Now that we are learning to conserve, we have a good opportunity of doing it in full measure. We are getting used to saving wheat, fat, sugar, and everything that the Government tells us it is necessary to save in order to win the

war. We are adapting ourselves to war conditions at large, having to do with markets, transportation, finance, and so forth. We know what it is to adopt new ways of doing things.

But the lifelong war which we all must fight if we are to win out, also demands conservation in little things and in big. Saving physical energy is important. Little details must be watched and bigger tasks must be taken hold of intelligently.

The knowledge we are now getting of food values fits nicely into a program of health conservation, providing we give it that kind of fitting. As we learn what is best in food, how food should be prepared to get the most out of it, and how to eat it to the greatest advantage, we can apply the principles to conserving health as well as to making war savings only as such. In truth, one cannot more effectively help toward national efficiency than by building up individual efficiency.

WHAT IS FEEDING?

The war restrictions on our foodstuffs do not by any means deprive us of proper and sufficient rations. An ample selection is afforded, and much instruction is given for its best use. With a little special care it may be made an easy matter to make our food do what food is intended to do,— repair broken-down tissue and sustain the functions of the body.

To properly feed the body it is necessary to do more than merely put food into the mouth. What we eat is not a gauge of the energy or life we get out of our food. It is not what goes into the mouth that feeds the human machine, but what is digested and assimilated. Bad teeth, insufficient chewing, indigestion, or poor assimilation will prevent a man from having a chance to get one hundred per cent of nourishment from the food he eats.

The body has been compared to a furnace or engine, using heat or energy supplied by food fuel. Well, there are two ways of firing a furnace or engine. One way wastes good coal, makes clinkers and smoke, clogs the apparatus, and produces but little heat. The other way gets full value out of the fuel, turning it into available heat and energy. Stoking the human furnace may be done much the same as either of these.

The wrong way of feeding means a waste of good food material. It also means a greater loss of the human energy into which this body fuel might be converted, and the service that could be performed by a healthy man or woman. Food conservation must surely take this into account.

And while we are at it, why not make conservation count for all it is worth? Getting health out of it would be one of the most profitable returns, and this can be accomplished at the same time that we are serving the direct objects of food conservation. Health conservation involves also the right use of air, water, rest, sleep, and exercise.

United States Food Administration

Food Queues in London, England

On the Campus of the New England Sanitarium, Melrose, Mass.

Out of Doors for the Nerves

W. E. Bliss, M. D.
Superintendent New England Sanitarium

SOME one has said that it is as uncommon to go through life without some kind of nervous break as to go through without the measles. Few nervous disorders, from insanity, locomotor ataxia, and paralysis agitans down to insomnia and the fidgets, can be laid at the door of our forefathers — that is, they are not hereditary. Above all other disorders, nervous diseases depend upon our own habits and manner of living. Nerves are our best friends or our worst enemies. Treated three fourths decently, they will carry us through life in a sane, happy, contented condition. If abused, they get it back on us a hundredfold sometimes, in aches and pains and depression and exhaustion and fears and obsessions, more or less real or less or more imaginary. But whether genuine or not, they are real to the owner.

Some people say that the worst thing about nervous troubles is, they never kill. Those having them, as well as others, often wish they would. They are like seasickness, in that the possessor first fears he will die, then wishes he might, and finally fears he will not.

In these days, high and fast living and rapid transit are responsible for much of the nervous disorder found. The mad rush of business and social life is driving people mad. Insanity is on the increase, as are all nervous diseases. What shall be done to check them? "Back to nature," some faddists tell us, and there is much sense in this doctrine. Simple living is very important. The present ban on high living, known as Hooverizing, is one of the greatest blessings that ever struck neurasthenics. Next to this is the associated movement in gardening. There is no better medicine for nervousness than fresh air and well-regulated exercise out of doors. Of course a person taking exercise should know from a physician how much exercise he can take, and should have his exercise supervised and if necessary prescribed. The best antidote for that tired feeling of a neurotic is a real tired feeling from work or exercise in games or other diverting pastime. The best sleeping drafts are drafts of fresh air taken in out-of-door exercises several times a day. No one can keep his health as good

as it ought to be without a fair amount of exercise in the fresh air.

There is no better exercise than gardening. There are many things in favor of this form of exercise. It occupies the mind, and this is of the utmost importance in the treatment of nervous disorders. Watching things grow has a great attraction when one gets interested in it, and is a great help in overcoming nervousness.

When active and useful work is inadvisable and more vigorous sports cannot be endured, some systematic recreation, as the study of birds, flowers, stones, trees, and insects, is very profitable.

Of the games, golf is excellent exercise; it can be engaged in very energetically or one can work as moderately as necessary. Croquet is very moderate exercise, but the stooping position assumed most of the time is not the most beneficial. Tennis is suited to persons who are physically fit, and is very profitable for exercise.

It matters little what form of exercise is adopted. The principal thing is to take exercise out of doors. Do it systematically, persistently, conscientiously. There is nothing so good for most nervous persons as well-directed out-of-door exercise or diversion.

There is very little excuse for any one to be nervous when the means for recovery are so near at hand and so abundant.

Wheatless Dinner

Cream of Bean Soup Tomato and Rice Soup

* * *

Protose Smothered in Onions Rice au Gratin
Baked Soy Beans with Brown Bread

* * *

Creamed Celery Mashed Turnips
Parsnips with Egg Sauce New Beets
Baked Potatoes Scalloped Potatoes
Baked Savory Lentils Stewed Tomatoes

* * *

Radishes Ripe Olives
Young Onions Okra Salad
Romaine Lettuce with Dressing

* * *

Gooseberry Jam Comb Honey
Lemon Pie with Granola Crust
Cream Rice Pudding Cherry Sauce
Apple Sauce Peach Sauce

* * *

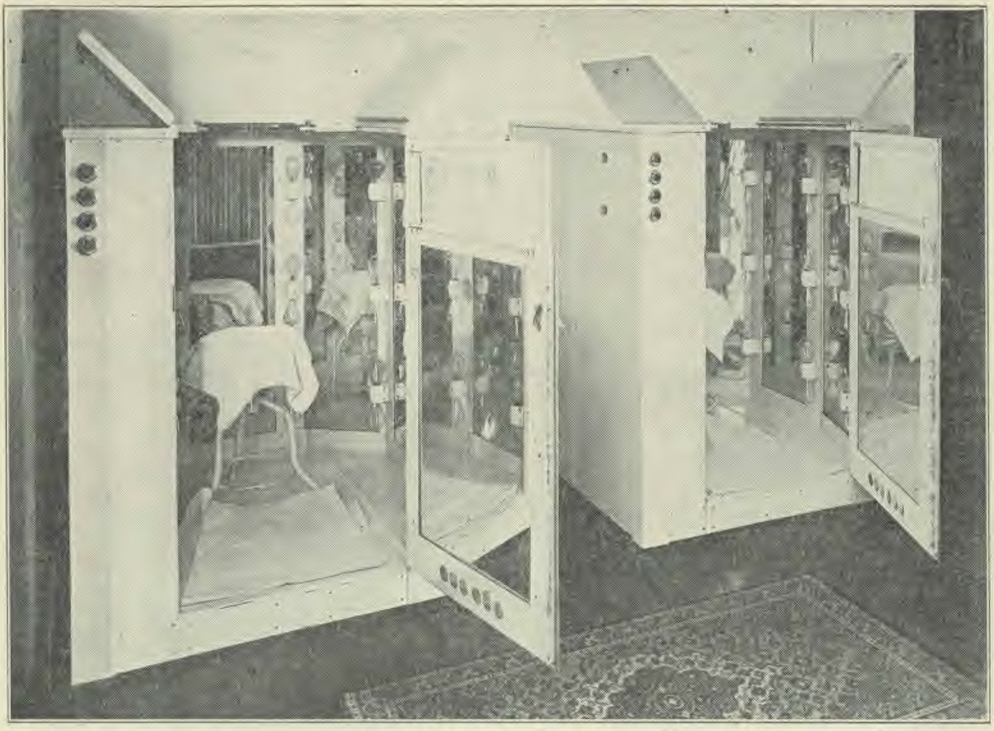
Cereal Coffee Hot or Cold Milk
Gluten Gruel Yogurt Buttermilk
Health Cocoa with Marshmallow Cream

* * *

Wheatless Educator Crackers
War Bread Victory Bread
Bran Gems Bran Fruit Cake
Zwieback Corn Rolls
Fruit Crackers
Dairy Butter Peanut Butter
Nut Margarin

The above menu is from the New England Sanitarium.

"Of the games, golf is excellent exercise; it can be engaged in very energetically, or one can work as moderately as necessary. . . . Tennis is suited to persons who are physically fit, and is very profitable for exercise."



Electric-light Bath Cabinets

The Treatment of Rheumatism

W. A. Ruble, A. M., M. D.
New England Sanitarium

HOWEVER vague and incomprehensive the term "rheumatism" may be to the medical profession, it has a very vivid meaning to people in general. Like charity, the term covers a multitude of sins — yes, in more ways than one. In one sense it covers any pain, ache, stiffness, or indisposition that cannot be accounted for in any other way. In another sense rheumatism covers, or rather uncovers and reveals, a multitude of errors in diet, lack of exercise, diminished water drinking, etc.

It is a well-known fact that crystalline deposits form in the joints, causing gout and other rheumatic conditions. It is also well recognized that these disorders are most common in those who are most careless in their diet. Gout is known as the disease of the epicure.

Diet, then, is of the utmost importance. Most of the waste products of the body which predispose to rheumatism arise from the protein in food. A high protein diet is therefore to be avoided. The most common source of protein food is meat. In meat there is an excess of waste products produced in the body of the animal, hence meat is denied those having rheumatism by almost all physicians. A diet largely vegetarian is indicated in this condition.

Dr. Graham Lusk, one of the greatest authorities on diet, in a lecture before Food Conservation officers in Washington, Aug. 30, 1917, said:

"Splendid health both of body and mind, the peasant's comparative immunity to indigestion, kidney and liver diseases, as well as *absolute immunity to gout*, is the alluring prospect held out by the following dietary:

"Graham bread	1 pound
Potatoes	2 pounds
Vegetable fat	½ pound
Apples	1½ pounds
Milk	1 pint."

This bread-potato-milk diet gives an excellent basis of wholesome nutrition.

Water drinking almost to excess is also indicated in this condition.

So much for prevention; now for curative measures.

Elimination is first in importance. Sweating treatment, such as fomentations, hot packs, shower baths, and especially the full electric-light bath, are best. Some of these can be given at home, but the most effectual will have to be sought in a sanitarium or other institution equipped for such work.

Don't let rheumatism run long. It often results in permanent stiffening, called arthritis deformans. If it does not quickly yield to home treatment and diet, seek medical advice, and if necessary, treatment as indicated. Rheumatism also very often results in heart disease, and is many times followed or accompanied by hardening of the arteries, or arteriosclerosis. Get busy, then, about your rheumatism. First avoid it by proper living. If it comes anyhow, do not neglect it.

SENILE RHEUMATISM

Senile rheumatism, according to recent observation, is often only a symptom of kidney disease, and can be relieved best if at all by treatment of the kidney trouble. Senile rheumatism according to this view, is the result of uremic poisoning. In fact, patients suffering from so-called rheumatism have not infrequently been relieved by relieving the uremic condition.

There should be a severe cutting down of animal protein, with the exception of milk. Treatment to increase the activity of the skin, and to keep the intestines functioning properly, are in order. Electric light baths, packs, and other sweating treatments may be given two or three times a week, followed by a hot-and-cold spray or douche. Alternate hot and cold over the kidneys, which is best given in the form of a douche, increases the circulation of the organs and increases kidney activity.

The treatment of senile conditions is most favorably given in a properly equipped institution, as a sanitarium, where every facility is provided, and where attendants have been carefully trained in the technique of giving the various treatments.

Kitchen, New England Sanitarium, Melrose, Mass.

Dining-Room, New England Sanitarium, Melrose, Mass.

Chronic Intestinal Toxemia

G. H. Heald, M. D.

SOME physicians seem to doubt the importance of intestinal intoxication as a cause of general bodily disturbance, but there are weighty theoretical and experimental and clinical reasons for believing that the intestinal tract is a most potent part of man for weal or woe, for health or disease, for efficiency or inefficiency, for long life or early death. One adage makes a man's life expectancy depend on the condition of his arteries; but the arterial condition doubtless depends largely on what is going on in the intestinal tube.

Herter and others have shown conclusively that the lower bowel may be inhabited by putrefactive organisms producing violently poisonous products. He also found that men who are young at seventy have their bowels singularly free from these putrefactive organisms.

Severe constitutional symptoms are sometimes relieved by emptying a festering bowel of its contents. Sometimes a radical change in diet will correct profound chronic nervous conditions.

In the *Medical Record*, Sept. 8, 1917, there was an article on chronic intestinal toxemia by Dr. George Reese Satterlee, of New York, which, though written for physicians, contains much that laymen should know.

Among the symptoms of this condition mentioned by Dr. Satterlee are constipation and flatulence (shown by eructation of gas from the stomach and passage of gas from the bowel). There may or may not be abdominal distention and pain. Some patients complain that "everything turns to gas." In other cases gas seems to be formed only from certain foods. If the flatulence is due to carbohydrate fermentation it will be odorless; if from fermentation of protein (putrefaction) there will be a foul odor. A carbohydrate-free diet will often relieve the former, and a meatless diet the latter condition. Sometimes there is a fermentation of both the carbohydrates and the proteins.

The nervous symptoms, however, are more important, more disagreeable, and

more far-reaching in their effects on the personality and the welfare of the patient. There may be mental depression, even melancholia, and irritability, with tendency to be disturbed by small things. The character may be changed so that the patient is no longer understood by his family and friends, though he may appear normal to casual acquaintances. There is an inability to concentrate the mind on the work in hand, and an almost complete loss of memory. There may be attacks of vertigo, or dizziness, and lapses in consciousness, with convulsions somewhat resembling epilepsy, but more like the form known as *petit mal*. These conditions, which are likely to be worse after indulgence in some certain foods or combinations of food, may go on to stimulate actual insanity. There may also be muscular pains, or rheumatism, neuralgia, and neuritis. Other symptoms, dependent on the irritation of the sympathetic nervous system, are flushing of the face, rapid or slow heart, and irritable stomach.

Dr. Satterlee treats these cases with a purge, preferably of castor oil, and then gives a meatless diet. His course, consisting of catharsis, fasting, and colon irrigations (with saline solution), he says, will usually clear up intestinal putrefaction. He gives fermented milk with lactic-acid bacilli, or even sweet milk, and cereals and simple stewed fruits. "Drugs at this stage," he says, "are harmful." As putrefaction often recurs, the treatment may have to be repeated.

Regarding diet he says: "The diet in chronic intestinal toxemia proper is all-important. On account of the close association with and danger of intestinal putrefaction, it is necessary to *withdraw all meat protein* except that contained in milk, cream, and butter. This includes all eggs, meat, fish, shellfish, and meat extracts."

He makes a concession after three months. A little meat (bacon) is allowed, "and the patient watched for symptoms." This is by way of concession, for many patients *think* they *must* go back to meat. In our sanitariums we make no such concessions. The patient is taught that he will be better off to forego the use of meat permanently. Satterlee's next direction is to "*Prohibit all white refined flour* and substitute whole wheat. The white flour of today is so highly refined that the nutritive substance (so-called 'vitamines') and salts, so necessary for proper metabolism, have been removed. Prolonged eating of this white flour has shown bad results in intestinal toxemia and constipation. *Polished rice* should be placed in the same class and *forbidden*, nonpolished and uncoated rice being substituted. If starch digestion is poor, it is unnecessary to eat large quantities of these two articles."

He also suggests the free use of oatmeal and whole-wheat cereals, and the old-fashioned (water-ground) cornmeal containing the sperm, and green vegetables (fresh in preference to canned).

Dr. Satterlee says he has had head waiters in some of the best hotels complain that they could not get such a diet as here outlined. Doubtless it will be easier since it has become fashionable for the hotels to co-operate with the Food Administration. He also found it impossible to get fresh vegetables in small towns and in the country, and had to have them shipped from the large cities. Probably here also the food campaign will have a wholesome effect, encouraging an all-round reduction of animal foods, white flour, and sugar, and an increased production as well as consumption of the whole grains and garden vegetables. And this all tends to better health, especially for those suffering from intestinal toxemia.

Conservation Menus

For a Week in August

Wheatless and Meatless

George E. Cornforth
Chef New England Sanitarium

FIRST DAY

DINNER

New Potatoes in Cream Sauce
Rice au Gratin String Beans
Wheatless Brown Bread [1]
Peanut Butter Floating Island

BREAKFAST

Cream Hominy (cooked in fireless)
Cream or Milk Velvet Eggs [1]
Crumb Gems [1] Sweet Apples

SUPPER

Molded Hominy with Milk
Banana Sherbet
Barley Flour Sponge Cake

SECOND DAY

BREAKFAST

Toasted Rice Flakes
Cream or Milk Cottage Cheese
Hashed Potatoes
Corn-Flake Drop Cakes [1]
Apples or Sauce

DINNER

Walnut Loaf
Boiled New Potatoes
Hot Young Beets with Lemon
or Beet Greens
Barley Gems Sago Cream

SUPPER

Rice with Raisins
Cream or Milk Barley Gems
Blueberries

THIRD DAY

DINNER

Savory Rice Timbales [1]
Scalloped Potatoes Stewed Tomatoes
Barley Bread
Blueberry Pie

BREAKFAST

French Toast of Brown Bread with Maple Sirup
Baked Potatoes Rye Gems
Blackberries

SUPPER

Milk Gravy Toast of Barley Bread
Warmed-up Potatoes
Apple Sauce

FOURTH DAY

BREAKFAST

Silver Grains with Bananas
Cream or Milk
Hashed Brown Potatoes
Blueberry Gems (Barley Flour)
Cereal Coffee

SUPPER

Molded Silver Grains with Blueberries
Cream or Milk Creamed Potatoes
Jelly Roll

DINNER

Boiled Rice with Almond Cream [1]
Creamed Young Turnips
Ripe Olives Wafer Corn Bread
Bavarian Cream

FIFTH DAY

DINNER

Baked Bean Purée with Gravy [1]
with Bread Dressing
Mashed Potato Boiled Young Carrots
Fig Tapioca [1]

BREAKFAST

Rice Muffins Cottage Cheese
Creamed Potatoes Date Rolls
Blackberry Sauce

SUPPER

Egg Sandwiches of Wafer Corn Bread
Cup Cakes Ice Cream

SIXTH DAY

BREAKFAST

Potato Cakes with Cream Sauce
Nut Gems (Barley or Rye Flour)
Fresh Plums

SUPPER

Sliced Cucumbers with Lemon
Nut Gems Cottage Cheese
Rice with Blueberry Sauce and Whipped Cream [1]

DINNER

Cream Barley Soup
Boiled New Potatoes with Nut Gravy
Corn on the Cob
Blueberry Shortcake (Barley Sponge Cake)

SABBATH

DINNER

Potato Salad Wheatless Crackers
Barley Fruit Bread
Mixed Nuts Apple Tart
Mint Nectar [1]

BREAKFAST

Puffed Corn (toasted)
Milk or Cream Warmed-up Potatoes
Buckwheat Raisin Gems (reheated)
Peaches

SUPPER

Corn Flakes with Milk or Cream
Barley Fruit Bread
Baked Sweet Apples

Superior figures ([1]) indicate recipes that are in this number.

CRUMB GEMS

1 cup milk.
1 egg.
½ teaspoon salt.
½ cup thoroughly dried bread crumbs.
¾ cup barley flour.

Beat together the milk, egg, and salt. Stir in the flour, and beat till the batter is smooth, which will require not more than two minutes. Put into hot, oiled gem irons, filling the irons level full, and bake in a hot oven.

The hominy that is left from breakfast can be molded in cups wet with cold water. It is then unmolded for supper. Each mold is surrounded with sliced bananas, and served with milk or cream.

SAVORY RICE TIMBALES

CORN-FLAKE DROP CAKES

WHEATLESS BROWN BREAD

Set a sponge of the following ingredients:

2 cups lukewarm skim milk
¼ cake compressed yeast
1 cup cornmeal.
½ cup rye meal (unsifted.)
⅔ cup thoroughly dried crumbs of wheatless breads.

When this sponge is light, which will be in about three hours, add the following to make a dough:

¾ cup warm molasses.
1 teaspoon salt.
1 cup thoroughly dried crumbs.
½ cup raisins, washed.

Mix thoroughly. Set in a warm place to rise again. When light, stir down well, then put it into an oiled brown-bread tin, cover the tin, let stand a few moments to rise just a little, then put into a steamer and steam two hours. This is nice made the day before it is used, and then warmed up by steaming.

CORN-FLAKE DROP CAKES

3 eggs.
¼ teaspoon salt.
⅓ cup sugar.
1 tablespoon boiling water.
½ cup shredded coconut.
About 4½ cups freshly toasted corn flakes.

Break the eggs into a mixing bowl. Add the salt. Set the bowl in a pan of hot water. Beat the eggs with an egg beater till they are light. Add the boiling water, and beat again; then add the sugar, a little at a time, beating as it is added, and continue to beat till the mixture is very light and stiff. Then carefully fold in the flakes and coconut, making as few strokes as possible, so as to lose as little as possible of the air which has been beaten into the eggs. Drop in spoonfuls on a pan which has been oiled and lightly sprinkled with flour, and bake in a moderate oven.

SAVORY RICE TIMBALES

1 cup tomatoes.
1 slice of onion.
Sprig of parsley.
½ cup water.
½ teaspoon salt.
¼ cup peanut butter.
1 teaspoon oil.
1 cup cooked rice.
1 egg, beaten.

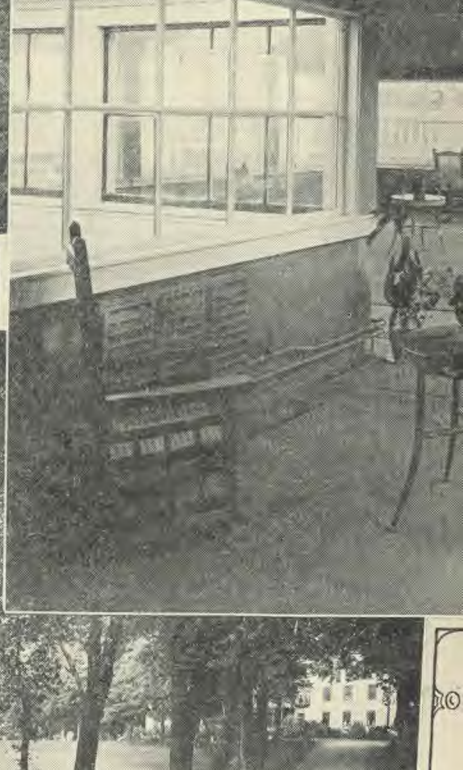
Cook together slowly for twenty minutes all the ingredients except the rice and egg. Rub through a fine strainer. Add the rice and egg, and mix well. Put into oiled cups. Bake in a pan of hot water till set. Serve with tomato sauce containing a few chopped olives.

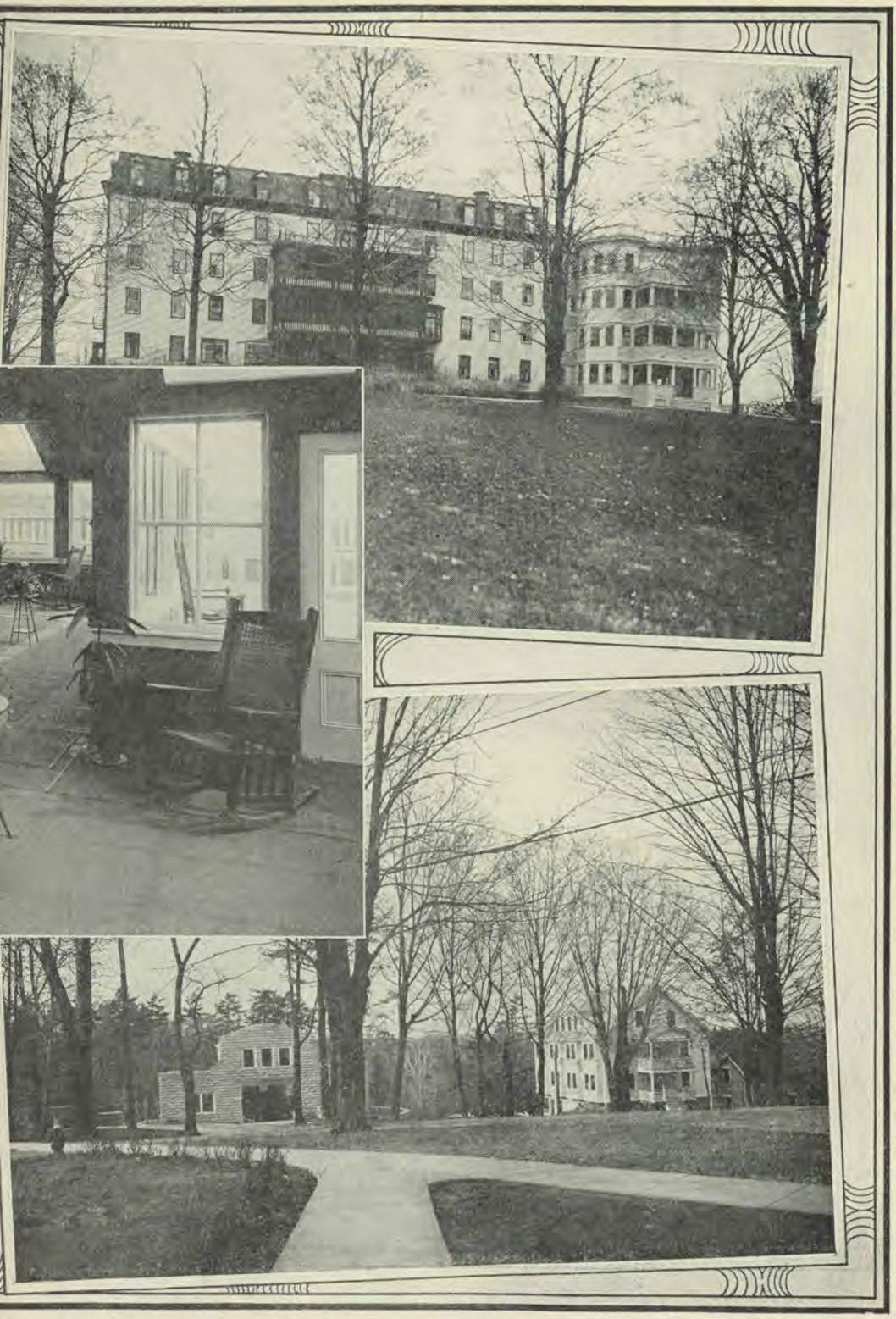
The silver grains is simply cornmeal mush made from white cornmeal. Slice bananas over each dish, and serve with cream or milk. Mold what is left in cups wet with cold water; unmold for supper. Surround each mold with fresh blueberries, and serve with cream or milk.

ALMOND CREAM

Grind thoroughly dried blanched almonds through a food chopper which

(Continued on page 248)





ARIUM VIEWS

Conservation Menus

(Continued from page 239)

has a plate to grind nut butter. Stir one-fourth cup of this almond butter smooth with one pint of water, adding the water a little at a time. Cook twenty minutes in a double boiler. Add salt. This may be used either hot or cold.

BAKED BEAN PUREE

Cook beans in the fireless cooker. Rub them through a colander. Season well with salt and cream or cooking oil. Spread in a baking pan, and bake till dry and nicely browned. Serve with gravy.

Left-over pieces of bread may be saved by making bread dressing from them, and serving the dressing with the bean purée. Garnish the dish with halves of shelled walnuts.

FIG TAPIOCA

¼ cup tapioca.
1½ cups water.
⅓ cups sugar.
A few grains of salt.
1½ cups fig marmalade.
½ teaspoon lemon flavoring.
¾ teaspoon orange-flower water.

Soak the tapioca in the water one hour, or overnight. Put it into a double boiler, add the salt, and cook till transparent. Then stir in the sugar, fig marmalade, and flavoring. Serve cold with cream.

RICE WITH BLUEBERRY SAUCE AND WHIPPED CREAM

Thicken stewed blueberries slightly with cornstarch. Sweeten to taste. Serve over each individual dish of steamed or boiled rice with whipped cream on top.

Wheatless crackers are manufactured and have been put on the market by some cracker companies.

MINT NECTAR

1 cup strawberry juice.
1 cup raspberry juice.
⅔ cup lemon juice.
1 to 2 cups sugar, according to taste.
12 mint sprigs (spearmint)
1 pint boiling water.
1 quart cold water.

Pour the boiling water over the mint sprigs, cover, and allow to stand one hour. Strain. Add to this water the remaining ingredients, and put away in the refrigerator till serving time. When serving, put a fresh mint sprig into each glass of nectar.

VELVET EGGS

3 eggs, beaten.
½ cup milk.
½ teaspoon salt.

Beat together, and cook in a double boiler, keeping the water in the lower part of the double boiler a little below the boiling point, till the mixture is just set, but do not cook it so long that the mixture curdles.

SOME OF THE MOST NECESSARY COOKING UTENSILS

Pyorrhea

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

ONE of the most important conservators of bodily health is a healthy mouth condition, such as results from scrupulous care, not only of the teeth, but of gums, tongue, and the entire mouth cavity. An unhygienic, neglected mouth is a standing menace to health. These facts, familiar to dentists and physicians, should be better understood by the laity.

In one sense, the practice of oral hygiene is not new. Esthetic people for generations have attempted to keep the mouth clean, and have recognized the benefit to be derived from the practice; but the means used have been inadequate, and no one ever expected by such measures entirely to escape having decayed teeth, diseased mouths, and loss of teeth. But the great movement for tooth conservation — or, as we might call it, the science of conserving health through the practice of mouth hygiene — which is now sweeping through the world, is of comparatively recent origin, dating, in fact, from the time when it was definitely determined that many diseases owe their inception to bad mouth conditions, especially pyorrhea.

Years of study and research by leading dental scientists have left no room for doubt that pyorrhea is the most baneful as well as the most frequently occurring dental disease, affecting at least seventy-five per cent of all persons over thirty-five years of age, many under that age, and some in early youth.

Pyorrhea begins locally[1] at the necks of the teeth, from inflammation caused by salivary deposits. As this tartar deposit is a foreign body and an irritant, inflammation follows. The gums then begin to recede, and more tartar forms below the first deposit, and so the process goes deeper. During this recession of the gums, germs are active; pus forms, and is carried through the system, disturbing the functioning of every organ of the body.

As the disease progresses, the tissues and bony structure of the root sockets are destroyed, and pus pockets are formed about the roots of the teeth, creating places for the collection and retention of filth, and breeding places for pus and other disease-producing germs. The teeth gradually become loose, and eventually fall out. In advanced stages of pyorrhea there is a decided exudation of pus and a characteristic odor. The pus exuding from diseased gums is taken into the stomach in a never-ending stream, and in great quantities during the mastication of food. This being the case, it is not difficult to understand why the effects of pyorrhea are so destructive to health.

Dr. Charles H. Mayo has said:

"The next great advance in the prevention of disease, and that wherein dentists are so much interested, is the knowledge that chronic diseases, acute diseases, and special local diseases, such as neuritis, sciatica, and acute paralysis, come from mouth infection in the majority of instances; also that appendicitis, diseases of the gall gladder, and ulcerated stomach are caused by bacterial infarcts [obstruction by plugs of bacteria] in the capillary circulation at the base of the mucous cells in these organs, and are

[1] While pyorrhea may be called a local disease, there is no organ of the body that may not be involved in the infection. When the system is cleaned up, in conjunction with the local treatment, the disease rapidly disappears. When oral treatment only is given, the disease yields with great difficulty.

caused in the same manner from local infections. While there are several sources in the body for the entrance of bacteria and their culture in a local focus, the mouth is far the most common situation. The tonsils very commonly harbor disease germs.

"In pyorrhea we find these germs in cavities and abscesses at the roots of teeth from natural decay, and in special abscesses at the apex of a tooth, all of which are often the result of faulty or old-time dentistry."

Thus in addition to neuritis, sciatica, acute paralysis, appendicitis, etc., according to this well-known surgeon, we have arthritis, abdominal inflammation of different kinds, all resulting from bad mouth conditions. Digestive disorders are very common with those suffering from pyorrhea, as are also disturbances of the gastric secretion and inflammatory infections of the upper reaches of the throat, such as croup and quinsy. Among other conditions attributable to bad mouth conditions are heart diseases, poor heart action, neurasthenia, insomnia, and melancholy.

TREATMENT

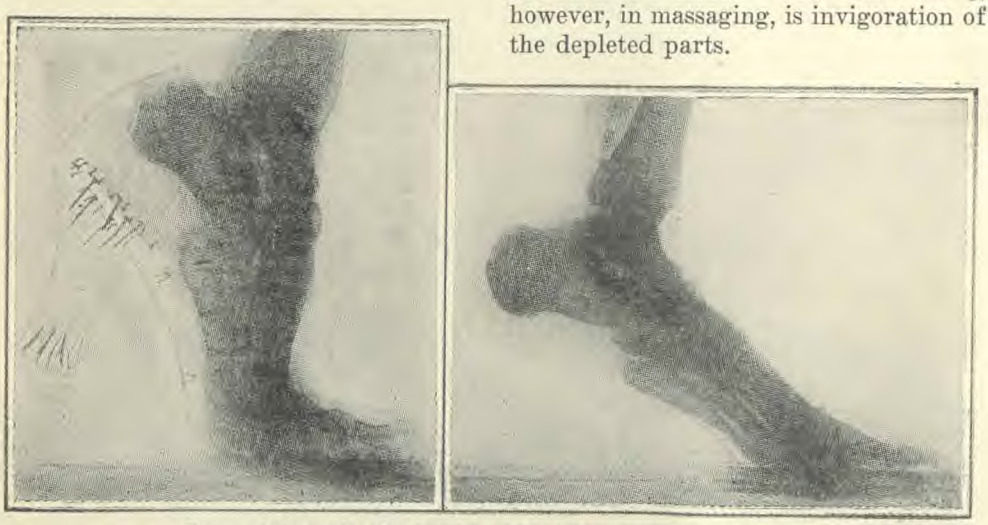
Pyorrhea cannot be cured in every stage. In the first stages, when the bony sockets are not too far destroyed, the disease may be checked and finally cured.

Pyorrhea can be properly treated only by an expert dentist. The secret of success is in thoroughness. The dentist must be most conscientious. Not a trace of tartar should be left around any of the teeth. This is important, lest there be a recurrence of pyorrhea. The dentist must correct all unhygienic conditions of the teeth, mouth, and gums.

All pyorrhea pockets, together with their disease-producing germs, must be destroyed by the dentist's treatment, and the tissues must be restored to normal vitality before the disease can be called cured.

With this the dentist must have cooperation. The patient must maintain these conditions by keeping the teeth and mouth *clean*, using local applications of an antiseptic, nonirritating, healing nature. The patient must be conscientious, for the conditions that caused the disease at first will bring about the disease again, if like conditions arise.

Next in importance to the dentist's treatments is that of massaging the gums. This may be done right after the use of the mouth wash and toothbrush. A coarse-meshed linen cloth wrapped around the finger is best for this work. Always push the gums, with the cloth-covered finger, toward the crown or cutting surfaces of the teeth. That is, upon the upper gums pull down, and upon the lower gums push up. Avoid as much as possible letting the cloth slip over the gums. The coarse-meshed cloth is to allow of catching into the gums and to avoid slipping. This massaging will to some extent push back the gums upon gum-receded teeth. The main thing, however, in massaging, is invigoration of the depleted parts.



X-ray photograph, showing how high heels distort joints of feet

AS WE SEE IT

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

LEARN TO EAT CORN AND TO ENJOY IT

THERE is a home bakery in the city of Washington (I should rather say the District of Columbia, for the Federal Government does not recognize a city of Washington) which is endeavoring faithfully to carry out the Food Conservation program regarding wheat. Customers are not always ready to make a *personal* sacrifice, no matter how much they may in theory desire to co-operate with the Government; so some of the customers of this bakery, when told that the white loaves would thereafter contain 20 per cent corn, said, "I cannot eat corn bread; if you cannot give me wheat bread, I'll have to get flour and make my own bread."

It was not long after such statements that these same customers were eating the 20 per cent corn-flour bread, and testified that they liked it even better than the bread made entirely of white flour. So much for prejudice. As a matter of fact, they are sacrificing nothing. They are getting what to them is just as acceptable as that which they had when wheat was abundant. When 25 per cent corn flour was added, there was no complaint. We are doing just as well on flour containing 75 per cent white flour as we did on that containing 100 per cent white flour. How much more of a reduction can be made without complaint remains to be seen.

Meantime there are thousands — whole States in fact — who have pledged total abstinence from wheat until the next wheat crop. That is a little more like sacrifice, and yet there are many in the South who habitually live on corn bread, and scarcely know the taste of wheat bread.

Is it too much of a sacrifice for us to yield voluntarily for the country what may be called our prejudices in order that those in the stricken zones who do not know corn and its use, and who are not now in a condition to learn, may share our wheat with us?

THE HIGH HEEL IN MOTION PICTURE

UP to about the fifteenth century, human beings were content to walk with the foot horizontal. Since that time fashion has been gradually elevating the heel from the earth until now shoe heels have reached the extraordinary height of three or even three and a half inches. There has been no want of protest against this unhygienic and ungainly practice, but it has been of no avail. What fashion decrees, goes, irrespective of what hygiene or common sense may say.

According to Drs. Quenu and Kuss, as quoted in the *Scientific American*, the effect of the artificial elevation of the heel is to derange the "pedal equilibrium."

> "The muscular action, the orientation, and the mutual relationships among the elaborately articulated members of the human foot, are thrown out of gear; in particular, the arrangement of those joints of the foot which support the weight of the body is profoundly changed. The tibia is forced backward; there is a tendency to bend the knee; and in order to maintain the center of gravity within the area of support, it is necessary to throw the upper part of the trunk backward, exaggerating the curve of the spine and causing the abdomen to protrude unduly."

When it comes to walking, the case is even more serious, according to these authors. Dr. Quenu, by means of motion pictures, has analyzed the constrained gait which results from using a heel three inches or more in height. After describing the natural step when the heel is not raised, the writer (to quote the *Scientific American*) proceeds:

> "In the second film, however, the subject passes before us in short, jerky steps, moving her foot through the air and putting it on and off the ground quite rigidly, without change of relative position of heel and toe, and without any flexure whatever, giving the effect of a stiff and awkward glide rather than a step. It is the jerky progress of an automatic puppet which we have here, not the supple gait worthy of a brisk human being."

Certainly fashion makes large demands on her willing and loyal votaries. If one should sacrifice as much of dignity and ease and health for his religion, he would be counted a saint. The *Scientific American* continues:

> "And what is even more fatal, some parts of the foot support, at all times wholly without aid, the weight of the body. The resultant excessive fatigue has been demonstrated radiographically by Dr. Menard. . . . In this position the bones of the foot proper press upon those of the toes, which, striking in turn against the bottom of their prison, in time become deformed. On the other hand, the bones of the heel take an altogether vicious position, and the whole effect is precisely that of clubfoot.
>
> "Long before this stage is reached, the foot has registered failure in its normal functions of balance and support, and these duties have been thrown upon the leg muscles, especially those of the calf, which must be in a constant state of tension in order that an upright posture may be attained."

And the dear things will read these descriptions of distortion, and then order still higher heels! Heroic woman!

LONG HOURS OF LABOR AND INDUSTRIAL EFFICIENCY

COMMON sense and everyday experience often go a long way ahead of scientific demonstration. That is to say, the common people often learn a scientific truth from everyday experience, years before the laboratory by exact methods demonstrates the same thing. Common experience away back somewhere framed the saying, "All work and no play makes Jack a dull boy." Physiological science has more recently demonstrated the accuracy of this saying.

There has long been a feeling that men do not accomplish so much when working long hours as when they are on more reasonable hours. The study of conditions in munition factories and other places where it has been attempted to speed up production, has shown conclusively that lengthening the hours does not speed up, but retards production.

The Government, realizing that national efficiency is dependent upon efficiency of the individual workmen, is taking an active interest in the matter. The United States Public Health Service has published a leaflet, prepared by Frederic S. Lee, Ph. D., Professor of Physiology in Columbia University, on "Industrial Efficiency," which contains the following significant statements:

> "It is widely believed, and especially by employers of labor, that longer hours mean necessarily a greater output. If industrial physiology does nothing else but show the fallacy of this notion, it will have justified itself. A man can of course accomplish more in two hours than in one hour, but it does not follow that he can accomplish more in 15 hours than in 12, or more in 12 than in 10, or even more in 10 than in 8 hours. Here the American committee has discovered a strikingly suggestive fact in the night work of one of our large munition factories, the duration of the night shift being 12 hours. After 5 A. M. the curve of output shows a rapid decline, and during the last 40 minutes there is very little or absolutely no production. The elimination of the last two hours would be greatly to the advantage of the men, and

would probably result in no diminution but an actual increase in the total product turned out.

"Under the British committee, Vernon has accumulated most striking statistical evidence of the beneficial results of a reduction of the hours of labor. Two instances will suffice to illustrate the point: With a group of 80 to 100 women turning aluminum fuse bodies, the reduction of the weekly hours of actual work from 66.2 to 45.6, a saving of more than 20 hours, increased the gross production by 9 per cent. When the actual weekly working hours of 56 men engaged in the very heavy labor of sizing fuse bodies, were reduced from 58.2 to 51.2, the gross output was increased by 21 per cent."

"Industrial physiology tells us, in the interest of a large output, not only to keep the hours of labor down to what experience has shown to be a reasonable limit, but to choose this limit in accordance with the fatiguing effects of the different specific occupations. It tells us to introduce recess periods into long spells, to omit Sunday labor, and to impose overtime on already fatigued workers only in rare emergencies and when compensation can be given by free hours later. It tells us not to keep the same workers continually on the night shift, but to alternate night with day work."

THE PRO AND CON OF DAIRY BUTTER

HALLIBURTON and Drummond, as a result of experiments on rats, report in *Journal Physiol*, the following conclusions:

"Coconut oil, cottonseed oil, Arachis oil, and hydrogenated vegetable oils contain little or none of this [fat-soluble] accessory substance, hence margarins prepared with a basis of these fats have not an equal nutritive value to that of butter. Nut butters prepared from crushed nuts and vegetable fats are similarly not equal to butter.

"Lard substitutes prepared from vegetable oils are equal to lard in their nutritive value, both alike being destitute of the fat-soluble accessory substance."

On the other hand, the use of butter is not free from danger, as is illustrated by M. F. Boyd, who in the *Journal A. M. A.* reports two outbreaks of typhoid fever, in one of which the evidence pointed conclusively to butter as the cause of the epidemic; in the other the evidence was only suggested. In neither case had the cream been Pasteurized. The author, however, believes that on account of the attenuation of the germ in the presence of lactic acid and salt, the menace from infected butter is not so great as from infected milk.

DO NOT LAUGH AT A DRUNKEN MAN

IF you see a drunken man, do not laugh at him. He may act silly, he may talk nonsense, he may reel and stagger and muss himself up a good deal, and show a lack of sense in general; but do not laugh at him.

The drunken man is a poisoned man. His system is abnormal. His whole being is drugged. He is not himself. What is there amusing in that?

A drunken man is beyond his own control. His mental faculties are running loose. He is not responsible for his conduct. He may be in good humor, or he may be out of sorts. He may want to treat you or fight you. There is no joke about any of this.

Many a drunken man is in grave danger of serious injury. He may lose a limb or burst a blood vessel. He may get so badly hurt that he will become a public charge. There is nothing funny about that.

A drunken man is ruining himself. He is throwing away everything that is manly. He is throwing away his money, his honor, himself. This is not a laughing matter.

The drunken man may kill some one. Many a wife or child has been murdered by a drunken husband or father. His brain may invent terrible things.

He is crazed. He knows no law. He is worse than a wild beast turned loose. He is a menace to the community. There is no humor in that.

There is no telling what may be done by a drunken man under the overstimulation of his brain. You cannot judge the man's conduct by what he is in his sober moments. When drunk he may do that which he will greatly regret in after soberness — something he can never undo. Where's the fun?

Don't laugh at a drunken man. L. A. H.

FEEDING A NATION IN PEACE AND WAR

BEFORE the Royal Institute of Public Health (England), D. Noel Paton, M. D., F. R. S., Regius Professor of Physiology in the University of Glasgow, delivered a lecture with the foregoing title, which, as a straw, indicates the direction of the wind.

Men, even physiologists, have usually taught, regarding dietetics, according to the dictates of tradition and of their own food preferences. At least, it has taken the conditions brought about by the war to bring such men as Prof. Graham Lusk to recognize in meat a food of secondary importance. Now comes Dr. Paton, as quoted in the *Journal of State Medicine*, London, March, 1918, who classifies foods into three divisions: (1) of primary importance, (2) of secondary importance, (3) of minor importance. In the first class he places the cereals, especially wheat. In the second he places meat and dairy products, potatoes, and sugar. The third class he does not consider.

Dr. Paton calls attention to the fact that "the formation of meat from vegetables is an extraordinarily wasteful process." He continues: "The pig is probably the least wasteful transformer, but it takes over 6 pounds of maize to make 1 pound of pork."

Such a wasteful transformation of energy is inexcusable in this time of food stress. Attention in this country has already been called to the fact that the surest way to increase our allowance of food energy is to cease the wasteful process of transforming it into animal products.

Dr. Paton, in this address, has unquestionably called attention to some fundamental health and economic principles, but we think, in view of the light recently thrown on the importance of the so-called vitamines to proper nutrition, he has erred in not including, at least in his second class, the green vegetables or their equivalent.

FOOD CONSERVATION ALL ALONG THE LINE

THERE is conservation in the sowing of wheat, its reaping and threshing, its storing in the farmers' bins, and its handling at the elevators.

There is conservation in the milling of the flour, its transportation, and its sale by wholesalers and retailers.

There is conservation in the baking of bread and its distribution from the bakery door.

There is conservation in hundreds of hotels, restaurants, and dining-cars in the country.

Is there conservation in your home?

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.

Twilight Sleep

"Do you consider 'twilight sleep' advisable?"

No. It should not be used unless in a hospital by physicians who are trained and experienced in its use. If an anesthetic is necessary, ether is to be preferred.

Epsom Salts

"Is the daily use of a small dose of Epsom salts harmful?"

Yes. If this medicine is kept up for a time, it will produce irritation of the mucous membrane of the stomach and bowels. It also irritates the tissues of the liver and kidneys and produces definite changes in these organs. Epsom salts, sodium phosphates, mineral waters, and other like medicines should be used only under the direction of a physician, and then for only a limited period. Constipation, and inactivity of the kidneys are better relieved by diet and hydrotherapeutic treatments.

Fish, Meat, Shellfish

"Is fish a more harmful food than meat? Are shellfish objectionable? Why?"

Fish is more easily decomposed than is meat, and for this reason it is likely to be a source of intestinal toxemia. Other things being equal, if the meat and fish are both masticated well, the former is less likely to produce autointoxication than the latter. Shellfish are liable to be carriers of disease germs and of cancer. Vegetables, grains, and nuts provide the necessary food elements in a more healthful form and at a less cost, and are to be preferred.

Coffee

"Is one small cup of weak coffee daily injurious?"

Coffee contains the drug caffeine, and the amount of this medicine taken depends upon the strength of the coffee. It has no food value and is wholly a stimulant, acting as a whip to the nervous system. Caffeine is eliminated by the kidneys as uric acid. Coffee is injurious, and should not be used. It should never be given to children or to the youth, as it is particularly harmful during the growing period. It is better to use hot water with a little milk in it, or some of the various cereal coffees which are so easily obtained. One should be careful not to use liquids at meals to wash down the other food.

Celery, Lettuce, Spinach

"Is there any medicinal value in celery, particularly for nervous people? Are lettuce, spinach, and celery hard to digest?"

These green vegetables are rich in vitamines which are in some way necessary for the growth and daily activity of the human organism. These vegetables also have some mineral salts which are daily needed, and they provide bulk for the diet. In these three ways they are necessary, but they have no medicinal virtue otherwise. They are not hard to digest.

Swelling of Feet, Shortness of Breath

"What are the cause and treatment of swelling of the feet and ankles, and puffiness under the eyes, with shortness of breath on walking?"

Puffiness under the eyes is often caused by poisons produced and absorbed from the intestines. This condition is known as intestinal autointoxication. Swelling under the eyes may also be due to kidney disease. The swelling of the feet and ankles, with the shortness of breath, is probably due to heart trouble. A person suffering from these troubles should have a careful and thorough examination. This should include tests of the blood and urine, and an X-ray after a barium meal. The treatment should be under the supervision of a physician. Diet is important. Easily digested foods in small amounts, carefully moderated exercises with gentle treatments which stimulate the elimination and relieve the work of the heart, are indicated.

Rupture

"Do you recommend the nonsurgical treatment for rupture?"

In the treatment of hernia in infants, and perhaps in the youth, a well-fitted truss will oftentimes press back the contents of the hernia, and allow nature to restore the normal condition of the part. Many young persons, and all adults whose life is active,— who travel from place to place,— should submit to a surgical operation. It is not wise to defer surgical treatment in the latter cases. The chance of strangulation is so great in those leading an active life, and the disturbance produced by the hernia is so great, that these factors depreciate the general health. Other nonsurgical measures than the truss are not reliable, and are often productive of great danger and harm.

Excessive Acidity

"What diet would you recommend to correct excessive acidity in the body?"

The accumulation of acids in the body is due to an overuse of cereals and to the use of meat. The first thing to do is to stop the use of flesh foods and coffee, as the latter is carried off by the kidneys as uric acid. The use of cereals should be decreased, and their place supplied by vegetables, as potatoes, carrots, and parsnips. Potatoes are rich in alkaline salts, and supply the great need for these elements. They are somewhat poor in lime, but this element can be supplied by the use of milk, green vegetables, bran, etc. Potatoes are rich in starch, but they also have nearly a sufficient amount of protein for the daily requirement.

Roaring in the Ears

"What is the cause and treatment of roaring in the ears?"

This difficulty may be due to earwax or to earache; it may be caused by insufficient blood, or anemia; or by an excessive amount of blood, as in plethoric individuals. It may be due to overaction of the heart, or to a general arteriosclerotic condition. The arteriosclerosis may be confined to the internal ear. Noises in the head may also be due to catarrh of the middle ear and to nasal obstruction, causing pressure. The treatment is to remove the cause and to treat the above conditions. Patients may find it necessary to go to a specialist for removal of some nasal obstruction or for the treatment of a middle-ear catarrh. It may be necessary to employ general treatment for the anemia or for the high blood pressure, and to raise the general health and build up the tone of the nervous system.

Picnic Dinner

"What sandwiches and drinks do you recommend for a picnic dinner?"

Baked-bean sandwiches are excellent. The beans are pressed through a colander and thus made into a purée, and may be mixed with a little lemon juice before filling the sandwiches. Egg sandwiches or sandwiches of nuts and olives are much better than meat or cheese sandwiches. Sliced tomato, sliced cucumber, or leaves of lettuce make excellent filling. Cottage cheese finely mashed and spread between slices of bread, butter, and jelly are very appetizing and nutritious.

For drinks, lemonade makes the basis for many drinks. Other juices may be combined with lemon juice, producing various nectars. The juices of pineapples, oranges, red cherries, grapes, etc., make very healthful drinks, much superior to the ordinary soft drinks so often used.

Insomnia

"Please give suggestions and simple treatments for the cure of insomnia."

Remove the cause of this condition. Cure or relieve constipation, indigestion, or chronic diseases, such as heart or bronchial trouble. The evening meal must be light and of easily digested food. Avoid substances which stimulate the gray matter of the nervous system, as tea, coffee, cocoa, tobacco, alcohol, flesh foods, condiments, and spices. Sleep out of doors. Use no feather beds; a fairly hard bed is more productive of sleep. If there is congestion of the head, raise the head of the bed, and use cold compresses to the head. Avoid exciting work, games, or reading in the evening. A tepid sponge bath at night will often relieve this condition. It is sometimes better to take a prolonged lukewarm or neutral full bath for half an hour or more. A hot foot bath at a temperature of 103° to 110° is very serviceable, and may be combined with fomentations to the liver and abdomen. This may be followed by a cool sponge bath or a witch-hazel rub, and is very effective, particularly when the digestion is disordered.

Rheumatism

"Do you recommend the hypodermic treatment for rheumatism?"

By this I suppose you mean the injection of dead cultures of bacteria or germs. This treatment is good in selected cases, when given by a thoroughly competent physician who has had much experience with it. If care is not used, this treatment will probably make rheumatism worse. It should be combined with the proper diet, hydrotherapy, and other medical treatments.

Scaly Face

"Please give the cause and treatment of scaly face in a child."

This condition is most often due to constipation, intestinal indigestion and resulting toxemia. The diet should be carefully selected, and the child encouraged to eat slowly, masticating the food well. Some whole-grain preparations should be added to the daily menu, or bran should be used in making muffins and bread. These branny foods help relieve the constipation, and contain mineral salts which are necessary in the growth of a child. Some fresh vegetables should be used daily, and if the child is very young they should be mashed thoroughly. The juice of oranges or of prunes should also be taken. Other fruits are also valuable in correcting this condition. It may be necessary to give the child a teaspoonful of mineral oil at night and in the morning before breakfast. This acts as a corrective, and soon gets the intestinal tract in a healthy condition, when the dryness of the skin will disappear.

Effect of Mercury

"What is the effect of mercury on the system when taken as a medicine?"

Mercury as a medicine is said to be tonic, purgative, antisyphilitic, and antiseptic. Many of the salts of mercury are poisonous; others are caustic. This drug if used gradually accumulates in the body. It is eliminated as an albuminate by all the excretory organs, but is carried off very slowly. When given even in medicinal doses, it accumulates in the body, and may remain for almost indefinite periods of time, being found deposited in all the organs. Neither mercury nor its salts should be used indiscriminately, but only under the advice and supervision of a competent and conscientious physician.

NEWS NOTES

Our Candy Bill

The people of the United States expend annually for candy about $400,000,000, about twice the amount required to feed Belgium. This amount would buy more than 234,000,000 bushels of corn, which would release sufficient wheat to supply the needs of the Allies and our soldiers in France.

Testing War-Time Recipes

Near the main building of the United States Department of Agriculture is a small building, or "kitchen," where representatives of the Food Administration will co-operate with representatives of the Department of Agriculture in testing out, standardizing, and putting out for the public practical war-time recipes. Recipes from all over the country will be tried, and their nutritive value thoroughly tested.

Victory Bread

Any baker will be permitted to use the name and advertise his product as Victory Bread, provided it contains no more than 80 per cent wheat flour. The ingredients included in the other 20 per cent may be selected from the extensive list of other cereals recommended by the Food Administration, including corn flour, cornmeal, barley flour, oatmeal, rolled oats, rice and rice flour, potato flour, and other similar flours and meals. Bread made of Graham or whole-wheat flour may be called Victory Bread, as this flour effects more than a 20-per-cent saving over ordinary wheat flour.

Children's Year, 1918

The United States Children's Bureau has sent broadcast a call to health officers, State councils of defense, State women's committees, and other organizations interested in promoting children's health, urging them, during 1918, to make a special child-welfare effort, to the end that 100,000 child lives may be saved. Each locality is assigned its definite quota of lives to save. Similar work in England reduced the infant mortality to a point lower than ever before reached, and that notwithstanding the unprecedented difficulties of getting adequate foods.

Soap from Dishwater and Table Scraps

British military authorities, by installing grease traps at the soldiers' messes and by giving instruction at the various camps and hospitals regarding the saving of scraps and even of dishwater, have succeeded in saving fats in sufficient quantity to make about all the soap needed by the army in Macedonia, and as a by-product they obtained a considerable quantity of glycerin, valuable in the manufacture of high explosives. The quantities manufactured are approximately: Hard soap, 40 tons; soft soap, 10 tons; dubbing, 7 tons; glycerin, as much as possible. The fifty tons of fat saved and utilized in this way would be, except for this method of saving, entirely wasted.

Saving Grease

Reports for March to the Food Administration of the amounts of grease recovered from garbage in 14 cities of the United States having a total population in excess of 5,000,000, shows a decrease of nearly 40 per cent over March, 1917. The experts accept savings of grease in garbage collections as one of the best indexes of savings by conservation, and from that standpoint the showing made is extremely pleasing.

The Color of Butter

As is generally known, most butter put on the market is artificially colored by a harmless vegetable color — annatto. Butter itself has a yellow color which varies in intensity with the nature of the feed. Butter eaters get accustomed to a certain shade of yellow, deeper perhaps than is usually natural with butter, and are inclined to refuse butter that is lighter or darker; the color seeming in the ordinary mind to be a kind of badge of purity. It is said that the Pennsylvania Dutch want their butter entirely uncolored and saltless. Natives of some of the West Indies, on the other hand, demand a butter colored almost mahogany red.

We Must Help France

Some of the problems confronting the Food Administration are indicated by the reports that come from France. The shortage of wheat there is becoming more alarming week by week. M. Maurice Long, minister for general revictualing France, said recently that a further reduction of 20 per cent in the bread ration would soon become imperative. The manufacture and consumption of pastry, regarded as a luxury, was entirely suppressed on January 1, except on Sundays and holidays. The bread ration is already too low for the maintenance of health. Paris was put on a ration of 300 grams (about 10 ounces) of bread a day on January 29.

Lime Water Bread

Clara M. Gott, who took a four-year course in domestic economy at Lewis Institute, writes the *Scientific American* regarding her success in using lime water in mixing her bread. She finds "it works beautifully, using 2-3 war flour, 1-6 rye, and 1-6 oatmeal. The bread rises well, is sweet tasting, as your article says, and keeps moist for several days." Here is her recipe: "One cake compressed yeast dissolved in 1-4 cup warm water, 1 cup steel-cut oatmeal cooked 10 minutes in 1 pint water, 2 tablespoons sugar, 2 tablespoons fat, 2 tablespoons salt, 1-3 cup lime water, 1 pint water, 2 1-2 cups rye flour, 6 to 7 cups war flour.

"Cook oatmeal, let cool until *lukewarm;* add yeast and other ingredients; kneed well, let rise until double in bulk; kneed again, shape into loaves; put in tins, and let rise again; bake in moderate oven about 50 minutes. This makes 3 good-sized loaves."

The Burroughs Calculator $175

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In beauty of design and finish, in mechanical excellence, in speed, accuracy, and ease of operation, the Burroughs Calculator is a typical Burroughs product.

Many improvements are built into it, results of the Burroughs Adding Machine Company's thirty years and more of experience in manufacturing figuring and bookkeeping machines.

This superior Calculator followed the old box-type of machine into the accounting world. And, like other Burroughs machines, it is smoother running, easier to operate, more durable, handsomer, and more economical.

The Burroughs Adding Machine Company, the leader in adding machine design and construction, has produced "the better Calculator."

Burroughs Adding Machine Company

Detroit Chicago New York
Kansas City Atlanta San Francisco

Larger Wheat Acreage

More acres were planted to wheat last fall than ever before in this country. This may or may not mean a larger crop, depending on weather and other conditions, but it does mean that the American farmer is loyally trying to do his part to increase production.

To Prevent Frostbite

Experiments carefully performed show that when a part of the body to be exposed to cold water is well oiled, the layer of oil acts as a very efficient blanket to retard the conduction away of the body heat. Men in the trenches who have to stand in very cold water for long periods, are made more comfortable and are in less danger of having frozen feet, by oiling their legs and stockings.

Ventilation of Shoes

A correspondent writing to the *Scientific American*, May 4, 1918, says: "For quite a number of years I have made it a practice to take a large darning needle and puncture through the perforations that are on the tips of my shoes. I formerly suffered severely from perspiring feet, and I found that sufficient ventilation came in my shoes by this method. There is no danger of water entering the shoes, as the holes are small, and as soon as the water strikes the leather, it causes it to swell and close up. Of course it is necessary to run the darning needle through the shoes every once in a while, to keep the holes open."

Electrically Warmed Beds

The *Lancet* tells of a cripples' hospital in Alton, England, in which two wards are supplied with electrically heated mattresses, which have proved both safe and convenient. A flexible wire enters at the head of the mattress. The heating element is so arranged that the maximum heat is developed at the foot, less in the middle, and none at the head. The current may be graduated by a switchboard on the wall; so that any desired degree of heating may be produced up to a certain safe maximum, which cannot be exceeded. Such a device might be fine for the all-year sleeping porch.

Kreed of the Keep-wells

The National Society of Keep-wells has for its purpose the spread of knowledge concerning healthful living. So far as possible, it proposes in each community to invite local medical men to give practical talks to the people on the preservation of health. In a recent meeting in Washington, the national president of this society, Mrs. Arthur MacDonald, urged that less meat be eaten. "Meat stimulates the system more than vegetables," she said, "but taxes the organs more." "Economic prosperity tends to increase meat eating, and automobilism lessens physical exercise and adds to the difficulties of digestion." She believes that we eat about three times as much meat as we ought. "Centenarians," she said, "throughout their lives are shown to have been very moderate eaters, and very few indulged in alcohol."

Typhoid from Vegetables

According to C. O. Melick in the *Journal of Infectious Diseases*, radishes grown in infected soil were found to be infected with typhoid germs after periods of 28, 35, and 37 days. These organisms evidently have a comparatively long life in the soil, and there is a possibility of typhoid transmission, from eating radishes grown in soil fertilized with human excreta. The organisms do not penetrate the skin of the radishes, but remain on the surface, and are not removed by ordinary washing. This fact suggests the importance of avoiding the use in a raw state of vegetables from sewage land.

Sheep Versus Dog

In this country, where the dog does not earn his bread by the moisture of his tongue (*no* dog perspires) pulling a dog cart, the query is raised, Why not have more profitable pets? For instance, it is shown that one county in Kansas has 6,000 dogs which consume enough food to feed 1,000 Belgian orphans. "The county has only 2,000 sheep. A sheep can be raised for the cost of a dog. It is just as good a pet as a dog, and will yield $5 worth of wool yearly." Besides, it always has a sales value. It is said that the replacement of the dogs with sheep in that one county would save $18,000 worth of food a year. How about the saving in the nation if all the dogs were killed? I'm aware that such a suggestion may bring me a reward of tar and feathers.

Enlist the Boys and Girls

The food administrator of New Mexico has asked the children of that State to send a carload of sugar to France. A fine suggestion for other States.

No Idle Yard

Back-yard gardening should be much more in vogue this year than last, for the necessity is greater. Let the slogan be, "Not a foot of idle yard."

Pure Food Enforcement

In the ten years ended Jan. 1, 1917, the Bureau of Chemistry had secured decisions in more than 6,000 cases of alleged violation of pure food laws. More than 750,000 shipments of food and drugs, domestic and imported, had been examined. The enactment of the national pure food law proved a stimulus to the passage of similar legislation in the different States to control traffic wholly within the respective States, and of the standardization of the various State food laws, so that now they are fairly uniform. Another result of the governmental activity is the development of uniform and better methods of production, and now there is much less than formerly of the cheap "just as good" substitutes for articles of honest manufacture. Manufacturers themselves are coming to realize that honesty in production is the best policy. There is still room for vast improvement, but the outlook is hopeful.

"The atmosphere breathes rest and comfort, and the many chambers seem full of welcomes." LONGFELLOW.

Come!

COME out to California—out where the skies are a trifle bluer—out where the sun is a little brighter—out where a fresher breeze is blowing—out where you can rub elbows with Nature and revel in the great outdoors.

Come!—break up the monotony—get away from the toil and moil of city life—cut loose from the daily grind—leave workaday responsibilities far behind—and dedicate a few weeks to health-building. *It pays!*

Once a year, at least, the body should be given a chance to catch up—to recuperate. Tired muscles and fagged-out nerves should be relaxed. Pleasant recreation should take the place of nervous tension.

And this rest period should be more than an aimless absence from daily routine. It should be a period of actual body-building.

The value of several weeks of healthful living under such ideal conditions can hardly be overestimated. The natural results are sound, refreshing sleep—good digestion—a clear head—increased energy—and a sense of zest and buoyancy that makes life worth while.

It is a treat to see the outdoor life work its charm. Men and women with the pallor that comes with fatigue and indoor air, become ruddy, clear-skinned and healthy.

Come to one of these places, then, for your "rest-vacation". For here a quiet, restful atmosphere prevails. Here you get all the pleasant diversion of a resort, with none of the health-defeating distractions.

WHY spend your "rest-vacation" in California? A natural question and an ample answer—if you'll send for our illustrated literature. Today is the day to do it.

The Loma Linda Sanitarium
108 Pepper Drive, Loma Linda, Cal.

The Glendale Sanitarium
208 Broadway, Glendale, Cal.

The Paradise Valley Sanitarium
308 Sanitarium Ave., National City, Cal.

To Utilize Old Tins

A correspondent in *Popular Science Monthly* suggests that, owing to the increasing scarcity of tin, it is advisable to utilize the tins in which food comes from the grocery. The cans should be cleaned and stored as soon as the contents are removed. Fill within ¼ inch of top with the food to be preserved, and pour in melted paraffin till level full. Cover with waxed paper and tie. The correspondent asserts that the food will be preserved as well as in the patent can or glass.

Home Grinding of Cereals

Oscar Rystrom, a farm-implement dealer in Stromsburg, Nebr., has installed a small mill and bought a supply of corn and wheat. Whenever he finds time Mr. Rystrom grinds a sackful of fresh cornmeal or other grain, and gives samples to his customers, asking them to try them. The cornmeal, being fresh, oily, and rich, because ground from the whole grain, has a different quality from the ordinary commercial cornmeal, and its flavor is novel to most people and creates new understanding and constant demand for this typical American cereal. Mr. Rystrom believes that a practical demonstration of this sort not only will lead to wider use of cornmeal, but that farmers and housewives will install small mills and learn how to grind their own meal, a little at a time, getting the best at slight expense. By grinding their own whole-wheat flour they will also obtain nourishing cereal and save wheat.

Island Possessions Drying Up

A bill passed by an overwhelming majority in both Houses of Congress, and signed by President Wilson May 24, makes Hawaii bone dry. Secretary Daniels has issued an order prohibiting the sale and use of liquor after July 1, 1918, in the island of Guam.

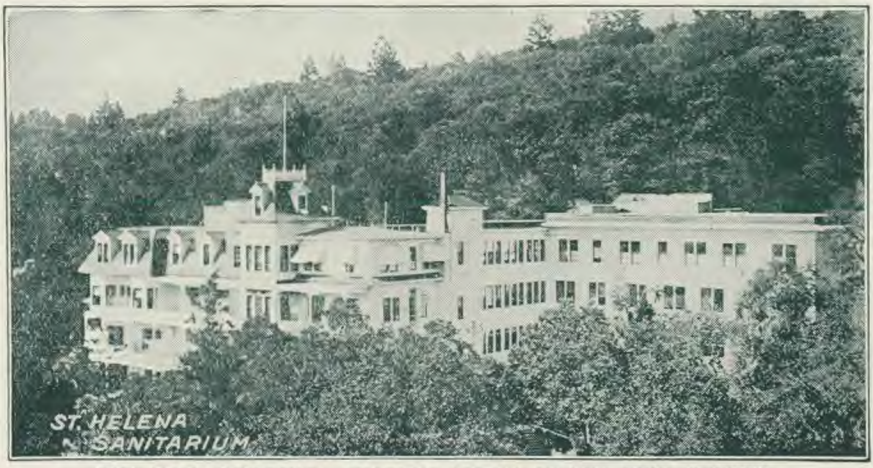
Demonstrations on Preserving Eggs

Extension workers of the United States Department of Agriculture, poultry division, have been holding demonstrations in large department stores of various cities to teach city people how to preserve eggs with water glass. Similar demonstrations were first given in rural schools and at farmers' meetings.

Migration of Mosquitoes

Prof. S. C. Ball, who spent a month at Rebecca Shoal lighthouse last summer, reports some surprising facts regarding the migration of mosquitoes, according to the *Scientific American* of June 1. The nearest land is East Key, twelve nautical miles distant. The nearest point where mosquitoes might breed in considerable numbers is Marquesas Atoll, twenty-four miles eastward. Breezes from the north and east brought mosquitoes to the lighthouse, and in one case a strong southerly wind brought them from Cuba, ninety-five miles distant. They seem even to be brought from more distant points, perhaps Tampa Bay, 180 miles away. Houseflies and other insects were also captured at the lighthouse.

St. Helena Sanitarium



THE MAIN BUILDING — SHOWING THREE OF THE FIVE STORIES
New Concrete Hydrotherapy Building at the Right

AWAY from the noise, excitement, and contamination of the city, and nestled close to the heart of nature, on a beautifully wooded slope of Howell Mt., is situated the St. Helena Sanitarium.

ITS natural setting, in a forest of live-oaks, firs, manzanitas, and madronas, together with an almost unending variety of flowers and foliage, gives a beauty and fragrance to the place that beggars description. It must be seen and enjoyed to be appreciated.

EVERY modern facility favorably known to medical science in the treatment of curable conditions, has been incorporated into the institutional régime. Thus nature and science have combined to make the St. Helena Sanitarium all that can be desired by the diseased body or the weary mind.

Health is Contagious at St. Helena

Sixty-five miles from San Francisco, easily accessible by either steam or electric line; three and one-half miles from St. Helena; 750 feet above the sea level; splendid climatic conditions at all seasons of the year; pure mountain water; beautiful view of valley, mountain, and plain; seven physicians, seventy nurses; excellent service, liberal cuisine,— these and many other advantages are to be enjoyed at this beauty spot of California.

The St. Helena Sanitarium

Sanitarium, Napa County - - - California

The New England Sanitarium

Is one of more than thirty similar institutions, under related management, scattered from Massachusetts to California, and from Europe to Australia. It is so equipped that it is one of the best and most complete scientific medical and surgical health institutions of its kind in all New England.

HERE the law of love and kindness prevails, and one always finds a warmth of welcome and companionable society. An unconventional spirit is maintained, which immediately gives one the feeling of being at home. The service of the institution is equal in every way to that of a first-class hotel.

THE broad principles upon which this institution is founded embrace the physiologic method of training the individual back to health, and teaching him health culture. The system employed is the development of fifty years of experience and research by a large corps of physicians and scientists, and includes all that is known to be good in curative methods.

The object is more than merely to restore lost health. A campaign of health education is constantly promulgated, teaching the people how to live to retain the restored vigor and to avoid sickness in the future.

THE RURAL LOCATION OF THE SANITARIUM

affords abundant opportunity for the best of all recreations,— communion with nature in her varied forms. Although the health retreat grounds are but seven miles from Boston, they are surrounded by a veritable wilderness of woodlands, rocks, and rugged fells, with placid lakes, rippling brooks, and cooling springs. Such an environment in itself gives an inspiration to those who are tired or sick, and here they may live close to nature and be in harmony with her laws.

In addition, there are golf links, tennis courts, croquet grounds, archery, quoits, and other facilities for outdoor exercise. The roads through the park in all directions are unexcelled, giving opportunity for delightful walks, drives, and automobile trips.

For further information write to

THE NEW ENGLAND SANITARIUM

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