

GOOD HEALTH

The Oldest Health Magazine in America—Established 1866

Edited by

JOHN HARVEY KELLOGG, M.D., LL.D.

Vol. XLIX

DECEMBER

No. 12

The Race Betterment Foundation

With half the human race engaged in the bloodiest war of all time, the world has before it a most striking example of the need of race betterment, and of the imminent danger of race deterioration. The contending armies, which are composed of the very best men of their respective nations, are killing off one another at a rate never before equalled in the most destructive wars known to history. England confesses to a loss of 57,000 of her finest youth—killed or maimed. France, with her greater army, must have lost five times as many, or 250,000. Russia's loss has probably been equal to both, and Germany's 500,000: already a total of 1,000,000 or more.

The loss to the world is not measured by these figures, enormous as they are. The greater loss, one which must extend to all succeeding generations and with ever increasing proportions, is the cutting off of these lines of vigorous, healthy human stock, an absolutely appalling and irreparable loss.

That war is a most active factor in race degeneracy, Dr. David Starr Jordan has ably pointed out. The European war is killing off, not sick men or weaklings, which are the chief victims of epidemic and endemic scourges, but the finest and healthiest, the fittest for propagating the race.

The war in Europe has already dealt a staggering blow to the race, and inflicted an injury that centuries cannot heal. More than ever, efforts toward race betterment are needed—are, indeed, imperative. Every possible agency tending toward race improvement, and every feasible measure looking toward the suppression of degenerative forces, must be set in operation and earnestly promoted.

Copyright, 1914, by THE GOOD HEALTH PUBLISHING COMPANY.

Entered at the Battle Creek Post-Office as Second-Class Mail Matter.

The race betterment movement which was inaugurated at Battle Creek last January aims to coordinate and unify so far as possible all the forces which are working for the physical upbuilding of men and the development of a new race of human thoroughbreds. This work is now in progress. Euthenics, the science of physiologic living, and eugenics, the science of physiologic breeding, are the comprehensive and complementary methods by which the betterment of the race may be attained.

The carrying forward of this great work has now been undertaken by the Race Betterment Foundation. This organization, with an endowment of about \$300,000, will make its influence felt more and more from year to year. The trustees are, J. H. Kellogg, M.D., C. E. Stewart, M.D., W. H. Riley, M.D., M. W. Wentworth, E. L. Eggleston, M.D., B. N. Colver, M.D., W. F. Martin, M.D., George C. Tenney, R. H. Harris, M.D., and M. A. Mortensen, M.D. The trustees will be assisted in carrying forward the great work entrusted to it by the Advisory Board, made up of a considerable number of well known men eminent in various professions and thoroughly in sympathy with the work. At present this Advisory Board consists of the following distinguished persons: Professor Irving Fisher, head of the Department of Political Economy at Yale University; Sir Horace Plunkett, formerly Secretary of Agriculture for Ireland; Dr. Newell Dwight Hillis, Pastor of Plymouth Church, Brooklyn; Dean Walter Taylor Sumner, of Chicago; Judge T. P. Wilson, of Minneapolis; Bishop John W. Hamilton, of Boston; Hon. Gifford Pinchot, the well known philanthropist.

Coffee Sophistry

A certain eastern physician, who appears to have chosen for his literary avocation the function of special pleader for popular foibles, in a recent article commends strong coffee as a beverage, asserting that coffee puts "both vigor and valor into a healthy man's muscles." Unfortunately for the Doctor, the facts do not at all agree with his assertion. In backing up his statements, he quotes Professor Hollingsworth, of Columbia University, who claims to have proved that "one grain of coffee increases the power of exertion."

Professor Hollingsworth's experiments do not justify this assertion as a general proposition, and much less do his observations justify

the assertion of this medical writer that "the endurance of the individual shows a pronounced excellence for an hour or two after a strong cup of coffee is taken."

The observations of Doctor Hollingsworth, if they prove anything at all, prove that a strong cup of coffee acts like a poison. Dr. H. W. Wiley some years ago showed by actual analysis of coffee as used that a weak cup of coffee contains two grains of caffein, while a cup of "good" coffee, such as is served at a first-class hotel, contains four grains of caffein.

This writer admits that if "more than a grain and a half of caffein are swallowed, bedlam breaks loose in the muscles. Tremblings occur and nervous symptoms which tend toward insanity." Thus he himself demonstrates that a single cup of coffee is harmful and dangerous, and that two cups or more are extremely hazardous. The Doctor says, in fact, that "to all an excessive amount is poisonous in the extreme."

If these admissions by the Doctor are true, certainly as a physician he ought to be the last of all men to recommend the habitual use of coffee by the public, since a single ordinary weak cup of coffee contains more caffein than can be taken without producing poisonous effects.

Whitewashing the Oyster

The oyster has been so much and so often discredited within the last few years that this slimy industry is threatened with symptoms of a decline. Those interested in the oyster business are showing evident symptoms of uneasiness about their dividends. Several articles have recently appeared in the public prints in defence of the bivalve, inspired, one easily imagines, by those who are financially interested. Attempts to whitewash or sugar-coat the slimy little beast and make him less unpalatable emphasize the fact that it is only necessary to take care to avoid the use of oysters from sewage-infected waters to escape the danger of typhoid fever infection. This is true, of course; yet how can one be certain about the nativity of any given oyster. When served on a hotel or restaurant table the oyster is not labeled or branded, and certainly nobody but a rare expert could tell by the oyster's physiognomy where he was born or in what sort of an environment he grew up.

The Oyster's Diet Is Not a Dainty One

The fact is the oyster is naturally a very dirty sort of a creature and fairly revels in impurities. Slime, ooze, and gruesome residues of

every sort of filth imaginable that covers the ocean bottom near shore, and especially about the mouths of rivers, is the banquet of the bivalve. Dead and putrescent fish, rotting seaweed and other decaying vegetable matter, and the innumerable millions of germs which swarm in the ocean slime are tid-bits for the oyster and his kind. The oyster is prepared to deal with this sort of material because he is designed by Nature to be a scavenger. We say "he," although as a matter of fact the oyster is both male and female. It is, biologically, a hermaphrodite.

The oyster has no brain to speak of, but possesses an enormous liver, or rather liver and kidney combined, which constitutes the big purple mass in the oyster's body. The oyster is a sort of live rendering establishment, which gathers in all sorts of dead things and converts them into an inferior sort of living tissue, which some people roll beneath their tongues as a dainty morsel. Anyone who will take the trouble to observe a live oyster through a microscope will lose his appetite for oysters, on the half shell at least. The oyster is completely covered with germs of the same sort that are found in sewers, in the rotting body of a dead rat or any other sort of putrescent matter. The oyster's stomach and intestines swarm with the same kind of germs. A drop of oyster juice is fairly alive with putrefactive germs, which may be seen wriggling in all directions.

What is Oyster Juice?

By the way, did the reader ever stop to consider the nature of oyster juice? Where does the juice come from, anyway? Lift a dozen oysters out of the water and leave them shut up in their shells over night. In the morning the juice that has accumulated will represent simply the waste matters which have been excreted over night. The oyster's liver, kidneys and bowels continue active as long as it is alive. This is the source of the oyster juice for which many people have a liking. Some time ago the scientists reported finding a very much degraded Asiatic tribe of people who ate as a delicacy the feces of birds. The mere thought of such a practice is nauseating, yet the feces of a grain-eating bird must be far less repulsive than the bowel and kidney discharges of a filth-eating oyster. Of course, when one swallows a live oyster he engulfs the whole thing—brains, stomach, big and little intestines, kidneys, liver, feces, urine, male and female sex machinery—everything except the shell. Even the eater of bird's dung might well be appalled at such a dose.

What a pity it is that custom can blind and paralyze our senses so as to lead us into the commission of acts so loathsome and unnatural. The oyster has been a scavenger from the remotest ages, but it is only in comparatively recent times that man has become a scavenger of scavengers by adding the oyster to his bill-of-fare.

How to Get to Sleep

BY W. H. RILEY, M. D.

Sleeplessness will have fewer horrors for us if we remember that after all it is not a disease, but a symptom. It sometimes becomes so troublesome that we give it the name of "insomnia" and call it a disease—and in extreme cases, indeed, it must be treated as such. It is not a disease, however, but merely indicates a condition in which the system demands more rest than it is getting.

Why Mental Workers Do Not Go to Sleep Quickly

Fortunately the causes of sleeplessness are clearly defined in most cases. Prominent among these are sedentary habits. Brain workers do not sleep as well as people who use their muscles. This is because mental work sends a great deal of blood to the brain, which tends to produce in the brain a congestion, or at least a hyperemia, or excess of blood. Muscular work, however, takes the blood to the muscles, and not to the brain, so that the laboring man has no trouble in getting to sleep.

Forget Your Troubles

Associated very often with sedentary life are worry, anxiety, mental uneasiness of various kinds. These, together with any of the passions—such as hatred, sudden anger, and a brooding desire for revenge—these states of mind are all active causes of sleeplessness. Diet also plays a very important part. Highly seasoned dishes and excessive quantities of food disturb sleep and make it unrestful. This statement also applies to tea and coffee, especially if they are used at the mid-day meal or in the evening. Tea and coffee disturb the functions of the nervous system and of the vital organs. The writer, indeed, has observed cases of insomnia that were entirely relieved when tea and coffee were discontinued.

Insomnia Poisons

Tobacco produces the same effects as do tea and coffee. There is nicotin enough in a cigar to kill a good-sized cat. One can inject a few drops of water containing a small amount of nicotin under the skin of a frog and the animal dies at once. The writer has performed the experiment many times while talking to scientific audiences, and invariably the frog dies almost immediately. A man in smoking his cigar does not get in his blood all the nicotin that there is in the cigar. If he did, it would undoubtedly do serious harm; but as it is he gets enough nicotin to disturb all the functions of the body, making him irritable and, if the habit is ex-

cessive, possibly to produce degeneration of the optic nerve. And if it will do that to the optic nerve, it certainly produces a very baneful effect upon the other nerve tissues of the body.

Alcohol, in spite of a common belief to the contrary, is a frequent cause of insomnia. Physicians have even prescribed alcoholic liquors for insomnia patients. The doctor may tell the patient to take a glass of beer at night before retiring—and a glass of beer may really put him to sleep, but a few nights later the patient will find himself obliged to take two glasses of beer to secure the desired results, and later on three or even more glasses. By this time he has a well established alcohol habit, so that nothing short of whiskey will secure sleep. His nervous system now is on the road to ruin; insomnia has become chronic, and the condition of that man is worse than before beer was prescribed.

Drugs Taken to Produce Sleep Produce Sleeplessness Instead

Precisely the same thing occurs in the case of drugs. When people acquire the habit of taking drugs to produce sleep it is not long before they have "drug insomnia." Bromids, chloral, trianol, sulfanol—these substances produce sleep readily enough at first, but gradually the dose must be increased, until the drug habit not only has become firmly fixed, but insomnia has become chronic.

Sleeplessness is also frequently caused by disease. Most often it is associated with nervous exhaustion or neurasthenia, and with hardening of the arteries—a condition in which the brain is not properly nourished. For the same reason organic diseases of the heart may interfere with sleep. All disorders of the digestive tract figure prominently in insomnia. This includes not only indigestion, but constipation, a condition in which enormous quantities of poisons are produced in the colon, only to be taken into the general circulation and carried to all parts of the system. Likewise chronic rheumatism, in which poisonous substances are retained in the body, may cause sleeplessness.

Heredity a Frequent Cause

It is a fact worthy of remark, in view of the widespread interest that is being taken today in eugenics, that heredity and insomnia may be closely associated. We all inherit to a greater or less degree the good and bad of our fathers and our mothers. In diseases of the nervous system, this element of heredity is especially active—certainly it is more conspicuous than in other diseases—although we see it also in diseases of other parts of the body.

Insomnia is also associated with old age, chiefly because with the passing of years the arteries in the brain become hard, as the

result of which the brain does not get its full measure of nourishment. Irregular sleeping habits also play their part, especially the habit of retiring at irregular hours. Men who work on a night shift, for instance, sleep less soundly than men who work during the day.

How to Cure It—New Habits

The problem of cure resolves itself first of all into a question of adopting a complete set of new habits. To begin with, one should retire regularly and at an early hour that will assure plenty of sleep. And let us insist on this point—the importance of cultivating a habit of sleeping. Any habit can be cultivated to a point where it becomes very valuable to us, if it is a good habit. The habit of sleep is not an exception, and should be cultivated by regular retiring hours and by spending an adequate amount of time in bed.

The amount of sleep which one needs varies with the individual. In early life the child should have twelve to sixteen hours, because it is during his sleep that he grows, not during the waking hours when he is intensely active. The healthy, normal adult needs at least eight hours. People in old age, however, require less sleep than people in earlier life.

What and When to Eat

One should correct, too, bad habits of eating. Highly seasoned food should be absolutely discarded, as also pepper and other condiments, tea, coffee, tobacco and alcohol in every form. The tremendous relief that has followed the discarding of all these substances in hundreds of cases that have come under the writer's care has been so striking as to leave no doubt whatever as to the important part which they play in sleeplessness. It is well, too, that meals should be regular, and that they contain no more nourishment than the system actually needs.

Special care should be given to the sleeping room. In the first place, have it as quiet as possible, away from light. Ventilation is, of course, essential. Where a sleeping porch is available this is to be recommended, especially if it is constructed in such a way as to provide shade against the early morning light. Where a sleeping porch or other outdoor room is not possible, however, one must make the best of an ordinary bedroom by leaving the windows up, winter and summer, in winter having a warm room nearby in which one can dress and undress. The patient in winter should take especial pains to see that his feet are warm when he goes to bed. When the feet are cold the brain becomes congested, with the result that the patient lies sleepless in the early part of the night.

How to Take a Warm and a Neutral Bath

A warm bath, at a temperature of from 98° to 100° F., taken just before retiring, is of great assistance. Care should be taken that the temperature does not run higher than the point named, a hot bath having the very opposite effect of stimulating the nerves to a point where sleep is impossible. While in the bath the head should be kept cold by means of a towel wrung out frequently in cold water. The duration of the bath should be from fifteen minutes to half an hour. At its close one should get immediately into bed.

In some cases the neutral bath (92° to 96° F.), lasting from twenty minutes to one hour, serves better than the warm bath. In this the temperature of the water is approximately that of the skin. Below the point named, however, the temperature should not go, since a cold bath has the same effect as a hot bath, stimulating the nervous system and preventing sleep.

The Hot Hip-and-Leg Pack

The hot blanket pack about the hips and legs may also be used to advantage. In giving this treatment it is usually best to keep the patient in his own bed, so that after the pack he can go to sleep without being disturbed or excited by moving from one room to another. The first step is to spread out upon the bed a dry blanket; upon this place a woollen blanket that has been wrung out of water as hot as can be borne by the naked hands, and upon this in turn another dry blanket. Then have the patient lie down upon the blankets and snugly wrap the blankets about the hips and legs. A rubber bag containing hot water should also be placed at the feet.

Before giving this treatment it is well to make certain that the bowels have moved. For this purpose an enema of a temperature of from 98 to 100° F. may be given. Also the patient should drink two glasses of hot water at the beginning of the treatment, and remain in the pack from twenty to thirty minutes, or until a gentle or moderate perspiration is produced. The head should be kept cool during the pack by means of towels wrung out of cold water. On removing the patient from the pack sponge him off gently with a towel rub, making certain that the body is thoroughly dried. The patient is then ready to go to sleep without further disturbance.

Constant attention should be paid to the general health. An outdoor life is to be recommended. One should spend several hours a day in the fresh air, burning up the poisons that have accumulated in the system by improper habits of eating and by an indoor manner of living. If mental work must be done it should be performed if possible in the early hours of the day, the afternoon and evening being

spent in a way that does not task the mind. The playing of light games, or some form of amusement that does not arouse the feelings in any way, is beneficial.

And Take Plenty of Rest

A short rest in the middle of the day is always advantageous. This, together with the eight or more hours of sleep that the system requires, might seem to encroach upon the hours that we keep open for work. A young man may be ambitious and desirous of acquiring an education; an older man may be ambitious to make money, while a woman may have social ambitions. These ambitions are laudable in their place, but to achieve them we must not attempt to rob Nature of her rest, for sooner or later she will demand a settlement. And after all, one does better work, and in the long run more work, by giving Nature the amount of sleep that she demands. One does not work so intensely, perhaps, but one works more soundly and for longer years.

The Walk Home Club

Chicago has the newest idea in athletic clubs. It has no expensive club rooms to maintain; no elaborate organization to keep up; no uniforms for its members to buy. It is a "Walk Home Club," and its members are bankers, brokers, merchants, bookkeepers, stenographers, office boys—anyone who works down town during the day and elects to boycott motor, taxi, or street-car at night.

Mr. Martin A. Delaney, who has been active in getting the movement started, says of the way in which the idea is catching on: "Men who have ridden on street cars and elevated trains every night for years have besieged me with applications to join this 'Walk Home Club.'

"Perhaps it is not such a little thing after all to remind men that they have legs as well as brains. Most of them seem rather proud of the fact. I thought the difficulty would be to persuade them to walk home. Why, you couldn't keep them from it now.

"My telephone has been ringing every minute or so with calls from men who are tickled to death with the idea. I have read letter after letter thanking me—yes, actually thanking me for suggesting that they can get home some other way than being hauled there like a bag of beans."

One of these letters was from no less prominent a figure than Congressman Fred A. Britten, who wrote, "Your suggestion is the best I've heard for a long time. I'd rather walk home than ride, I'm on like a duck."

"It was actually like working a miracle to turn loose this simple suggestion to Chicago," says Mr. Delaney. "You would have thought that these men were paralytics just recovering the use of their limbs. The trouble was they had forgotten all about them."

This new Chicago idea deserves to be adopted in every community in America where people are in the habit of riding home from indoor work. And the movement should be extended to include walking *to* work. It can easily be done in most cases if one rises a half hour earlier; and if the distance is too great, one can walk part way—as far as time permits. One should be careful to start early enough so that he can do a smart pace without at the same time feeling hurried.

Now It's a Hygienic Sausage

The Javanese eat a sausage that is thoroughly up-to-date—from the standpoint of the hygienist, at any rate. It is absolutely free from dog, cow, pig, horse or other animal that is popularly supposed to enter into the construction of the common sausage. Instead it is made only of rice, which is well boiled—usually in water, but sometimes in milk—until the entire mass has reached the proper consistency. After being cooled the rice is molded into stick-like lengths with the fingers. These are put in oil-paper cases instead of the skin used in the regulation sausage. This non-meat sausage is served either whole, or cut up and eaten along with other foods.

WHILE federal and State authorities are doing everything in their power to prevent the spread of foot-and-mouth disease, we should remember that American herds are suffering from another disease that is actually causing enormous loss of life every year—bovine tuberculosis. Eight per cent of all cases of tuberculosis in this country can be traced to infected dairy herds, according to Dr. Lawrason Brown, of Saranac Lake, New York. An official of the Chicago Health Department reported that of the species of germs found in all samples of milk examined by the Department in 1910, 8.9 per cent were tubercle bacilli. And yet comparatively little is being done to stamp out the disease—certainly no great stockyards have been closed; half a dozen of the greatest states in the Union have not been placed under federal quarantine; there has not been a scramble on the part of the officials to wipe out bovine tuberculosis. This activity in the case of the foot-and-mouth disease is right—but can't we get some of the same zeal back of a campaign for the suppression of tuberculosis in cows and human beings?

Getting Fresh Air to Baby in Winter

By MRS. E. E. KELLOGG

One-third of life is spent in sleep. The conditions under which this time is spent has an important bearing upon individual health. Especially is this the case with the growing child. During sleep growth and repair of the body chiefly take place. The more favorable the sleeper's environment, the more perfectly will Nature be able to do her work.

Fresh air is first and always a constant necessity. Mothers who guard the health of their little ones in other particulars often overlook this need.

During his hours of sleep is a most favorable opportunity for securing the benefits of fresh outdoor air for the child, just as it is for persons of older growth. No one can afford to sleep in a confined indoor atmosphere. At the very least, wide open windows in the sleeping apartment should be the rule, but it is far better if one can sleep out upon a porch or open air apartment. There is less draft, and less probability of taking cold when one is wholly environed by a fresh cold atmosphere than when a current of air is rushing in through an aperture at one side of the room.

Even during the winter season, sleeping out in the open air is wonderfully beneficial. However, one point needs to be borne in mind when sleeping in cold air: *the sleeper himself must be warm and comfortable*. Since it is fresh air breathing that is required, only the nostrils actually need exposure, though most people enjoy having the entire face exposed.

It is best to get one's initiation in outdoor sleeping during mild weather. To begin in the summer and continue into the cold season is the better way. By this plan, even babies can be easily accustomed to outdoor sleeping. When the child is of an age not requiring night feeding, if he is a good sleeper, it is quite practicable for him to sleep in the open air. But he must be properly protected.

For cold weather an ordinary willow clothes basket, carefully lined and fitted with a soft mattress, makes a very good outdoor sleeping arrangement for a baby. With two halves of barrel hoops fastened over one end of the basket, a hood of canvas may be supported as protection against strong winds. If in addition the basket be fastened to a small truck on wheels it will be especially convenient. It can be turned against the wind at any angle, and in case the child needs attention it can be rolled into a warm room in a moment.

Likewise at bedtime the baby can be fitted out for sleep, put into a warm nest, then wheeled into place in the outdoor apartment.

Some mothers use the baby's cab for outdoor sleeping. While serviceable, it is not so roomy as a basket, and as the sleeping quarters are quite likely to be on the second floor, it is not so handy.

The sleeper's outfit must at all times be suited to the weather. A sleeping bag affords more protection and holds body heat far better than any sort of loose covering. For the little ones who are apt to throw their arms out from under the covers it is particularly essential to have something that fastens closely about the neck, and at the same time covers the whole body. For the tiny tots, a silk lined or fleeced sweater, warm but soft, worn over the night shirt, with long hose and soft leggings with feet to cover the limbs, each to be fastened to the napkin, is better than a night gown. For the older children, the so-called "Teddy Bear" suit—a closely fitting night suit, with feet—is just the thing for the first garment of the sleeping outfit. Making the opening for this suit on the left hand side of its front rather than up the middle of the back makes it warmer.

Over these first garments a closed kimona of some soft warm material, long enough to wrap the feet well, is desirable. Then use a single blanket of wool, doubled lengthwise and placed around the child's body, just under the arms, the ends being crossed smoothly at the back, brought up over each opposite shoulder and pinned securely at the front, and baby is ready to be put into a sleeping bag. This should be arranged to fit closely about the neck, and may or may not be buttoned across the lower end.

Such a bag may be made of light weight wool blankets, several thicknesses tufted together, or of an arrangement of three bags—the outer one of canvas; inside this one of wool, and the innermost of soft fleeced material. The air space between the layers adds to the warmth.

A hood of padded silk or crocheted wool, lined with some soft material, to which may be attached a warm shoulder cape, completes the outfit. The cape should cover the shoulders, and to keep it in place it may be buttoned to the sleeping bag. If no bag is used, loose elastic loops to put the child's arms through will hold it in place.

As has been stated, the amount of night clothing demanded must be suited to the weather. The child should not be bundled until he is so warm he perspires.

It is wise to have the baby take his day naps in the open air. Then the watchful mother can readily determine by observation just about how much clothing the infant requires for certain temperatures,

The thermometer as a guide for both indoor and outdoor adjustment of the baby's clothing is vastly more important than mothers generally recognize. It is well to keep one at hand in both day and night apartments. Not all children are alike as to physical condition, and no definite rules for temperature can be laid down. A careful use of the thermometer, however, will aid in more readily determining each child's special need.

If open windows are the only means of obtaining fresh air, a screen placed around the crib will protect from drafts. A frame fitted with a screen of cheese cloth to fit in an open window, allows the air to filter in and lessens drafts when window ventilation is depended upon for fresh air, either day or night.

Care of the Skin in Cold Weather

While most people will find no special benefit from bathing the body daily with warm water, yet at the same time no harm will be done, providing one is always careful to apply an oil to the surface. Perhaps the best preparation for this purpose is the following simple formula, given by Dr. L. Duncan Bulkley, of New York City: lanolin, 2 grams; boroglycerid, 1 gram; cold cream, prepared with white vaseline, 6 grams.

Sometimes there will be a burning, tingling sensation of the skin in cold weather, especially after bathing in hard water and soap. To relieve this the above formula may have added to it ten grains of menthol. If the irritation is pronounced, a further addition may be made in the form of five drops of carbolic acid to the ounce.

Flesh-Abstainers Can Fight

Nothing could be more erroneous than the popular notion that a red-meat diet is necessary to produce fighting ability. Meat makes a dog or a man irritable, but gives neither courage nor endurance, both of which are essential fighting qualities.

Byron once said to a brother poet, who was cutting a tough steak and gritting his teeth, "Doesn't it make you feel ferocious to eat beefsteak? When I eat meat it wakes the very devil in me." But it is a quarreling rather than a fighting devil that meat arouses.

The most dreaded fighter of the African forest is the fruit-eating gorilla. Not a lion is found in all the region where this great forest man reigns, untamed and untamable, a real king of beasts. When

brought to bay the lion fights because he is short-winded and cannot run away. Every experienced hunter has borne testimony to the fact that the grass-eating bison is a most courageous fighter with few equals. Even a timid deer, when wounded, may turn upon its pursuers with death-dealing fury and agility.

When the eminent Professor Halliburton, of England, at a great medical meeting declared that a handful of beef-fed Englishmen were able to control three hundred million non-flesh-eaters in India, an East Indian physician, a Brahmin who happened to be present, promptly rose and replied, "The Hindoo is a man of peace—not because he cannot fight, but because he does not want to fight. Neither I nor my forefathers for a thousand years have tasted flesh. If any man here wishes to test my physical powers I am ready to meet him. This moment I am the Secretary of the Athletic Association of Madras." The tremendous applause which greeted this challenge clearly showed that this age-old argument of flesh-eaters' had been fairly and finally answered.

If meat eating really does generate a fighting spirit, this is a very good reason why it should be opposed. In view of the European situation, it would seem that the world needs an antidote for the war spirit rather than a stimulant.

A Flesh-Abstaining Pugilist

FREDDIE WELSH, the new lightweight champion, is a non-meat eater. He is particularly partial to peanuts, and his ability to retain his "form" after long years in the ring has been ascribed to the good effects of a vegetarian diet.

THE EDITOR of the *Rural New-Yorker* raises the very pertinent question as to the whereabouts of those wondrous wise philosophers who have seen the Belgian people going to the bow-wows because they were a race of non-meat eaters. Just a few years ago, he says, "we had a visit from a scientific gentleman who had spent some years studying conditions in Europe. This man said that the Belgians were becoming a weak, effeminate race—'a race of old women' was the way he put it. This was due to diet, he said. The average Belgian rarely ate 'good red meat,' but lived upon vegetables, bread, cheese and eggs or poultry. Such a diet would tame any nation, and take the fighting spirit out of them. Our friend claimed that only the large meat-eating nations would show any patriotism—'potatoes and pullets make a tame dog—not a fighter.' It looks as if the Belgians had eaten a few roast bantam roosters along with their potatoes and pullets." Until the present war the Belgians had done no fighting for a hundred years.

Why the Stomach "Sours"

BY JOHN HARVEY KELLOGG, M.D.

A sour stomach is usually due to the fact that the stomach makes too much acid and not, as is commonly supposed, because the food sours. There are some rare cases, though they are really very rare, indeed, in which sour stomach is due to acid fermentation of the food. These are generally cases in which there is an obstruction of the pylorus, with an enormously dilated stomach, so that food accumulates and remains a long time in the stomach.

Very often we hear a person say: "I have sour stomach when I eat starchy foods; it must be the fermentation of this starchy food." It is very easy to fall into this error, because starch may ferment, and it is reasonable to conclude that when one eats starchy foods and has a sour stomach, the starch has fermented. But it is an error after all. When a person takes a meat diet, the meat absorbs the acid and neutralizes it, just as soda does; the acid combines with the meat. When a person eats freely of eggs the same is true. The acid combines with the albumin of the egg and produces a chemical combination which is non-irritating to the stomach. But when one eats starchy food the starch does not combine with the acid, and so the acid remains in the stomach and a small amount of acid will produce a great deal of acidity.

About ten or fifteen years ago Professor Pawlow, of St. Petersburg, in experimenting upon some dogs performed an operation that made it possible for him to observe the action of digestion. The Professor experimented with different kinds of food and he found that when he gave the dog a meat diet it produced a very powerful acid gastric juice, and when he gave the dog a milk diet it produced very little acid in the gastric juice. When he gave the dog a bread diet there was very little acidity, but very high digestive power—a large amount of pepsin, but only about one-quarter as much acid as when the dog was given a meat diet. He further found that when he gave the dog a diet of pure fat there was no acid at all. When he gave the dog only olive oil, for example, there was not a particle of acid formed.

Another very curious thing was observed. When he gave the dog a pint of water there was an outflow of very acid gastric juice; but if he put into that pint of water just one grain of carbonate of soda, then there was not a particle of acid formed.

These observations revolutionized the practice of physicians in dealing with cases of acid dyspepsia. Very little had actually been known about digestion, but Professor Pawlow gave us a scientific foundation on which to build dietetic treatment. Stomach specialists all over the world have recognized his work. There is not an

eminent gastric specialist in the world today who would feed his patients suffering from hyperacidity a meat diet, as was formerly done. Doctor Salisbury originated a system of diet for persons suffering from acidity, in which meat was the chief food. This gave the patient comfort, but at the same time it was making him worse, because the meat was exciting the stomach to make more and more acid gastric juice. After a while the patient would get where he could not eat a thing but meat. Doctor Salisbury did one thing, however, that was very important. He required every one of his patients who lived upon a meat diet to drink from three to six quarts of water a day. He knew that if they did not drink this large quantity of water they would die of Bright's disease from this enormous over-dosing of protein—and some of them did die and others got hardening of the arteries.

The best remedy for sour stomach is not something that will neutralize the acid, for that gives only temporary relief. What must be done is to get down to the physiologic law that governs the situation. Supposing a man to have sour stomach because his stomach makes too much acid: what is to be done? Shall we give him beefsteak to absorb the acid? This will have the effect merely of causing the stomach to make more acid. That is not the wise thing to do. Some soda for temporary relief would not be so bad as the beefsteak, but to relieve this difficulty the cause must be removed. The stomach, over-excited, is making too much acid, and this must be stopped. That is, the stomach itself needs to be reformed, and this can be done only by a process of training.

When the Stomach Makes Too Much Acid

In the first place, since the stomach is making too much acid because it is irritated, we must remove the irritation. Possibly the patient has been accustomed to mustard, pepper, peppersauce, horseradish, ginger, ginger snaps and various things that irritate the stomach. Alcohol will do it—beer, wine and other beverages that contain alcohol will excite the stomach and cause it to make an excess of acid, as also beef tea and beef extracts of all kinds. These things must be taken from the bill-of-fare.

The next thing is to remove foods that will have the opposite effect upon the stomach. What has been said of beefsteak is true of all protein, so it is necessary to adopt a low-protein diet, eggs as well as beefsteaks being banned. The fats and oils may be used freely, and especially olive oil, which is the best of all the fats for this purpose. A couple of tablespoonfuls of olive oil at the beginning of each meal has a most excellent effect, for by coming in contact with the linings of the stomach it causes the stomach to secrete less gastric juice—the stomach does not digest fats, so it pours out little or no digestive juice for it.

Peel a ripe, mellow apple, and scrape, reducing the apple to a fine pulp. Fold this into the stiffly beaten egg white, add the sugar and a few drops of lemon juice. Serve in sherbet glasses with a bit of bright jelly on top. It should be served immediately.

CORNMEAL GRUEL

2 tablespoons cornmeal
 1½ cups boiling water

½ cup cold water
 ½ teaspoon salt

Moisten the cornmeal and the salt with the cold water and add to the boiling water. Cook over the flame until well thickened, then set in a double boiler and cook four hours. Strain and add more liquid, if necessary.

OATMEAL GRUEL

3 tablespoons rolled oats
 1 pint water
 ¼ teaspoon salt

Have water boiling and add rolled oats; let boil ten minutes, then put in double boiler and cook three hours; strain.

HOT MALTED NUTS

¼ cup dry malted nuts
 ¾ cup boiling water
 Salt, if desired

Pour the hot water into the dry malted nuts, stirring while so doing. It is ready to serve at once.

GRAPE NECTAR

1 cup grape juice
 Juice of 3 oranges

Juice of 3 lemons
 ½ cup sugar

1 quart water

Strain the orange and lemon juice and add to the grape juice. Add the sugar and stir until dissolved; then add the water and set on ice until thoroughly chilled.

VEGETABLE BROTH

1 pint chopped celery
 ½ pint chopped red beets
 5 sprigs of parsley

1 pint chopped carrots
 ½ pint chopped turnips
 ½ cup strained tomato

1 quart water

Chop the vegetables with a chopping knife or put through a food chopper, taking care to save all the juices which may run through the food chopper; add the water, cover, and bring to the boiling point, then place in a double boiler and cook for several hours. Strain and season with a little salt, and if desired, a little celery salt. One or two tablespoons of bread crumbs added to the broth and cooked a few moments give an added amount of nourishment and flavor to the broth.

HOT MALTED MILK

2 tablespoons malted milk
 Hot water to fill a cup

Moisten the dry malted milk with enough warm water to make a smooth paste, then add remaining hot water, gradually stirring meanwhile. If desired, a little salt or celery salt may be added as seasoning.

MOCK CHICKEN BROTH

To three cups of vegetable broth, prepared as above, add two beaten eggs; turn the hot broth slowly into the beaten eggs and serve at once without further cooking.

ORANGE EGGNOG

1 egg	2 teaspoons sugar
Juice of one orange	$\frac{1}{2}$ teaspoon lemon juice
	1 tablespoon cream

Beat the egg yolk until light, add one-half of the sugar, then gradually the orange and lemon juice; next add the cream and fold in the stiffly beaten white, to which has been added the remainder of the sugar. Other fruit juices may be used instead of the orange.

FRUIT SOUP

1 cup strawberry juice	1 cup pineapple juice
1 tablespoon lemon juice	1 tablespoon sugar
	2 tablespoons sago

Cook the sago until transparent in the strawberry juice, then add the other fruit juices and the sugar reheat. Serve cold or hot. Other fruit juices may be used in the place of the two mentioned. The amount of sugar used will vary according to the amount in the cooked fruit juices.

ORANGE WATER ICE

1 quart water	2 cups sugar
2 cups orange juice	$\frac{1}{4}$ cup lemon juice
	Chipped rinds of 2 oranges

Chip off the pieces of orange rind with a knife, being careful not to get any of the white portion. Prepare a syrup from the water and sugar, and let the orange rind boil in it. Strain through a cheesecloth and add to the fruit juices.

SEGMENTED ORANGES WITH WHIPPED CREAM (For convalescence)

Peel an orange deep enough to remove all the white portion. In other words, cut down into the flesh of the orange. With a sharp knife cut the orange in such a way that the sections can be removed, leaving all of the white portion. Arrange these sections in a serving dish, sprinkle lightly with sugar and serve with whipped cream. Whipped cream is one of the most easily digested form of fat for the invalid and this is one of the best forms for again introducing fats into the dietary.

FRUIT SANDWICH WITH WHIPPED CREAM (For convalescence)

Cut stale bread quite thin, cover with a layer of fruit, such as berries, sliced peaches, segmented oranges, sliced ripe banana, etc. On top of this spread another layer of bread, press firmly together, trim and serve with a generous helping of whipped cream. This is a very simple dessert, but should not be given until the patient is convalescent. A little later the bread may be spread with butter before placing the fruit thereon.

School Instruction Against Tobacco and Alcohol

In an excellent article in the July number of the *Forum*, Dr. Crawford Richmond Green deplores the lack of attention paid in our public schools to the intoxicants—which include, not only the alcohol and tobacco, but also the poisons which result from decaying foodstuffs in the colon:

Our instruction regarding the evils of alcohol and tobacco is, says Doctor Green, "pretty largely relegated to the Sunday-school, where their use is considered from the viewpoint of an assumed immorality, and they are therefore classed by the child in that too large category of ethical teachings that the child's reason promptly rejects because they are preached only on Sunday and practised none of the other days in the week. As a matter of fact, instruction in these matters should be dissociated altogether from ethical teaching and an appeal should be made to the child's reason by the definite exposition of facts which will show in no uncertain terms that the use of alcohol and tobacco is a handicap to the individual in the competition for health, longevity and success in life. Such instruction, if properly and convincingly given, would do more to abate the evils of these poisons than the moralizing of all the Anti-Tobacco Leagues and Temperance Societies that have ever existed. The school boy who takes his first glass of beer, perhaps in celebrating some athletic victory of his school team, little realizes that by so doing he paves the way for the acquirement of a habit that may result in fatal disease of liver or kidneys, in organic nervous disease, in hardening of the arteries, in insanity, and in many other types of physical degeneracy; nor does the lad who hides behind his father's barn to indulge in his initial cigarette know that by so doing he opens the way toward becoming the habitu e of a drug which may invalidate his health by making him a nervous wreck, or blind, or a confirmed dyspeptic, and which, it is now established, often produces disease of the arteries that results in apoplexy and death. There can be no doubt that the danger of the child's becoming a victim of either of these poisons would be greatly diminished if, by an appeal to his reason, he were thoroughly impressed with the fact that it is to his physical and economic advantage not to use them."

Still less, however, does autointoxication receive adequate attention in schools: "Autointoxication—self-poisoning—the results, as its name implies, of the retention of poisons that are manufactured in the body and normally are excreted with the wastes. One of the commonest and most familiar causes of autointoxication is constipation. More and more does medical science recognize the con-

stipated habit as the causative agent of many distressing cases of ill health. Yet we make very little attempt systematically to instruct the child as to the necessity of avoiding this condition, which could be accomplished easily if attention were paid to it before the habit becomes firmly fixed, but we allow him to go blindly on his way to chronic invalidism. We make no effort to teach him how and when and what to eat, nor of the value of drinking abundant water and taking proper exercise, nor of the pernicious effect of the continual and widespread use of castor oil, pills, and salts. A host of mothers who would do anything for their children's good are continually dosing them with purgatives, even when their children are in excellent health, under the misguided, unreasoning delusion that purgation, even when unneeded, is good for them. These mothers do not know, because they have never been instructed, that unnecessary purgation merely perverts elimination and makes for ill health."

There is no question that if the next generation is to be a healthy one the best work is to be done in the schoolroom. Nor is it putting it too strong to say, with Doctor Green, that "all the propagandic movements to instruct the people with regard to public health, all the campaigns of enlightenment that the ablest journalism can initiate, are worth almost nothing when compared with the results that might be obtained by the adequate instruction of the young in school. With regard to the body as well as in regard to the intellect, knowledge implanted upon the plastic mind of youth, the lasting impressions and prejudices formed in early life, are the certain, un failing means of insuring an education that will be of enduring benefit to the race."

The World's Greatest Problem

The great problem before the world is not the settlement of the horrible European war. The really big question is how to save the human race from degeneracy and extinction. Chronic disease kills 750,000 people in the United States every year, twice as many as would die if we were as healthy as we were thirty years ago.

The average man of fifty years has today only three-fourths as many years to live as he had thirty years ago. Of our twenty million school children seventy-five per cent have been shown to be physically or mentally defective. Three hundred thousand babies die annually in the United States, nine-tenths from ignorance and neglect. Mental defectives form one per cent of the total population and are increasing twice as fast as the sane. Heart disease and kidney disease have doubled in fatality in thirty years.

That Christmas Dinner

By LENNA F. COOPER

A Meatless Menu

Grape Fruit and Celery Salad

Tomato Bisque

Celery

Radishes

Ripe Olives

Peanut Roast

Browned Sweet Potato

Buttered Cauliflower

Macedoine Salad

Celery

Nut Buns

Bread

Date Cream Pie

Nut Cake

Oranges

Almonds

Cereal Coffee

How to Cook It

GRAPE FRUIT AND CELERY SALAD

1 cup celery, diced

1 cup grape fruit, diced

Cream mayonnaise dressing

Cut the grape fruit into halves and with a sharp knife cut a circle through the flesh, near the edge of the skin. Remove the flesh by scooping out carefully with a spoon, and cut into cubes or small bits. Put to drain while preparing the celery.

Wash, brush, and scrape celery and put into cold water for an hour or more. Drain, dry on clean towels and cut into small pieces. Mix the celery and the grape fruit with cream mayonnaise dressing. Serve in the shells of the grape fruit, prepared by removing the skin or "rag" on the outside and cutting notches in the edge with a pair of shears. Serve on a lettuce leaf.

TOMATO BISQUE

1 quart can tomatoes

3 2-inch sticks cinnamon

1 pint water

3 slices lemon

2 teaspoons salt

1 tablespoon butter

1½ tablespoons sugar

3 tablespoons flour

1 cup cream

Cook the tomato, sugar, cinnamon, lemon and salt together for 20 minutes. Put through a colander and bind with the butter and flour. Let boil 5 minutes, add the hot cream and serve at once.

If preferred, bay leaf and onion may be used for seasoning in preference to the cinnamon and lemon.

Condensed tomato may be used in this recipe, in which case use 1½ cups condensed tomatoes and an additional 2½ cups of water.

PEANUT ROAST

1 quart slightly toasted bread crumbs	2 teaspoons salt
2 cups peanut butter	2 tablespoons sage
2 medium-sized onions	1 tablespoon summer savory
1 cup milk	2 cups mashed potatoes
	4 eggs

Prepare the bread crumbs by rubbing pieces of stale bread together, thus making fine, loose crumbs. Dry these out in a small oven and toast only slightly. Mix peanut butter with the milk, adding only a small portion at a time, and mixing thoroughly before adding more. When all of the milk has been added, beat the eggs and add to the peanut butter. Stir in the crumbs, the finely chopped or grated onion, the hot mashed potatoes and the seasonings. Turn into a well oiled bread tin and bake one hour. To remove from the bread tin, turn upside down on a platter with a moist cloth over the tin. Let this remain five minutes or more, then loosen with a knife and turn out upon the platter. Garnish with parsley and moulds of cranberry jelly.

BROWNE SWEET POTATOES

Peel the sweet potatoes and toss into cold water immediately to prevent discoloration. Cut in halves lengthwise. Cook in boiling salted water or steam until tender. Drain and place in a buttered dripping pan. Brush the tops of the potatoes with butter. Sprinkle slightly with sugar. Place in a hot oven and bake until nicely browned.

BUTTERED CAULIFLOWER

Remove all the green leaves and place the cauliflower head downward in cold water to which has been added 1 tablespoon of salt to each quart of water. Let soak one-half hour or more to draw out any insects that may have found their way into the flowerets. If the head is to be cooked whole, tie it in a cheese cloth to prevent breaking. Boil in salted water twenty to twenty-five minutes, or until tender, taking care not to cook longer than necessary. Drain and dress with melted butter.

Cauliflower is more quickly cooked if broken into the flowerets.

MACEDOINE SALAD

1 cup diced carrots	$\frac{1}{2}$ cup diced sweet potatoes
$\frac{1}{2}$ cup diced potatoes	$\frac{1}{2}$ cup diced turnips
1 cup cut string beans	$\frac{1}{2}$ cup French dressing

Cook the vegetables separately, adding salt toward the last of the cooking. When cool, cut into $\frac{1}{2}$ -inch cubes. Canned beans may be used if fresh ones are not obtainable. They should be cut into $\frac{1}{2}$ -inch lengths. Vegetables other than these mentioned may be used. Cauliflower, beets, peas, celery, etc., may be substituted, if desired. Two or three vegetables only may be used; mix the vegetables with the French dressing. Garnish the salad with lettuce leaves or finely shaved cabbage.

FRENCH DRESSING

1 tablespoon lemon juice	$\frac{1}{4}$ teaspoon salt
3 tablespoons olive oil	A few drops of onion juice

Dissolve the salt in the lemon juice, add the onion and then the oil. If desired the oil or the lemon juice may be increased.

NUT BUNS

Make a sponge of the following:

$\frac{1}{2}$ cup milk	2 tablespoons sugar
1 teaspoon salt	$\frac{1}{2}$ cake compressed yeast
1 cup white flour	2 tablespoons warm water

Scald the milk, cool to lukewarm. Dissolve the yeast in the warm water. To the warm milk add the salt, sugar, dissolved yeast cake and the flour. Set in a warm place and let rise an hour or more, or until light and foamy; then add 2 tablespoons melted butter, 1 egg, one-half cup chopped nuts and about $1\frac{1}{2}$ cups flour. Knead thoroughly. Let rise about one and a half hours, or until light. Shape into buns. Beat an egg until well blended, and add 2 tablespoons milk or water. Brush the tops of the buns with the egg and sprinkle with sugar and chopped nuts. Let rise again until light and bake in a quick oven.

DATE CREAM PIE

1 pint milk	2 eggs
$\frac{1}{2}$ pound dates	Pastry

Put the dates in cold water. Seed and wash in hot water. Put to cook in a small quantity of hot water and let simmer until the dates are thoroughly softened. When tender and quite dry rub through a colander. Beat the eggs slightly, add the milk (preferably hot) and stir into the dates. Line the pie tin with any preferred pastry. Fill with the date mixture and bake until set. Three eggs will suffice for two pies. A little cinnamon and nutmeg may be added if desired.

NUT SPONGE CAKE

4 eggs	1 tablespoon lemon juice
1 cup sugar	$\frac{1}{2}$ teaspoon grated lemon rind
1 cup flour	$\frac{1}{2}$ cup chopped nuts

Sift the flour once, measure, then sift three times. Sift the sugar four times, grate the lemon rind, then extract the juice from the lemon. Beat the egg yolks until very light and lemon colored, add the sugar gradually, beating meanwhile. Add the lemon rind and the juice. Beat the egg white until stiff, and fold into the yolk mixture, then fold in the sifted flour and the chopped nuts. Turn into an unbuttered loaf tin and bake in a moderate oven 30 to 40 minutes. Turn upside down in the pan until cool. If possible, use a pan with a removable bottom. If this is not obtainable, fit a buttered paper in the bottom.

If an ornamental cake is desired, ice with boiled frosting or water frosting and arrange symmetrically 16 walnut meats if baked in a square tin, and about the same number if baked in a round tin.

The Cleveland Eugenics Program

The city of Cleveland is demonstrating that the first step in bettering the race is to seek out those who need bettering. And this work, like much public uplift work that gets down to fundamentals, is being started in the public schools. The Department of Medical Inspection, under the direction of its expert in feeble-mindedness, Miss Steinbach, has discovered two families who very obviously need training in practical eugenics—and who are getting it.

One of these families comes down from a German of average thrift and intelligence, in whose family there seems to have been no trace of feeble-mindedness or degeneracy, with the exception of two sons, who took to drink. Three other sons established respectable families in whom no taint is apparent. One of the alcoholics, who later also committed suicide, married an immoral, feeble-minded woman; of their five children, one died of smallpox, one was insane, one alcoholic, and one feeble-minded. The latter married a feeble-minded member of an average, well-to-do family in which there is a latent or recessive strain of feeble-mindedness; this union gave rise to seven feeble-minded children and one epileptic. One of these feeble-minded children married a feeble-minded, alcoholic member of a degenerate family.

Even more interesting from the standpoint of practical eugenics is the second family. This family was founded by a sea-faring man, who later became a drunkard, and who had as his first wife a normal woman. Their descendants of three generations today form a well-to-do, refined family. This man, after he became a confirmed drunkard, had a second wife, a woman who was feeble-minded; three generations of their descendants show among their number fifteen feeble-minded, four alcoholics, two prostitutes, and only one or two normals. Three other strains of feeble-mindedness have so far been introduced into this line, thereby intensifying the taint and sealing the fate of future generations.

Are there not other communities to follow Cleveland's lead and institute in their schools a program of charting its feeble-minded families?

FIRST year men in Princeton University can no longer use cigarettes, according to a decree by the Senior Council, the student governing body at Princeton. Already there had been a ban on pipes and cigars, but inasmuch as Dr. J. E. Raycroft, Physical Director of the University, has declared cigarettes more harmful than either pipes or cigars, it was decided to forbid them to freshmen.

New Medical Discoveries

of Interest to Lay Readers

The Color of Milk

Recent experiments by Plumber and Eccles, an account of which is published in a recent number of the *Journal of Biologic Chemistry*, have shown that the color of milk is chiefly due to the presence of carotin, a coloring matter found abundantly in green plants, especially in grass. The yellow pigments of the body also consist of carotin, which is probably derived chiefly from the food.

Vitalizing the Brain

At a recent meeting of the Paris Academy a case was reported in which an operation was performed upon the brain of an idiot fourteen years of age, the idiocy being cured and the child restored to a normal condition. The child had been normal to the age of eight years when, after an attack of scarlet fever, symptoms of cretinism developed. The skin became yellow and pink, dry and scaly, the hair thin and brittle, the eyelids were swollen, the nose flattened, the cheeks flabby, the face bloated, the eyes were dull and the countenance idiotic in expression. The operation consisted in grafting upon the lower part of the brain a portion of the right lobe of the thyroid gland of a baboon. The mental condition of the child began to improve very quickly. His expression became intelligent. The child began to grow and the mental improvement was so remarkable that the boy who had before taken no interest in his surroundings became surprisingly alert, bright and even mischievous. This case is another demonstration of the immense importance of the internal secretions of which the secretion of the thyroid gland is one.

How Water Influences Digestion

The *Experiment Station Record* gives the following interesting summary of observations recently made by an eminent German physiologist on the influence of water on the digestion of solid substances:

According to the author, of the materials experimented with, water left the stomach soonest. Bread, with water taken five minutes after,

required twice as long a time as water alone. However, the material remained in the stomach a shorter time than was the case with bread alone. The longest time was required for bread and water mixed. With water, the largest amount of liquid had left the stomach at the end of an hour. With bread the smallest amount had left within the hour, while with bread and water the amount was greater when they were taken in succession than when they were taken mixed.

The minimum amount of gastric secretion was noted with water and was only slightly lower for bread alone than in the other cases. When the dogs were thirsty, there was an increase in the total amount of liquid which left the stomach in an hour, without any special diminution of the gastric secretion or the length of the period of gastric digestion. In two other series both of these factors were diminished. Coffee, on the other hand, increased the period of gastric digestion without changing the percentage values.

The author says that these results have a bearing upon the length of time that food remains in the stomach, though not upon the amount of work required of the secretory glands in digestion. He believes that his results support the common theory that dry food leaves the stomach less quickly than moist food, and that with respect to the time that food remains in the stomach, the best results are obtained when water or similar liquids are taken after food, rather than when they are mixed with it; and that the mixing of solid or liquid foods is not desirable from a physiological standpoint.

In the case of bread or cake taken with coffee, he is of the opinion that the increase in the time the food is retained in the stomach is an advantage, since it prolongs the feeling of satiety and delays diuresis.

Cornmeal is Vindicated

Recent studies by Dr. Joseph Goldberger, while they seem to show that pellagra is not an infectious disease, but rather one of dietary origin, at the same time exonerates cornmeal from the claim that it is a direct cause. This finding, corroborated by the studies of other writers, is of great importance, as conclusions hastily arrived at during early pellagra epidemics cast unwarranted suspicion upon one of the most nourishing and economical of our foodstuffs.

The One-Sided Diet at Work

Doctor Goldberger's conclusions point to one-sidedness of diet as a probable cause of the disease—the one-sidedness lying in the direc-

tion of an over-abundance of carbohydrates. It chanced that in many communities this abnormal carbohydrate supply was due to the constant use of cornmeal products and syrups. In this very indirect manner cornmeal may possibly figure in pellagra, but the dangers from constant use of cornmeal may be easily avoided, Doctor Goldberger tells us, by supplying more proteins in the form of beans.

Beans a Cheap Source of Protein

When Doctor Goldberger reported his conclusions, that a diet which produces pellagra is usually almost entirely lacking in proteins, objection came from many sides that meat was becoming too expensive a source of protein for the average home. Doctor Goldberger, through the *Journal of the American Medical Association*, now replies to these objections in this way: "I am repeatedly called upon," he says, "to answer substantially the following question: 'Our people cannot afford fresh meat, milk and eggs, the year round; how can we, therefore, keep pellagra from recurring?' Tentatively, at least, the answer may be summed up in one word, 'beans.' The people of the South, especially the poor, must be taught to cook and eat at least as much of the dried (not canned) beans and peas during the winter as they do of the fresh during the summer."

Rice Polishings a Cure for Beri-Beri

It has been found that by adding rice polishings to rice the occurrence of beri-beri may be prevented. Laboratory experiments have also shown that ordinary yeast added to rice has the same effect of preventing the beri-beri, and has this advantage over polishings, that the latter contain much dirt, germs and fragments of insects.

The Gateway of the Body

The Postal Life Insurance Company continues its good work in behalf of the health of its risks. In a new *Health Bulletin* it discusses mouth hygiene, calling the mouth "the gateway of the body." "If we want to be healthy, we must see that our mouths are kept as clean as possible. Fortunately we are beginning to realize that the condition of our general health is largely affected by the condition of the mouth and teeth."

And in caring for the mouth—the point where attention to health should start—we cannot begin at too early an age. "All parents owe it to their children to have their teeth examined

by a competent dentist as soon as the temporary teeth have disappeared. The decay of teeth is caused, primarily, by the uncleanliness of the mouth, and even in the case of very young children, alkaline or acid conditions may be found which a dentist can easily correct. Where this is done, and the teeth afterwards are systematically cleaned, with an occasional inspection by the dentist, the teeth will probably remain strong and undiseased all through life.

“How many parents know that frequently the reason their children fail of promotion in the public schools is because they have deficient teeth? It seems a curious thing, yet it is a very true one.

“Dr. William P. Cooke, an eminent physician who is well known by reason of his effective work in the Harvard Medical School, recently noted that, in Boston, where children who are physically defective are not promoted, out of 121,369 defects recently noted in school children, 108,984, or about eighty per cent, came from their teeth. About eighty per cent of the ill-health noted among the Boston school children was entirely the result of inattention to their teeth.”

The *Bulletin* of the Ohio State Board of Health cites several cases that will surprise the layman. One, a middle-aged teacher, was treated for more than a year by physicians for iritis, cyclitis, conjunctivitis, and other diseases with equally formidable names, including glandular swelling and general debility. He happened to visit a dentist, who examined his mouth, extracted a fragment of diseased root, and the cause of all the trouble was removed.

Eye Troubles Due to Constipation

The writer is frequently asked as to what extent eye troubles have to do with digestion. The answer must always be that eye weaknesses probably have little to do with digestion, but that digestion plays a very important part in diseases of the eye.

Only recently a famous English oculist found that the poisons which enter the system as a result of colitis often cause a loss of accommodation in the eye—loss of ability to see well at a distance, or close by.

Iritis, corneal ulceration, choroiditis, retinitis—all these difficulties have been traced back directly to an absorption of poisons from the intestinal canal. In one case reported from England a man who had suffered from recurring inflammation of the eye was cured by the removal of his colon. This radical treatment is not always necessary, but at the same time it indicates very clearly the close relation which exists between intestinal and eye disorders.

Why We Sneeze

Sneezing may be due to one of a number of causes. A bright light will cause many people to sneeze, as also the pollen of certain plants, while there are few people but will sneeze in the presence of dust. When you have a cold the sneezing is due to an attempt by Nature to cure you. She is trying to make you sneeze for the same purpose that she wants you to shiver—to generate heat for warming the blood and preventing you from taking more cold—to help relieve the cold you have. For one does not sneeze with his nose, but with the entire body. During the act every muscle of the body gives a jump, as it were; it goes into sort of a spasm that warms the entire system.

The Triumphs of Temperance in Kansas

In the most lilting of Kansas prose-poetry Walt Mason tells of the effects of alcohol. And Walt Mason should know, inasmuch as Kansas, lo! all these years, has had a prohibition that actually prohibits:

“Old booze, the magician, does wonderful things; he’ll change the condition of paupers and kings. Some flagons of whiskey concealed in his frame, the cripple grows frisky, forgets that he’s lame; the beggars are riding on beautiful steeds, the man law-abiding does desperate deeds. The husband and father who’s kind to his wife kicks up a huge pother, inaugurates strife; and then in the morning he coughs up his fine, and gets a grim warning to cut out the wine. The man who for mildness is famed far and near is driven to wildness by schooners of beer; with shotgun or hatchet we see him cavort, and doesn’t he catch it when dragged into court! The thoughtful provider, whose kids were well fed, now lays in hard cider instead of rye bread. The man who was straighter than any strings look, poured gin in his crater, and now he’s a crook. The man who was natty, and groomed like a beau, is ragged and ratty, an emblem of woe. One held the truth higher than any in town; Booze made him a liar, and battered him down. Old Booze, with his chalice, doth miracles work; he ruins the palace, dismantles the kirk. Industrial regions he turns to a void, increases the legions of starved unemployed. The depths and the shallows of trouble he brings, he leads to the gallows the victim who swings; he smuggles the coppers of men who are blind, persuading the paupers he’s friendly and kind. And always he’s jolly, and blithely he cries: ‘Join me in my folly—fools only are wise!’ ”

With Our Readers

Raw Cabbage Aids Digestion

TO THE EDITOR OF GOOD HEALTH:

In the July number of GOOD HEALTH I read with interest the article, "Raw Cabbage is Easily Digested." Two years ago a physician told me that raw cabbage, thoroughly masticated and eaten without any dressing (though salt, olive oil and lemon juice might be used) aided digestion. I have proved that his assertion is true, for I have always suffered from indigestion and have used the standard digestive remedies with very little benefit. But since the advice to use raw cabbage to promote digestion I have forgotten that I have digestive organs.

A word about the preparation of raw cabbage. I cut a head in halves, and then in strips of about an inch or two inches, and lay it in very cold, slightly salted water for a few minutes before serving. This makes it crisp, and seems to increase the delightful pungent, spicy flavor that is smothered by pepper and vinegar.

CLARA V. HOWARD.

Cornwall, New York.

From Cover to Cover

TO THE EDITOR:

"I never fail to read GOOD HEALTH through from cover to cover."

WESLEY SISSON.

Secretary, Postal Life Insurance Co.

Offsetting the Cost of Meat

TO THE EDITOR OF GOOD HEALTH:

As one of your enthusiastic patrons I send you a clipping from *The Ohio State Journal*—an editorial. It is worth publishing in your magazine, as showing that there are supporters of your doctrines outside of Battle Creek:

"There is no need," says the *Journal*, "to waste any sympathy on those people who complain of the high cost of meat. It wouldn't be a great calamity if the cost would shut out its use entirely, for a person can get along just as well without it, and a great many people get

along better. If the rich want meat, let them have it. That would not concern the people who cannot afford to buy it. It is no misfortune to have to do without it. As a rule, better health, better appetite, better dispositions, better housekeeping can be done with vegetables, fruits, milk and eggs—nothing else. Whatever is added comes as a burden. We have got so used to meat in this land of plenty that we have regarded it as a necessity, but some of the healthiest and strongest people in the world, and in this country, eat no meat whatever."

Yours truly,

L. H. SCOTT,

Cadiz, Ohio.

Member Ohio General Assembly.

Efficiency Increased 100 Per Cent

TO THE EDITOR OF GOOD HEALTH:

I am a young man, and as one who has found a great friend in GOOD HEALTH through practice of your common-sense teachings I wish to tell you that my physique is one hundred per cent more efficient now than a few years ago. Among other things I have freed myself from eczema, which once bothered me persistently. May GOOD HEALTH increase in its usefulness as a health factor.

Yours truly,

Davenport, Iowa.

C. A. ANDERSON.

Ought to be in Every Household

EDITOR OF GOOD HEALTH:

Every copy of GOOD HEALTH is worth many times the price of a year's subscription. There is no other such medical magazine published. It ought to be in every household. Please accept my thanks for the invaluable, up-to-date medical help it has given me. I have taken it for a number of years, and write this without solicitation. It is plain duty.

Respectfully,

Los Angeles, California.

J. A. BEDIENT.

Pure Food and Morals

TO THE EDITOR OF GOOD HEALTH:

I cannot express the great appreciation of the articles in the last issue. God bless you. Pure food has much to do with good morals.

MRS. ETHEL C. BROWN.

Plainfield, New Jersey.



Spice



"YOU must have had a terrible experience, with no food and mosquitoes swarming around you," said a friend to the shipwrecked mariner, who had been cast away upon a tropical island.

"You just bet I had a terrible experience," he acknowledged. "My experience was worse than that of the man who wrote, 'Water, water everywhere, but not a drop to drink.' With me it was bites, bites everywhere, but not a bite to eat."—*Day Book*.

A NEW YORK physician, who has recently transferred his activities to the Hub, tells of a Bostonian who, like most of his townsmen, is a precisian in the matter of English, and who had occasion not long ago to consult the aforesaid doctor.

After ascertainment of symptoms, the physician said:

"What you need, more than anything else, is a tonic in the shape of fresh air."

Whereupon the Hubbite waxed sarcastic, and inquired:

"Before we proceed further, would you mind telling me what is the shape of fresh air?"—*Lippincott's Magazine*.

"YES," said Mrs. Lapseing, "Johnny's all right now. When he was bitten by the strange dog I took him to a doctor's and had the wound ostracized right away."—*Merck's Archives*.

"HE IS a man who never wishes anybody ill." "Then what does he want to be a doctor for?"—*Baltimore American*.

WHY DRUGGISTS GO INSANE.—"You will please gif the littel poi for five cents epecak for to throw up a fife months old baby. The baby has a sore stummick."

"This child is my little girl. I send five cents to buy two sitless powders for a grown-up adult who is sick."

"My baby has eat a peace of his father's parrish plaster. Sens a anecdote quick as possible by the enclose boy."

"I haf a hot time insides and would like a extinguisher. What is good for to extinguish it. The inclosed money is for the price and send the change back."

"Dear Sir Druggist. Please give berrer some aunty toxens to gargel sore throat in a littel baby three years last May."—*Selected*.

GOOD HEALTH

The Oldest Health Magazine in the World—Established 1866

Edited by

JOHN HARVEY KELLOGG, M.D., LL.D.

Dec. 1914

Battle Creek, Michigan

10 Cents

Welcoming Winter

Winter air is germless.

It sweeps over the frozen, snow-covered earth without contamination.

It is dense, vitalizing, curative.

The fire on the hearth burns brighter when the snow flies. And so do the vital fires of the body, and for the same reason: the air is denser, and changes in the blood and tissue are more active.

The "dance of life," as Sir Lauder Brunton called the cell activities, goes on at a merrier pace in winter. The body is more rapidly torn down and more rapidly built up than in summer.

Thus the rebuilding, renovating processes by which the sick man puts off his old diseased body and puts on the new man of health are accelerated.

Those who run away to some warm region to avoid cold weather and disease miss in so doing the very thing that would do them the most good.

One of the greatest advantages of cold weather is the opportunity to breathe cold air while asleep. By means of the window tent, the fresh-air tube, sleeping balconies and similar arrangements, it is possible for one to enjoy every night during the winter season and during the whole period spent in sleep, the chief advantages which the wood-chopper enjoys from life in the open air.

There is no vitalizer equal to cold air. It is the best tonic known, the most powerful of all tissue-renovating agencies.

J. H. Kellogg

Now Ready

Report of Proceedings

of the

Race Betterment Conference

To those interested in the various agencies—and organizations working for improvement of the race, this will prove the most intensely interesting book ever published. It brings together in one volume a complete report of proceedings of the most notable gathering of its kind in history—the First National Conference on Race Betterment.

This report makes a book of *over six hundred pages*. Included are some of the most convincing facts—and statistics—ever stated. Here you find the best efforts of Frederick Hoffman, Dr. Cressy Wilbur, Prof. Wilcox and others.

In the section devoted to Individual Hygiene you find papers by Dr. Vaughan—President of the American Medical Association—Dr. Sargent, of Harvard University, Mrs. Melvil Dewey, Dr. Knopf, Dr. Bishop, Professor Metcalf, of Oberlin, and Elmer Rittenhouse.

Upon Narcotics, there are papers by Dr. Henry Smith Williams, Dr. Daniel Lichty, and Prof. Arthur Hunter.

Dealing with the subject of Child Life are addresses by the late Jacob Riis (one of his most powerful utterances), Judge Lindsey, Dr. Gertrude Hall, Dr. Lydia A. DeVilbiss, and Robbins Gilman.

On the Sex Question are utterances by Doctors John Harvey Kellogg, Winfield Scott Hall, Luther Halsey Gulick, J. N. Hurty, Caroline Geisel, F. O. Clements and Prof. Graham Taylor.

Upon the intensely interesting subject of Eugenics, are included papers by Dr. Kellogg, Prof. Irving Fisher, of Yale University, Dr. C. B. Davenport, Supt. of the Carnegie Record of Eugenics Bureau, and other eminent authorities.

School, city, state, national and institutional hygiene are treated by such authorities as Dr. Caroline Bartlett Crane, Dr. Lillian South, Sir Horace Plunkett, Rev. Newell Dwight Hillis, Dean Sumner, Dr. Austin, Dr. Hoag, Dr. Favill, and Prof. von KleinSmid—the world's greatest authorities on these subjects.

This book should be added to the library of every doctor, scientist, scholar and social worker because of the definitely helpful and practical suggestions contained. Its papers record years of work and results which are full of encouragement to those looking forward to development of a stronger, better and more enduring race.

Interspersed in the volume are valuable diagrams and tables, illustrating the scientific side of the work, while many other illustrations emphasize the popular appeal.

This book has been prepared at great cost and, in consequence, the edition is limited to but a few thousand copies. While they last, we shall sell them, bound in half leather, for \$5.00 a copy. A very few, bound in library paper will be sold at \$2.00 a copy. This is a great opportunity to secure, on especially favorable terms, one of the most remarkable publications of the last hundred years. Order today, if you wish one of these books. You take no risk in sending money because, if you are not entirely satisfied, the book may be returned for prompt refund. Address—

THE RACE BETTERMENT FOUNDATION

112 University Ave.

Battle Creek, Michigan

The Importance of Rest

The best remedy for fatigue is rest—and at The Battle Creek Sanitarium rest is considered just as important as medical treatment or healthful diet.

THE stress of modern business and the nerve racking activities of social life impose cruel penalties upon the average American man and woman. Nature insists that we “slow up” now and then—give the fagged system a much needed rest—and permit tense nerves to relax.

The over-worked business man must remove himself from all contact with commercial clatter, and the tired woman must seek restful influences—not merely a change of scene.

Obviously, one cannot find relaxation amid the jarring distractions of a noisy city or at the so-called “health resort” where social activity defeats every attempt at rest.

In Southern Michigan—away from the stress and toil of big commercial centers—is the beautiful, little city of Battle Creek.

Just at the edge of town—within sight of rolling hills, winding roads and rustic farm houses are situated the magnificent buildings of The Battle Creek Sanitarium, forming a community that stands out with startling contrast upon the landscape—a little world of its own.

In these immense buildings is gathered the most complete and up-to-date equipment for medical examination and treatment anywhere to be found.

The whole world contributes to the vast scientific resources of this institution. Foreign methods have been studied, pathological and research laboratories in leading scientific centers have been drawn upon. No new development is too insignificant to invite investigation—no apparatus is too expensive to be installed if found effective.

And what of the one thousand physicians, nurses, attendants and other workers who operate this great University of Health? Certainly one finds in no other institution in the world such pleasing personalities, such able service, such conscientious interest in each patient and visitor. The attitude of these workers is entirely different from that of the employes of the ordinary hotel or the commercial health resort. A real desire to serve and an earnest interest in the principles for which the institution stands is

dominant in the minds of these Sanitarium attaches. To sum it all up, visitors to The Battle Creek Sanitarium enjoy the combined advantages to be derived from favorable climatic conditions, comfortable, homelike surroundings, scientific methods and close, conscientious supervision.

If you are planning a sojourn or winter vacation get the facts about a real "rest" vacation at Battle Creek.

A beautifully Illustrated Prospectus, issued by the institution, will be mailed gratis to those who write for it.

Christmas Magazines

at

Lowest Prices



HERE'S your opportunity to buy the very best magazines at low cost. Read the opposite page carefully. Consider all that these great leading publications of the country offer in the way of interesting reading. Then send us your subscription, using the coupon below, which is provided for your convenience. In considering these remarkable offers, we ask you to especially bear in mind the following:

FIRST. We have been at great pains to secure for you the very lowest possible combination rates so that you could have good reading you wish at the biggest possible saving to you.

SECOND. All these offers include "GOOD HEALTH" on an especially favorable basis, because "GOOD HEALTH," enlarged and improved as it is now, is worth considerably more than a dollar a year, and, beginning very early in the spring, *we are going to charge more for it.*

Therefore, to be able to get "GOOD HEALTH" at the low price figured in these combination offers is a distinct opportunity and *for immediate acceptance only.* If you wish to get these splendid reading values, you should use the coupon at once. Cut it out NOW. Fill in the number of the offer you accept, write your name and address plainly, pin to it remittance (your check or a money order) for the right amount and mail TODAY.

GOOD HEALTH PUBLISHING CO.

Battle Creek, Michigan

I accept your Magazine offer No. _____ and attach remittance of \$ _____ for one year's subscription to "GOOD HEALTH" and a year's subscription to _____.

Name _____

Street and No. _____

City and State _____

N. B. This is for magazines to be mailed in the United States only. Others write us for rates plus foreign postage.

FOR IMMEDIATE ACCEPTANCE

Offer

“Review of Reviews”

No. **1**

The Leading Review Publication.....	Regular price	\$3.00
GOOD HEALTH	“ “	1.00
		<u>\$4.00</u>
Both together on this Special Offer.....		3.00

You Save . . \$1.00

Offer

“The Century”

No. **2**

The Leading Literary Magazine.....	Regular price	\$4.00
GOOD HEALTH	“ “	1.00
		<u>\$5.00</u>
Both together on this Special Offer.....		4.00

You Save . . \$1.00

Offer

“The Delineator”

No. **3**

The Leading Fashion Publication.....	Regular price	\$1.50
GOOD HEALTH	“ “	1.00
		<u>\$2.50</u>
Both together on this Special Offer.....		2.00

You Save . . \$.50

Offer

“House and Garden”

No. **4**

The Foremost Garden Magazine.....	Regular price	\$3.00
GOOD HEALTH	“ “	1.00
		<u>\$4.00</u>
Both together on this Special Offer.....		3.00

You Save . . \$1.00

Offer

“Sunset Magazine”

No. **5**

The Leading Pacific Coast Magazine	Regular price	\$2.50
GOOD HEALTH	“ “	1.00
		<u>\$3.50</u>
Both together on this Special Offer.....		2.50

You Save . . \$1.00

Offer

“Scientific American”

No. **6**

The Leading Scientific Publication.....	Regular price	\$3.00
GOOD HEALTH	“ “	1.00
		<u>\$4.00</u>
Both together on this Special Offer.....		3.50

You Save . . \$.50

Offer

“The House Beautiful”

No. **7**

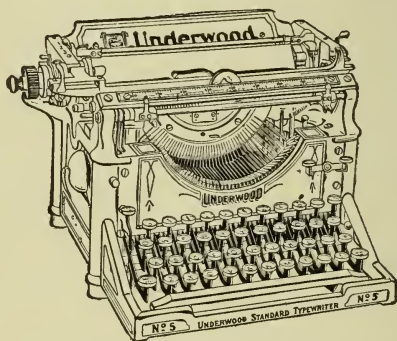
The Leading Home Publication.....	Regular price	\$2.00
GOOD HEALTH	“ “	1.00
		<u>\$3.00</u>
Both together on this Special Offer.....		2.00

You Save . . \$1.00



Use the Order Coupon

A Partial History of the **UNDERWOOD**



First practical visible machine

Winner of every International
Record for Typewriter
Speed—Accuracy—Stability

Holder of the Elliott Cresson
award for mechanical su-
premac y

Surely the

Underwood

is

“The Machine You Will Eventually Buy”

Pasteurize Your Milk

The present epidemic of foot-and-mouth disease is remarkable because of the apparent immunity of human beings. Thus far no cases have been recorded that could be traced directly to the disease, whereas in 1902 several were reported in New England. And again in 1908, eruptions in a few instances were observed in the mouths of children—due, it was thought, to contaminated milk. In neither year, however, was the disease epidemic, whereas the present outbreak, involving nearly the entire middle West, has been confined, so far as is known, to live stock.

Thus the authorities of the federal Department of Agriculture seem to have good reason for their optimistic comments on the susceptibility of humans to the disease. "The anxiety that has been expressed in several quarters in regard to the effect upon human health of the present outbreak of the foot-and-mouth disease," says a recent Bulletin, "is regarded by government authorities as somewhat exaggerated. The most common fear is that the milk supply might become contaminated, but in view of the precautions that the local authorities in the infected areas are very generally taking, there is comparatively little danger of this. Milk from infected farms is not permitted to be shipped at all. The only danger is, therefore, that before the disease has manifested itself some infected milk might reach the market."

Neurasthenia

Symptom—NOT Disease

Neurasthenia is due largely to habits which may be corrected by giving attention to causes of the ailment.

This is fully explained by Dr. John Harvey Kellogg, who gives you in his new book—"Neurasthenia"—results of his experience with thousands of cases treated during the nearly forty years he has been Superintendent of the great Battle Creek Sanitarium. Dr. Kellogg's book is not a dry book—nor couched in technical terms. On the contrary, Dr. Kellogg has the happy faculty of making his writings easily understood and intensely interesting. If you suffer from nervousness—exhaustion—sleeplessness—or any other form of Neurasthenia, get this book and study it. It shows the way out—teaches you how to obtain relief from the dread fangs of nervousness.

The book contains 250 pages, printed with plain type on fine book paper. There are several full page illustrations, diet tables and valuable instructions as to exercise, relaxation, rest and sleep. The regular price of the book is \$2.00 but, to give the work widespread distribution, Dr. Kellogg has permitted us to bind an edition in library paper covers and, while these last, we shall sell them at only \$1. a copy. Send your order and remittance today. You take no risk. If you are not entirely pleased and satisfied with the book, it may be returned for prompt refund. Order at once and get relief from nerve suffering. Address—

GOOD HEALTH PUBLISHING CO.

112 W. Main Street

Battle Creek, Michigan

So long, however, as the disease can be confined by rigid quarantine to limited areas, the danger from this source is very small. Should the pestilence spread all over this country and become as general as it has been at various times in large areas in Europe, the problem would become more serious.

Also the nature of the symptoms and the ease with which they are detected, aids in maintaining a strict quarantine. For "cows affected with the malignant form of the disease lose practically all of their milk. In milk cases, however, the decrease may be from one-third to one-half of the usual yield. The appearance of the milk also changes. It becomes thinner, bluish, and poor in fat. When the udder is affected, the milk frequently contains coagulated fibrin and blood, so that a considerable sediment forms, while the cream is thin and of a dirty color. These changes, however, occur only when the disease is in an advanced stage and, as a matter of fact, the disease is not permitted to pass into an advanced stage, as any stricken animal is at once slaughtered."

To this we might add the further assurance to users of milk, that dairy herds are affected far less often than animals kept for general stock purposes.

Workers in dairies should exercise every precaution. "In adult human beings the contagion causes such symptoms as

How to Sleep in the Open Air

If you have one or more windows in your sleeping room, you can easily sleep in the open air. This is made possible through use of our new "Sanequo Window Tent" which fits any window and can be put in or taken out in two minutes' time. No fastenings. Window sash holds it. Price only \$15.00 complete and ready for use. Write for particulars of our **FREE Trial Offer**. On receipt of your request, we send you a circular illustrating the "Sanequo Window Tent" and telling you all about it. Write us today. Sleep in the open air and keep well. Address—

SANITARIUM EQUIPMENT CO.

112 Washington Street

Battle Creek, Mich.

You Must Keep Well to Keep Working

"GOOD HEALTH," the real efficiency magazine, teaches you how to keep well the easiest way—by cultivating natural health habits. GOOD HEALTH is the most intensely interesting magazine published for men and women who are striving to develop personal efficiency. Only \$1.00 a year. With a 2 years' subscription (\$2.00) we give Dr. Kellogg's latest book on the Nerves FREE. You take no risk sending money because, if you are not entirely satisfied, we promptly refund. Address—

GOOD HEALTH PUBLISHING CO., 112 W. Main St., Battle Creek, Mich.

sore mouths, painful swallowing, fever, and occasional eruptions on the hands, finger tips, etc. While causing considerable discomfort, however, the disease is rarely serious. Where it is very prevalent among animals, some authorities believe that it is fairly general among human beings, but that the disturbances it causes are usually so slight that they are not brought to the attention of the family physician. There is, however, a very good reason for everyone giving the diseased animals as wide a berth as possible, namely, that otherwise they may easily carry the disease to perfectly healthy herds. Federal inspectors engaged in the work of eradicating the pestilence are thoroughly equipped with rubber coats, hats, boots and gloves, which may be completely disinfected; and others who lack this equipment are strongly urged not to allow their curiosity to induce them to become a menace to their own and their neighbors' property."

The Department of Agriculture strongly urges the importance of pasteurizing the milk as a preventive measure. Pasteurization consists in subjecting milk to a temperature of 150° F. for several minutes, a very simple method being as follows: set the bottle of milk in a vessel containing water and heat the water until the milk reaches a temperature of 150°, then remove from the stove and allow to stand twenty to twenty-five minutes in the water. Next put the milk in a sterilized bottle, and keep cool until used.

Better Food for Less Money

This is what you secure, if you get and read the newest and most intensely interesting book ever written about table deliciousness.

Contains over 700 recipes for soups—entrees—meat substitutes—stews—roasts—salads—pies—puddings—pastries—frozen desserts—and many other dainty, as well as substantial, dishes for breakfast, luncheon, dinner and supper.



The New Cookery

Is by Miss Lenna Frances Cooper—Superintendent of the Battle Creek School of Home Economics—a leading authority upon table delicacies, invalid diet, scientific feeding and economy in the home.

Her book contains over 300 reading pages, with many full-page illustrations, all bound in library cloth with title on front cover in gold. The price is only \$1.50—a big value. Order today. Send check or money order. You take no risk because, if you are not entirely satisfied with the book, you may return it for prompt refund. Get this book at once. *Set a better table and—save money.*

GOOD HEALTH PUBLISHING CO.

0000 W. Main St., Battle Creek, Mich.



Prevents Colds

Most colds come because your nose and throat are irritated and sensitive. This may be relieved by use of the Sanequo Pocket Vaporizer. Regular use will soothe, heal and strengthen the delicate membranes so that you will catch fewer colds. Price only \$1.00. Order today. You take no risk sending money because, if you are not satisfied you may return the Vaporizer for prompt refund. Get this Vaporizer and stop colds. Address—

Sanitarium Equipment Co.
112 Washington St., Battle Creek, Mich.

FREE Christmas Books

with subscriptions to "GOOD HEALTH." Write today for particulars of one of the most intensely interesting offers we have ever made. Books for young mothers and old. Books for housewives. Books for cooks. All FREE for Christmas with subscriptions to "GOOD HEALTH." Write us at once.

Good Health Publishing Co.
112 West Main St.
Battle Creek, Michigan

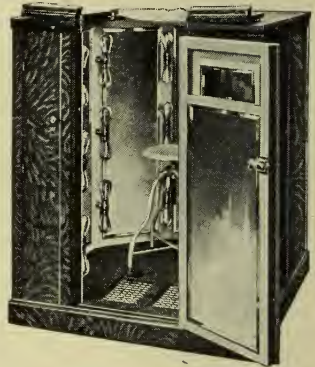
Sweat Baths Stop Rheumatism

Get the poison out of your system. That's the only way to *prevent* rheumatism. Remove the cause. For this purpose, science proves the Electric Light Bath effective. It gets results. Easy to use. Get in and turn on the lights. That's all there is to it. In a few minutes, you have a good sweat. The electric light and heat draw poisons out of your blood through the pores of your skin. You get the most effective and beneficial sweat baths in

The

SANEQUO

Electric Light Bath



We make no detailed claims here for our bath. We say only this—We know our bath is the best bath and we are willing to *prove this* to you at our own expense. Send for our Sanequo Bath Book. Select the bath you believe best suited to your needs. Order it. Use it a month—

30 Days FREE

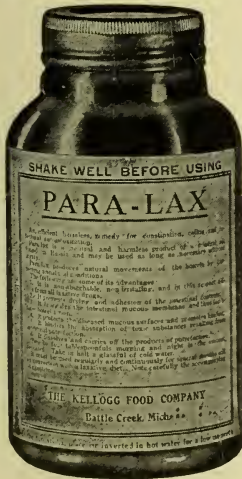
If, by the end of that time, you are not convinced, pleased and satisfied, return the bath at our expense. For the use you have had of it you need not pay us a penny. Is this fair? We can afford to make this offer because Sanequo Baths always "make good." Write for our Bath Book today. We forward it fully postpaid, upon receipt of your request. Write us and get rid of Rheumatism. Address—

Sanitarium Equipment Co.
112 Washington St., Battle Creek, Mich.

War News that Affects You

WAR in Europe has cut off the supply of Russian Paraffin Oil used in making Para-lax.

We now have a good supply because we have scoured the country and bought every gallon of Russian Paraffin Oil we could locate—paying, in some cases, several times the price asked for it before the war.



In spite of this, however, we shall not, at present, raise the price of—

PARA - LAX

You can still buy it for \$1.00 a bottle but NOT six bottles for \$5.00.

This latter price has to be withdrawn and we do not now know how long we shall be able to maintain the dollar price.

It depends upon how our supply of Russian Paraffin Oil holds out and how long the war lasts.

This is why you should buy Para-lax NOW while the price is still only \$1.00 a bottle. Send your order direct to—

Dept. X-30

The Kellogg Food Company
Battle Creek, Michigan

Teach Home Economy

Nation wide interest in Domestic Science has opened a new profession to women—that of teaching economy in the home.

Cooking Teachers are in demand by colleges, seminaries, private and public schools, Y. W. C. A.'s, clubs and other similar organizations. Trained Dietitians secure quick employment in hospitals, infirmaries, sanitariums, public institutions, factories, department stores, and industrial establishments everywhere.

Graduates of the Battle Creek Sanitarium School of Home Economics are in especial demand because of the recognized thoroughness of their training. It is known that they are taught scientific food values, feeding "the balanced ration" for efficiency, invalid diet and other special subjects.

Pupils of this school have use of the great gymnasiums and playgrounds and other social and educational facilities connected with the greatest Sanitarium in the world.

There is also a special course for house-keepers.

Write today for illustrated booklet giving full outlines of all the courses, requirements of students, tuition and terms. Address—

Miss Lenna Frances Cooper
Principal

112 Administration Building

Battle Creek, Michigan

Wanted—Physical Instructors Young Men and Women

This is a comparatively new profession for young men and women. Schools, colleges, seminaries, clubs, Y. M. C. A.'s and Y. W. C. A.'s are looking for Gymnasium Directors and Playground Instructors. Big industrial establishments—factories, department stores, mines and railroads—seek men and women to take charge of practical welfare work. All such positions are well paid. Salaries are in keeping with efficiency.

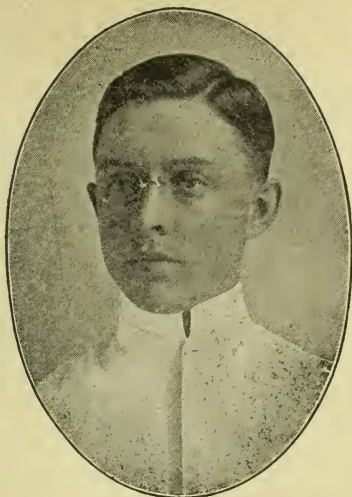
And—you can develop the very highest efficiency in this profession here at Battle Creek where the equipment for such training is unusual. Great laboratories, indoor and outdoor gymnasiums and swimming pools, playgrounds, athletic fields, golf links and tennis courts as well as extensive classrooms and all other facilities for instruction in Physiology, Anatomy, Hygiene, Chemical Analysis, and the common branches necessary to a complete training of this kind.

Tuition is very low. Board and room can be secured for less than \$5.00 a week. Also, in many cases, opportunity is provided for students to earn money toward expenses. Write today for catalog and terms. Find out about this profession. It may be the vocation you are looking for. Address—

Normal School of Physical Education

112 Manchester Street

Battle Creek, Mich.



Be a Nurse

This is one of the noblest of callings. Wherever the nurse's uniform appears it is respected. In the homes of the wealthy—in the slums—on the battle-field—in the marts of trade—everywhere men and women step aside to give place to those who administer to the sick.

The importance of this profession is growing day by day. Graduate nurses earn from \$20 to \$40 a week and their living is always provided. Nurses trained here in Battle Creek are sought for because the thoroughness of their training is now recognized all over the world.

In addition to all the branches usually taught in hospitals, this school gives its nurses special training in Hydrotherapy, Phototherapy, Electrotherapy, Manual Swedish Movements, Medical Gymnastics and Massage, as well as special courses in Chemical and Microscopic analysis, Dietetics and Scientific Cookery.

The course also includes actual practice in nursing at the greatest health institution in the world—the Battle Creek Sanitarium. This affords students opportunity to earn money while taking the various courses of training. Facilities for intellectual and physical development and social intercourse are unusual because students have access to the resources of a vast health establishment visited and patronized by prominent people from all over the world.

Young Men and Women

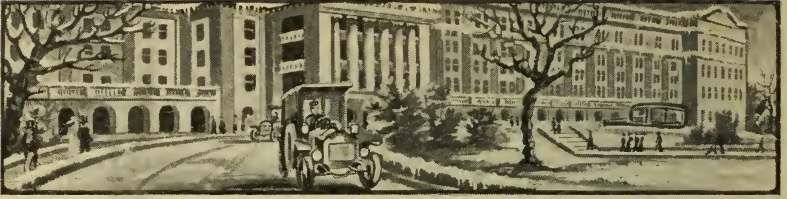
may enter for a two or three years course, inclusive or exclusive of summer courses which afford opportunity for additional practice and training.

Write today for illustrated booklet, describing courses in detail stating requirements, tuition and terms. Address—

The Training School for Nurses

112 No. Washington St.

Battle Creek, Michigan



Take a Rest This Winter

If you are planning a winter vacation, consider the advantage of a real "rest" vacation at Battle Creek.

Here everything is scientifically planned for health-building—you eat, sleep and live daily for health in a pleasant, wholesome environment.

In winter, the outdoor life is encouraged by the most favorable conditions . . . sleighing, skating, skiing and other invigorating winter sports may be almost constantly enjoyed. Those preferring less strenuous forms of exercise find healthful recreation in indoor games, gymnastic exercises, drills and swimming, all under expert direction.

The Main Building alone has seven acres of floor space. The four hundred guest rooms are supplied with steam heat, electric lights, intercommunicating telephones, private writing desks, large mirrored dressers, delightfully comfortable beds and fine linen—representing the acme of comfort and convenience.

Beautifully Illustrated Prospectus on Request

THE BATTLE CREEK SANITARIUM
Battle Creek Box 11 Michigan

