

Life & Health



WASHINGTON, D. C.

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The Loma Linda Sanitarium



The Glendale Sanitarium



The Paradise Valley Sanitarium

—that thou mayest prosper and be in health, even as thy soul prospereth.”

JOHN 3:1-2.

“HALF-HEALTH” —does it satisfy you?

DO you know that only one in twenty enjoys “whole-health”? The rest live on, day after day, in a state of “half-health”—not sick enough to go to bed—nor well enough to engage with zest and energy in the busy activities of the day.

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- The Loma Linda Sanitarium
305 Pepper Drive, Loma Linda, Cal.
- The Glendale Sanitarium
206 Broadway, Glendale, Cal.
- The Paradise Valley Sanitarium
106 Sanitarium Ave., National City, Cal.

Life & Health

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FLY TIME IS HERE

TREASURY DEPARTMENT
U. S. PUBLIC HEALTH SERVICE

THE HOUSE FLY

A LITTLE INSECT BUT A GREAT SPREADER OF DISEASE

KILL FLIES - SAVE LIVES

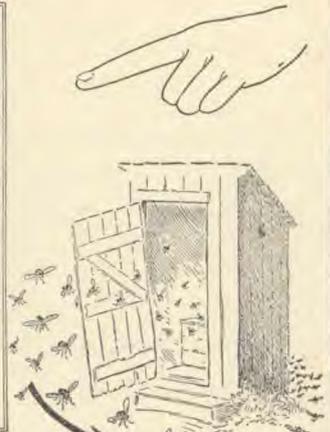
THOUSANDS OF PEOPLE DIE EVERY YEAR FROM DISEASES TRANSMITTED BY FLIES

COMMON DISEASES TRANSMITTED BY FLIES

Typhoid Fever
Diarrhoea

Dysentery
Tuberculosis

Anthrax
Cholera



To rid a town of flies, everybody must do his bit.
There are many kinds of flies—**ALL HARMFUL.**
Flies breed in filth, feed on it, live in it, and contaminate everything they lay their hairy little legs on.

It is a very good thing to swat, trap, or poison flies, but it is still better to prevent their breeding:

By keeping stables clean.

By removing all manure at least twice a week.

By keeping garbage in receptacles, with close-fitting covers, which should be emptied and washed out frequently.

By building only fly-proof sanitary privies when sewers are not available.

The time to begin a campaign against flies is before any have been seen in March or in April of each year.

A pair of flies born in April may give origin to millions by August. Do not let those millions come into existence. Keep the first pair from breeding.

Strict cleanliness and immediate destruction of all filth are the best measures against flies.

Outhouses, homes, markets, bakeries, and all food establishments should be screened against flies.

REMEMBER: NO FILTH. NO FLIES, LESS DISEASE



SEE ARTICLE, PAGE 129

Life & Health

HOW TO LIVE

Editor

H. W. MILLER, M. D.

Associate Editor

L. A. HANSEN

Office Editor

G. H. HEALD, M. D.

VOL. 34

JUNE, 1919

No. 6

EDITORIAL

Health Comes from God

WE say it with no hesitation, without fear of ridicule for believing it, and with assurance that it is absolutely true, that *health comes from God*. We recognize that there are many "ifs" and "ands," many possibilities and probabilities, various conditions, and several other things to be taken into consideration as coming in between the original source of health and our enjoyment of it. All the same, we acknowledge the God of heaven, the Creator of all things, as the one and the only one who can or does give health.

The same power that works for us every moment of the twenty-four hours of the day, week after week, through the months and the years, to keep us alive, is the power that heals us when we are sick. It is the power that builds us up when broken down, that renews our strength when worn, that supplies the physical energy necessary to life and its various activities. In fact, all this is only to speak of healing in another way, for healing means to make whole, and day by day, hour by hour, moment by moment, there is going on that same process of restoration that is seen in a more marked and definite manner when an injury to the body is healed or when disease gives place to health. We call that power nature, but it really means God, for life is only of God and healing is to give life.

Giving credit to God as the Giver of life, the Healer of disease, is not religious cant or a matter of doctrinal belief. It is the simple statement of a fact that holds true in the case of every living being, whether that being recognizes the fact or not. It is not a question of faith healing, for men are healed by God without the exercise of faith. It is not even a matter of believing in God, for many a man is healed who does not believe there is a God. To heal is to give life, and no one can give life but the Lord who made all things.

L. A. H.

Disease Not of God

WHEN the preacher at a funeral says, "The hand of God has taken our loved one," he does not put it just right. God is not killing people. He is not bringing disease. He does not give suffering. Sickness, suffering, and death come from another power. God delights not in death, but in giving life. All that he has done for human beings, all that he has ever told man, has

been to the end that men should not die, but have life; that so far as this earthly life is concerned, it should last as long as possible and be wholly free from disease, and that after this life is spent it should be followed by one that measures with God's own eternal life.

No, sickness does not come from God. As he said to the people of old, so he says today to those who find restoration, either of body or soul or both, "I am the Lord that healeth thee." Ex. 15:26. Not only is he to be known as the God who desires to heal, but as the one to whom all healing is due, "who forgiveth all thine iniquities; who healeth all thy diseases." Ps. 103:3. L. A. H.

Man Must Do His Part

HEALTH is a free gift of God, but man has something to do to get it. The animals are fed by a kind Providence, but they have to gather what they eat. Ps. 104:28. The farmer must sow and cultivate for his crop. Though all the elements for food production — seed, soil, sunshine, and rain — are available, something has to be done with them before a harvest can be realized.

The elements of health may be ever so abundant, but unless they are properly utilized they will avail but little. What good that we have plenty of fresh air available if we do not breathe it? Pure water, good food, time for sleep, and all the other health essentials will yield but little physical profit if they are but little used.

Health building is a business. It demands attention and diligent application. Hit-or-miss methods are most likely to miss. Haphazard living increases the health hazard. Putting good sense and real effort into health cultivation will bring sure results just as certain as good farming will bring a crop of wheat or corn or anything else.

Working for health is just a plain matter of cleaning up our premises, caring for our bodies, cooking food properly, going to bed on time, and doing a number of other things that may seem very commonplace. So far as the actual work is concerned, it may not be any more than would be involved in living any other way than for health, but to follow a health program does take thought and effort. Merely praying for health, the wishing for it, or trusting God for it, will not give it. We can co-operate with the Creator by observing the laws which he has established in the making of our beings. L. A. H.

What About the Doctor?

WHERE does the physician come in in the question of healing? If cures are affected by divine power, is there need of the human? Does the doctor have any place, and what is it?

The medical world is coming more and more to recognize that it is nature that heals, and that all anybody can do toward healing is to assist nature in her processes. Instead of doctors being the custodians of the health of the world, responsible for making and keeping people well, this responsibility is largely being thrown upon the people themselves, and it is the doctors who are placing this responsibility where it belongs. Emphasis is being placed on the importance of hygiene, sanitation, and the general practice of health habits, for the preven-

tion of disease. Conformity to nature's laws of health is recognized as being the only means of health, whether for its maintenance or its recovery.

The true physician is a most efficient colaborer with God when he stands as a protector of the people's health. By giving plain instruction in health principles,—by pointing out wherein the sick have violated health laws, and teaching them what obedience to them means; by the use of rational remedies in the treatment of the sick; and by making plain those laws which govern the human mechanism,—the doctor does work that is of the highest importance. No calling, not even that of the clergyman, is more sacred than the work of a godly physician.

L. A. H.

The Scarlet Plague

IN the selective draft there was found, as a result of the medical examination, a surprisingly large number of young men infected with venereal disease. Many of these came from good families. Owing to the protection thrown around the army camps, comparatively few men were infected while in the service. It was in their civilian life, before entering the ranks, that the large proportion of infections took place.

When we think of the young men, the flower of the land, the hope of the future, so generally infected with loathsome disease, worse than smallpox or tuberculosis; when we think of these men as fathers, husbands, infecting wives and through them the unborn children; when we realize that all this is the result of a false "double standard,"—that the young man does not need to be quite so pure as the young woman,—we can understand that society in permitting and winking at such a double standard, is bringing about its own degradation. For there is probably no one factor, not even the alcohol habit, that today is accomplishing a tithe as much in the degeneracy of the race as the venereal disease.

Were we to lay aside all moral considerations, all ideas founded on the Scripture teaching, society, in order to continue to progress, or even to hold its own, would be compelled to deal drastically with this protean evil. The fact is, a respectable proportion of the workers for what is familiarly known as "sex hygiene" are not actuated by so-called "moral" or religious motives, but are working entirely with the purpose of stamping out these diseases which constitute a human scourge. They work just as they would work to stamp out yellow fever, or typhoid, or leprosy, or smallpox, or tuberculosis. To eradicate typhoid, they attempt to prevent infection by looking after the food and drink supplies by controlling "carriers," and by vaccination. Yellow fever they stamp out by destroying certain mosquitoes, and by segregating all the human cases of the disease. Smallpox they stamp out by enforcing general vaccination and by quarantine. Leprosy they attempt to control by isolation. Each of these diseases is transmitted in a slightly different way, which necessitates a different method of control.

With few exceptions, venereal disease is transmitted by direct contact, usually sexual; and the hotbed for the perpetuation of the disease is the house of prostitution or its various substitutes. Here men are infected, and from here they take the disease into their homes.

G. H. H.



HEALTH— What is It ?

How Attained and Maintained

By W. A. Ruble, M. D.

“Whatsoever a man soweth, that shall he also reap” is as true of health as of any other crop.

HEALTH may be said to be the normal working of a normal body. It is as dependent upon the law of cause and effect as any other phenomenon in nature. “Whatsoever a man soweth, that shall he also reap” is as true in reference to health as to corn or wheat or any other crop. People recognize the influence of good seed, soil, refreshing showers, and favorable climate in raising vegetables and grain and fruit, but forget that a good crop of health and vigor depends upon conditions largely within their control.

Heredity

It was once believed that heredity had much to do with our physical well-being. One of the poets assures us that we are the chariots in which all our ancestors ride. Even the part of the commandment that says “visiting the iniquities of the fathers upon the children unto the third and fourth generation,” was accepted, while the remaining part of the commandment, “showing mercy unto thousands of them that love me and keep my commandments,” was forgotten. A puny weakling of a baby with physically weak parentage may become strong; or a bouncing baby boy, the pride of vigorous parents, may go down to an early grave, according to how he relates himself to the laws of his being.

Superstition

Many people have not advanced far above the level of the savage in estimating the real cause of disease. Some of our dark-skinned distant relatives in China or Piji or Madagascar attribute disease and pain to the

working of an evil spirit somewhere within, and may probe for it with a hot needle. Some who pride themselves upon being far above such superstition, attribute to Providence the blame for calamities for which their own wrongdoing or carelessness is to blame. Even our worthy divines often lament the “strange dispensation of Providence” that removes a soul from this mundane sphere, when all the friends of the deceased know his departure from this life was due to his own bad habits. Providence does not desire the death of any one, but places within our reach every condition possible for our well-being, and encourages us to make the best use of our opportunities. Then Providence gives the sure reward for obedience, which is health, and metes out the sure result of disobedience, which is sickness, suffering, and death.

Health Depends upon Conditions

There are very exact conditions which must be met in order to have health. These are proper amounts of proper food, adequate well-regulated exercise, sufficient sleep, and contentment. Breeders of cattle, horses, and poultry

recognize that the best results in producing fine stock can be attained only when careful attention is given to combinations of food elements administered under the most favorable conditions; yet we allow our children to choose their own diet, let them eat it when they like, and allow them to follow their own inclinations as to exercise and rest. Surely we should give more thought to the welfare of our families than to our live stock.



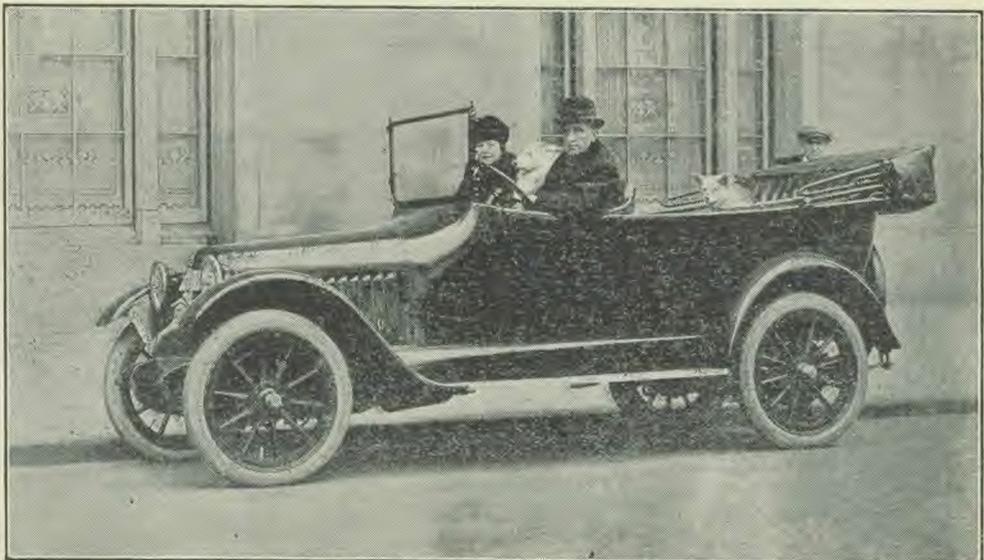
Probably one of the worst things in this age to militate against health is the lack of proper exercise. Formerly people had to walk some, at least to the street-car line. Now the automobile honks at the door. We scrouge down into a soft seat in a closed coupé with the same air that we breathed last night, ride to office, sit in a cushioned chair during office hours, then ride home again. If we are of the gentler sex, a ride of an hour or two in a closed car is all the respite from household duties that is engaged in during the day. No wonder newspapers and patent-medicine concerns thrive so from advertising liver pills, laxatives, and blood tonics! Active exercise a few hours a day in the garden for every person would put the patent-medicine business and other so-called health-restoring evils out of business in a short time.

Why We are Weak

The lack of ability to control our own habits and appetites is the greatest cause of sickness today. Health departments, sanitary regulations, and health officers are doing an excellent work in controlling disease for which the other fellow is responsible. They can control the water supply, and thus prevent us from contracting typhoid fever from contaminated water. They enforce vaccination upon us when we are children, and thus make us immune to smallpox. They drain our swamps, and thus exterminate the mosquito, and protect us from malaria. They remove refuse piles and prevent the production of flies, thus protecting us from many diseases of which the fly is the carrier. They deport or segregate the consumptives, thereby protecting us from that dread disease tuberculosis. And they are even putting into effect regulations which are controlling the influenza

scourge. In fact, they are hedging us about on every side and protecting us from disease in every way possible, when it can be done by controlling the other fellow. Man is his own worst enemy. He is passive when restrictions for his own good affect the other fellow only, but when it comes to himself he must have his own way and do as he pleases. It is in health legislation as in the endeavor to stamp out the liquor traffic. A man makes no great effort to oppose prohibition as long as his own cellar is full of the abominable stuff. Touch his own personal, private right to indulge his perverted appetite for his favorite beverage, and see how soon he resents it as an infringement of his personal rights. So in health, we welcome the regulations that bring about better conditions of living as long as they do not interfere with what we consider our own rights.

The facts are these: First, the diseases that are due to conditions that can be bettered by legal enactment are all diminishing in their mortality. Tuberculosis, typhoid, children's diseases, malaria, have been greatly reduced in their death rate during the past few years since health laws have been in operation. Second, the diseases due to our own personal abuses are all of them increasing in their toll. These are Bright's disease, heart diseases, high blood pressure, apoplexy, liver diseases. All of these have increased in mortality from 25 per cent to 200 or 300 per cent during the past quarter of a century. These are all due to improper methods of living over which no one but the individual himself has any control. Every man is a law unto himself in some things, and in these things a great many people are proving to be their own worst enemies and their own destroyers. We are all suicides — self-destroy-



The Automobile Honks at the Door



Active Exercise a Few Hours a Day in the Garden

ers — by yielding to our perverted appetites and wrong habits.

Cause of Disease

Any departure from the normal working of the body is disease. This may be great or small, temporary or of long standing, known or unknown to the individual.

Disease

Theories of the cause of disease are as numerous as are the diseases themselves. The gods, demons, the stars, humors, the weather, germs, the mind, the spinal column, each has come in for its share of responsibility for loss of health. We must dismiss without comment the first three of these. Humors, when applied to certain secretions of the body, affect the general health of the body to a great degree. The weather has little effect except in the blues. The mind in a great degree influences the working of the organs of the body; but when it is claimed that all disease has its seat in the mind — that there is no material world, that pain is all imaginary — this is too much to ask of a normal scientific mind.

Doubtless some painful conditions and possibly some other disorders arise from malformations and subluxations of the spine, but these certainly are few as compared with malignant diseases and infections.

Infection as the Cause of Disease

Until a quarter of a century ago, very little was known as to the true cause of most diseases. It was not known to what an extent living creatures, too small to be seen with the naked eye, dominated the ultravisible world. It has been discovered that both in the animal kingdom and in the vegetable kingdom there is a universe of minute creatures inhabiting our world. Plants and animals that can be seen

are composed of millions of cells. For instance, a drop of blood the size of a pinhead contains millions of cells. The microscopic organisms are one-celled creatures, each creature being a single cell. Of these there may be millions in a single drop of water. The object of these germs originally was to disintegrate organic matter and return it to its elements, so that it could be again used as food for plants. Gradually these organisms have advanced on human beings until now these germs live in and on the body at times. When they attack the body, especially when it is below par in resistance, or "run down," as we say, the body endeavors to fight them off, and this effort on the part of the body furnishes the symptoms of disease. For instance, when diphtheria attacks the body, there is a fever. This rise in temperature is designed to hinder and destroy the germs. A membrane is formed in the throat. This is to check the germs. An antitoxin is produced in the blood to destroy the germ. In most cases the body, if left to itself, will recover after it has had time to put up a fight.

Germs have been proved, by many experiments, to be the cause of disease. The germs are taken from a person having the disease and introduced into animals. The animal has the disease. The same kind of germs are again obtained from this animal and introduced into another animal and it has the disease. Before inoculation, the animal had no germs and no disease. Afterward it had both the germs and the disease, and the germs were most abundant where the disease was worst. What further proof is needed that germs cause disease? Not all diseases as yet have been proved to be caused by germs. Some seem to be caused by a still smaller kind of organism than the ones we see now with the microscope. These are known as ultramicroscopic. Probably we shall not be

able to see these micro-organisms until we can perfect a microscope hundreds of times more powerful than the ones we have now.

Germ, then, cause a great many diseases, and if we could see them all, probably we should find that they produce almost all diseases. In order to combat the disease, we must combat the germ. This must be done before, during, and after the disease. Fighting the germ before the disease develops is known as prevention, or prophylaxis. Fighting the disease during the disease and helping the body to combat it, is treatment, or therapeutics. Fighting the disease after the disease, is also prophylaxis as far as the spread of the disease to others is concerned.

Principles of Treatment

There are three things to be considered in treating a disease:

First, combat the germs and prevent their multiplying.

Second, keep the body from overdoing itself in the attempt to fight the intruder. Often this

is the most dangerous part of a disease. The body puts up a most vigorous fight when attacked by germs. One of the first things is to fire up, and burn up the germs and their poisons. This is called fever. This is a healing process on the part of nature, but it must be watched lest the temperature get so high as to injure the body and the brain. Delirium, spasms, and other serious conditions result unless the temperature is controlled. In pneumonia the body endeavors to wash away germs in the lungs and dilute their poison by pouring out great quantities of fluid into the air cells and spaces. This causes short, rapid breathing, and results in a person's drowning in his own fluids unless the process of congestion and elimination in the lungs is checked. Often the greatest need for a physician is to keep the body from overdoing itself in fighting disease.

Third, keep the resistance of the body as high as possible, so it will not be overcome by the disease. This is very important, and calls for careful nursing and feeding.



KEEP AFTER THE FLY

L. A. Hansen

KILL flies and save lives" is the order of the United States Public Health Service, and the wisdom of the order is verified by every investigation of medical authorities. Thousands of persons die every year from diseases transmitted by flies. The list of diseases which may be spread by flies is a long one, and it includes some of the most fatal diseases. Here is a partial list:

Typhoid fever	Smallpox
Diarrhea	Anthrax
Dysentery	Leprosy
Tuberculosis	Hookworm
Diphtheria	Infantile paralysis

The fly is charged with spreading leprosy, and carrying the germs of Egyptian sore eyes

and the eggs of many intestinal worms, especially those of the tapeworm. There is strong suspicion that the fly is an active agent in the spread of meningitis.

A Dangerous "Animal"

Though not a large creature, the fly is most dangerous. It has neither horns nor teeth, nor does it need them in its death-dealing work. It has the ability, perhaps as has no other creature, of carrying dangerous disease germs. It lives, crawls, and feeds in filth. It can fly some distance, and being small, finds entrance to any place that is not well screened. It has so long been regarded as a domestic associate that it is not always recognized as the filthy, dirty, and dangerous creature that it really is.

How Flies Carry Disease

Bacteria and other disease germs may be carried on the feet, body, and wings of the flies. Or the infected material may be eaten by the fly, and the germs perhaps multiplied in its body and then scattered about in the form of "specks," which are nothing less than the fecal discharges. It has been proved that disease germs are not killed by passing through the digestive apparatus of the fly. The legs of the fly are hairy, and dirt sticks to them too well, at least until the fly alights on some article of food.

Milk is a favorite bathing resort for flies, and a choice food or drink to them. It is also a particularly good breeding, or culture, medium for the disease germs which flies leave in it. Germs gathered from cuspidors, noses and mouths of sick people, and from sores, from garbage, manure heaps, privy vaults, dead animals, rotten and putrefying matter, and many other haunts of the filth-seeking fly, find lodging in milk and other food materials, to be later swallowed by human beings. The human body is the place where disease germs particularly thrive and do their damage to human life. The fly is one of the most prolific means of conveying the deadly disease germs to the human body.

How Infection is Carried

Suppose you have a typhoid fever case, and the bowel discharges are thrown out on the ground, which should never be done. Very soon



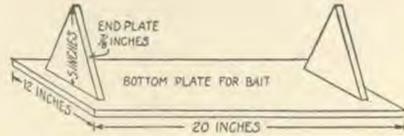
House Fly Regurgitating Liquid Material

These "vomit spots" most likely contain filth and disease germs.

typhoid bacilli multiply. Under favorable conditions, they will live in the soil for a month or more. Flies just naturally go to such a place, and again just naturally go to the house, laden with typhoid bacteria. Let them come in contact with food or food vessels, and typhoid infection is very likely to occur. Or water from the surface soil may pollute the drinking-water supply, and typhoid fever be given to many. Numerous epidemics have been traced to just such causes.

Diarrhea, dysentery, and other bowel troubles are readily and easily disseminated by flies that

have access to privies and then to persons' living quarters. By careful test it was found that out of a certain number of babies, twice as many of those exposed to flies as those protected by netting had diarrhea; and two and a half times as many of bottle-fed babies as breast-fed babies. Flies were the chief medium of disease

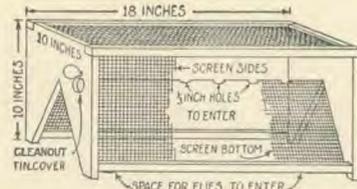


Courtesy Ladies' Home Journal

Part of Flytrap

communication. The fly is a natural and positive enemy of the baby.

Fly extermination should have begun in March and April, or with the appearance of the first flies. A pair of flies born in June may

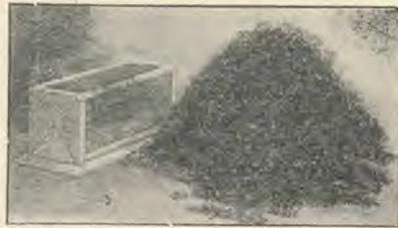


Courtesy Ladies' Home Journal

Part of Flytrap

give origin to millions by September. Kill the first pair, and prevent the breeding of millions.

Swat, trap, and poison flies. It is still better to prevent their breeding, which we can do, By keeping stables clean.



Courtesy Ladies' Home Journal

Effective Flytrap

By removing all manure at least twice a week.

By keeping garbage in receptacles, with close-fitting covers, which should be emptied and washed out frequently.

By building only fly-proof privies when sewers are not available.

Swat and Starve

Strict cleanliness and immediate destruction of all filth are the best measures against flies.

Manure heaps are especially favorable places for breeding flies. The eggs are laid there and hatch there.

So with "Swat the fly" we say, "Starve the fly."

No filth — no flies.

No flies — less disease.

Outhouses, homes, sleeping porches, markets, bakeries, and all food establishments should be screened.

Keep a netting over the baby.

Recipes for Killing Flies

The United States Government makes the following suggestion for the destruction of house flies: Formaldehyde and sodium salicylate are the two best fly poisons. Both are superior to arsenic. They have their advantages for household use. They are not a poison to children; they are convenient to handle, their dilutions are simple, and they attract the flies.

A formaldehyde solution of approximately the correct strength may be made by adding three teaspoonfuls of the concentrated formaldehyde solution, commercially known as formalin, to a pint of water. Similarly, the proper concentration of sodium salicylate may be obtained by dissolving three teaspoonfuls of the pure chemical (a powder) to a pint of water.

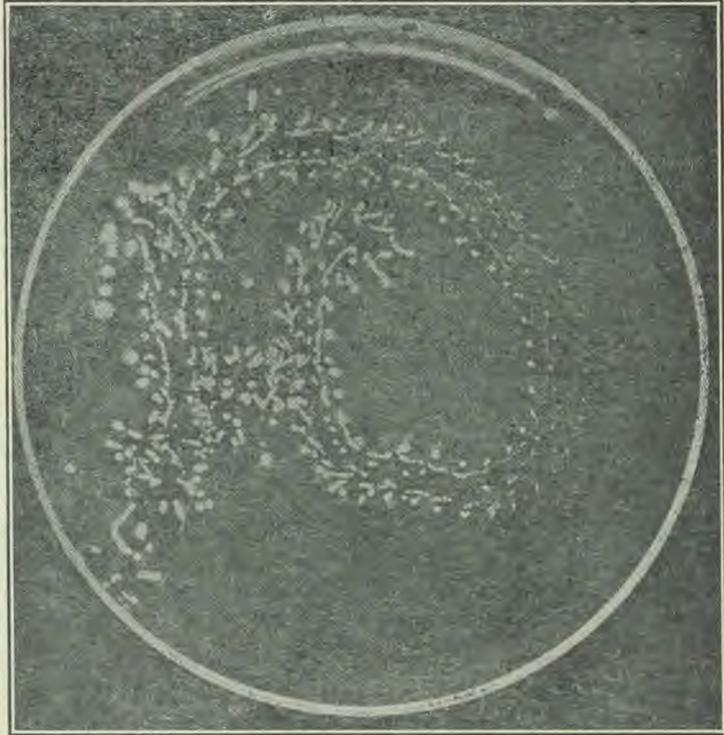
An ordinary, thin-walled drinking glass is filled or partially filled with the solution. A saucer or small plate, in which is placed a piece of white blotting paper cut the size of the dish, is put bottom up over the glass. The whole is then quickly inverted, a match placed under the edge of the glass, and the container is ready for use. As the solution dries out of the saucer, the liquid seal at the edge of the glass is broken and more liquid flows into the lower receptacle.

Other Simple Preventives

Any odor pleasing to man is offensive to the fly and vice versa, and will drive him away.

Take five cents' worth of oil of lavender, mix it with the same quantity of water, put it in a common glass atomizer and spray it around the rooms where flies are.

Geranium, mignonette, heliotrope, and white clover are offensive to flies. They especially dislike the odor of honeysuckle and hop blossoms.



Hampton Leaflets

Footprints of a Fly on Nutrient Beef Jelly

Every white spot is a colony of germs. The smallest spot contains millions of germs. The spots midway between the footprints are colonies of germs planted from the tongue of the fly when the insect stopped to feed as it walked along.

According to a French scientist, flies have intense hatred for the color of blue. Rooms decorated in blue will help to keep out the flies.

Mix together one tablespoonful of cream, one of ground black pepper, and one of brown sugar. This mixture is poisonous to flies. Put in a saucer, darken the room except one window, and in that set the saucer.

To clear the house of flies, burn pyrethrum powder. This stupefies the flies, but they must be swept up and burned.

Recipes for Stables, Barns, and Outdoors

Borax is especially valuable around farms and outdoors. One pound of borax to twelve bushels of manure will be found desirable as a poison without injuring the manurial qualities or farm stock. Scatter the borax over the manure and sprinkle with water.

Lye, chloride of lime, or copperas (sulphate of iron) dissolved in water, crude carbolic acid, or any kind of disinfectant may be used in vaults.



Why are Epidemics?

D. H^r Kress, ²M.D.

IT is possible that never in the history of the world has there been an epidemic disease that has been more extensive, or has traveled with greater rapidity, or has, during so brief a period, been more disastrous in its results, than the disease to which the term "Spanish influenza" has been applied. It first made its appearance in Spain, and rapidly spread to other parts of Europe, including Great Britain. It then took a bound across the Atlantic, and began its destructive work in Boston. With unheard-of rapidity it spread throughout the United States and Canada, exacting a toll of human life heretofore unknown in so short a time. Not less than six million persons perished from the disease and its complications during the short space of less than three months.

War and Influenza

The terrible World War which began in 1914 had been regarded as the greatest destroyer of human life; for 7,354,000 men in the prime of life were sacrificed on the field of battle during the four and one-half years of its continuance. No slaughter like it had ever before been witnessed; yet the epidemic of influenza, which made its appearance near the close of the war, was responsible for almost, if not quite, as many deaths in less than four months' time.

In America alone, more than 400,000 perished from the influenza and its complications during this brief period. During the entire time America was actively engaged in the European war, she lost less than 65,000 men in battle. The young American was safer in France facing the German artillery, the poison gas, liquid fire, and other inventions of destruction, than in the cantonments in peaceful America. Should the epidemic have continued unabated during the entire time of the war, more than one hundred million lives would have been snuffed out by it.

The disease was not content to confine its destructive work to so-called civilized lands; it spread to the islands inhabited by semi-civilized savages, and to the heathen countries. In India the epidemic was severe. The city of Bombay had more than 15,000 deaths from it. In Delhi city, with a population of 200,000,

the death rate reached as high as 800 daily. In the Society Islands, 22 per cent of the population is reported to have perished from the disease. South Africa felt the full effects of it, as will be seen from a letter from Cape Town describing the scourge:

"Deaths started at twenty a day, and before many days had mounted up to 500 and even to 600 a day. In two weeks 60,000 people had died, and Cape Town was like a city of the dead. In the hospital here the servants took ill first, and then all the laundry people, then the porters, ward maids, and last of all, the doctors and nursing staff. The people died in the streets, and big covered wagons patrolled the streets to pick up the dead; and when a house-to-house visitation was started, a most terrible state of affairs was discovered. Whole families were stricken, and dead and living were in the same beds, with no food in the houses, and no one able to crawl about and get it. Hundreds of people were starving because they could not go out and get food. All the delivery carts stopped, as there was no one to drive them. The shops were shut, the people who ran them being ill. Business houses shut up, and trains and trams stopped running. In a great cemetery six miles outside Cape Town there was no one to dig graves, and people carried their friends and relatives from motor cars to plots, and had to dig the graves themselves. At the height of the plague, there were no clergymen or priests to bury any one; neither were there coffins."

In Army Camps

In some of our American cities whole families were wiped out. The dead were piled up in tiers awaiting burial. In describing the havoc wrought at the cantonments of America, Dr. Victor Vaughan said:

"I went to Camp Devens as soon as the epidemic was reported, and I might say that I thought my eyes would never see such horror as I there saw. I went through the Spanish-American War. I saw thousands and thousands of cases of typhoid fever, but I never had anything depress me as the condition that existed at Camp Devens."

The Germans have surrendered, and war is at an end for a time, at least, but the germs of influenza have not yet surrendered. Another epidemic is almost certain to occur next winter, the severity of which will be, in all probability, much greater. The present epidemic came on the heels of war and famine, when the vitality of the human race was at a low ebb. War, famine, and pestilence are always associated. One follows the other in the order named.

Other World Epidemics

The world has had severe epidemics of disease in the past. The city of Naples lost in six months' time 380,000 of her people. Constantinople had 144,000 deaths during an epidemic of disease, and at one time Marseilles lost half her population. In Great Britain 45,000 died annually from smallpox. In Boston, with a population of 11,000, more than 5,900 contracted this disease during an epidemic in the United States. One out of every seven died. Washington, during a smallpox epidemic, found it difficult to secure sufficient men to keep guard at the hospitals, so prevalent was the disease. In 1793 yellow fever killed one tenth of Philadelphia's population in six weeks, and the population of New Orleans was practically decimated during an epidemic of cholera in the year 1848. In New York City during the week ending July 21, 1849, more than ten per cent of her population died. A historian of that period said:

"It was a spectacle of sadness to appeal to the stoutest hearts,—the mournful gloom of those empty streets, their silence broken only by the rumbling of the dead carts and the drivers' hoarse cry, 'Bring out your dead;' those houses left open and fully furnished, from which the owners had fled; the forest of shipping deserted and silent as those of the Western wilds. The heart recoiled from such sights and contacts. Death was uppermost in men's minds; business was forgotten; the graveyards looked like plowed fields."

In those days the people were unable to ascertain the causes of these visitations, and ascribed them to a divine providence over which they had no control. The only recourse left was fasting and prayer. It was not uncommon to hear the church bells toll as the people assembled to ask God to stay these terrible disasters; but the disease did not abate.

The people perished for lack of knowledge. Lord Palmerston, being appealed to by the Scotch clergy to appoint a season of fasting and prayer to avert the cholera, with a clearer vision, replied: "Cleanse and disinfect your streets and houses, promote cleanliness and health among the poor, and see that they are plentifully supplied with good food and raiment, and employ right sanitary measures generally, and you will have no occasion to fast

and pray. Nor will the Lord hear your prayers while these, his preventives, remain unheeded."

Science has made remarkable strides during the past century. The diseases which proved such a scourge during those periods have been practically eliminated. It would be considered a disgrace to any civilized community to have an epidemic of smallpox, cholera, or yellow fever. We pride ourselves upon our success in eradicating these diseases. So hopeful have some been of the future that a Western editor predicted:

"If science continues to advance in her efforts as it has during the past few decades, the time will come when undertakers will be compelled to move to a sicklier planet in order to carry forward their business."

But just as we felt we had made the world secure against epidemic diseases, the greatest epidemic the world has ever seen made its appearance, and before it we stand as helpless as did the people of two centuries ago before the epidemics of their day.

More War

The same security was felt in regard to a world war. Just before the war broke out, a large body of influential people from all parts of the world were assembled in Europe discussing peace problems. They voiced the general feeling of the people everywhere when they reasoned, as stated by one of the members, "A great war, a world war, is absurd. It is unthinkable. It is impossible." They reasoned that modern implements of war were so destructive that the losses, should war occur, would be too appalling to be faced. While they were discussing these matters, the war broke out, and the peace conference "came to an abrupt end." The ancient seer, in looking forward to this time, said: "We looked for peace, but no good came, and for a time of health, and behold trouble!" Jer. 8: 15.

The apostle Paul in referring to this same period, said: "When they shall say peace and safety, then sudden destruction cometh upon them, . . . and they shall not escape." 1 Thess. 5: 3. Jesus, in answer to the question "What shall be the sign of thy coming, and of the end of the world?" (Matt. 24: 3) replied, "Nation shall rise against nation, and kingdom against kingdom: and there shall be famines, and pestilences." "All these," he said, "are the beginning of sorrows." Matt. 24: 3, 7, 8. These wars, famines, and pestilences, horrible as they have been, Jesus said, are merely the beginning of sorrows that will not end until he comes. This is not a promising outlook from the world's point of view. The outlook is bad, very bad; it has never been worse. The uplook is good, very good; it has never been better. In the providence of God, these things are permitted to lead the inhabitants of the world to forsake sin and to look

up. In referring to this time, when "upon the earth" there would be "distress of nations, with perplexity," and "men's hearts failing them for fear, and for looking after those things which are coming on the earth," Jesus said, "When these things begin to come to pass, then look up, and lift up your heads; for your redemption draweth nigh." Luke 21: 25-28.

Clemenceau said it is a mistake to say the war is over, there is merely "a lull in the storm." This statement harmonizes with the prediction of Christ.

More Epidemics

Epidemics are not something of the past. Dr. Victor Vaughan, at a meeting of the Public Health Association, made the statement,

"We are going to have influenza with us; it is not going to disappear very soon. We are going to have the influenza epidemic for some time to come."

The epidemic had its origin in the famine-stricken countries of Europe. Lowered vitality, resulting from the scarcity of food, paved the way for the epidemic. It prepared the body soil for the seeds of disease. No doubt the prevalent use of cigarettes in the cantonments of America had the same influence upon the young men who were housed there. The mortality was twice as great among them as among the civilian population during the same age period of twenty to thirty-five years. Any practice, whatever it may be, that impairs the health and lowers vital resistance, paves the way for epidemic diseases. So long as these predisposing causes exist, we cannot hope to look for an abatement of epidemic diseases.

The causes still exist. There are starving millions in Europe. Owing to the high price of food everywhere, many are compelled to subsist on an impoverished diet. In Europe, long lines of men, women, and children may be seen standing in rows waiting for hours in the snow, for a small bowl of soup, or a handful of food, insufficient to keep body and soul together. The infant mortality in some of the cities has reached as high as 90 per cent, we are told. In America there will, in all probability, be more poverty next winter than there was during the past winter. There will be many more unemployed men. The prices of food, because of a world shortage, will no doubt, continue at almost prohibitive prices. In thousands of families already, the food supplies are down to a point where the vitality is at a low ebb.

In a report which appeared in the New York dailies, it was stated that pupils in the East Side schools "were slowly starving to death," "because their parents cannot pay the prevailing high prices for milk and staple foods." In one schoolroom visited, it was said, "There were twenty-two children. A ragman would not have paid five cents for all the clothing they wore. Most of the children came to school

without breakfast. Some kind people were giving the teacher a little money every week; with that she purchased milk and cereals, preparing gruel over a small stove in the room. She said that now with the high cost of milk, she was not able to buy much, and that several of the children had fainted right there in the classroom. Others were too weak to leave home, and died there. Malnutrition was the cause."

These conditions will not be greatly improved during the next winter; in fact, the probability is that conditions will be worse, do what we may. If so, what is to hinder another epidemic of a more severe type than the one of last winter? The chief factor in the prevention of epidemic diseases is to build up the barriers of body defense against invading germs, whatever they may be.

For years the people of the world have been engaged in preparing the way for the influenza epidemic. It is well known that the habits of men and women have not been conducive to health. For years the human family has been degenerating. Heretofore, epidemics have weeded out the physically degenerate, those of lowered bodily resistance. After ascertaining the existing causes of epidemic diseases, we have exerted every precaution in preventing the spread of germs, or seeds of disease. By doing this we have kept alive the vitally weak, who before were weeded out. These have married and intermarried, and have produced of their kind. The result has been that vitally the race has been weakened.

Cause Unknown

The long list of epidemic diseases of the past we know something about. We have been able to isolate the germ of each disease. We prevent a repetition of these epidemics by preventing the spread of the specific organism that produces them. Spanish influenza is a disease that has baffled modern science. We know little or nothing about its origin or cause, and hence we stand before it as helpless as did the people of two centuries ago before smallpox, cholera, the plague, and other epidemics. Dr. Victor Vaughan said, "If I were asked to define influenza, I should say it is a disease of unknown origin." He continued:

"We do not know anything more than our ancestors knew a hundred years ago, and we may as well admit it. I say this in the face of the greatest pestilence that has ever struck our country. We are just as ignorant as the Florentines were with the plague described in history."

In summing up the discussion of members of the Public Health Association at the meeting held in Chicago, the editor of the *Journal A. M. A.*, said:

"The discussions relative to the etiology of the present epidemic resolve themselves into the belief that the actual cause is as yet unknown."

Prevention and Treatment of Common Colds

G. H. Heald, M. D.

What is a Cold?

EVERYBODY knows — or thinks he knows — just what a cold is; but even medical men have been puzzled, and are not at all in agreement as to the exact nature of this most common of disturbances. Is it a local condition with general symptoms, or a constitutional condition with localized symptoms? Is it primarily a germ disease setting up a disturbance of the circulation which has made infection possible? The reason for this variety of opinion is that colds are not all caused in the same way. The most evident factor in the determination of any particular cold may have been some sudden temperature change, or change of clothing, or exposure to draft, (Yes, I mean just that!) or some dietary indiscretion, or it may have been exposure to infection as in case of an epidemic of colds. Whatever else a cold is, it is an infection. The germs that cause my cold have come directly or indirectly from some other person's cold, and the germs I discharge carelessly may be the cause of a cold in some one else.

For want of a better definition, we may define a cold as an acute infection of the lining membrane of the air passages, accompanied by more or less local inflammatory changes and manifested by such symptoms as irritation of the air passages, alteration of the secretions, sneezing and coughing; and by bodily disturbance manifested by chilliness, slight rise in temperature, *malaise* (a feeling of illness or indisposition), more or less prostration, possibly loss of appetite, constipation, etc. The infection may be localized in one part of the respiratory tract, as the nose, throat, chest, etc., or may travel from one part to another. The first symptoms may be associated with an irritation of the nasal passages or of the throat, or of the larynx (the voice box), or of the air tubes deeper down in the chest.

Frequency

The condition commonly known as "cold," according to a published statement coming from the United States Public Health Service, is "the most prevalent illness in the United States." Though it is not commonly considered of enough importance to be reported in the statistics of disease, in the aggregate it is undoubtedly the cause of a vast amount of discomfort and inconvenience, and of industrial loss because of sick leave. Unfortunately, colds are commonly regarded as of so little import

that often little or nothing is done in the way of prevention or treatment; or if anything is done, it is of the potato-in-the-pocket or whisky-and-glycerin or druggist's-counter-prescription or patent-medicine type that takes the place of adequate treatment, and may do more harm than good.

Results of a Cold

A cold is usually "cured" in the course of time, or else "wears itself out," but if it runs for a considerable period, it does not leave the patient in exactly his old condition. Every attack leaves its permanent effect on the mucous membranes, making the patient more liable to future attacks.

Colds may be followed by grave complications. One of the least serious, perhaps, but most painful, is muscular rheumatism — lumbago, or "wryneck," for instance. Pneumonia is one of the most fatal complications. Pneumonia germs are widely scattered, and some types may be found in the mouths of healthy persons where they are apparently harmless, but when, as the result of a cold, the mucous membranes are weakened, their lowered resistance may afford a favorable opportunity for the activity of the pneumonia germ. At any rate, an acute cold frequently "runs into" pneumonia.

Tuberculosis is another grave disease which may become active after a cold. A vast number of people are infected with tuberculosis, but have their powers of resistance so developed that the disease is held in abeyance, and there is no evidence whatever of any activity of the germ. But as a result of a neglected cold, the tissues may become so weakened that the latent tuberculosis becomes active. It is common in such cases to say that the cold "ran into" tuberculosis, or consumption. In most cases, the probability is that the acute process (the cold) lighted up the chronic process, which had long remained latent. Some very chronic cases of tuberculosis have a history of repeated victories, first of the tissues, then of the germs; every cold or exposure giving the germs another occasion to become active.

It will be appreciated from this that colds, in addition to being themselves a source of discomfort and loss, are forerunners of grave conditions, such as pneumonia and tuberculosis, — diseases which stand at the head of the causes of death.

In addition, colds may be followed by such local troubles as inflammation of the middle

ear, or of the air cavities in the bones of the face, or by serious heart or kidney affections.

Another important fact is that some of the gravest of children's diseases begin in a manner not easily distinguishable from a common cold. Among these may be mentioned diphtheria, scarlet fever, measles, and whooping cough, which are responsible for a vast amount of childhood illness and mortality. Every case of supposed "cold" or sore throat in a child should be regarded with suspicion. Care should be taken not to expose other children, and a physician's diagnosis should be obtained at the earliest opportunity. When there is an efficient system of medical school inspection, school children having such a condition will be sent home. When there is a lack in this respect, parents, in the interest of the public health, should keep at home any child who has contracted what seems to be a cold, until a physician has stated that the child is not likely to infect others; and at home he should be so isolated that the other children will not be infected.

Why is a Cold?

Who knows? The doctors are not agreed. Some will tell you nowadays that colds are caused by dry air and hot stuffy rooms, notwithstanding the fact that one may contract a cold in summer, while living practically an outdoor life.

In view of the fact that there are numerous explanations of the why of a cold, the present writer will venture his "why" by explaining that colds are the result of a number of causes or factors acting together. In general, it is a safe assertion that one factor acting alone does not produce disease. Unless every one of the tumblers of a combination lock is in the right position, the lock will not open. In like manner, unless the various factors co-operate together to produce disease, there will be no disease. The defensive forces of the body prevent it. Physicians are generally agreed on this point. They assign to every disease certain predisposing or favoring causes, and one or more exciting causes. What, then, are the different factors, or conditions, that help to produce colds? They may be best understood when grouped under three general heads. Usually all these three contribute to the onset of a cold, but two may. The factors are:

1. *Predisposition* to cold, the result of bad hygiene, wrong habits of eating and dressing, overheated rooms, poor ventilation, excesses, worry, and fear of colds; in fact, any condition or practice that tends to debilitate the body. "Coddling" by rendering the body unusually susceptible to atmospheric change is a particularly potent factor in causing a predisposition to cold.

There is often a special predisposition caused by a malformation of the passages of the nose, providing favorable places for the growth of germs. Persons formerly subject to almost con-

stant colds have had permanent relief by a surgical operation correcting a crooked septum or other condition that plugs up the nasal passage. Any other condition which favors the rapid growth of germs, as decayed teeth or diseased gums or tonsils, may also predispose to colds. Chronic catarrh is another predisposing cause. If one is "subject to colds," constantly catching cold, it is for one or more of the above-mentioned reasons.

2. *Circulatory changes*—that is, changes in the blood flow, so that it is driven from certain areas and stagnated in others—are the result of sudden weather changes, improper or inadequate dress, sudden or poorly timed change to lighter clothing, exposure, or indiscretion, such as sitting on the damp ground, or in the shade, or in shirt sleeves after vigorous exercise, going from a hot, close room into cold outdoor air without making an adequate addition to the clothing, failing to exchange damp clothing for dry clothing, and the like. Circulatory changes are much more liable to occur when there is a predisposition. What might be a hazardous exposure to one person would have no effect whatever on another.

3. *The germs.* This factor is particularly noticeable in epidemic colds, when, on account of the increased virulence of the germs, it may become the principal factor. During an epidemic, some who are not ordinarily subject to colds and who have committed no indiscretion to disturb the circulation, may be overcome by the sheer virulence of the germs.

It is a noteworthy fact that in the arctic regions, where presumably there are practically no germs, explorers never contract colds, no matter what the exposure, though they may have severe colds when they return to civilization.

It is probable that in most cases of cold there is the play of all three of these classes of factors; though without much of a predisposition, one being subjected to some trying weather change and at the same time exposed to a virulent type of germ, may have an attack. This explains why occasionally one "in the pink of condition" is, under special circumstances, overcome with a cold. Or again, one without much if any predisposition, might be overcome with an extra heavy dose of virulent germs. Again, there seem to be cases independent of weather conditions and apparently having nothing to do with infection from an outside source, such cases apparently being wholly due to some dietetic error. A "sore throat" may thus follow the use of some food, probably producing an acidosis, the irritation shifting back and forth from throat to nose, and then to bronchial tubes or larynx, in a way to suggest the rapid changes from joint to joint in acute rheumatism.

General Preventive Measures

These should be directed in the line of the three causative factors. Predisposition should

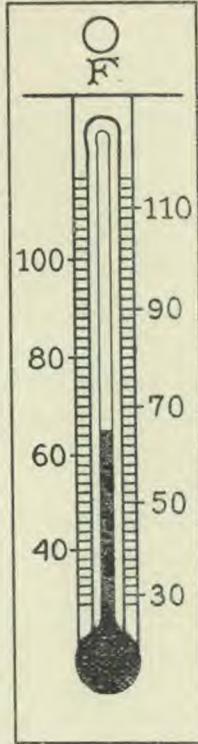
be lessened as far as possible, the nose and throat membranes being put in a healthy condition by treatment, or an operation, if necessary.

Faulty habits of eating, dressing, housing, bathing, and all excesses should be corrected, making the life as nearly normal as possible. The food should be ample; well balanced, not only as to protein, fat, and carbohydrates, but as to salts and "vitamines." This is best provided by a diet including a fair quantity of milk and a liberal supply of green vegetables, in addition to the usual cereals, root vegetables, and the like. Milk is far superior to meat in balancing the deficiencies of the cereal foods. The free use of denatured foods, such as white flour, cane sugar, white rice, bolted cornmeal, make it more difficult to secure a properly balanced dietary.

There should be no "coddling." The house should not be overheated or overdry. In winter the thermometer is better at 65° or lower, than at 70° or higher, and there should be care to furnish an ample supply of moisture to the air by having open vessels of water on the radiators or stoves, or in the registers. The clothing should not be too heavy in winter. With our houses kept at a temperature of nearly 70°, and especially if we have to work in an office heated above 70°, we should not be much more warmly clad indoors in winter than in summer. Going out, we should put on extra wraps according to the weather. If we dress too warmly in the house, the moisture next the skin may cause a condition that will favor a cold on exposure to the outside air.

The condition of mind: Though we may not accept the theology of Christian Scientists, we must admit that there is under their healing methods a deep truth. The condition of the mind does actually have on the cells of the body an influence for good or for ill. In an epidemic like influenza or cholera, fright and worry lower the resistance of the body, and so act as predisposing factors, paving the way for the disease. This being the case, an important preventive is the maintenance of an attitude of fearlessness, but not of indifference and neglect to take precautionary measures. The next point is to avoid exposure or indiscretions which might cause an unbalanced circulation, such as sitting insufficiently clothed or in a cool place after vigorous exercise; making too sudden a change, or at a wrong time, from winter to summer underwear; or neglecting to change the clothing when wet. Another precaution is to avoid as far as possible contact with virulent

strains of the germ. Remember, the germs are thrown into the air in coughing, sneezing, and in forceful talking. In time of an epidemic of colds or similar diseases, it is important to keep out of crowds, and avoid the cougher or sneezer who fails to cover his mouth with his handkerchief. Then by means of proper mouth hygiene, good dentistry, the use of cleansing mouth washes and cleansing sprays to the nose, one may reduce the number of germs occupying these locations.



To Break Up a Cold at the Start

If, notwithstanding our best endeavors, we "catch" a cold, our next best defense lies in recognizing the fact at once and applying immediately and vigorously the appropriate remedies. If this is properly done, the cold may be broken up practically at its inception, leaving no noticeable after-effects. The value of abortive treatment is dependent very much on how early it is begun.

Unfortunately the first slight symptoms of an on-coming cold, the sneezing, the chilly sensations, the dryness of the throat or nose, are overlooked, or if they are noticed, treatment is postponed until a more convenient time. This is allowing the golden moment to pass unimproved. Delay is unwise, for with a cold developing, immediate active treatment is of the utmost importance. Treatment begun later will probably not be so successful.

If one has premonitory symptoms of a cold, he should —

1. Determine that he will not have a cold. Remember that the mind has a powerful determining influence on the body cells. Hope, cheer, determination to get well, act as a powerful

stimulus; fear, worry, discouragement, act as a depressant. A determined attitude of mind at the very start of a cold before there have been any material tissue changes will wonderfully increase the resisting power of the body tissues against disease. Hope and determination heighten the immunity. Fear and a what-is-the-use spirit increase the susceptibility. Owing to a combination of influences, immunity is like the mercury in a thermometer, constantly rising and falling. The mental influence, just explained, is not the least.

2. Take immediate steps to prevent the cold. One who is in vigorous health may gain most by active exercise in the open to the point of perspiration,—a bicycle ride, the wood pile, the garden, a rapid walk, or any exercise that will secure the restoration of the circulation to the surface. This exercise is best followed by a full warm bath, a vigorous towel rub, and fresh underclothing. The warm bath is more effective

if followed by a cool spray, or by a cold wet hand rub, dipping the hand repeatedly in cold water and passing it rapidly over the body. If convenient, it is better to go to bed and remain there until morning.

It is a decided advantage to use local sprays when there is irritation of the nasal passages. For this purpose, it is advisable to use first a cleansing spray, then an oil spray. The cleansing spray may be prepared by dissolving an alkaline antiseptic tablet (obtained at the drug store) in two fluid ounces (one-fourth cup) of water. Or one may prepare a homemade solution by adding a teaspoonful each of salt and baking soda to a quart of water. To this may also be added, if desired, half a cupful of five-per-cent carboic acid. Such a preparation will keep well. The cleansing solution is best used in one of the nasal sprays, preferably one with short open nozzle. After the nose is thoroughly sprayed with the cleansing solution, it may be further treated with an oil spray, of which there are many. The following is a good one: Camphor, 10 grains; menthol, 10 grains; oil eucalyptus, 10 drops; light mineral oil, 2 ounces.

If one is not vigorous, or if the cold has progressed for some hours, a hot treatment — a hot foot bath or leg bath or a hot leg pack, or some other hot treatment to restore the circulation to the surface, followed by rest in a warm bed — will usually prove efficacious. The hot treatment should be given so there will be the least possible exposure on getting into bed. For illustration, a method of taking a leg bath is given, as this treatment is simple in its application and requires nothing that is not usually at hand or easily obtainable.

Articles necessary for a leg bath: A pail, two thirds full of water as hot as the hand can well bear. A vessel containing a supply of scalding water. A pitcher of hot, weak, unsweetened lemonade. One or two heavy blankets. The treatment can be given better if there is an assistant present.

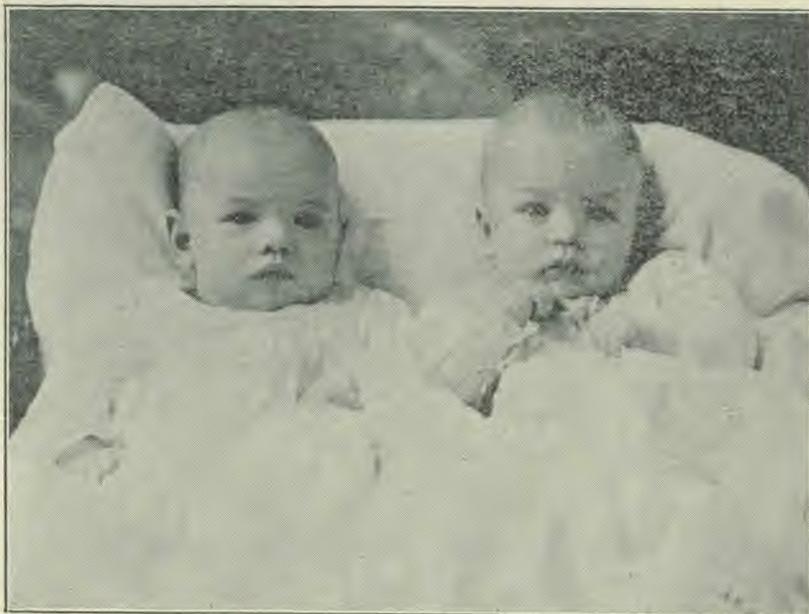
How to Take a Leg Bath

Turn back the bedcovers, arrange the water at the side of the bed, disrobe, wrap up in the blankets, and sit on the edge of the bed with

(Concluded on page 147)



THE HOT LEG BATH



Baby Health Suggestions

IF a person is to live to adult age, he must live through infancy.

Health rules and preventive measures do no good for the baby that dies young.

Life-saving campaigns and health development must begin with the baby, if sure results are to be obtained.

Nothing that is important enough to affect the health of the baby is little, but a lot of things that seem little are important because they do affect the health.

There is no age line, or certain point in the life of a child, at which health conditions are not in force. The very beginning of child life should start the program of health.

Sunlight, air, proper food, pure water, restful sleep, suitable clothing, and cleanliness are just as important in baby life as in youth or adult age, and even more so.

A good start in life will mean more life and health for the future than will corrective measures later on.

A bad beginning does more harm than wrong measures do in later life.

A well baby is a happy baby.

Some of the things that make a well and happy baby are:

- Intelligent care from parents.
- Regular feeding.

The right kind of food.

Cool boiled water to drink.

A daily bath.

Protection from flies.

Cleanliness.

Clothing according to the weather.

Fresh air to breathe.

Its own bed.

Plenty of sleep.

A sick baby cannot be contented and happy. Some of the things that tend to make baby sick and unhappy are:

Being taken up or fed every time it cries.

Overfeeding.

Tasting a little of almost all the family food.

Not kept dry and clean.

Bounced up and down.

Teased.

Made to show off.

Given a pacifier.

Dosed with soothing sirup.

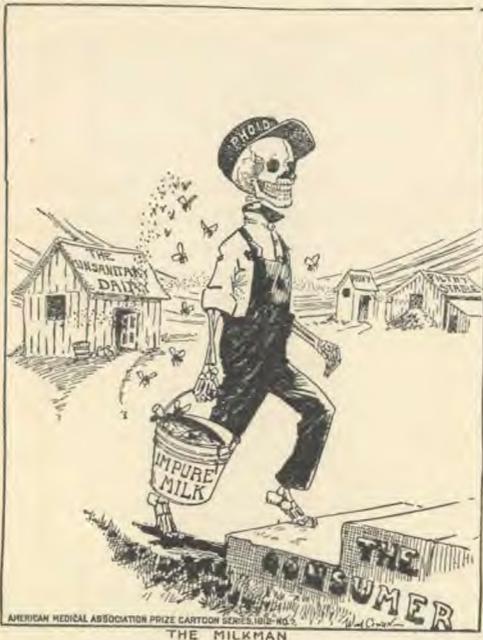
Kept up too late.

Sleeping in a hot room with windows closed.

Played with after feeding.

Allowed to suck on an empty bottle.

The difference between doing some little thing the right way or the wrong way is what



makes the difference between a healthy and a sickly baby.

Of all the babies born in the United States, one out of every eight dies before it is two years old. This needless loss of life is mostly due to apparent ignorance.

Out of one hundred babies born last year only eighty-five are living this year. Only eighty will survive next year.

One half of the babies who die could be saved if they were nursed by the mother. Mother's milk is always ready, and is never sour. It does not have to be prepared or measured. It is intended for the baby, and nothing can entirely take its place. It is the most perfect food for the baby, containing the proper elements of food in the right proportion. Breast-fed babies have the best chance of living.

Ten Suggestions for Milk Consumers

KEEP MILK CLEAN, COVERED, AND COLD

1. Buy only the best milk obtainable. It is cheapest in the long run.
2. Consult the health department before selecting your milk dealer.
3. Buy only bottled milk if possible. Dipped milk is often dirty and deficient in cream.
4. Take milk into the house as soon as it is delivered, and place it in the refrigerator immediately. Bacteria increase rapidly

in milk which stands in the sun or warms up, and such milk will sour quickly.

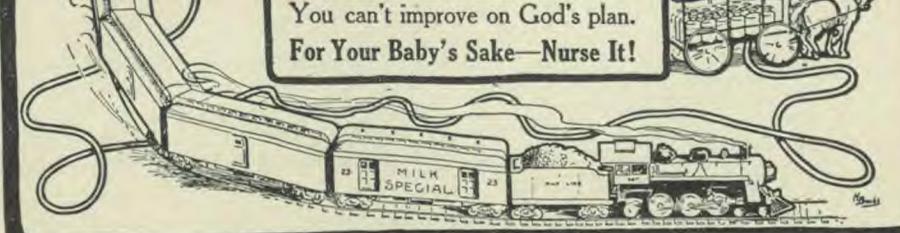
5. Keep milk in the original bottle in the refrigerator until the moment of serving. Milk which has been poured from the bottle should not be returned to it.
6. Keep the bottle covered with a paper cap or an inverted tumbler, to prevent the entrance of flies and dust, which may carry dangerous bacteria into the milk.
7. Keep the refrigerator clean and sweet by means of proper drainage and frequent washing with scalding water and sal soda, since milk quickly absorbs unpleasant odors and becomes less palatable.
8. Wash milk bottles as soon as emptied, by rinsing first with lukewarm water and then with hot water. If there is an infectious disease in your house, do not return any bottles except with the knowledge of the health department, and under conditions which it may prescribe.
9. Return empty bottles promptly, and do not use them for anything except milk. Remember that they are the property of the dealer and represent cash.
10. Remember that clean milk, properly cared for, is one of the best foods obtainable. It is nourishing, digestible, and usually economical.

UNITED STATES DEPARTMENT OF AGRICULTURE BUREAU OF ANIMAL INDUSTRY Dairy Division



MOTHER'S MILK FOR MOTHER'S BABE COW'S MILK FOR CALVES

(God's Plan)



The Long vs. The Short Haul

70 percent of city babies get their food through a tube 60 miles long. It takes about 36 hours—often 42 hours—for the milk to run from the cow end of the tube to the baby end of the tube.

This tube is open in many places and baby's food is frequently polluted. It is often wrongly kept in overheated places.

Then there may be a diseased cow at the country end of the tube. And Yet Some People Wonder Why So Many Babies Die!

On the other hand the mother-fed baby gets its milk fresh, pure and healthful—no germs can get into it.

To Lessen Baby Deaths Let Us Have More Mother-Fed Babies.

You can't improve on God's plan. For Your Baby's Sake—Nurse It!

By Courtesy of Chicago Board of Health.

Lessons from the Influenza Epidemic

R. S. Ingersoll, M. D.

THE war in which the world has been engaged has revolutionized methods of warfare. At the same time medicine and surgery have received many a shock and have been compelled to adopt new methods in order to keep up with the advancement in other lines. Formerly we thought in terms of national affairs. We were limited by the conditions and needs of the nation in which we lived. Now we think in terms of world problems. The same can be said of the magnitude of finances.

Now whether considering men, dollars, or deaths, we have to reckon in terms of millions and billions rather than thousands. Having learned this lesson in part in the affairs of world war, we have had in the pestilence which followed, not an epidemic of influenza, but a pandemic. This has been more severe and more far-reaching than any we have seen before. As in the case of war, not only our standing army but all our strength was called for, so in the pestilence we have found more cases than the trained men and women (physicians and nurses) could care for. Many a home has been converted into a hospital, and brother, sister, mother, or father has been pressed into service as attendant to take the place of a nurse.

Can we not reasonably expect that as a result of the new international relations and extensive travel, we shall have in the future to deal with pandemics rather than epidemics?

One conclusion which certainly should be drawn from the difficulties found in giving proper attention and care to the sick recently, is the necessity of laymen being able to care for those next to them who may be ill. In other

words, all should acquaint themselves with methods of care for the sick, so that the patient may have assistance ready at home and may be properly cared for from the first.

At first thought, that may seem absolutely impossible, as it is generally conceded that one must have a long training in some hospital before he will be competent properly to care for the sick. It is true that to care for them to the best possible advantage, one should be trained fully; but in the recent influenza epidemic the results would have been much better had there been a general knowledge of simple methods which could have been used to bring protection against pneumonia. These same methods used judiciously in the care of the patient who was unfortunate enough to develop the serious complication, would have been of great value.

An important lesson which should not have been forgotten is that in medicine there is no specific remedy for either pneumonia or influenza. Very beneficial results have been obtained in the care of these patients with simple hydrotherapeutic measures, such as fomentations to the chest, abdomen, and spine; heating compresses to the chest and abdomen; foot baths; and enemata. These measures can be learned by a layman in a short time, and will prove to be an armamentarium of great value in combating these and other diseases.

The physician attending a large number of patients appreciates and gladly welcomes such help. How valuable a helper one with a knowledge of these simple methods can be to a physician in times of epidemic, only one who has searched in vain for assistance can appreciate.

The New Sleeping-Sickness

G. H. Heald, M. D.

DISCONCERTING stories have been reaching us regarding cases of "sleeping-sickness" in Europe and in this country. This disease is not the African sleeping-sickness which is caused by a small parasite in the blood, introduced by the bite of the tsetse fly. That form of sleeping-sickness is comparatively limited in its localization, owing to the fact that the tsetse fly is not widely distributed over the earth, and there is no other known insect or creature capable of transmitting the trypanosome, or sleeping-sickness, parasite.

The original sleeping-sickness bears some re-

semblance to malaria, in that the parasite causing the disease passes through different cycles of existence, requiring two hosts. That is, the malarial parasite cannot continue to exist, unless it has both man and anopheles mosquito in which to develop. In a malarial district, if all the people were to move away for a time, the mosquitoes would soon cease to be infected; or if all the anopheles mosquitoes in a certain district were kept destroyed, man would eventually cease to be infected. It is the same with the sleeping-sickness, except that certain vertebrate animals, as well as men, may be hosts;

so if all the people were removed from the district, the disease would still remain, as long as the animals were there.

Regarding the new sleeping-sickness, "epidemic encephalitis" (inflammation of the brain), it is known that it is *not* caused by the parasite of the African sleeping-sickness. Otherwise, there is not much known regarding the cause.

It is not strictly a new disease, having been noted in Italy and Hungary after the influenza epidemic in 1890, and in other parts of Europe, and in America in 1895. It appeared in England, during the present influenza epidemic in February, 1918, and has since been noted in other parts of Europe and in this country.

There appears to be some congestion of the covering of the brain with some small inflammatory spots, but thus far no micro-organism, or germ, has been identified as the cause of the disease. There is also some change and degeneration of nerve cells. But the fact that the disease followed previous influenza epidemics — that of 1890 and as far back as 1712 — and again made its appearance during this epidemic, and the further fact that victims of the disease often give a history of having recently had an attack of influenza, would seem to indicate that there is some relation between influenza and the new sleeping-sickness. So far as is now known, there is no mention of the occurrence of a disease of this nature except in connection with an epidemic of influenza.

The characteristic symptom of the disease is stupor. There may be a stage of fever, running from 101° to 102°, or higher, lasting about five days, sometimes longer, and followed at times by a subnormal temperature.

Usually the first noticeable symptom is a catarrhal condition suggestive of a fresh cold, with sore eyes, sore throat, tonsillitis, and bronchial trouble. There may be an initial fainting spell. In other cases, the principal symptom is an increasing tendency to drowsiness and stupor. The patient is drowsy during the day, and sleeps a great deal. There may be pain in the eyes, avoidance of light, double vision, dizziness, and headache. The mentality may be changed, in some cases, showing an exalted emotional condition; in others great mental depression. Finally the patient is confined to bed, and may not be able to make voluntary movements, even the muscles of the face being inactive, so that the face is entirely expressionless. In some cases there is facial paralysis on both sides. There may be a great deal of muttering delirium. Usually there is paralysis of the eye muscles. In mild cases there may be fever, stupor, and weakness, without paralysis.

The mortality may be as high as 50 per cent, though one observer reported only two deaths in 13 cases. The stupor may last anywhere from two or three days to five weeks. One patient, after a stupor of eight weeks, finally recovered. Those who recover may have after-effects, such as changed mental condition, and certain palsies, for several months.

As to treatment, the best that has been offered is to keep the patient in bed and furnish a good nurse, though there may be some temporary advantage as a result of tapping the spinal canal and withdrawing spinal fluid.

In England the law requires that all cases of the disease be reported to the health authorities.

A Dentist's Advice to Mothers

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

OTHERS may deny indignantly the charge that ninety per cent of the diseases of children are due to parental treatment, or rather mistreatment, yet the statement is true. The reason why it is true is that women, as a rule, have comparatively little knowledge of the laws of health, and therefore are poorly equipped to supervise the health training of their children.

Disease was once regarded as a manifestation of the wrath of an offended Deity; and to struggle against the Deity would be useless. But higher culture has swept away such idle superstitions, and we now — the most of us — realize that sickness comes as the result of the operation of natural laws, and are gradually appreciating the fact that health and happiness are rewards for living in strict con-

formity with these laws, and that disease is the penalty for their infraction. Indeed, the knowledge of physiological law is so accurate that one who has made a study of the subject can largely decide for himself whether he will have health or disease. But for one to receive the full measure of the advantage to be derived from this knowledge, the principles must be operative in his life from the first.

Health laws should be impressed upon the child. The training should begin in infancy, yea, even before the child is born. Being asked, "When should a child's education begin?" Henry Ward Beecher replied, "With its grandfather." To give this training efficiently, the mother, upon whom the duty naturally falls, must be familiar with the laws that govern the child's physical existence, as well as the laws

which have to do with its moral well-being. Any amount of thought and study in after-life will not compensate for early neglect. The child must be taught health principles in the home and in the school, for it is the early impressions which are most readily received and most lasting, and it is the early activities that are most likely to develop into fixed life habits. We therefore give in the following paragraphs some instruction to mothers in the hope that it will help them in the development of rugged health in their children.

WHAT TO EAT

The problem of what to eat is one that must be solved largely by each person for himself. Some foods seem to agree with one and not with another. The brain worker or student does not need the strong diet essential to the physical laborer. Age, the time of the year, and the occupation must be considered when determining what is essential for each man. But certain fundamental principles are applicable to all.

The body is composed of about seventeen elements, chief of which are nitrogen, oxygen, hydrogen, carbon, and the lime salts. The various organs of the body are formed by varying combinations of these elements; and they nourish and sustain themselves by extracting from the blood stream their particular food. If the food taken into the body is deficient in these necessary elements, one or more organs may suffer. No foods, with the possible exception of milk and eggs, contain all the essential elements; therefore, it becomes necessary to have recourse to a diversified diet. In this way the deficiency of one food may be supplied by another.

TEETH FOOD

Teeth resemble bone in texture and composition. They are composed of organic and mineral elements, principally the latter. The mineral consists of lime salts, such as calcium phosphate, calcium carbonate, calcium fluoride, and also magnesium phosphate. These elements give to the teeth, especially to the enamel, their great strength and intense hardness. If any of these elements are absent from the food, the teeth become weak, frail, and soft.

The following foods contain these necessary elements in greatest abundance:

Milk may be considered an ideal food, as it contains all the body-building elements. There is a feature, however, in milk which is objectionable. It is an excellent culture field for microbes, and should be boiled or Pasteurized before being given to children. When handled properly, milk is an ideal food.

Buttermilk is a valuable food, unless it has been churned from very sour milk, or has become cheesy from age.

Wheat, corn, rye, oats, and rice are valuable foods because they contain most of the food elements.¹

Fine flour is not a good food, for in its refining, much of the proper elements have been extracted. Graham flour and whole-wheat flour contain all the essential elements of the wheat.

While there is nourishment in flesh foods, they are not an ideal food. Diseases among the lower animals are becoming more prevalent, and in order to avoid danger of disease transmission, flesh foods should be avoided. Meats contribute to the development of disease, partly because of the large amount of uric acid resulting from its utilization in the body. With an appropriate food supply, the amount of uric acid produced is not greater than can be eliminated by the kidneys without difficulty. But when the food supply consists principally of meats, a greater amount of uric acid may be formed than can be excreted, and it accumulates in the body.

Eggs are highly nourishing and if soft boiled, are fairly easily digested. Eggs should be chewed well with plenty of bread, as this renders them more wholesome.

Peas and beans are similar to meat and eggs in nutritive value, being rich in protein. They should be properly combined with green foods.

Potatoes should be boiled or roasted with the skins on. They are valuable for their potash salts. These salts are very largely lost if the potato is cooked without the skin.

Parsnips, carrots, cabbage, onions, beets, and tomatoes are valuable for the salts and vitamins they contain, and also for bulk.

Nearly all nuts are valuable as food for man. They contain not only oil, but usually a liberal supply of protein, and important salts as well. Nuts should be eaten with a little table salt and with bread.

Fruit is a valuable adjunct to the menu, principally as a body cleanser.

While there are other valuable foods, the foregoing list contains the most common, and is selected principally from the standpoint of the teeth; many of them are valuable, also, in building up other tissues of the body. The consequences which result from a neglect to use proper food, and to use it properly cannot be overstated. It is because of this neglect that many of our boys and girls are compelled to use artificial dentures while yet in the bloom of youth.

Dental troubles, along with other diseases, are becoming more prevalent. The many reasons why this is true we cannot discuss at this time; one of the principal reasons, however, being that foods today are prepared to be "gummed" and not chewed. In preparing these foods, the phosphates and lime salts have been

¹They should, however, be eaten in connection with milk or green vegetables, in order to make up certain elements lacking in the cereals.

largely extracted. Consequently the teeth and bones suffer.

Having considered "What to eat," I feel this article will not be complete without a word upon

HOW TO EAT

Let it be emphasized that however nourishing the food may be, it is of little real value unless it is properly eaten. It should be thoroughly masticated. For this purpose the teeth must be in good condition. Early and occasional visits to the dentist will prevent the development of bad mouth conditions, and will save

teeth, money, and health. Food should be eaten only when the child is hungry. Never force or coax a child to eat, or induce it to eat, by giving it sweets and other dainties when it refuses substantial food. Food, however good and pure, should never be eaten in excess. Overeating is the cause of more disease than poor food. Food should never be eaten too hot nor too cold; a little above the body temperature is usually about right. The stomach should be allowed perfect freedom of movement during eating and digestion of food. Never eat between meals. Do not drink much at mealtime. A person who uses much water at meals seldom masticates the food sufficiently.

Economical Recipes

George E. Cornforth

Bean Meat

THIS recipe makes something that is a closer imitation of the original vegetable meat, called protose, than anything I have tasted. I am giving this recipe because there may be people who would like to make such a food at home because they cannot get the factory-made food in their locality, or they do not care to pay the price of it. This food is economical. It is little trouble to make it. The only difficulty in making it is that it requires long cooking; but it does not require nearly so long cooking as Boston Baked Beans, and it should be made when fire is needed for other things also.

The food value of this bean meat in calories per ounce is as follows:

PRO.	FAT	CAR.	TOTAL
17	33	7	57

This is practically the same as the food value of roast leg of lamb.

- 1½ cups soy beans.
- ¾ cup peanut butter.
- ¾ cup cold water.
- 2½ level teaspoons salt.

Wash the beans well and soak them in cold water overnight. In the morning drain them and grind them through a food chopper, using the nut-butter disk.

Stir the nut butter smooth with the cold water, add the salt and the bean pulp and mix thoroughly. Put into a tin can or a basin, cover and steam four to six hours. The longer cooking gives a more meaty flavor. Instead of being steamed, it may be cooked by setting the can or basin in a covered kettle of boiling water, in which the water does not come up to the top of the can or basin.

When this is cold, it should be removed from the can or basin. It can be sliced and broiled,

or baked in tomato or in gravy, or may be used for sandwich filling or in making hash or stews.

Economical Salad Dressing

- ¼ cup flour.
 - 1 level tablespoon sugar.
 - 1½ level teaspoons salt.
 - ½ level teaspoon turmeric powder.
 - ½ level teaspoon celery salt.
- Mix these ingredients and rub them to a smooth paste with
- ¼ cup cold water. Add
 - 1 egg. Beat well together. Then stir in
 - 1½ cups boiling water. Cook, stirring, till thickened. Add
 - 1 tablespoon cooking oil.
 - ½ cup lemon juice.

Some persons avoid making salads because they think salads are expensive or are too much trouble to make. But very nice salads can be made of left-overs or of inexpensive foods. A similar mixture in another form is called "hash," and that is a synonym for something cheap. A salad may be as inexpensive but something nice.

The essentials for a good salad are: The ingredients should be cold; the green vegetables should be clean and crisp; the salad dressing should be tasty; and the ingredients should be lightly mixed together, shortly before serving. I say "lightly mixed," because the salad should not look "mussy" or mashed.

Potato and Pimiento Salad

- 1 pt. diced left-over baked potato.
 - ½ cup canned pimientos, cut into small dice.
 - 1 tablespoon chopped parsley.
 - Juice of ½ lemon.
 - ½ level teaspoon salt.
- About ¾ cup salad dressing, or sufficient to moisten well.

Squeeze the lemon juice over the potato and allow the potato to absorb it. Add the remaining ingredients and mix lightly.

Cabbage is a winter substitute for lettuce in salads.

Tomato Jelly and Baked Bean Salad

$\frac{3}{4}$ qt. canned tomatoes.

2 bay leaves.

1 onion, sliced thin.

1 level teaspoon salt.

1 level teaspoon celery salt.

$\frac{1}{4}$ oz. vegetable gelatin.

$\frac{1}{2}$ cup lemon juice.

$\frac{1}{2}$ cup baked beans without juice.

Put the gelatin to soak in two quarts of water

as hot as the hand can bear. When it has soaked one-half hour, change it to a second two quarts of hot water. In fifteen minutes change it to a third two quarts of hot water.

While the gelatin is soaking, cook the first five ingredients of the recipe together till reduced about one half. Then turn the soaked gelatin into a strainer to drain off the third water, and put the drained gelatin into the tomato mixture and cook till the gelatin is dissolved. The gelatin dissolves when the mixture boils. Rub through a colander to remove the tomato seeds. Add the lemon juice and the baked beans, and put into molds wet with cold water. When cold, unmold and serve on shredded cabbage with salad dressing.

The Mental Attitude and Disease

G. H. Heald, M. D.

THE causes of disease are manifold. If some one asserts that disease is caused by certain physical factors, as improper food, insanitary surroundings, impure air, and the like, he is right. If another says that disease is inherited, or at least is congenital, the body being diseased or predisposed to disease when born, he is right. If still another asserts that disease is caused by a wrong mental attitude, he also is right. Physical conditions (or environment), heredity, and the mental or rather emotional state, all have their influence — greater or less — in the production of disease. Sometimes one, sometimes another, of these causes or factors may be the predominating cause.

Then there is an interplay between these various factors, for one may by heredity have a depressed mental or emotional condition; bad environment may cause emotional depression; or emotional depression with lack of initiative may, and often does through poverty, contribute to produce a worse environment.

A depressed mental condition may cause a man to lose his job, and necessitate the use of poorer, less-nourishing foods, and the occupation of less sanitary quarters; and this again would react on the mental condition, producing a "vicious circle" with a tendency for the poverty and the mental depression and the bad health each to react on the others, the result being the gradual but steady degradation of the family.

If outside help in the shape of public charity steps in, it may take away the sense of hopelessness, but substitute for it the not much better sense of dependence, lack of self-confidence, and self-respect, and a willingness to become a public charge. This is the possible history of some families that began as self-

supporting and self-respecting units. If charity rescued them from actual starvation and perhaps from physical sickness, it left them in what may be a worse condition, that of dropping into the delinquent and dependent class, without initiative, without hope, without self-respect, with no ambition or object in life further than to have doled out to them their daily bread and protection against the elements.

It is well to understand, then, that we cannot divide the physical and the mental causes of disease, in such a way as to say that a certain condition is entirely mental in causation, another entirely physical in causation. The physical, the mental, and the hereditary, perhaps, each has its contributory part in every attack of illness. So in this article, it is not the intention, in emphasizing the mental, to belittle the other causes of disease.

It is probable in nearly every case of illness that the mental or emotional attitude of the patient has a more or less potent influence on the outcome — on whether the patient will get well, and how soon. Some patients with nothing very serious the matter with them, so far as any physical examination can show, but who are tired of life, give up and die. Others, given up by doctors as hopeless, but with a large measure of "grit" and determination to live, get well in a manner the doctors cannot understand.

There is something in will-power, in the will-to-live, in hopefulness, in cheerfulness, that goes farther than any drugs in the materia medica. In fact, such a spirit taps certain internal glands, and stimulates to the secretion of harmonies that are more powerful for good than any artificial remedies, simply because they are nature's remedies prepared by the body for its own defense. The Creator of the

body has prepared in the body laboratories for the preparation of remedies much better adapted to the cure of bodily ills than any drugs distilled from plants or elaborated from minerals.

An example of what the mental condition can stimulate the body to do is related of a certain army corps which was ordered to take a certain position up a hill with apparently insurmountable obstacles. In the face of the enemy's fire the men stormed and took the position, and the way they did it amazed the officers. The next day the commanding officer, in order to see just how the position was gained, attempted to go through the process of capturing the position again, but, of course, without the opposition of the enemy's fire. The men were willing enough to repeat the episode, but found they were physically unable to do it. It was an utter impossibility. When under the heavy fire of the enemy and carried on by the spirit of victory, they scaled heights that in their natural condition were absolutely impassable. The will-to-do can stimulate secretions which will enable one to accomplish the impossible. So it is in disease. The never-give-up, while-there's-life-there's-hope spirit will pull a patient through even when the doctors have given up.

The trouble is, that one who is ill does not always, or I might say does not usually, have this spirit. When the body is sick, the mind is also sick; and right here comes the supreme value of a good nurse, one who can instil into the patient courage, hope, determination. A good nurse can often do more for a patient than a physician. On the other hand, there are nurses, or would-be nurses, whose very presence is depressing. Whatever they do or say seems to suggest to the patient that he is not going to get well. For the "good of the cause" such nurses should by all means seek some other occupation.

What, then, can the person do who is physically and also mentally depressed? What hope is there for him? There is considerable, if he is willing. The cures of the Dowieites, the Christian Scientists, and other drugless healers are of this type. They are able by means of suggestion to supply a dynamic to the mind that lifts it above itself with physical results appreciable by all. But one does not need to go to these sources.

First, one should realize, as is stated in the editorial this month, that God is the author of health; then one may turn to psalm 107: 17-20.

"Fools because of their transgression, and because of their iniquities, are afflicted. Their soul abhorreth all manner of meat; and they draw near unto the gates of death. Then they cry unto the Lord in their trouble, and he saveth them out of their distresses. He sent his word, and healed them, and delivered them from their destructions."

If one comes in the right attitude to God, he will develop, or perhaps I might better say, he will be given, a right mental attitude toward his disease — one that will greatly modify the prognosis. One cannot well do this alone, and for that reason it is an advantage to take treatment in a sanitarium where there are God-fearing doctors and nurses, under whose influence the patient may be directed to look up to the Author of health. With this attitude, the patient will receive much more benefit and more permanent benefit from the treatments than he would from the same treatments with a different spiritual atmosphere.

Prevention and Treatment of Common Colds

(Concluded from page 138)

the feet in the pail of water, arranging the blankets around the pail so that no air from the outside can reach the skin.

The bath should be taken as hot as can be borne, more hot water being cautiously added as the skin can bear it. Drink the lemonade during the bath, which should be continued until the perspiration is profuse. Dry the feet, then turn around on the bed, roll up in the blankets, with the arms inside, and cover with the bed-covers. The blankets should be drawn in around the neck and feet so as effectually to exclude the air.

This is only one of many ways of inducing perspiration. The details may be varied. The essentials are: Heat to the surface of the body, with hot drink; avoidance of exposure to cold air during and after treatment.

The following morning, if the bathroom is near, take a hot tub bath; then, standing in the tub, go over the body rapidly with the hand, frequently plunging it into a basin of cold water; then wipe briskly with a rough towel. Give a more thorough application of the cold hand bath and towel rub to the chest and throat.

If a tub bath is impracticable, take a rapid hot sponge bath, followed by cold hand bath and vigorous towel rub. Avoid exposure of the body to the air, as much as possible, before the bath.

After breakfast, take a walk in the fresh air. Eat lightly. Live on fruit for twenty-four to thirty-six hours. Drink freely of water, or, if you wish, of lemonade (preferably unsweetened). If solid food is taken at all, eat very lightly, and especially avoid fats and sweets.

HEALTH and understanding are the two great blessings of life.—Greek proverb.

QUESTIONS AND ANSWERS

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

This is a service for subscribers to LIFE AND HEALTH.

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

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

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

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

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

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

Baby Healthier on Natural Food

"My baby boy is two months old, and as I am burdened with an enormous number of important matters,—Red Cross, Mothers' Club, War Service work, etc., I must wean him. What method or what artificial foods do you suggest?"

No burden which society or your Government can give you is more sacred than your duty to bring your boy to a healthy, strong manhood. A good foundation for this must be laid in infancy, and his feeding is of vital importance. No artificial food can satisfactorily take the place of mother's milk, which is a living food, containing all the food elements necessary for the infant. These are ready for immediate absorption. Mother's milk contains substances which enable the breast-fed child to resist all infections better than can those children fed with artificial foods. Both the child and yourself will be healthier if he has his natural food.

Wean the Child

"My baby girl is three months old, and I have begun to menstruate again. We think that if this could be controlled and the energy turned into milk, it would be better for the child and far more convenient than hand feeding, as well as cheaper. What you recommend must be safe and not injurious to the health."

The recurrence of menstruation while the mother is nursing, usually changes the milk so that it is unfit for the child to use. The little one should be weaned at once, as there is no way known to change conditions so that the milk will not be likely to injure the child. Menstruation and nursing, or pregnancy and nursing, occurring together, are a dangerous tax to the strength of the mother, and in either case the child should be placed upon artificial food.

Crackers and Bread

"1. Are there any crackers that will take the place of bread? 2. Do you think the average person requires bread for his system, if he has vegetables and other foods? 3. Will a meat diet with lack of vegetables induce auto-intoxication?"

1. Ordinary Graham crackers will take the place of bread very nicely. Several brands of good crackers are on the market. These are whole-grain products, and are, I think, better

than bread, as they require more thorough mastication and do not contain any yeast germ. Twice-baked bread, or zwieback, is better than ordinary bread for some people.

2. The average person needs a carefully balanced dietary, including cereals, fruits, and nuts, as well as vegetables. Unleavened or beaten or pulled bread demands chewing, and is better than yeast bread, being in smaller loaves and thus having more crust surface.

3. Flesh foods are a fruitful source of intestinal putrefaction and toxemia, fish being a marked offender. Meats contain enormous numbers of putrefactive bacteria which are more prone to rot than is vegetable life, and the products of proteid decomposition are more poisonous and more irritating to the tissues and organs of the body than are those formed when carbohydrates are broken up, the latter being harmless. Vegetable end products are not poisonous, and the presence of vegetable material (cellulose), as in lettuce, celery, etc., hinders the growth and action of putrefactive germs.

Catch in the Back

"Please give treatment for a soreness and 'catch' in the back in bending and stooping. Do you recommend osteopathy, Christian Science, chiropractic treatments, or Dr. Miles' Nervine for this trouble?"

Endeavor to increase your weight and nerve strength. Get plenty of sleep, moderate exercise in the open air, and good nourishing food and pure water. Bathe daily. The trouble in your back is probably caused by weak ligaments, weak muscles, and loss of weight. We cannot recommend Dr. Miles' Nervine. The best nerve tonics are as above indicated: good food, sleep, rest, fresh air, pure water, and moderate exercise. Take hot fomentations to your back and abdomen, following these with a cold mitten friction; rub or massage the back after this treatment. A good liniment or ointment is also helpful. Those who treat the sick should have an accurate knowledge of the anatomy and physiology of the human body, and a long course of study and experience in rational methods of treatment—dietetic, hygienic, medicinal. In the vast majority of cases, disease is caused by a violation of one or more of nature's laws. The violation must cease and the cause be removed in order to cure the disease. Then remedial measures must be used, with special adaptation to the needs of the case. The proper treat-

ment of disease must include a careful diagnosis; a removal of the cause; and the following of a complete program for health building, which must of course include more than body manipulations or mere faith. Great harm is done in many instances where people are encouraged to believe that they can get well by some easy method, and are thus led to defer taking the proper treatment.

Live a Wholesome Life

"I am generally run down. I had a miscarriage a year ago, and a severe attack of influenza since that. Am up to my average weight of 110 pounds, eat heartily, can work without tiring; but my temperature rises to 99.6° about noon daily and remains so for several hours. Have no dizziness or shortness of breath; no leucorrhoea. Have some constipation all the time, with gas and indigestion. What shall I do for the temperature?"

You should systematize your day, adopting a carefully planned program. Retire early, and if possible, sleep out of doors. Your exercise should be moderate. You should rest for a half hour after each meal and have another hour's rest in the middle of the afternoon, and a half day's vacation in the middle of each week, and the entire Sabbath day for rest and worship.

It seems to me that you are a little careless about bowel movements. You should hold yourself to a laxative diet and take sufficient mineral oil, bran, or agar to secure at least two thorough evacuations of the bowels a day. Eat as much nourishing food as you can digest, taking three regular meals daily and a glass of hot milk at bedtime. Use milk at two meals during the day. Bathe at night three times a week, taking a warm, full tub bath, and take a tepid sponge bath each morning on arising, being careful to dry off one part of the body before wetting another part. Take this sponge bath in a warm room. If you do not have proper reaction following the bath, you should omit it. You should have a thorough physical examination, including tests of the blood and an X-ray examination of the chest, stomach, and bowels. The teeth and tonsils should also be examined.

An Apple a Day

"There is an adage, 'An apple a day keeps the doctor away.' Is there any truth behind this rhyme?"

There can be little doubt that in general, one is better off when eating a reasonable amount of apple than when eating no fruit. Some have thought that the benefit of the apple lay largely in its laxative effect. But that would be equivalent to saying that apples could be profitably substituted by bran mush, which is probably not so.

Perhaps the apple is in no way superior to some other fruits. Perhaps an orange a day, or a lemon a day, or a bunch of grapes a day,

would be as efficient as an apple a day, in postponing the professional visit.

There would seem to be in the fruits some food accessory that renders the fruit valuable out of all proportion to its actual nutritive value as measured in calories. G. H. H.

Dental Bridge or Plate Work

"Which is the better when one has lost some of his natural teeth, a bridge or a plate? Is it advisable to crown a broken tooth?"

There are serious reasons why dentists are turning away from bridge and crown work, and are inducing patients to have bad teeth extracted and to use "artificial dentures," or plates.

It has been found that a very large proportion of the body infections originate in the mouth. Perhaps a few disease germs get into the mouth—not enough of themselves to cause serious disturbance. There they find some sheltered place where they can develop undisturbed. It may be in a tooth cavity, or in the space between the receded gum and the tooth, or in the space between the tooth and the gold band or the crown—some little corner not reached by tongue or toothbrush—wherever it is, the germs, having ideal conditions of temperature and moisture and food, multiply rapidly, and sooner or later find their way to other parts of the body and set up new foci of infection. Every such breeding place in the mouth is a nidus for possible infection of the whole body, manifested in a crippled heart, damaged kidneys, general rheumatism, appendicitis, etc.

For this reason, every tooth cavity, every alveolar or apical abscess (pyorrhoea), every piece of artificial work (as gold band or gold crown) which may harbor germs, is eliminated in modern dental practice. The advantage of a dental plate is that it can be thoroughly cleaned at frequent intervals. G. H. H.

Adenoids

"What are adenoids, how are they recognized, and what harm do they do?"

Adenoids are an abnormal growth of the adenoid tissue normally existing at the back of the vault of the nasopharynx. In the back of the throat, above the point seen when you look into one's mouth, almost at the roof of the cavity, these cauliflower-like growths form, and by their growth encroach on the breathing space, and interfere with breathing through the nose. The victim of adenoids is almost always a mouth breather. Habitually his mouth is open. There may be some deafness, owing to closure of the Eustachian tubes. There is often a listless and apathetic expression, and difficulty in keeping up with assigned studies in school.

The only treatment for adenoids is prompt removal by a physician. Any other course is foolishness. The operation is simple and involves no danger. G. H. H.

BOOK REVIEWS

The Newer Knowledge of Nutrition, the Use of Food for the Preservation of Vitality and Health

by E. V. McCollum, School of Hygiene and Public Health of Johns Hopkins University. \$1.50. The Macmillan Company, 66 Fifth Ave., New York.

This is doubtless one of the most important contributions to a popular knowledge of dietetics that has appeared. For several years McCollum and his associates have worked patiently to determine what constituents of foods are important for nutrition, growth, and health, and in what proportions they are most efficient. From time to time as the work progressed, papers by these writers appeared in scientific journals, giving a summary of certain phases of their work; and coincident

with the inauguration of the food conservation program in 1917, some effort was made to popularize this knowledge; but this present volume is, we believe, the first effort to give in popular form a detailed account of this addition to our knowledge of the principles of nutrition.

The book has two historical chapters, giving an insight into the experimental methods by which the new truths in nutrition were dug out. Then follow chapters on "The Vegetarian Diet," "Foods of Animal Origin," "The Diseases Referable to Faulty Diet," "The Nursing Mother," and "Planning the Diet."

The book is accompanied by a series of charts showing the effects of various combinations of food on growing animals, so arranged as to determine what combinations induce the best growth and health.

NEWS NOTES

Food Conditions in Brazil

So great has become the high-cost-of-living burden in Brazil that plans are under way to restrict the exportation of foodstuffs.

The Food Supply

Thanks to the good will of the Government of the United States, the restrictions on the importation of foodstuffs into this country have been largely rescinded, and large quantities of wheat and flour have begun to arrive, which will reduce the price of bread to the benefit of all.—*Mexico Letter, Journal A. M. A., Jan. 4, 1919.*

Cost of Living in Scandinavia

There is such a discrepancy in Scandinavia between the increase in price of necessities and in the wage rates of the laboring classes, that the governments are considering some means to remedy the condition.

Ground Glass in Food

Of 120 samples of food submitted to army medical officers at Ft. Sam Houston, Texas, for examination, because suspected of containing ground glass, 13 samples contained glass in some form. In most of the specimens, the glass was in small quantity, and may have been accidental. In a few there were large pieces of broken glass, "which apparently had been put there purposely by those sending in the specimens."

Hooverizing the Quinine

The Brazilian government, determined to overcome the destructive malarial endemics in rural Brazil, has made arrangements for the importation and manufacture of quinine, which is put up in standard packages with the government price marked thereon. Pharmacists and distributors who charge in excess of a ten-per-cent profit will be penalized. Federal railways will be furnished quinine by the government, and will distribute it gratis to their employees. Other industries desiring to make free distribution to their employees, may purchase quinine at a discount of 10 to 20 per cent.

Narcotics in Prescriptions

A recent survey of Chicago drug stores by the Chicago health department shows that between Oct. 1 and Nov. 1, 1918, 946 drug stores had filled 741,825 prescriptions, 441,641 of them for influenza and pneumonia, and of these 104,010 contained some narcotic,—opium or one of its derivatives, cocaine, or chloral hydrate.

End of Ground-glass Delusion

Simmons and Von Glahn of the United States A. M. C. having received a number of samples of food supposedly contaminated with ground glass, decided to carry on a series of feeding experiments on animals, part of which received ground glass in their daily food, and part did not. No symptoms were noted. There was nothing in the animals fed ground glass to indicate that they were not so well as the control animals, and finally when they were all autopsied there was nothing in the post-mortem findings which indicated any ill effect from the ground glass.

Is Influenza Infectious?

An extensive series of experiments has been performed under the auspices of the United States Public Health Service in order to determine how influenza is transmitted. Volunteers were inoculated with pure culture of the influenza bacillus, with secretions from the upper air passages of persons in the early stage of influenza, and with blood from typical cases of influenza. Various methods were tried of swabbing and spraying the noses of individuals with secretions from the air passages of influenza patients. Some were placed so that influenza patients coughed directly into their faces. And other experiments were tried without one of the men contracting influenza, the whole indicating, or seeming to indicate, either (1) that every one of the sixty-eight men who volunteered for this series of experiments was absolutely immune to influenza, or (2) that influenza is not a transmissible disease, (3) that it is transmitted in some manner not now suspected. It still remains the mysterious disease.

Rabies Again in England

After a freedom of fifteen years, England has again been invaded by rabies. It is the policy of England to permit no dogs to enter the island until they have been in quarantine sufficiently long to insure that they are free from rabies. It is supposed that the present run of the disease was caused by dogs smuggled in by returning soldiers.

Symptom of "Flu"

According to Croft, the most characteristic sign of the "flu" is furred tongue, which he finds to be very constant, and to be present a week or two before the "onset" of the disease. Croft states that "the furred condition is chiefly located in the posterior part, but extends anteriorly. At first it is a peculiar yellowish-brown or white; later in the course of the disease, the color becomes dark-brown with a yellowish-green tinge, and will not respond to the usual treatment for gastric disturbances." He did not find it in all cases.

Some Vital Statistics

According to Dr. William T. Howard of Baltimore, assistant commissioner of health, Philadelphia had the highest death rate from influenza—7.4 per thousand of population. Next came Pittsburgh with 6.8 per thousand, and Baltimore third, with 6.5; Boston, 5.5; Washington 5. There is evidently much confusion in reporting deaths. Wherever there was a high death rate from influenza, the pneumonia death rate was also high. As one investigator has shown, practically all influenza deaths are from the pneumonia complication, and the report should be death from pneumonia with influenza as the secondary cause. In many cases, probably the pneumonia was not detected as such, owing to its peculiar character.

Treatment for "Flu"

Croft's treatment for "flu" is absolute rest in bed for five days or more. No food, liquid or solid, for 48 hours, especially if fever is present. Saline laxative, and if this fails, an enema. Daily bowel movement important. Drink abundance of water, or orange juice, if more agreeable. Warm sponge two or three times daily, followed by brisk rub with Turkish towel. Closed room better than open. No drafts. Air room several times a day. Small fire to dry air. For severe headache, phenacetin. For high and constant fever, acetylsalicylic acid (aspirin), but not for too long. For severe cough, a counter-irritant—mustard poultice lengthwise up and down breast bone till unbearable. Avoid cough sedatives. Give expectorants.

Drink Control in England

Though England is not in the prohibition ranks, the food shortage during the war forced a drastic restriction in the manufacture and use of alcoholic drinks. The following significant figures showing the effect of progressive restriction, are from a London letter published in the *Journal A. M. A.* of January 18:

Year	Convictions for Drunkenness	Deaths from Alcoholism, Excluding Cirrhosis of the Liver	Deaths from Cirrhosis of the Liver	Deaths from Suffocation in Infancy
1913	35,765	719	1,665	1,226
1914	37,311	680	1,773	1,233
1915	33,211	584	1,525	1,021
1916	21,245	333	1,163	744
1917	12,307	222	808	704

California Grapes to be Utilized

The College of Agriculture of the University of California has made a survey of the wine grapes of California, and reports that the crop can be turned into sirup equivalent to 40,000 tons of sugar, having a value of \$8,000,000.

White Bread Again

With the cessation of hostilities, the use of a dark flour constituting a high percentage of the grain is no longer compulsory, and white bread again appears on our tables, to the great satisfaction of most persons. It is curious that although both before the war and during the war the advantages of whole-meal bread or something approaching it, were pointed out, no impression has been made on the public. Even a press campaign by the most widely read newspaper produced little effect. In spite of dietetic teaching, people prefer what is more pleasing to the eye and gratifying to the palate, white bread.—*London Letter, Journal A. M. A., Jan. 4, 1919.*

Root Vegetables to Prevent Scurvy

Chick and Rhodes have reported in the *London Lancet* of December 7, the result of their investigation on guinea pigs, which seems to indicate that when the use of dried milk or heated milk tends to cause scurvy in infants or small children, this trouble might be prevented by the addition of the juice of root vegetables. Their method was to grate the vegetables, place the pulp on muslin, and squeeze gently to express the juice. Vegetable juices undergo rapid changes at room temperature, and should be prepared fresh daily. Even when stored at a low temperature in a refrigerator, they soon lose their power to prevent scurvy. The raw juices of Swede turnip, carrot, and beet were used. The juice of the Swede turnip takes precedence as an antiscorbutic.

A New Health Almanac

The United States Public Health Service has issued for free distribution a "Health Almanac for 1919." In addition to the monthly calendar of health hints and notable events, this almanac discusses such topics as the following: Control and prevention of infectious diseases, as pneumonia, common colds, tuberculosis, infantile paralysis, typhoid fever, smallpox, trachoma, hookworm disease, and venereal diseases; disposal of human excreta; importance of clean drinking water; care of the teeth; care of milk in the home; what the United States Public Health Service is doing to protect the health of the people of the United States. Copies of the 1919 almanac may be obtained free upon application to the United States Public Health Bureau, 5 B St. S. E., Washington, D. C.

Is He Right?

D'Alessandro, in the *Semana Medica* (Buenos Aires) Sept. 26, 1918, argues that if it is necessary to boil milk for children, in order to prevent the transmission of infection, butter should also be boiled. Possibly. But recent experiment on young animals shows that Pasteurized milk produces a more rapid growth in animals than the highest grade of raw milk, and that boiled milk produces a more rapid growth than Pasteurized milk, and breast milk (direct from the mother) produces the most rapid growth of all. It would seem from these experiments that boiling does help. Another series of experiments on a man who could easily disgorge his food, showed that Pasteurized milk is more rapidly disintegrated in the stomach than raw milk, and boiled milk is disintegrated more rapidly than Pasteurized milk.

Incubation Period of Influenza

A number of observations in cases when the source of infection was fairly well established indicate that the period of incubation for influenza is about 2 days, or 48 hours.

The Gerny Handshake

The *New York Medical Journal* advises editorially against the custom of hand-shaking, especially during the prevalence of an epidemic. Doubtless one may infect his hands by the use of his handkerchief, and in other ways; then in shaking hands, he may convey infection to his best friends. If this be so, the grouches who have no friends should stand the best chance in time of epidemic.

World Conference on Child Welfare

Miss Julia C. Lathrop, chief of Children's Bureau, United States Department of Labor, has been in Paris conferring with a number of French and Belgian individuals in reference to a Child Welfare Conference to be held in the United States in April. According to the plan, the delegates will meet in Washington, then tour the country, holding meetings in localities where they can study at first hand the problems of child betterment.

Warning Against Tuberculosis

There is great danger that many of those who have suffered from influenza will develop tuberculosis. The New York State Charities Association has issued warnings, urging communities to call upon their physicians to hold tuberculosis clinics from time to time. All who have had influenza are advised to submit to repeated medical examinations at intervals of a few weeks. Those who are unable to pay for such service are advised to go to a tuberculosis clinic.

Birth Rates and Death Rates in France

In 1913 the births in France exceeded the deaths by 17,000, but since the war, the deaths have exceeded the births, the total excess of deaths over births during the four-year period of the war being 883,160. In 1913 there were approximately 600,000 births; in 1916, 315,000; in 1917, 343,000. The decrease in population here considered does not include the 1,400,000 killed in the war, but depends largely on the decrease in the birth rate, which may be due principally to the fact that practically all the able-bodied men were called to the front and the women had to take up man's work.

Washington Health Crusade

Beginning February 27, an educational crusade was inaugurated in Washington, D. C., whereby the fundamentals of cleanliness as a prerequisite to good health is to be taught to the twenty-five thousand school children of the city. The movement is known as "The Modern Health Crusade." The work is being carried on by the Junior Red Cross and the District Tuberculosis Association, reaching all pupils in the fourth to the seventh grades inclusive, in public and parochial schools.

Vaccination in Influenza

There is excellent reason for believing that certain of the vaccines prepared to prevent influenza were efficient. In a certain St. Louis tenement district of 75,000 persons, 30,000 persons were vaccinated against influenza. Following this, there were reported in this district an average of 12 to 14 new cases a day as against 100 or more a day in the fashionable districts where vaccination had not been practiced. Again, in the case of 20,000 persons vaccinated, who had been requested, in case of taking the disease, to report the fact, not one case was reported among those who had received three injections of vaccine.

Chemists to Study Medicines

According to an address by Dr. Charles H. Herty before the New York Academy of Sciences, February 3, the American Chemical Society is planning a ten-million-dollar foundation for drug research, the object being to obtain more exact information regarding the effect of drugs on the human body and the fundamental reasons therefor. Another object is to make the United States independent of the rest of the world, especially of Germany, in the synthetic drugs. The fiscal year before the war, according to Dr. Herty, we imported 185 synthetic drugs, valued at \$1,033,000, 95 per cent of which came from Germany.

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