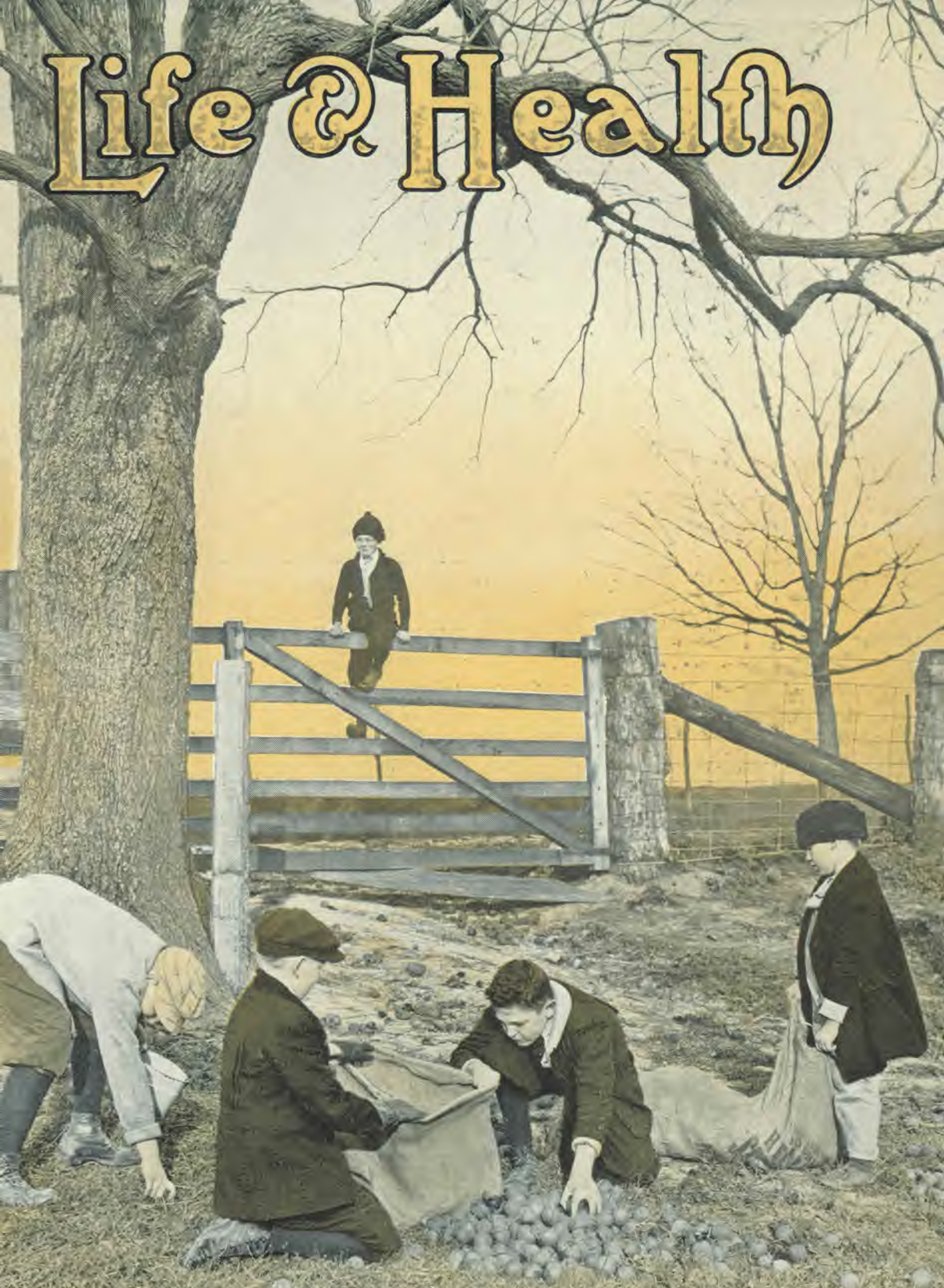
Life & Health



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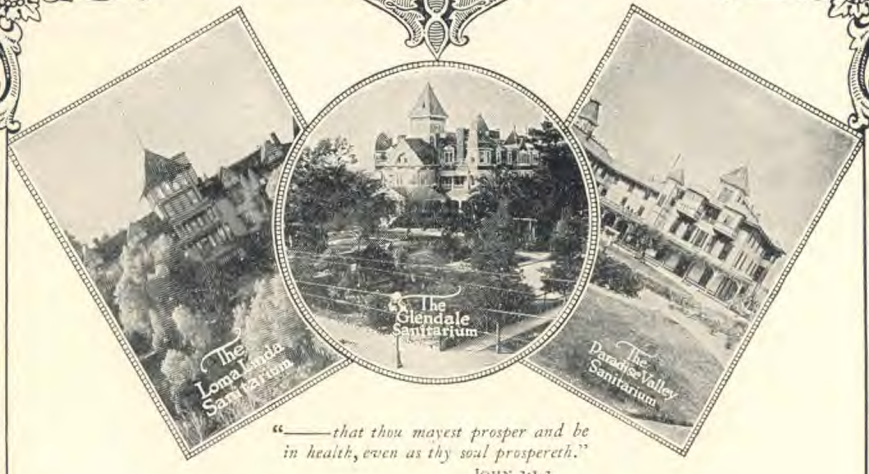

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JOHN 3:1-2.

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Life & Health

PUBLISHED MONTHLY BY THE

REVIEW AND HERALD PUBLISHING ASSN., TAKOMA PARK, WASHINGTON, D. C.

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

Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of Oct. 3, 1917, authorized on June 22, 1918.

VOL. 34 NOVEMBER, 1919 No. 11

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

BOW RIVER, NEAR BANFF, CANADIAN ROCKIES

Life & Health

HOW TO LIVE

EDITORS

L. A. HANSEN G. H. HEALD, M. D.

VOL. 34 NOVEMBER, 1919 No. 11

Is Your Work an Expression of Yourself?

IS your work an expression of yourself? Does it represent you? Do you find your highest enjoyment and interest in your work and in making yourself a better workman? If not, you are marking time while the world is moving. You are advancing toward old age and the grave, but not toward a more complete, more useful, more dependable life. According to a prominent student of mental hygiene, "Mental stress and strain begin when one's work is not the expression of his desires, but in conflict with them." This is a most important statement, for it gives the secret of very many life failures.

Why is there such a diversity of attainment in the world? is it because some are not so well endowed at birth as others? Are the well-born bound to succeed and those not so well born bound to fail? No. It is not entirely a difference of mental endowment, but a difference of attitude. And this attitude, while it may be partly a matter of native endowment, is largely a result of education and of one's reaction to his environment.

Our school work is being condemned right and left for the reason that it does not encourage the self-development of the pupil, but checks it at every point. It is for this reason that the school work is a grind — a drudgery. Even the more studious pupils are not sorry when some circumstance necessitates the closing of the school for a few days in mid-term. The work is irksome because it does not express the child's instinctive longings. We sometimes think of children as depraved because they like play better than school work. The fact is, it is the school work that is depraved rather than the children. Instead of representing the activities of red-blooded children it represents the ideas, perhaps, of anemic teachers, or the worn-out traditions of a bygone age.

To this day the writer wonders what good certain of his school duties did him. He could see no good in them then, and could take no interest in them; and though he was told that later he would see the benefit of them, he has not. He feels that much of the school work he had was lost time, as was also the schooling that others were having at the same time.

We all know how well children remember the things in which they are interested, and how readily they forget the things we think they ought to remember. That forgetting, under the circumstances, is a healthy process. It is very much like taking a cathartic to avoid the effects of a heavy banquet of indigestible food.

As we find it pays not to force the appetite for food but to create a real hunger for food, so with learning. The true educator, whether he be parent or teacher, is the one who can help develop a proper mental hunger.

As with study, so with work. That work in which we have no especial interest, which we do to earn our bread, or because we are paid to do it, or because we are forced to do it, has no value as a developer of our powers. Such work does not make us better workmen, or prepare us for a better job.

Work, on the other hand, into which one delights to throw himself, in which he takes pleasure mastering all the details, in which he finds something new every day to interest him,— the work in which he takes pride and of which he loves to talk with his friends,— that work will one day make him a master. No matter what the work, it may be dish washing, or cooking, or gardening, or running a street car, it will bring success.

The success of such men as Edison, Ford, and hundreds of others that might be mentioned, was due to the fact that they were in dead earnest in what they undertook. They gave themselves entirely to the thing in hand. If by any means one obtains an interview with such men, one thing is found to be characteristic of them. No matter how busy they are with other matters, when they turn to the visitor they give him their entire attention for the time, as if they had not another thing on their minds,— one thing at a time, and that thing pushed through to its completion — that is the secret of their success.

The trouble with many persons who have not made a success of life is that they live a divided mind. Their mind is never more than half on their work. Hence they make mistakes. They are dreaming of something else, and their work is mechanical. They feel that the present job is beneath them and are dreaming of some higher job they hope to have later, with the result that their interest is not on their present work and they not only do not improve, but deteriorate; so that in place of being above their job, they soon find themselves below it. But usually they do not learn the lesson that should come to them through failure. They go on with their daydreaming, resentful that others are advanced ahead of them.

Some people never take a right attitude toward any job. Owing, perhaps, to some unfortunate factor in their early training, they go at their work, whatever it may be, with a feeling of antagonism toward those in authority over them and a subconscious determination that they will not improve their work; and of course they do not. They are misfits, wherever they may be placed, and they finally go into the discard.

There is another class that seem adapted to certain work and not to other work. No doubt we all are better adapted for some particular class of work than we are for other work, and it is fortunate for a person if he chances to choose that occupation for which he is best adapted. Some persons after puttering along in a mediocre sort of way, are by some circumstance thrown into a different line of work adapted to their capabilities, and they make a brilliant record.

An excellent example is that of General Grant, who was not noted for anything in particular until the Civil War brought him to the front as a great military leader. Undoubtedly there are many now living mediocre lives who under different circumstances might be crowned with success. But there are probably many more who wherever they might be put, would fail to realize the opportunity for self-improvement in their present occupation, and would vainly dream of some greater work in the future.

Dreaming never gets us anywhere. Strict attention to the business at hand does.

"Whatsoever thy hand findeth to do, do it with thy might." G. H. H.

Cold Weather Diseases

G. H. Heald, M. D.

A STUDY of statistics shows that certain diseases are much more prevalent in the winter months than during the summer season. Among these diseases are pneumonia, la grippe, bronchitis, and diphtheria. And in general, except in the South, the winter mortality in the United States is higher than the summer mortality.

Now this might seem to indicate that a cold climate is more unhealthful than a moderate climate. But if this were so, we might reasonably expect that in arctic exploration trips there would be an exceptional amount of lung trouble with high mortality. The opposite is the fact. Among arctic and antarctic explorers, colds and respiratory diseases are practically unknown. If they have any such troubles, it is after they come back to civilization with its germ incubators, its modern overheated dwellings, assembly halls, etc., where in close quarters and with insufficient ventilation, the inhabitants carry on a business of "swapping" germs.

In almost any room where there are a number of persons assembled, germ culture dishes, if exposed for a brief time, would reveal that the air of these rooms is more or less densely laden with germs of various kinds, many of them from the nose and mouth of those present.

It is the greater concentration of these germs, favored by the inadequate ventilation, and the greater susceptibility of the individuals, caused by the abnormally dry, hot air of our rooms, that favor the rapid spread of winter diseases. Those who habitually live and work in the open do not suffer nearly so much from such diseases as those who live indoors.

Keep the House Cool

THE tendency in the average home, apartment house, hotel, and assembly hall, at the beginning of cool weather, is to heat the building a little warmer than is comfortable in the spring and fall. At the time of this writing, the weather is delightful at 65°. But when this article reaches the reader, such a temperature will be considered chilly.

Why should a certain temperature affect us differently at different periods of the year? The explanation is in the difference in the humidity, or moisture, in the air. At this writing (beginning autumn), there is sufficient humidity in the air to prevent excessive evaporation; but in the colder months, the air at 65° will be much drier, and consequently there will be increased evaporation from the body; and evaporation is the most efficient means of reducing temperature. As the air is artificially heated to 70°, it is rendered still drier, more hungry for moisture; and though the temperature is approaching the point where in summer it is counted just a little too warm, yet because of the very rapid evaporation, one feels a little chilly, and perhaps the fire is forced a little, and the temperature run up considerably above 70°. The colder the temperature outside, the drier the air in the house, and the greater the tendency to run the room temperature excessively high.

Meantime, perhaps, the ventilation is neglected. There is not a free exchange of air with the outside. Whatever germs are floating around in the dry dust of the air are not blown out, but remain within, a source of possible danger.

One will not have far to go to find such conditions. Overheating and insufficient ventilation are extremely prevalent, and are important contributary causes of respiratory disease. In the cure of tuberculosis, pneumonia, and some other diseases, it is found that a cold, pure atmosphere is very much more conducive to recovery than the warm stuffy air of the ordinary house. Our modern custom of overheating houses contributes largely to the increase of respiratory diseases, and retards their cure.

Keep the Air Moist

INSTEAD of running the room temperature up to 70°, an effort should be made to keep it between 60° and 65°. If one becomes accustomed to this lower temperature and if the air is kept sufficiently moist, the higher and drier temperature will, by contrast, feel uncomfortably dry, raspy to the throat, and irritating to the nostrils.

Many people accustom themselves in winter to an atmosphere and temperature condition

that keeps the air passages more or less constantly in a state of irritation, with increased susceptibility to any disease germ that may lodge there. The nasal passages are abnormally dry, possibly cracked and fissured, if not ulcerated; and the dry air of the ordinary house acts like so much blotting paper, sucking up the moisture as fast as it appears on the mucous membrane of the nose and throat. Such a condition is never present in a cool, reasonably moist air.

It may take more trouble, possibly cost just a little more, to keep the air moist at 65° than to have dry air at 70°. But the difference in doctor's bills and in lost time for sick leave will more than offset this added expense. It does not cost so much to heat a house to 65° as it does to heat it to 70°; but there will be some outlay in keeping the air moist. This may be accomplished if the house is heated by stoves, by keeping a shallow pan of water constantly evaporating on top of each stove. If the source of heat is a hot-air furnace, a pan of water may be placed in each register, though this may not be sufficient to moisten the air in the coldest weather. Then water may be kept boiling on the gas stove. With steam or hot-water systems, a device may be arranged at each radiator for rapidly evaporating water. A simple one is to place on the radiator a pan of water; into this water, place one end of a piece of cheesecloth or gauze, and allow the rest of the cloth to hang down back of the radiator. By capillary attraction, the water is drawn into the cloth, and by evaporation, it is given out into the air.

If one can afford it, it is well worth while to have some device for determining the humidity of the room as well as the temperature. The wet-and-dry bulb thermometer is accurate, but requires some care in computing the result. A humidity indicator with a dial, though not so accurate, will answer all practical purposes, and is much more likely to be read than the wet-and-dry bulb thermometer. Make an effort to keep the temperature down to 65° and the humidity up to 65 per cent or higher.

Pneumonia

SEVERE chill with high fever, flushed face, labored breathing, and chest pain are symptoms strongly indicating pneumonia. When such symptoms develop, a doctor should be called immediately, for the favorable progress of the case may depend largely on early treatment.

Among the symptoms of pneumonia are "rusty sputum,"—the patient coughing up a large mass of brown or blood-tinged sputum, and possibly a small amount of blood. There is at first a full pulse, which may later become rapid and so weak that it is detected with difficulty. The breathing is rapid, from 35 to 40 respirations a minute. The patient may have to be propped up in order to get his breath, and shows much restlessness. Often he is "flighty," and must be carefully watched to prevent self-injury.

In lobar pneumonia, the form most common in adults, the fever usually lasts from seven to nine days and then drops suddenly to normal; this drop is called the crisis. If the temperature makes only a partial drop and then rises again, the outlook is not favorable. There is probably some new infection setting in, some complication adding greatly to the gravity of the prognosis.

Pneumonia is due to a germ, sometimes from a pneumonia patient or convalescent, or from a healthy person who has been exposed to a pneumonia patient. Sometimes the germ may be in the patient's own throat, living as a harmless germ until some lowering of body resistance makes the patient more susceptible.

Prominent among the things which favor the onset of pneumonia is sudden chilling of the body when heated. Those who go into crowded, badly ventilated, overheated assembly halls, moving picture shows, theaters, or department stores, where they may inhale germ-laden droplets from the air, and then go out into the raw air, are exposing themselves to an attack of pneumonia.

Nurses must avoid the "hand-to-mouth infection" by disinfecting their hands before eating, and by keeping out of range of the patient when he coughs. Dishes used by the patient, also towels, sheets, etc., should be disinfected.

Colds

EVERY cold in the head, every cough, and every sore throat should be given prompt and vigorous attention. Such conditions may be symptoms of something more serious. La grippe, pneumonia, and a number of serious infectious diseases begin with similar symptoms. One feeling such a condition coming on is better at home, probably in bed. A good hot treatment (hot bath, hot blanket pack, hot foot bath) followed perhaps by a short cool spray, the patient being dried without exposure and going immediately to bed, is a good routine practice for such conditions. The patient should have a light diet, and should take a dose of castor oil or some other purgative.

Any cough that lasts as long as three weeks, no matter how mild it may be, is serious enough to have the attention of a physician. It may be beginning tuberculosis; and in any case, it is a constant menace if allowed to continue unchecked.

(*Continued on page 289*)

Health Hints for November

L. A. Hansen

THE way you live this winter will have a good deal to do with the way you feel next spring, as well as with determining your winter state of health. People too often approach spring feeling "all run down" and in need of something to "tone them up;" hence the patent medicine man's big sale of "Spring Tonics," "Blood Purifiers," etc. Begin now on a program of right living, keep it up all through the winter, and you may greet spring as that glorious season should be met.

There is no reason why people should feel bad in spring. The weather is not the reason, that is sure. Cold weather does not enervate the system; on the contrary, it should give it tone, for the natural effect of normal cold is tonic. Neither does cold weather thicken the blood, nor does the temperature clog the system.

Blood is made of the food we eat, the water we drink, and the air we breathe. The quality of these has more to do with the kind of blood made than does the weather of either winter or summer. And the balance we strike between putting food into the body and making use of the energy it gives and eliminating the wastes of the body, is a strong determining factor as to our blood condition and our general state of health.

WINTER HEATING AND WINTER EATING

Many people will now get the house-heating apparatus in working shape. Some are figuring on how they can get the most out of a limited and costly coal supply. The proper feeding and regulation of stove or furnace comes into consideration. The quality of fuel, the draft, proper combustion, the prevention of clinkers, and the care of the ashes must all receive attention. Some days but little fire will be needed, while others will require heavy firing.

No less does the human furnace require care and management in order to secure normal heat production and proper elimination. And the body may, in many respects, be compared to a furnace or to a steam engine. The food eaten is largely body fuel, and when everything works right, most of it is converted into heat and energy, leaving a residue of waste to be eliminated.

But heat and energy production is not the only object of eating. The repair and the construction of the body, in all its parts, depend upon food. As a living, working organism, the body is wearing out. Every physical exertion means the using up of body tissue. This loss has to be repaired. In addition to this, the growth process of the body demands body-building material for the making of bone, muscle, brain, nerve, and blood.

Only good food can be made into good blood and tissue. A poor quality of food cannot make a good quality of blood, for there is no provision in the whole process of digestion for converting poor material into good blood. Digestion does not add nutriment; it is a process of getting it out of food that already contains it.

USE SENSE IN SELECTION

In the selection of food for winter eating, we must take into account our winter habits. Indoor living, of which there is usually more in winter,—at least to most people,—means less exercise. This means less need of repair-food. Cold weather calls for more fuel-food. Some attention should be given to striking an approximate average.

While protein food can be used by the body as fuel material, it is not the best food for producing heat and energy. Its special or best use is for the repair and growth of the body. Such foods as meat, eggs, cheese, milk, beans, peas, most nuts, and some cereals are rich in protein.

Because of the mistaken notion about the value of meat and the necessity of its use, many people use it freely. For a long time the medical profession has contended that people use too much meat, the reason given being largely on the basis of an excess of protein. Should people take into account the amount of natural impurity contained in meat, besides the increasing tendency to disease in animals, the arguments against meat eating would weigh heavy.

AVOID HEAVY EATING

Even without meat the diet may be too heavy in protein. Much difference of opinion has existed as to just what proportion of the diet should be protein. About ten per cent of the total nutritive elements is now generally ac-

cepted by authorities as the proper amount. This does not mean ten per cent of the bulk or weight, mind you, but of the nutriment.

There is a possibility of overdoing things in using substitutes for meat. Beans are usually a stand-by in this connection, and care should be taken against using them to excess. Besides, the protein of navy beans is not the best grade, and some people may have trouble eating navy beans.

While speaking of beans, let us suggest that inasmuch as they are a rather heavy article of diet, the Sabbath is not the best time to make them the main dish, as is so often done. A day of comparative inactivity does not call for such food. Men who work hard in the woods do well on beans, even when the beans are so badly treated as to be cooked with pork. And this suggests further thought in the selection of food.

The occupation of the individual has much to do with his digestion. All persons cannot eat alike. In the same family there may be varying digestive ability. Those working hard, or out of doors, can eat what those of sedentary pursuit cannot. Boys who play and men who do muscular work can eat food that is not suited to school girls or office workers. Therefore, season, climate, and occupation must all be considered in the diet question.

NEAR-FRESH FOODS

In the absence of fresh vegetables, we must depend on such vegetables as can be stored, dried, or canned. Those who have storage facilities and can get the vegetables to store are fortunate, and should make good use of the advantage. It is not merely a matter of economy. An ample supply of Irish potatoes, pumpkins, squash, beets, carrots, rutabagas, turnips, onions, cabbage, sweet potatoes, and such other vegetables as may be stored, will mean a great deal to family health, both for the winter and for next spring.

A liberal supply of canned fruits is another essential of a good winter diet. Cooked just long enough to insure its keeping and with little sugar, canned fruit comes near to taking the place of fresh fruit. Dried fruits also are valuable in providing the necessary food variety.

Lay in a supply of such native nuts as may be available. Nearly all nuts have high food value. They should be eaten as food, at mealtime, and not as titbits between meals. Nuts are rich in protein and fat. Some people find them difficult to digest; the trouble may lie in eating too many of them and not chewing them enough.

Nuts may be combined with other foods very well; that is, they may be eaten with fruits, grains, or vegetables. In a limited degree, they may be combined with grains or vegetables in cooking. The preparation of a conglomeration of nuts, etc., etc., and calling it "nut meat" or "nut roast" is not advisable. There are some very good nut food preparations, however, which serve excellent uses. With these it is only necessary to guard against using too much at a time.

Prevention of Disease in Childhood

G. H. Heald, M. D.

WE try to guard our children against certain acute infections such as summer diarrhea, diphtheria, scarlatina, but we have not fully sensed the importance and the gravity of certain chronic infections, which may at the time cause comparatively little annoyance, but which may be laying up trouble for the future.

That tree, which yesterday appeared as sound as any, but which fell in the windstorm last night, had a rotten heart. The high wind was the immediate cause of the tree's downfall; but there was an important contributing cause — the weakened condition of the trunk, caused by the decay at the center. Hundreds of other trees, apparently no sounder than this one, withstood the wind. It was the wind that showed which trees were sound and which unsound. That rotten heart was the work of germs, permeating the wood of the tree through a long period of years. Some unhealed wound on the bark, or some limb broken off in such a way that the bark could not heal over it in time to protect it from germ action, permitted the decay to begin, which ended in the destruction of the tree.

It is thus that some apparently trivial infections contracted in childhood or youth may

continue their unobserved and apparently harmless course until, without warning, an incurable heart or kidney or other trouble manifests itself, and another premature victim is laid away.

The man or woman of forty with kidney, heart, or intestinal trouble has a condition somewhat similar to the rotten heart of the tree, awaiting some atmospheric or other change to finish the work of destruction.

Even at this age, if the trouble is discovered in time, before extensive destruction has taken place, the process may be stayed; but this is an unusual termination. Usually the trouble is not discovered until the condition has become so bad that the patient is forced to go to the doctor for temporary relief. If the doctor is faithful to his patient, he will discover the trouble and do what he can to prevent further ravages. Sometimes, unfortunately, the physician himself only looks after the present relief of the patient and makes no attempt to locate the source of the trouble. In that case, probably, the condition grows rapidly worse.

Realizing that many of these "rotten heart" conditions, which take men and women off when they should be in their prime, date back to childhood,— to school age or before,— we sense the importance of protecting the children from these damaging influences.

Owing to the fact that parents are not prepared to recognize, or to sense the importance of these little infections that are such a source of danger, the public schools are being supplied with medical inspectors and nurses whose duty it is to look after the various defects of childhood. But they have so many children to look after that doubtless some things escape them. Moreover, some of these troubles start and should be remedied, before school age. The parents, therefore, who are alert, who are on the lookout for those little infections that may take so much out of the after-life of the child, are really doing more for the child than if they should leave him a handsome inheritance. There is no inheritance so valuable as a sound mind in a sound body, with healthful habits well established in childhood. A child with such an inheritance will reach the top, while one who inherits millions may never have one meritorious act to his credit.

Parents should by example and precept teach their children to keep dangerous germs out of the mouth — for it is the germs from the mouths of other people that cause most of the dangerous diseases. It is well known that a person may carry in his mouth germs that are harmless to himself but dangerous to others.

For this reason each child should be taught to drink only from his own cup — never from one used by any one else, not even his mother. And the mother should never taste food from the baby's spoon and then let the baby use the spoon.

Owing to the fact that no immediate evil result follows the indulgence of such a habit, many may be inclined to believe that no harm can come from the practice; but just as the entrance of a few germs in the young sapling is the beginning of that process of decay which ends in the fall of the tree, so the entrance of a few germs into baby's mouth may pave the way for decayed teeth, diseased tonsils, appendicitis, and a host of other diseases. It is not always easy to trace the exact mode of infection, but we know that these diseases are caused by germs entering the mouth from some other mouth.

The child should be taught to avoid putting things into the mouth — pencils, and other things,— and to take no food that has been eaten from by another, as a piece of bread or an apple. He should be taught never to use a common towel, and in order that this may be impressed on him, he should always have his own towel.

He should be taught never to eat without first washing his hands, for the hands collect all kinds of dangerous germs.

He should be taught the regular and careful use of the toothbrush, and how to care for it.

We would not think of allowing the child to grow up without a school education; but he might be better off even without schooling than not to have instruction in the avoidance of infection; for if because of a little carelessness, he is carried off with some epidemic, his schooling will do him no good.

The child should have an open air life with exercise, summer and winter, and if possible the exercise should include swimming.

When he is old enough to be curious about the mysteries of his being — where baby came from, etc.— he should be taught frankly but in a delicate way such of the truths regarding the physiology of reproduction as he can understand; and as he grows older he should be cautioned and warned regarding the dangers that beset his sexual life. As a rule fathers should teach the boys and mothers the girls. There are books which give this instruction in a delicate way, which parents might use if they do not feel equal to the task — such books as "Truths: Talks with a Boy Concerning Himself" and "Confidences: Talks with a Young Girl Concerning Herself" both by Dr. E. B. Lowry, Published by Forbes & Company, Chicago.

The child's room should be well ventilated, dry, clean, and sunny. It should be one of the pleasantest rooms in the house.

Parents should be alert to detect infection. What appears to be "only a little cold" may be beginning of diphtheria, measles, whooping cough, scarlet fever, or some other dangerous disease which if uncared for may not only be a menace to other children, but may lessen

the chances of the recovery of the little one. It is best to have a family physician, and in case of any cough, sore throat, fever, loss of appetite, disinclination to play, or any unusual symptoms, the doctor should see the little one and make certain whether or not there is any serious infection. This might seem to cost more, but in the long run it will avoid heavy doctor's bills, and will probably prevent much unnecessary illness on the part of the little one.

"Over the Top"—and After

W. A. Ruble, M. D.

THE expression "over the top" has come to be a very forceful and well-understood term since the war. The great desire on the part of every fighting man who entered the conflict was to accomplish this enviable feat. Every effort of those who were responsible for the success of the war, and who had charge of providing fit men for service, had this supreme accomplishment in view in every act in training men. When accepted for service, a candidate was examined thoroughly to ascertain his physical fitness for war work. His training for months was directed toward developing every power for fighting. His food, rest, exercise, and technical training were directed toward a preparation to go over. When he had been so fortunate as to go to the front, he could with difficulty be restrained from rushing forward in battle, that he might reach the accomplishment of his highest desire. He faced any danger, endured any hardship, bore any deprivation, that he might reach the top.

There is in every man's life an experience which may be termed "going over the top." Every person with any ambition hopes, endeavors, and expects some time to obtain the desired end,— a predetermined goal. His education, training, ambition, and constant effort are to reach the goal of his dreams. Happy the man who attains this coveted end without sacrificing anything that will render the realization and aftermath of this experience less glorious, less honorable, or less desirable than the anticipation.

To many a young man who participated in the victory at the Marne this was the greatest experience and highest attainment in his life up to that time. To some this experience will always remain the greatest achievement in his life, and he will look back to it as the zenith of his life attainments. This may be for various reasons, possibly, because of lack of ability, ambition, or initiation. Another reason might be that in action he has been so maimed or broken in health as to render him incapable of further attainments, and he is forced throughout his entire after-life to look back to that battle, to talk of that battle, and to dream of that battle as the greatest experience in his life. He is physically incapable of greater achievements. To the great mass of the men who passed through those thrilling war scenes, their experiences will be remembered only as incidents in a life of greater and greater achievements.

What a counterpart there is of this illustration in many lives! Especially is this true in passing the meridian of life, as far as influence and activity are concerned. Many men and women, because of some calamity, some discouragement, or because of lack of determination to overcome some difficulty, become so depressed that they are early in life checked in a successful career of achievement, and lapse into a mediocre life of inactivity, where they remain for a considerable part of their life.

The greatest thing in life, viewed in anticipation, is to go over the top, but it is a most deplorable thing viewed in retrospect. This is a most important matter in determining the conditions known as "old age" in any life. Old age is a relative term in every life, and depends largely upon each individual. It was reported a few years ago that an eminent medical authority made an unwarranted statement that every person ought to be chloroformed at sixty years of age. It is a noticeable fact that this same man has attained some of his greatest achievements since passing the sixty-year mark.

The matter of old age is determined largely by the individual himself, and depends upon whether he is determined to look forward or backward to his going over the top. It is true that much of the work of the world today, especially in America, is done by comparatively young men. This is much less true in European countries. Even in our own country, behind the scenes of great enterprises where young men are in evidence, a Carnegie, a Morgan, an El-

liott, a House, or some other man of experience and years will often be found in a retired, well-guarded office, where weighty matters are largely decided.

Another class of persons to whom the matter of going over the top is of great importance are those who have passed through some great calamity, some crushing sorrow, or some depressing experience. Often these people fail to rise from their depression, but take their position on the afterside of the "top" and largely cease from their usual activity. Some by real or seeming injustice on the part of their associates, employers, or some association, become broken in spirit, and find themselves on the declining side of the highest point of their influence.

There is no reason why age, calamity, unjust treatment, or any other imaginary reason for discouragement should cause any mentally and physically fit person to despair and early cease vigorous activity in life. Always keep the zenith of your attainments in front of you. Always keep the determination strong that you will still go over the top.

Elderly Men and Exercise

G. Henry Hale

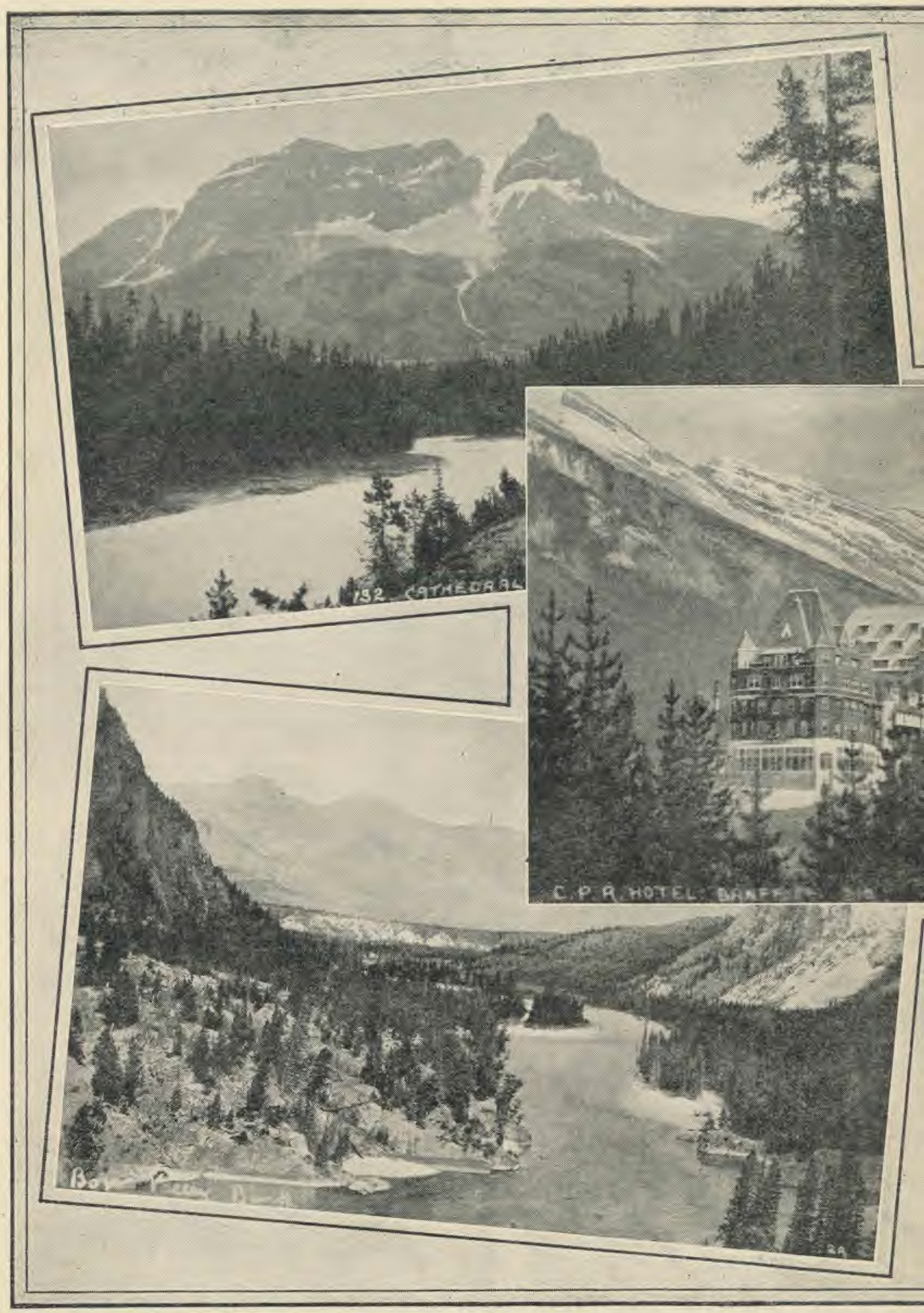
SHOULD the elderly man exercise, and if so, how much? Certainly he should exercise, unless he has what medical men know as an uncompensated heart lesion,— that is, a condition bordering on heart failure,— or some other very serious condition making him practically an invalid. How much he should exercise, is not quite so easily answered. The answer must depend on conditions. In general it may be said that man (and woman also) tends to overeat and underexercise. To put it in plain language, he is by nature a bit gluttonous and lazy. This tendency is due to a number of causes. Civilization has enabled many of us to earn our living by our wits, and thus dispense with the necessity of working; and again, street cars, automobiles, and the like have taken away even the necessity of walking. Moreover, the cook has invented many pleasing desserts, salads, etc., which tempt us to continue eating after we have had a full meal; and in addition, the ice-cream stand, the soda fountain, and the candy shop manage, for a consideration, to beguile us into making ourselves the repository for sundry other calories in the shape of ice cream, bonbons, and the like. We neglect exercise because we do not have to do manual work; and exercise finally grows irksome, and moreover it takes time which we might spend more profitably, or at least more pleasurably, otherwise. We eat freely, not for nourishment, but because it tastes good. We have thus — most of us — come to the place where in eating and exercise we consult our feelings rather than our health needs.

But athletics has wrought a great change in the young generation. Physical training has compelled those who were ambitious to win certain events to go into severe physical training and to regulate the diet in accordance with the body's needs rather than with the appetite. No trainer worth the name will allow his men to eat anything and everything that strikes their fancy. He knows that the human hankering for food is no guide if one wants to be at his best physically. So athletic training, whether in college or out, has done much for the younger generation in encouraging more exercise and a more restricted dietary. This is all excellent when it is not overdone.

But the time finally comes when one is no longer young. How should he then regulate his activities? Briefly, if he has been an athlete, it is dangerous for him to drop into a sedentary life. He will soon go stale if he does. On the other hand, it is not safe for one who has led a sedentary life to attempt strenuous work in his old age. He is liable to overtax his heart. The athlete should keep up his exercise,— possibly not to the extent of former days, but sufficient to oxygenate his food and tissues and to keep his muscles hard.

The sedentary man, especially if he has been a fairly big eater, is a dangerous risk. He has a weak heart, and perhaps a high blood pressure. He becomes worried at his evident aging and he bethinks himself of exercise as a means of rejuvenation. This is all very well, provided he keeps within the limits of his heart capacity. If he overworks his heart, he may bring on a noncompensated condition which will render him practically an invalid. At any rate, his attempts at exercise should be cautious, and possibly he would be better off to have a med-

(*Continued on page 287*)



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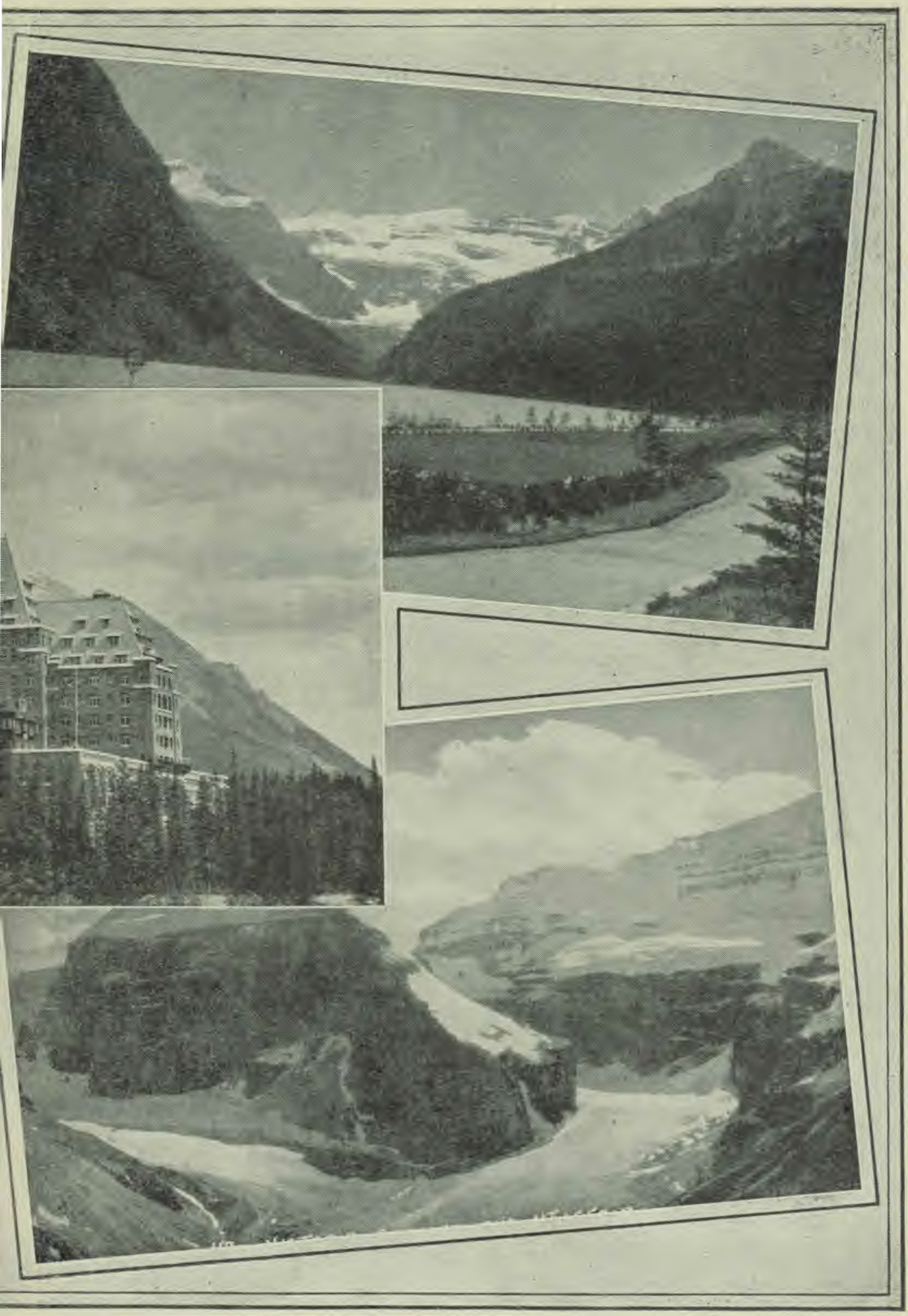
Cathedral Peak
Bow Valley



AN SCENES

r, Canada

Lake Louise
Victoria Glacier and Mt. Lefroy

RURAL HYGIENE

J. D. Shively, B. S., M. D.

Location of House

FOR obvious reasons, the building should be located on sloping or elevated ground. Better drainage and better general clearance are among the most desirable features. Under no circumstances should the drainage be permitted to run toward or under the house. All excavating for the building itself should be for the making of a water-tight basement or cellar, but not to obtain soil for filling in elsewhere, thus leaving a sink hole or depression under the house or about the building.

This condition of things under and about dwelling houses often exists, with the consequence, many times, that the persons living in such houses become ill with various ailments, as rheumatism, neuralgia, anemia, kidney, and liver trouble. A person would do well, for his health's sake, to refuse to live for any length of time in a house known to have a damp basement, or a sink hole under it which only occasionally becomes water soaked from any cause. Many cases of ill health can be traced to just such living conditions, for sooner or later they are certain to bring disaster healthwise.

Hence the precautions: (1) That the ground slope away from the building in every direction; (2) that the basement or cellar stay dry the year round; (3) that there be no pit-holes or excavations under the house that may become filled with water or even damp, during rainy times, or from any cause; (4) that the dwelling-house be on the highest point of the entire premises as regards other buildings, barns, stockyards, etc.

The Well

Geologists tell us that the underground drainage generally takes much the same course that it does on the surface, and that the area drained by a dug well on level ground is not less than twice its depth on every side. That is, suppose a dug well, walled with brick or stone, twenty-five feet deep, on level ground, should drain the surface to a distance not less than fifty feet all around it. This being the case, it is important that the well should be located on some advantageous point where it would be free, so far as possible, from all surface contamination. This would be, preferably, above the house and distant from the barn, outbuildings, and stockyards, and with the surface sloping away from the well in every direction and in no instance toward it.

The practice that is common in some homes, of emptying washwater, dishwater, and the like near the well, should be avoided, even though the quantity so emptied may not be large at any one time. Frequent repetitions by and by saturate the ground, and after a time some of it is almost certain to find its way into the well. The top of the well should be closed as nearly water-tight as possible, the platform fitting so closely that bugs and insects cannot get into it, to say nothing of mice, rats, or even larger animals.

All wells, especially those which are known as dug wells, should be thoroughly cleaned out every few years. It is astonishing to see the amount of mud and other filth that accumulates in the bottom of a well after long use.

THERE is a limit to enjoyment, though the sources of wealth be boundless,
And the choicest pleasures of life lie within the ring of moderation.
— *Tupper.*

BARN

Every sanitary home builder will see that the barnyard and stockyard are located on the lee or drainage side away from the dwelling-house, not only to escape the drainage and foul odors, but to avoid the presence of flies as well. The distance from the barn to the house ought not to be less than three hundred feet, and from a hygienic standpoint, farther still, if possible.

FLIES

Contrary to the usual belief, it is known that flies do not migrate, as a rule, any great distance from the breeding place. Hence, the farther the breeding places — for which purpose barn refuse is most ideal — are removed from the dwelling-house, the less these pests will annoy and the less danger of contamination from them.

BARNYARD WASTE

To further limit foul odors and breeding places for flies, barnyard waste should be removed from the premises at least once a week, as this period of time is too short for the development of the fly; for it is evident that if the breeding places of flies, which as stated above are manure heaps and barnyard waste, are removed and destroyed, there will be fewer flies. It is an accepted fact with health authorities that the presence of flies in any great numbers in or about a human dwelling, is positive evidence of very insanitary conditions existing somewhere near by.

MOSQUITOES

It is known that the mosquito is the agent by which man is infected with malaria and yellow fever, and that the breeding places of this pest are stagnant water, swamps, pools, rain barrels, etc. Therefore, care should be taken that all swamps, bogs, and ponds near the house and barn should be filled or drained. There might be some excuse for having a pond for storing surface water some distance from the house, but surely not near the dwelling.

It was the simple application of the principle of drainage of the swamps and disinfection of the areas that could not be drained that made the digging of the Panama Canal possible by the United States Government; and the lack of these simple measures caused the French to fail in this same undertaking some years previous. The reason is clear when once understood: the stagnant water in the swamps was the breeding place of the mosquitoes by which man was infected with malaria and yellow fever. Hence, to rid a district of these diseases, remove the source of infection, and disease disappears.

ELDERLY MEN AND EXERCISE

(*Continued from page 283*)

ical examination and advice before beginning physical work.

Regarding the diet, it is safe to say that elderly people are much more liable to overeat than to undereat; and overeating means as much strain on the organism as overexercise. Those who round out their eighty, ninety, or hundred years are conspicuously light eaters. It is a safe assertion that every ounce of food eaten by the elderly person in excess of his needs is that much toward an early funeral.

To summarize: If one has been an athlete, he should not drop physical work. If he has lived a sedentary life, he should, as an elderly man, take up exercise very cautiously. It should be regular, everyday, and not once-a-week. In any case, he should not eat more than he needs, and very probably, not so much as he craves. Most certainly he should not attempt to whip up his appetite by stomach tonics or "appetizers." As the rate of tissue change diminishes, as shown, perhaps, by diminished appetite, he should be content to eat simply and less. Such a course will do much to avoid the degenerative diseases that take so many men twenty or thirty years before their time.

FOR THE EXPECTANT MOTHER

Lydia Allen DeVilbiss, M. D.

IF it were possible for us to draw aside the veil and watch the embryo baby as it evolves from a single cell into a complex being with systems of tissues and organs; if we could see the unborn infant as he doubles his height in one month and quadruples his weight in another; could we watch the beginning of the circulation of the blood and see the first impulse as it travels through the brain and spinal cord, we should be compelled to seek new terms to express our amazement.

The unborn child truly lives and has his being in his mother. But the father, too, has a no less important part. For the proper growth of all germ life, from the seed of the tiniest plant to the human, nature requires the right nourishment, the proper temperature and quiet, or the absence of disturbing elements. This harmonious condition or peace is no less important to the expectant mother than her other requirements.

This is the opportunity for the father to show his appreciation and further to play a man's part in the development of his child. At no time in life is a woman more sensitive and more in need of tender, thoughtful care. The realization of this will draw husband and wife closer together and make of this time what it should be, the happiest time of their lives.

We do not understand very well the so-called prenatal influences. We know they are not physical, that is, we know that the color, stature, and physical and mental characteristics of children are determined by the germ cells according to the laws of heredity, and not by the desires or emotions of the mother. So what power is exerted by prenatal influences must be psychical, and physical only in so far as mind exerts influence over matter.

Unfortunately, we know very little about this influence, and are able to prove less. But we all believe in the power of the quickened mind and in the faith and steady expectations of the soul — the hopes, the prayers, and the aspirations of the mother-to-be.

The carrying and bearing of a child is, or ought to be, a normal process. To many women the period of carrying a child is the happiest time of their lives. And it is those women who are happy and who are in an almost exalted frame of mind, who invariably bring into the world the healthiest and the happiest children. The popular notion that a sick pregnancy results in an easy delivery is all wrong. A sick pregnancy is not a normal pregnancy, and a sick, uncomfortable, unhappy expectant mother is in need of special attention.

In the past, childbirth has been attended with much needless suffering. However, the great advance in the medical treatment of pregnancy has reduced the suffering and the loss of life to a low rate. Still the number of women who lose their lives or who date their semi-invalidism from childbirth, is entirely too large.

Fortunately, serious problems of pregnancy and the delivery and disease states announce their presence by ample warnings. Defects of vision, discharge of blood, swelling of the feet and hands, puffy eyelids, and pains in the head and body, are warning signals that somewhere something is going wrong. And such signals must never be disregarded.

But before these urgent signals are given, other changes are taking place which cannot be detected by the person herself. Among these are changes in blood pressure and in the contents of the urine, which may be detected only by an examination. For these reasons and many others the pregnant woman should at once place herself under the care of a physician. A few simple precautions now will help to bring her and her baby through safely and happy.

For such an important event do not choose a doctor for this or that trivial reason, but choose the man or woman in whose ability you have the greatest confidence and on whom you can depend every minute. Then having made your selection early, consult your doctor frequently, follow his directions faithfully, and if there is any worrying to be done about your case, just let your doctor do it.

Your physician will be pleased to assist you to obtain a nurse. It is poor economy to try to get along without the services of a capable woman. Your future health, as well as that of your baby, depends upon receiving intelligent care during the confinement and the convalescent period, and another week of rest at that time may be worth a month later on.

So as soon as possible get the momentous question of a doctor and a nurse settled. Then you may give your whole attention to the building of the human temple so mysteriously fashioning, and to pleasant daydreams.

A Testimony for RATIONAL LIVING

J. W. Raymond

THE readers of LIFE AND HEALTH no doubt number many persons who can testify by experience to the value of healthful living. The writer wishes to give his testimony.

Born with inherent tendencies to scrofula, and being seriously afflicted with tuberculosis, I was at an early age doomed to the grave. Fortunately my parents became acquainted with the principles of health now taught by LIFE AND HEALTH, and for a long time promulgated through various means by the body publishing the journal. The use of tea, coffee, and pork was discontinued, as well as other harmful practices, and the observance of a careful régime of living soon had its place in our household. In my own dietetic practices I have adopted three rules; viz., first, eat that and only that which should be eaten; second, eat it when and only when it should be eaten; third, eat it as it should be eaten. These rules have been to me a guide and a safeguard.

In determining what should be eaten, I am guided by the nature and condition of the article rather than by custom or mere taste. Recognizing my hereditary tendencies and the possibility of falling a victim to disease, I realized that I was not constitutionally fit to withstand the effects of any transgression to which my indulgence might lead me. Hence, I avoided the use of anything that would be injurious, even if the occasional use of such a thing might not make me conscious of its injurious effects. I knew that anything injurious would in time work injury to my health. I realized that one who by heredity is predisposed to sickness, takes upon himself the responsibility of developing that predisposition when engaging in any practice that is not good for the health.

The determination to eat only that which is right to eat may conflict at times with the desires of the appetite, but I believe that my intelligence must decide what should go into my stomach and system. I let judgment rule instead of desire.

The question of when to eat is settled by having regular times for eating, and regular periods of rest between meals. I never eat anything between meals.

One of the principles in my third rule of eating, is thorough mastication. I regard this as very important. I believe that if the stomach of a man who hurriedly bolts his food, had a voice to speak, it would ask that food spend more time in the mouth, where there are teeth to grind it and saliva to moisten it.

As the result of my careful living, I am now free from aches and pains, although in my eighty-fourth year. Many years ago I recovered from the tendencies to sickness, and since that time I have not had a single spell of sickness. I do not know what it is to feel old. I can read fine print without glasses.

I am glad to bear my testimony in behalf of healthful living, and commend to all the Scriptural injunction, "Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God." 1 Cor. 10: 31.

COLD WEATHER DISEASES

(*Continued from page 278*)

Influenza

THERE is reason for believing that an attack of influenza confers at least a partial immunity; that during the recent epidemic practically everybody was exposed; and that many who were not attacked carried the influenza germ. This would indicate that there is not likely to be another severe epidemic of influenza for some years; but if we may judge from the 1890 "la grippe" epidemic, there may be small recurrences for a number of years. At least it is well to be prepared for at least a mild return of the disease this winter.

The important measures of treatment, so far as the layman is concerned, are complete rest in a warm room, and a spare diet, or perhaps no food, for a few days. It is much better for one who has been attacked by influenza to remain at home for at least a week, perhaps ten days, no matter how well he feels or how much his business demands his attention. Many rugged people succumbed to influenza last year, for the reason that they refused to remain in bed, feeling that they had to be at their work. And the result was that they were lost permanently to the work.

In case influenza again becomes prevalent, it is well to avoid crowded cars and assembly-rooms, and to take an abundance of fresh air; and when necessary to be in close contact with influenza patients, to wear a face mask. But it is questionable how much protection such measures give when the germs are scattered everywhere; though in a more limited epidemic, they might be of more value than was apparent last winter.

AS WE SEE IT

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

DRY AIR
VERSUS MOIST AIR

ON a June morning, with the outside temperature at 58° and the house temperature at 62°, it was comfortable in " B. V. D.'s " and a " cool cloth " two-piece suit. Yet in winter, with a house temperature at 62° and with heavy undergarments and a full suit, most persons feel chilled. Why is it? Is it all imagination? Not at all.

The winter air at 62° has a much more chilling effect on the body than summer air at 62°. The reason is that the summer air contains moisture enough to prevent rapid evaporation. The winter air is about as dry as Kansas.

Evaporation is one of the most effective methods of cooling the body. It is for this reason that many places where the temperature goes above 100° are more comfortable than other places where it reaches only 80°. The day air at 100° causes rapid evaporation that keeps the body surface actually cooler than the humid 80° weather.

So when the temperature ranges between 60° and 70°, the drier the air, the more chilling its effect. Now winter air heated by the furnace, unless there is an efficient moistening system, is extremely dry. There is hardly anything equal to it in the most desert regions. This dry air, being hungry for moisture (or thirsting, perhaps I should say), " licks up " all the moisture within reach, including that in the clothing. This evaporation, as we call it, produces an intense cooling effect. In order to obviate this, we build a hotter fire and render the air still drier, and this process may be kept up until we have the room at a temperature well above 70°,— a temperature that in summer requires light clothing; and yet we need all our winter clothing on — or think we do.

What is the remedy? The obvious remedy is to add more moisture to the air in winter. This may be accomplished when a stove is used by keeping an open vessel of water on the stove all the time. Where the house is heated by furnace, a water container may be placed on or behind the radiators or in the registers, or a vessel of water may be kept slowly boiling on the gas stove.

The reduction in temperature from 70° to 60° ought to save coal, we think. It may do so, but the chances are that this will be almost or entirely offset by the heat required to evaporate the water. So that the cooling of the room from 60° to 65° in winter and moistening the air is not necessarily followed by a saving of fuel. It may be just as expensive to have humid air at 62° as it is to have dry air at 70°; but there is all the difference in the world in the health conditions. With a humid air at 60° to 65°, we are approximating the condition of that season of the year when there is the lowest mortality.

This statement needs a little explanation. Careful comparison of the mortality rates with the temperature conditions in localities as far different in climate as Alaska and Florida, as Boston and Los Angeles, show that the death rate is lowest in those periods when the weather most closely approximates a tempera-

ture of 65° with a high humidity — the temperature and moisture conditions of the cool rooms of a conservatory.

This would indicate that the heating and desiccating process which is all too common with us during the winter months is a prolific cause of disease and death.

But this raises a question that has been a source of more or less perplexity. If adding moisture to air at a temperature of 60° to 65° makes it more comfortable, why is it that the "moist" air at 32°, say in Washington, is as chilling as the dry air at zero in Minneapolis?

This question was quite a puzzle until it was realized that at temperatures much below 60° evaporation ceases to be so much of a factor in the cooling process, for the body does not give off much moisture to evaporate, and conduction of heat is a more potent factor; and moist air will conduct off heat much more rapidly than dry air. As an illustration of the difference between a poor and a good conductor, take hold of a piece of iron at 32° and a piece of wood at the same temperature. The iron, being a good conductor, feels much colder. So comparatively moist air, being a better conductor than dry air, feels much colder.

In hot weather moist air is more uncomfortable, for it makes us feel hotter. In cold weather it makes us feel colder. In a temperature between 60° and 70°, it makes us feel warmer. It is at that temperature when naturally the air is likely to be the driest, on account of our methods of heating, that we particularly need moist air.

Every house should be supplied, not only with thermometers, but with air moisteners and with some means of measuring the moisture in the air.

MORE NEED THAN EVER FOR EDUCATION IN TEMPERANCE

In Miss Stoddard's address before the Anti-Saloon League Convention she attributed the success of prohibition — rightly — to the co-operation of education and organization. Without thorough work in education, and without thorough organization, the prohibition of the liquor traffic could never have carried against the immense obstacles it encountered.

Replying to the question as to whether the necessity for education has ceased, now that we have a prohibitory amendment to the national Constitution, she said that the work of education has only begun, and she is right. Maine for years had State-wide prohibition, but as it was not sufficiently backed by persistent education, the law was not nearly so effective as it might otherwise have been. While we have prohibition written in the Constitution of the United States, we can hardly claim that it is written in the hearts of the people. We have a very large minority of foreign-born people who do not understand why their liberties should be abridged — why in this supposedly "free country" they should be controlled regarding their personal habits, as they were never controlled in the despotic countries from which they came. And there are thousands, perhaps millions, of Americans who do not fully understand the situation. Even some who have voted for prohibition, thinking they would in some way obtain a private supply of liquor for themselves, need education. Now that America has voted itself dry, its must be educated to understand the value of true temperance, or self-control.

We owe it as a duty to England and to other countries to educate so that prohibition may be a fact as well as a law. If other countries, looking to the United States, see that a large minority of the people are not in sympathy with prohibition and are taking every possible means to evade its enforcement, the temperance movement will be retarded in those countries.

We owe it to the people of the United States to educate them in this matter; for temperance enforced upon a people does not develop character and manhood. The people must come to realize that liquor is an evil, and learn to co-operate in every way in strict compliance with the law, because they understand and are in harmony with it. To be compelled to obey a law which seems unreasonable gives a sense of tyranny. To obey a law which we know to be reasonable and for our own good, gives a sense of freedom and good citizenship.

There is a growing movement to Americanize the foreigners in our midst, by teaching them English, acquainting them with American customs, and inducing them to become citizens. We should also Americanize them by teaching them to renounce their allegiance to King Alcohol.

WHY TOLERATE THE RAT?

THE rat is one of man's greatest enemies. Not that it has a grudge against mankind, but that its requirements, its ability to take care of itself, and its rapid rate of increase, constitute it a constant problem. Unless man destroys the rat, the rat soon destroys millions of dollars' worth of food; and not only that, the rat with the rat flea is the important means of transmitting to man the world-wide bubonic plague. So important is this feature of the rat problem that health authorities at various ports compel shipowners coming to dock to use measures to prevent the migration of rats. And often ships, for the same reason, are fumigated to destroy the rats.

Again, cities which have become plague infected are "rat-proofed." Owners are required to repair their structures so that they are rat-tight and to do away with open garbage barrels and other convenient supplies of food for rats. Moreover, by means of traps, poisons, and rat-destroying animals, such as terriers, the effort is made to reduce the rat population to a minimum. But notwithstanding all this, the rats continue to live and to multiply. There are enough places not rat-proofed, enough old shacks and slum places, to permit them to reproduce and keep the rat population very nearly if not fully where it was a century ago.

Certain wild animals and birds, such as the carrier pigeon, have become extinct as a result of man's depredations. The buffalo would long ago have become extinct were it not that a few of the species have been preserved and protected by law. And only the law prevents the extinction of some of our game and plumage birds. Not so the rat. It requires no law to protect it. Even if it is declared to be an outlaw and a bounty is set on its head, it will still thrive.

But remember! It thrives largely because there are those who maintain shacks, slums, ramshackle buildings, affording rat shelter, and because people will leave food and garbage where rats can feed.

In order to prevent harboring rats, every house should have a brick or a stone foundation, and all openings which a rat might reach from the ground should be carefully screened. When rats are persistent, all food should be kept in metal containers closed so as to be absolutely rat-proof.

If there are rats on the premises, the owner should without delay adopt efficient means for their destruction,— traps, a terrier, a weasel, or poisoned bait. Do not suffer them to remain around a single day.

DISEASE GERMS GET INTO BAD COMPANY

When a boy begins to run with a crowd of bad boys, he is soon accused of doing things which he may not have done and which he would not have thought of doing had he not been in bad company.

Some disease germs, while they actually produce disease, get into bad company, so that they are accused of doing some things they are not guilty of.

For instance, we speak of a person being "pock-marked," as if the disfigurement of his face were due to the smallpox germ; and, in fact, it is perhaps generally believed that the smallpox germ causes the pustules which end in the pitted condition.

The fact seems to be that the smallpox infection ends with the vesicles, or blisters; then just as the patient begins to feel better and to approach a normal temperature, the pus germs (of which there are always a number present on the surface of the body) infect the vesicles, and as a result pus forms, the temperature again rises, and the patient has a bad time. Then we have, in place of the original infection, a mixed infection in which the pus germs are doing the greatest damage.

Perhaps it was for this reason that when it was customary to vaccinate directly with human vaccine, physicians took the "eight-day lymph" from the blisters rather than wait until the pus infection. Otherwise they were likely to establish an abscess on the site of vaccination rather than a typical vaccine pimple, and to get a bad arm and no protection from smallpox.

Tuberculosis is another disease that often gets into bad company. The tubercle bacillus may live in the lungs for a long time without making much progress. It is when there follows a mixed infection — the pus germs and other germs adding their activities to those of the tubercle bacillus — that we get what is familiarly known as "consumption." Tuberculosis is curable, or at least may be arrested and held at bay for long periods. Consumption in the mixed form does not have nearly so hopeful a prospect. Tuberculosis is curable; consumption is not.

Influenza is another disease that when uncomplicated is comparatively harmless; but when there is added to it the germ of broncho-pneumonia and some others, the prognosis is more grave. Most influenza deaths were the result of complications caused by other germs than the influenza germ.

So with measles and scarlet fever. The serious conditions in these diseases are the complications caused by mixed infections. So we may say, at least in the case of a number of the most common diseases, that one does not die of the disease but of the complications.

The problem of the physician is, of course, to prevent so far as possible, the mixed infections that cause the complications.

QUESTIONS AND ANSWERS

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

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For personal reply, address J. W. Hopkins, M. D., Takoma Park, D. C.

Nostrum

"What is meant by nostrum, mentioned in some of your articles?"

According to Webster a nostrum is "a medicine recommended by its preparer; especially, a medicine the ingredients of which are kept secret by the inventor or proprietor; a patent medicine; a quack medicine."

Hypertension

"In hypertension, I have been told, it is sometimes dangerous to give treatment to lower the blood pressure. If high blood pressure is an unfavorable sign, why is it not good to remove it?"

The high blood pressure is only a symptom. It is nature's method of compensating — of patching up; and if we interfere by lowering the pressure, we may bring about a more dangerous condition. If the condition which is causing the high tension is removable, it is good practice to remove it, and then the pressure will take care of itself. Sometimes the high blood tension is merely an indication of a high nervous tension, worry, grief, and other peace-destroying conditions. If such be the case, then any measures which will restore peace to the patient will lower the pressure.

But more often, perhaps, there is at the bottom of the high pressure some organic trouble, arterial degeneration, heart or kidney trouble. In such a case, the condition may be only partially remediable. Treatment should be directed to the improvement of the heart and kidney functions and the removal of all unpleasant emotional states.

Often it does more harm than good for a patient to know that he has high pressure. The consequent worry is more likely than not to increase the pressure. G. H. H.

Aspirin

"Do you recommend the use of aspirin for colds or for headaches?"

The continued use of aspirin is not to be recommended in any condition. It should never be used unless under the prescription and supervision of a physician.

Laxative Diet

"What is a good laxative diet?"

That would depend on the person. Some need very little food of this kind, in fact need to avoid laxative foods. Others require just a little adjustment of the diet, as the use of bran or graham bread instead of white bread. Still others require a more vigorous treatment: coarse bread, laxative fruits, such as prunes, figs, etc., an abundance of coarse vegetables; and even then they may require to take something in addition, such as bran, agar, or mineral oil.

In general, it may be said that the laxative foods are the coarse foods as nature prepared them — the whole cereals, the coarse vegetables, the fibrous fruits. The use of sweets set up certain fermentations which increase the intestinal activity.

In connection with an anticonstipation diet one should perform regularly certain muscular exercises which involve the use of the abdominal muscles, and the bending of the trunk forward and back, and sidewise. These exercises have been described in former issues of LIFE AND HEALTH. Horseback riding and rowing a boat are excellent laxative exercises. One who has a strong tendency to constipation will not succeed with halfway measures, but must persevere in the matter of both diet and exercise.

G. H. H.

Tannin, Caffeine, Theobromine

"How can one detect tannin in tea, caffeine in coffee, or theobromine in cocoa, and how could theobromine be extracted from cocoa?"

There is no need to detect these substances; they are always present. However, one may easily demonstrate the presence of tannin in tea by adding a little tincture of iron. The iron and the tannin will combine to form ink. The demonstration of caffeine and theobromine is not so easy. But it would be just as useful to attempt to demonstrate that there is water in a watermelon. Caffeine is never absent from coffee or theobromine from cocoa, unless they have been tampered with artificially.

I know of no practical home method of removing theobromine from cocoa. Most people drink cocoa for the effect of the theobromine. There is a concern at Battle Creek, Mich., that makes a so-called "health cocoa" or chocolate from which it is claimed that the theobromine has been removed. For some reason this preparation has caused serious disturbance with some who have no trouble from using the regular cocoa. To them, at least, it has not proved to be a "health cocoa."

There is a coffee known as "Kaffee Hag," from which it is claimed that nine tenths of the caffeine has been extracted. But if one desires a caffeineless beverage it is perhaps better to use one of the "coffee substitutes."

G. H. H.

Bronchial Catarrh — Itching Anus — Vitamines

"What can be done for bronchial catarrh? What can be done for intense itching of the anus? Are vitamines and mineral elements the same?"

Acute bronchial catarrh should be under the supervision of a physician. In chronic bronchial catarrh foods which clog the liver, as sugars and fats in excessive amounts, should be avoided. The bowels must be regulated by laxative diet, mild cathartics, etc., and the skin stimulated by warm baths and cool sponging. A person suffering from bronchial catarrh should stay a great deal in the open air; the hours of work should be limited so that the health may be built up and the reserve strength increased.

Intense itching of the anus is sometimes due to worms and sometimes to irritating discharges. In either case the condition of the lower bowel should be kept as healthy as possible. An enema with a tablespoonful of salt to two quarts of water should be taken at night, and the parts thoroughly cleansed and washed with a solution containing a teaspoonful of carbolic acid to the quart of water. This mixture should be labeled poison and be kept away from the children.

Vitamines and mineral elements are not the same thing. The exact composition of vitamines is not known, while the mineral elements are combinations of sodium, potassium, magnesium, etc., with various acids, as phosphoric, hydrochloric, etc.

Lydia E. Pinkham's Vegetable Compound, and Wine of Cardui

"I am having trouble with my menses. I go about six weeks and am much depressed during the preceding two weeks. Am twenty-four years old and very fleshy. Do you recommend Lydia E. Pinkham's Vegetable Compound or Wine of Cardui? If not, can you suggest a remedy?"

The treatment of your trouble does not consist in the use of Wine of Cardui, or in taking Lydia E. Pinkham's Vegetable Compound. We do not prescribe either of these medicines, because we do not know what they contain other than an excessive amount of alcohol. If you resort to medicine, it should be prescribed by your physician and be taken under his direction.

It seems to me that your trouble is due to obesity, and that you should, therefore, reduce your weight. You should limit not only the amount of food you eat, but the number of articles as well. And you should secure the proper amount of exercise and rest. Take no fluid with meals or within half an hour before or after meals. This is important. You should very carefully regulate your bowels. Short cold sitz baths, of say five or six minutes' duration, at a temperature of from 65° to 75° F., accompanied by a thorough rubbing of the hips, abdomen, and back, will often relieve this condition. These treatments should be discontinued as the menstrual period approaches, and warm or hot baths should be taken instead. Hot douches are helpful. You should have a local examination to make sure that there is no growth that is obstructing the menstrual flow.

Pinworms

"I pass very small white worms and have some itching around the anus. What is the remedy?"

Keep the bowels fairly free with moderate doses of cascara or castor oil. Take an enema consisting of a solution of two tablespoonfuls of salt to each quart of water and retain it for a reasonable length of time. If the salt enema does not give relief, get a half pound of quassia chips and let them soak overnight in four quarts of water which was hot when you poured it on the chips. Cleanse the bowels by a simple soap enema, then use this water from the quassia chips as an enema and retain it for a few minutes.

Acid Stomach, Heartburn, Belching

"My stomach burns after I eat and I do not get hungry. After I begin to eat I do not know when to stop. I belch a great deal, and get weak and nervous and cold."

You are suffering from excessive acid in the stomach. You must refrain from eating great quantities of protein, both animal and vegetable. Avoid meat, fish, and chicken. Take a tablespoonful of olive oil at the beginning of your meal, and avoid coarse vegetables, such as cabbage and parsnips, unless they are tender. Use foods requiring little mastication, as corn flakes and other dextrinized cereals.

Keep your bowels regular by the use of mineral oil, one tablespoonful or two at bedtime. You may perhaps have to use an enema to move your bowels and a little cascara or salts occasionally. Take fomentations to your stomach and liver at night, and wear a moist bandage around your stomach and bowels, covered by a flannel bandage. Then, when you take this bandage off upon arising in the morning, sponge the abdomen with cold water.

NEWS NOTES

Registration Area

The death-registration area of the United States in 1917 comprised 27 States, the District of Columbia, and 43 cities in nonregistration States, with a total estimated population of 75,000,000, or about 73 per cent of the estimated population of the United States. (The territory of Hawaii has recently been added to the registration area, but the figures given in this summary relate only to continental United States.)

Pneumonia in 1917

In the registration area pneumonia (including broncho-pneumonia) was responsible for 112,821 deaths, or 149.8 per 100,000. This rate, although much lower than that for 1900 (180.5) or for several succeeding years, is higher than that for any year during the period 1908-16. The lowest recorded rate for pneumonia was 127 per 100,000 in 1914. The mortality from this disease has fluctuated considerably from year to year since 1900, the general tendency having been downward until 1914 and upward from 1914 to 1917.

1917 Mortality

The Census Bureau's annual compilation of mortality statistics for the death-registration area in continental United States shows 1,068,932 deaths as having occurred in that area in 1917, representing a rate of 14.2 per 1,000 of population. Of these deaths, nearly one third were due to three causes,— heart diseases, pneumonia, and tuberculosis,— and nearly another third resulted from the following nine causes: Bright's disease and nephritis, apoplexy, cancer, diarrhea and enteritis, arterial diseases, influenza, diabetes, diphtheria, and bronchitis.

Tuberculosis in 1917

Tuberculosis in its various forms caused in the registration area 110,285 deaths, of which 97,047 were due to tuberculosis of the lungs. The death rate from all forms of tuberculosis was 146.4 per 100,000, and from tuberculosis of the lungs, 128.9. The rate from tuberculosis of all forms declined continuously from 200.7 per 100,000 in 1904 to 141.6 per 100,000 in 1916, the decrease amounting to nearly 30 per cent; but for 1917 an increase is shown. Until 1912, more deaths were due to tuberculosis than to any other single cause, but in that year and during the period 1914-17 the mortality from tuberculosis was less than that from heart diseases, and in 1917 it fell below that from pneumonia also.

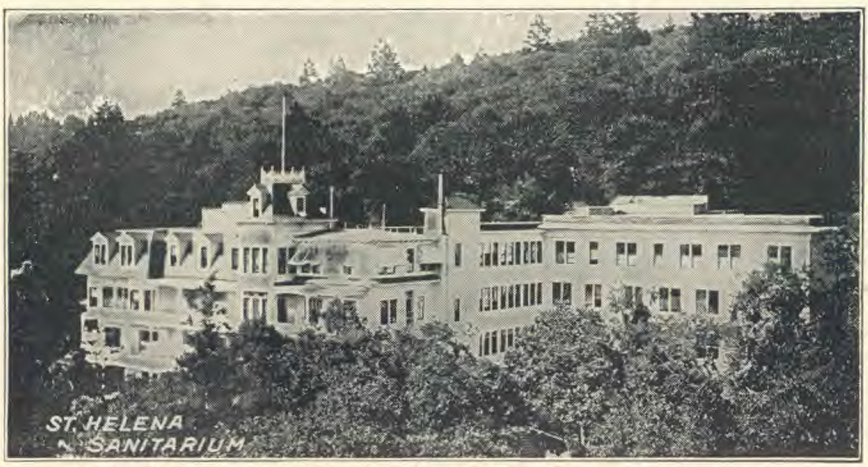
Heart Disease in 1917

The deaths from heart diseases (organic diseases of the heart and endocarditis) in the registration area numbered 115,337, or 153.2 per 100,000 population. The death rate from this cause shows a noticeable decrease as compared with 1916, when it was 159.4 per 100,000. There have been fluctuations from year to year, but in general there has been a marked increase since 1900, the earliest year for which the annual mortality statistics were published, when the rate for heart diseases was only 123.1 per 100,000.

Concerning Cancer

It is often laid down as an axiom that cancer cannot be treated successfully unless a correct diagnosis has been made in the early stages of the disease. This statement is obviously true. On the other hand, the fact that cancer occurring in certain parts of the body is, as a rule, most difficult, almost impossible to diagnose correctly at first, is not taken sufficiently into consideration. . . . Lawson Tait . . . said that accurate diagnosis in the abdomen was not possible, and that only the ignorant asserted that it was so, while only fools attempted it. Perhaps this was a somewhat blunt way of putting the situation, but it may be stated of internal cancer, that its early diagnosis is, generally speaking, practically impossible.— *New York Medical Journal, Editorial, Aug. 2, 1919.*

St. Helena Sanitarium



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INFLUENZA

REGARDING influenza there is one thing on which doctors agree: *It will return.* How severe it may be this winter no one knows. Owing to the certainty of an early recurrence, every one should be in possession of the fundamental facts regarding the disease. This special issue of LIFE AND HEALTH is published to meet this want.

G. H. H.

THE MACHINE GUN THAT KILLED OUR BOYS OVER THERE

THE MACHINE GUN THAT KILLED OUR BOYS, GIRLS, MEN, WOMEN, AND BABIES — MANY MORE OF THEM— OVER HERE

With acknowledgment to the North Carolina *Health Bulletin*

Life & Health

PUBLISHED MONTHLY BY THE

REVIEW AND HERALD PUBLISHING ASSN., TAKOMA PARK, WASHINGTON, D. C.

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

Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of Oct. 3, 1917, authorized on June 22, 1918.

EDITORS

L. A. HANSEN G. H. HEALD, M. D.

VOL. 34 NOVEMBER, 1919 EXTRA

How to Keep from Getting Influenza

By the National Conference of Army, Navy, and Civilian Doctors

1. Avoid contact with other people so far as possible. Especially avoid crowds indoors, in street cars, theaters, motion picture houses, and other places of public assemblage.

2. Avoid persons suffering from "colds," sore throats, and coughs.

3. Avoid chilling of the body or living in rooms of temperature below 65 degrees or above 72.

4. Sleep and work in clean, fresh air.

5. Keep your hands clean, and keep them out of your mouth.

6. Avoid expectorating in public places, and see that others do likewise.

7. Avoid visiting the sick.

8. Eat plain, nourishing food, and avoid alcoholic stimulants.

9. Cover your nose with your handkerchief when you sneeze, your mouth when you cough. Change handkerchiefs frequently. Promptly disinfect soiled handkerchiefs by boiling or washing with soap and water.

10. Don't worry, and keep your feet warm. Wet feet demand prompt attention. Wet clothes are dangerous, and must be removed as soon as possible.

What to Do if You Have Influenza

By the National Conference of Army, Navy, and Civilian Doctors

1. If you get a cold, go to bed in a well-ventilated room. Keep warm.

2. Keep away from other people. Do not kiss any one.

3. Use individual basins, and knives, forks, spoons, towels, handkerchiefs, soap; wash plates and cups.

4. Every case of influenza should go to bed at once under the care of a physician. The patient should stay in bed at least three days after fever has disappeared and until convalescence is well established.

5. The patient must not cough or sneeze except when a mask or handkerchief is held before the face.

6. He should be in a warm, well-ventilated room.

7. There is no specific for the disease. Symptoms should be met as they arise.

8. The great danger is from pneumonia. Avoid it by staying in bed while actually ill and until convalescence is fully established.

9. The after-effects of influenza are worse than the disease. Take care of yourself.

10. Strictly observe the State and city rules and regulations for the control of influenza.

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INFLUENZA

H. W. Miller, A. B., M. D.

NO disease in modern times has spread over so wide an area, carrying down so large a percentage of men and women as the influenza pandemic of 1918. We have seen an epidemic of dengue fever in which 85 to 90 per cent of all the people were sick at the same time. However, the disease was limited usually to one city or village. While the discomfort was severe for two or three days during the height of the epidemic, the death rate was insignificant. Again, we have seen bubonic plague, formerly known in Europe as "black death," ravage the cities with a most alarming death rate,—about 70 per cent of all those affected. However, the duration of the disease is so short and the number affected at one time so comparatively few, that this dread disease does not begin to compare in severity with influenza, in which from 60 to 70 per cent of the inhabitants of certain cities came down within a period of a few weeks, a very large number of whom — about 15 per cent — developed pneumonia. Of these pneumonia cases about three fourths proved fatal, making a death rate of about 10 per cent of those coming down with the primary disease.

In the city of Buffalo, where there was faithful reporting of influenza cases on the part of the medical profession and householders, there were 33,880 cases of influenza and pneumonia reported between Oct. 1, 1918, and March 31, 1919, and of this number 3,179 died, either directly from influenza or from pneumonia. These statistics, we believe, may be taken as fairly representative of the epidemic. Thus, with a disease which in its duration covered a number of weeks, and which in every locality affected the greater share of people, we have a very high mortality rate.

Then again, epidemics of dengue fever and bubonic plague were local, whereas in this nation and in other nations, influenza raged in every city, town, and rural district. Influenza seemed to travel the world over, in accordance with the transportation facilities afforded. Dr. Simon Flexner, of New York, said:

"In east Russia and Turkestan, influenza spread with the pace of the caravan; in Europe and America, with the speed of an express train; and in the world at large, with the rapidity of an ocean liner; and if one project forward the outcome of the means of intercommunication of the near future, we may predict that the next pandemic, should one arise, will extend with the swiftness of the airship."

In the great pandemic of influenza in this country in 1889-90, it was three or four years before the mortality from influenza and pneumonia returned to the normal. The incidence and mortality of influenza was practically as great the second year as the first. We may therefore reasonably expect that influenza will continue to be one of the potent diseases with which health authorities will have to deal for several years to come, and that we may see this great pandemic showing even a higher mortality this year.

The Active Cause of Influenza

At least five germs are more or less constantly present in influenza, or complicate the condition of the influenza patient. These bacteria have not been proved to be the cause of the epidemic, but it rather appears that the epidemic is the result of a contagious virus. One or more of these bacteria, ordinarily found lurking in the nasal and mouth passages, take advantage of the lowered resistance, begin active growth, and through the production of their particular poison, serious complications so

common to this disease have their inception.

Though no other disease has had such careful study given to it by so large a percentage of the medical profession, from the ablest laboratory technician to the consulting and carefully observing family physician, the specific cause of influenza is not yet known. Were we better acquainted with the characteristics of the particular virus of this disease, much might profitably be said in regard to combating the disease through prepared vaccines.

Dr. Charles J. Hastings, of Toronto, makes this very startling statement which is confirmed by the able men of this and other lands:

"Soon after the declaration of the war that we have just passed through, there was a very valuable and significant pamphlet published and circulated broadcast throughout the country, entitled 'Know Your Enemy.' I think that we had better recognize the importance of this and acknowledge the fact as promptly as possible, that we do not know our enemy in the pandemic we have just passed through. Various organisms have been found present, and numerous strains of each, and there have been cases where they have all three been present, and [cases] where one only has been present. So that we are not justified in saying that any one of them is the cause of the disease. *This being the case, we must assume that we do not know what is the cause of this disease.* [Italics supplied.] It may possibly have been a malignant form of the mild influenza of former years. I am sorry to learn that there are yet a few who have some faith in vaccines and who claim to have had wonderful results from their use. That there is a tremendous amount of virtue in vaccines cannot be doubted, but how can we claim to have a valuable vaccine when we do not know what we are preparing it for? Until we know the organisms that cause the disease, we cannot hope to have an efficient vaccine. We must recognize the fact that vaccine is along the right line. We hope that a vaccine will be perfected and will have the desired results, but do not let us continue to claim that we have an efficient vaccine at present, which I am satisfied we have not."

Our knowledge up to the present makes it clear that influenza is transmitted through the mouth, nasal and respiratory passages, the same as the pneumonias and the late epidemic of poliomyelitis (infantile paralysis), and it is thus an air-borne disease, and therefore one of the most difficult to quarantine against.

Predisposing Causes and Quarantine

Since influenza seems virtually to pollute the air with its virus, none living in a community or city where the influenza exists may feel warranted in assuming that he can obtain exclusive isolation from it. One is certain in many unexpected ways to come in contact with the virus. Therefore, *the greatest dependence must be placed on the maintenance of the body in the highest state of physical development and health.* Thus far the greatest weapon in fighting the influenza is a good body resistance gained through careful attention to the laws of health and hygiene and an almost sacred regard for the conservation of strength and energy when the first symptoms of this disease appear.

During an influenza epidemic every cold should be looked upon with suspicion, and radical measures for its cure should be adopted at once. Decreased vitality, as evidenced by backaches, headaches, languid, tired feelings, drowsy condition with poor appetite, loss in weight, and poor circulation, require prompt care and attention.

Prevention

While it is evident that quarantine has thus far sufficed to prevent the dissemination of influenza, yet it is just as true that influenza is a comparatively mild disease, that reacts quickly to early and thorough treatment. It is a disease that can be cut short in its duration, and when properly handled from its very beginning, may show a possibility of one hundred per cent recoveries. Though many men and women have taken cold and, as they sometimes say, "wore it off," it is a very serious thing to attempt to "wear off" this influenza infection.

The first requisite in the treatment of the disease is rest. With the cessation of physical and mental labor, the whole force and energy of the body can be di-

rected actively to the suppression of the poisonous virus; and while the excuse frequently is given that one cannot take time to give himself care and treatment or to stay away from work on account of a little indisposition in the way of a cold and slight fever, the possibility of loss of time, and health, and life itself from neglect should be given some consideration.

In the first place, one who goes about his work with a cold casts off in his breath virulent germs that find their entrance into the air passages of many previously uninfected persons. Thus every person who goes around with a cold, especially of the influenza type, is an active carrier of disease to others. When we consider that during the past year between six hundred thousand and seven hundred thousand of the best of our manhood and womanhood have been lost, and when we think of what these lives might have contributed to industry and society had they lived the full term of their productive years, we realize that it is not wise to take risks upon life as a measure of economy.

In a series of more than four hundred cases of influenza under my observation, which were treated from the beginning, there was only one case of pneumonia, and that case recovered; several cases of influenza that sought no help or treatment during the early stages but kept on their feet, were the means of infecting many other persons, and lost their own lives with pneumonia of a severe type which baffled all methods of treatment.

The importance of the early care of slight illnesses needs to be impressed upon the people. All serious troubles are usually slow in their inception, and are usually remedied by early treatment. Any person who has a severe cold, with a chilly sensation and flashes of heat, should immediately have his temperature taken and the pulse counted. If these are found deviating from the normal, he should give himself over to early care, and thus not only reduce the time of illness, but make recovery more certain, and escape with a mild condition which might otherwise have been serious and have terminated disastrously.

The Onset of the Disease

The symptoms of influenza are generally quite typical, although there are several types of the disease itself. It is usual during the period of an influenza epidemic to regard almost any symptom, be it headache, backache, vomiting, diarrhea, fever, chill, cough, or croup, as the beginning of influenza. This, however, is an error, since it has been found that the other acute infectious diseases that are present in almost every locality each year, such as measles, scarlet fever, whooping cough, typhoid, malaria, pleurisy, and pneumonia are as common during a pandemic of influenza as at other times. Thus we urge that each person obtain at once such skilled medical aid as will give his case an accurate diagnosis.

The ordinary attack of influenza begins with a sudden and rather severe aching of the entire body, headache, watering and reddening of the eyes, hoarseness, a cough of varying degrees of intensity, with a rapidly developing exhaustion. This extreme exhaustion seems to be due to the fact that poison is elaborated in tremendous quantities by the infecting organisms and is disseminated with great rapidity through the body.

Symptoms

There are three principal types of influenza. In the first, the infection seems to be particularly located in the respiratory passages, most directly affecting the lungs and sometimes extending to the pleura. In the second type, the gastro-intestinal tract bears the brunt of the attack, and, in the third type, the nervous system seems primarily affected.

Type 1.— The attack often begins with sneezing, running at the nose, redness and some degree of soreness around the margin of the nose, quickly followed or perhaps preceded by a cough, either of a ticklish character or of the type that is caused by irritation down deep in the chest. At first the cough is tight, and the breathing a little hampered. Any exertion seems to excite these symptoms. With the onset there comes a general feeling of exhaustion. The temperature frequently rises to 102°, varying slightly up and down from this for the first day or two. The skin may be dry and tense, but there is frequently a tendency to perspire. The throat may be sore, simulating tonsillitis, or the disease may be complicated by tonsillitis. This type of case, more frequently than any other type, results in pneumonia, often complicated by pleurisy.

The pneumonia that follows influenza is of a severe type. The lungs usually show infection; that is, both lungs are infected with pneumonia. The chest fills up rapidly, and the patient becomes cyanosed, or blue. The pulse is exceedingly rapid, from 120 to 160 beats a minute, with a very feeble, wiry impulse felt at the wrist. The respiration becomes very rapid, ranging in frequency from 40 to 60 a minute in extreme cases, and there is considerable "rattle" in the chest. The patient, who now has a very anxious look, soon becomes unconscious, owing to the severe infection. When these severe symptoms set in, there seems to be no remedy; for cases of this kind are almost invariably fatal. No system of treatment appears to be of any avail, whether it be vaccines, hydrotherapy, heart stimulants, or drawing off of the blood; all remedies fail, and the patient rapidly goes into collapse.

The duration of the pneumonias of influenza is from one to five days. Those living beyond the five-day period will, with proper care, usually recover, but those that recover are patients in whom only a limited amount of the lung tissue is affected.

Type 2.— In this type of influenza in which the stomach and intestines seem especially to suffer from the poison of the virus, we have as the earliest symptoms nausea, vomiting, extreme prostration and dizziness. The exhaustion seems almost complete to the extent that the patient dreads to move an arm or a leg, and such movement or shifting of the position often gives rise to a sudden onset of nausea and vomiting. Cough may be present, and usually the face is flushed and the eyes are congested and red. There is a general aching all over the body. The bowels may be constipated, but occasionally there is quite a severe diarrheal attack. There are periods when the patient is pale and seemingly almost lifeless. The temperature runs from 103° to 104°. The duration of this type is generally very short, and after active elimination is established, convalescence is rapid. The exhaustion attendant on this type of influenza frequently prevents patients from getting about, so they are not exposed to the complications of Type 1.

Type 3.— In this type the brain and the nerves seem to be especially affected by influenza poison. The early symptoms are those of excitation of the nervous system. In children, there may be convulsions; in adults, marked nervousness, characterized by rapid breathing, queer actions, and incoherent speaking, ending in a sort of delirium which may last from one to several days. The temperature frequently runs very high, from 104° to 105°. The body is in a tremor, the reflexes are greatly exaggerated, and there is found more or less rigidity, or stiffness, of the muscles. The most frequent complication in this type of influenza is heart and kidney trouble, the urine being scant and frequently containing albumin and casts. There is extreme headache and backache, and often neuritis, affecting the nerves in general, or those in some particular extremity.

The eyes roll upward, the head is often drawn back with the chin up, and in many respects the patient resembles one

suffering with the early symptoms of meningitis. In the recent epidemic there were many fatalities due to this type of influenza; more perhaps than to any other type, except Type 1 complicated with pneumonia.

Complications

Following the pandemic of October, November, and December, 1918, the hospitals of this country, as well as the physicians, were busy as never before in looking after the delayed recoveries of a large number of influenza cases, and in treating the resulting complications. Probably no epidemic has ever left such a large percentage of the people with weaknesses as has influenza.

A great many persons were left with mental weaknesses, ranging from feeblemindedness to acute mania. The fever resulted in many cases of degeneration of the heart muscle, with general feebleness due to the limitations of this vital organ. Bright's disease was occasionally a complication. In some cases there were impaired digestion and disturbed nutrition with recurring acute attacks of dyspepsia; and through the disturbance of the digestive tract, there were cases of acute appendicitis and gall-bladder disease. Pleurisy sometimes followed either an attack of pneumonia or, more directly, an attack of influenza. Many of these pleurisies developed into empyema, or filling of the cavity with pus, cases being on record in which more than a gallon of pus was removed. Certain cases terminated in multiple abscesses. Meningitis, running ears, mastoiditis, neuritis, paralysis of one or more of the extremities, were also frequent consequences. Influenza has frequently resulted in some chronic disease. It is indeed true that the physical and mental incapacity resulting from the pandemic doubtless outweighed in seriousness the death rate from the disease. Thousands of people are not only unable to be producers themselves, but, of necessity, must consume the time and efforts of others in caring for them through life.

In addition to the above general complications, there are special complications too numerous to mention in a brief consideration of the subject. A sufficient number are mentioned here to cause a more general awakening in regard to the significance of this terrible pandemic and to call attention to the necessity of every individual's making thorough preparation to deal with the disease in its most curable stage — the onset.

TREATMENT

The essential lines of treatment will be given, with their relative importance in combating the symptoms of the disease; and for the benefit of those needing instruction in giving treatments at home, the *methods* of administering them will be described.

It has been well established that influenza can be limited not only in its duration but in its severity by appropriate treatment. Some infectious diseases run a definite course, but this is not true of influenza.

The treatment of influenza may be considered under four headings: General Care and Nursing, Diet, Hydrotherapy, and Medicines.

General Care and Nursing

From the time the first symptoms are evident, the influenza patient should have close supervision. In order to avoid exposure of other members of the family, he should be isolated. A room with southern exposure, preferably an upstairs room, should be selected. It should be close to the bathroom, but separated as much as possible from the rest of the home. One member of the family, or better, a nurse, if no more than a practical nurse, should be secured for the constant care of the patient.

Rest is the first essential. Many persons recover from influenza if they can simply get the rest needed. Influenza patients should always be kept warm, and if there is a tendency to chill, more covering should be added and a hot brick or a hot water bottle placed in the bed. Hot drinks, such as hot lemonade, hot

milk, hot broths, and strained hot soups, are all beneficial in keeping up the body warmth. The feeling of chilliness at the onset of the disease may be overcome by giving a warm foot bath and fomentations to the spine. The patient should not be allowed to chill.

The next essential is good ventilation. This is beneficial to both patient and attendant. Fresh air is the best disinfectant. Bacteria do not thrive in air that is in circulation and exposed to the sunlight. For this reason the room should have both sunlight and a free circulation of fresh air, care being exercised that no part of the body, not even so much as an arm, is exposed to a draft. Drafts in a room are not objectionable, they are even desirable, providing the body of the patient is not exposed to them.

In influenza, the breathing is usually hampered, thus the patient does not receive sufficient oxygen, which is one of the chief defenses of the body, and one by which the disease poisons are destroyed. In any infection, and especially in influenza, it is important that ventilation be well provided for; and furthermore, for the protection of the attendant, it is important that the bacteria-laden air be disposed of as quickly as possible.

The room should contain only such furnishings as are absolutely necessary for the care of the patient. The carpet or large rug should be removed, and floor mats or small rugs used.

Three times each day a record should be taken of the patient's temperature, pulse, and respiration,— at six in the morning, at noon, and at six in the evening. Every family should have a fever thermometer. Very little effort is required to learn to read the thermometer, and thus accurately register the temperature. The pulse is best counted at the wrist on the thumb side. The number of respirations should be taken, and at a time when the patient is not aware of it; the character of breathing should also be observed.

When there are more than thirty complete respirations a minute, it is quite evident that there must be some pulmonary trouble; and should there be an expiratory grunt and the breathing be of a panting character, so that the patient speaks with difficulty, this is further evidence confirming the presence of pneumonia.

If the patient is in a light room, and the eyes are sensitive to light, feel painful, look red, have a tendency to water, there are three things that can be done: draw the blinds, which is the least desirable thing to do; or cover the eyes with a cold compress, which should be frequently changed; or procure shaded lenses.

It is highly important to have the patient drink copiously of water throughout the entire period of the disease.

Influenza patients should not be allowed to have visitors. It is against the law in many municipalities, and it is not good for the patient. An ordinary conversation will oftentimes send up the temperature one or two degrees.

While it is desirable at times to change the position of the patient for comfort, many influenza patients dread even the movement of an arm or a leg. Keep the patient as quiet and comfortable as possible.

Any tendency to constipation should be overcome by the use of a cascara preparation in proper dosage, or by enemas. There should be a daily movement of the bowels.

Diet

Influenza patients usually have a good appetite. As a rule they eat more than they ought, considering the fact that they have a fever. In view of the fact that they can eat and that a surplus of food is not desirable, it is highly important that the diet be selected with great caution. What is ordinarily termed a liquid diet or a soft diet, should constitute the meals prepared for influenza cases. By a liquid diet we understand such prescriptions as the following:

1. Broths and clear soups.
2. Gruels.

3. Milk, either plain or modified in such a way as to make it more digestible, more nutritive, or more attractive to the patient.
4. Raw eggs in combination with water, milk, fruit juices, cocoa, or other fluid.
5. Cream soups of various kinds.

Meat broths are of little value, since they have practically no nutritive elements in them; but good broths can be made from vegetables and legumes.

The liquid diet can be given in small amounts and at frequent intervals, as often as every two or three hours. Its advantage is that it is readily digested, leaves the stomach quickly, and in a short time enters into the circulation, giving nourishment to the tissues.

An excellent vegetable broth, known as "*Scotch broth,*" is made as follows:

2 tablespoons pearled barley.
1 tablespoon coarse oatmeal.
½ cup whole-wheat bread crust.
1 cup milk.
½ cup thin cream.
1 diced turnip.
1 grated carrot.
Salt to taste.

Soak the barley and oatmeal in water overnight. In the morning put the grains, together with the water in which they were soaked, in a kettle, and add sufficient water to make two quarts. Allow to simmer for several hours. About an hour before the broth is ready, add the turnip, carrot, and bread crust. Rub all through a colander, and add salt and milk or thin cream. This will make about three pints of broth. It may be kept in a refrigerator and used for two or three days, alternating with other liquids.

Vegetable bouillon, another excellent broth, is made as follows:

1 pint strained tomato.
1 pint potato water.
2 medium-sized onions.
½ cup chopped celery.
1 pint split-pea broth.

Cook the tomato, chopped onion, and celery together for two hours. Combine with the broth from the peas and potato water. Add one bay leaf and a pinch of thyme. Strain all through a fine strainer. Salt to taste, and reheat portions of it to serve as needed.

A very nutritious liquid food is *gluten gruel,* made as follows:

Sift two tablespoons gluten meal slowly into one cup boiling water, stirring constantly to avoid the formation of lumps. Let it boil until of the desired thickness. A little cream may be added just before serving, to thin it sufficiently so it may be drunk as a liquid.

Hot milk and hot malted milk are also nourishing liquid foods. Buttermilk or prepared kumiss, in addition to their nutritive value, have a bactericidal property tending to reduce the bacteria in the intestinal contents.

Fruit albumen is made as follows:

The white of one egg is cut up by chopping it thoroughly until it will readily mix with water. Add it to the juice of half a lemon or the juice of one orange, or one third of a glass of grape juice or some other fruit juice, and dilute with water until the glass is about three fourths full. It may then be sweetened as desired. This is a delicious drink, especially if a little ice is added in warm weather. It can often be kept in the stomach when other liquids are refused.

The heavier foods in a liquid diet are the *cream soups. Cream rice soup* is made thus:

½ cup rice.
4 stalks celery.
1½ quarts rich milk.
Salt to taste.

The rice and celery stalks are cooked together in a double boiler in one pint of water. When cooked until tender, add one and one-half quarts of milk. Heat, and thicken with a little cornstarch to the consistency of thin cream. Salt to taste, and it is ready to serve. Similar soups may be made of beans, barley, oatmeal, and other cereals.

If the patient's temperature is running low and the appetite craves stronger food than that supplied by a liquid diet, what is known as a soft diet — a diet be-

tween the liquid diet and a very simple wholesome regular diet — may be given. This diet is usually more acceptable to the patient, since he frequently tires of only liquids. It contains more nourishment and is less bulky. Among the more common articles found in the soft diet may be mentioned toast softened with water, milk, or cream; custard; junket; blancmange; ice cream; ices; and sherbets.

Noodle soup is a food usually acceptable to the sick. It is made of the following ingredients:

3 egg yolks.
¼ cup of nuttolene.
1 quart bean broth.
1 cup strained tomato.
Flour.
1½ level teaspoons salt.

Put the egg yolks into a mixing bowl and add one teaspoon cold water and one-fourth teaspoon salt. Stir in enough flour to make a stiff dough. Put the dough on a kneading board, and knead into it as much flour as it will take. Roll out very thin, and let it dry a little. Then roll up into a roll, and with a sharp knife cut into very thin strips. Shake them apart and allow them to dry, after which they are dropped into boiling salted broth.

The broth is prepared by cooking one pint of Lima beans in water with one teaspoon salad oil until done. Drain off the broth, add one cup strained stewed tomato and the noodles. Cook rapidly until the noodles are well done. Just before serving, add the nuttolene chopped fine or diced.

Baked vanilla custard is made of the following ingredients:

1 quart milk.
3 eggs.
4 tablespoons sugar.
Pinch of salt.
½ teaspoon vanilla.

Into the milk stir the sugar and the eggs well beaten. Add the salt and vanilla extract. Turn into a pudding dish, place the dish in another dish partly filled with hot water, and bake until the custard is set.

Rice pudding, cornstarch pudding, and chocolate blancmange are varieties of this class. Most housewives are acquainted with the recipes for these, so we will not give them here. Fruit sherbet is to be preferred to ice cream, the chief trouble with ice cream being the large amount of sugar and the low milk and cream content of much of the manufactured article.

We do not recommend that an influenza patient be put on regular diet until the temperature has been reduced to normal, as too much nourishment at this time often results in nausea, sudden rise of temperature, and increased headache or backache. It is safer to err on the side of conservation in the diet than to try an enforced diet.

Hydrotherapy

Hydrotherapy, or the use of water treatments, is the most effective means of relieving the distressing symptoms of influenza, cutting short the duration of the disease, and making recovery more certain.

Tub baths, local and general packs, can be given in every home, and with a little instruction, they can be used with great effect.

The earliest symptoms and the ones most likely to attract our attention, are tightness in the chest, a chilly sensation, and cough.

The first treatments given should be designed to induce free perspiration. By diminishing the toxins, or poisons, in the system, the prostration, exhaustion, headache, backache, and other painful symptoms will be relieved.

The Footbath.— Often the hot foot bath is sufficient to produce perspiration, provided the patient is well covered with a sheet next to the body and one or more blankets over that. In giving a hot foot bath a dishpan or, better still, a large pail, may be used. The large candy buckets which can be secured from confectioners are very good for this purpose, as they hold considerable water, are large at the bottom, and usually deep.

WET HAND RUB

The feet are immersed in water as hot as can be well borne, and hot water is added from time to time.

To prevent any danger of getting the bed wet, it is often convenient to place the patient crosswise of the bed with the legs hanging over the edge of the bed and the feet immersed in the pail of hot water set on a footstool or box. Care should be taken to keep the body well covered.

The Wet Hand or Cold Towel Rub.— After any hot treatment, the body should always be cooled. This can be done by means of tepid or cool water applied, in the form of a wet hand rub or a cold towel rub, first to each extremity, then to the trunk, and afterward to the back. Fifty-per-cent alcohol, or witch-hazel may be used in place of the water, if desired.

The method of procedure is much the same, whether water, alcohol, or witch-hazel is used: One arm is first exposed, a Turkish towel is laid underneath the arm with one end tucked well up in the armpit. The hands of the attendant are then dipped in cold water and the arm is briskly yet gently stroked from the hand up to the shoulder and back again by rotary movements around the arm. This may be applied once, twice, or three times, depending on the strength of the patient and the degree of perspiration.

If a cold towel rub is given, the towel is dipped into the cold water, and wrung so as not to drip. It is then wrapped around the arm, and the attendant strokes or pats the outside of the towel, bringing it in contact with the entire arm. It is then quickly removed, and the arm is dried with the Turkish towel, care being taken to dry it thoroughly. The leg on the same side is treated in the same way, then the opposite leg, and the other arm; then the chest; and last of all, the back. For the chest and back, two Turkish towels are required, one on either side of the patient, to prevent the bed from getting wet. It is important, when giving these treatments, not to allow the patient to remain in a damp bed.

The Fomentation.— A fomentation is the most frequently used of any heating application. It is easy to prepare, convenient to apply to any part of the body, and very effective. Fomentation cloths may be made by cutting a half-wool-and-half-cotton blanket into pieces about a yard square. There are usually at least two cloths, an outer dry cloth and an inner wet cloth. The latter may be double. It is usually well to have the inner part of the fomentation,— the cloth that is to be dipped in the boiling water,— folded to a definite size. For instance: Take two thicknesses of blanket, one yard square, fold one edge one third of the width, and lap the other edge back over the first one third, which makes a pad of six thicknesses, about one foot wide and three feet long. It is now ready to be dipped into the boiling water.

Grasp an end of the cloth in each hand, and immerse the central portion in a pail or kettle of boiling water. With the right hand twist the cloth from the body, and with the left hand twist the other end toward the body. When the fomentation has been twisted quite tightly, give a quick stretch, holding one end on the edge of the pail. This allows the water to drain into the vessel. Lift the fomentation, release one end, and by a slight whirl it will quickly untwist itself. Lay the fomentation lengthwise in the center of the dry cloth, and fold the dry cloth over the wet one.

WRINGING THE FOMENTATION CLOTH

For the chest, abdomen, or across the small of the back, a fomentation should be folded to a square, about twelve by twelve inches. This is done by overlapping the two ends of the wet fomentation and then folding over it the dry cloth. For the spine, the fomentation should be folded lengthwise once (about six by thirty-six inches) and covered by the dry cloth. If it is to be applied around the chest, around the stomach and liver, or around a painful joint, it should be laid down without any folding (about twelve by thirty-six inches), and wrapped in the dry cloth.

If it is found that one thickness of the dry woolen cloth is not sufficient to prevent burning, a Turkish towel may be laid over the part to be fomented, under the fomentation, and left there until the fomentation is sufficiently cooled; then it can be withdrawn. By this means a very hot fomentation may be used and its effect continued a longer time.

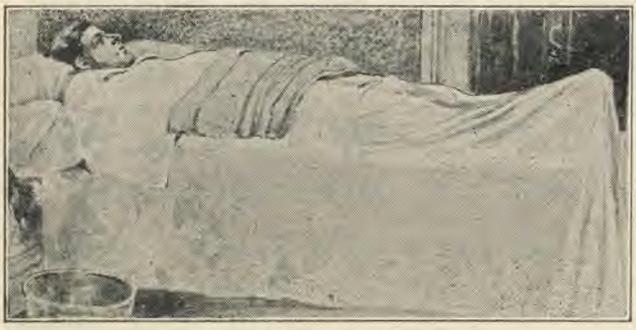
For tightness in the chest, fomentations ought to be applied over the front

of the chest, between the arms, coming well down over the chest on either side. Such an application should be continued from three to five minutes, depending on the amount of heat in the fomentation

Dry Cloth in Position

cloth. When it is removed, cold should be applied to the skin by means of ice or a towel wrung out of cold water. The skin is quickly dried, and a second fomentation is applied, the cold is repeated, and a third fomentation is applied. A fourth and a fifth may be added if it is thought best, each being followed by a cold application.

The application of fomentations to the chest or abdomen while giving a hot foot bath, affords one of the best means of giving relief from the early symptoms of influenza, and is probably the simplest and most generally applied procedure. This treatment can be given twice a day,



Dry Cloth Folded over Wet Cloth

and has been used as frequently as three times in twenty-four hours. Congestion of the head may often be relieved by the application of a fomentation to the spine. In this case the patient lies face down, and the fomentation is applied the full length of the spine. If the patient is kept well covered, such an application will often produce perspiration and a deep reddening of the skin.

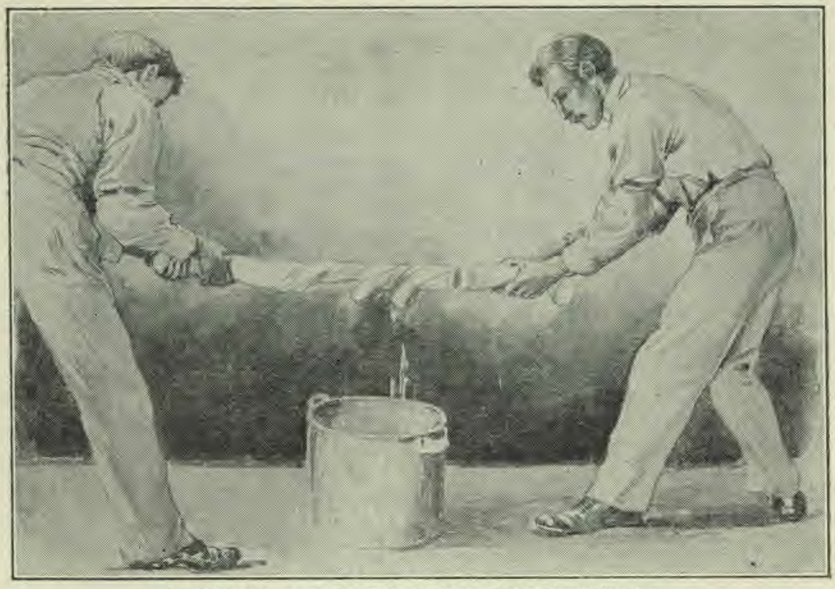
To be of value, the fomentation should always be just a little hotter than is comfortable, but it should not be hot enough to burn. During a hot treatment the patient's head should be kept cool by putting an ice cravat to the head, or by applying a cold towel folded so as to fit over the forehead; or a cold towel may be applied to the head and another to the neck.

Fomentations should never be left on

Wet Cloth Placed on Dry Cloth

until they are cool, for the good effect is spoiled by lukewarm fomentations.

Blanket Pack.— Only the severe types of toxemia in influenza require the full blanket pack. This treatment is given to the patient in bed. The articles required include two double blankets, one single blanket, and a large boiler full of boiling water. One of these blankets, called the wet blanket, is folded lengthwise so as to make it of convenient size to dip into the boiling water. The dry double blanket should be spread out smoothly on a table or on the bed. The wet blanket is now wrung out by two persons twisting the respective ends in opposite directions. The blanket is then quickly untwisted and placed upon the dry blanket. The single blanket is now laid over

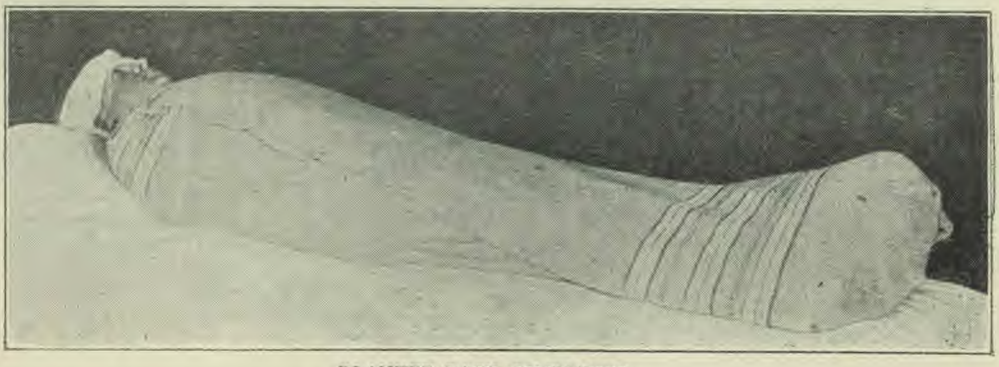


WRINGING A BLANKET FROM BOILING WATER

this and the patient lies down on it. In applying the pack, the single blanket is first folded around the patient by bringing up one side and then the other, completely covering all parts of the body except the head. The hot wet blanket is next quickly brought around the patient after the same manner; and lastly, the double dry blanket on the outside is folded over the others, care being taken not to leave any portion of the arms or shoulders exposed. The feet should be carefully tucked inside the wet blanket. The effect of the pack may be prolonged by placing several hot water bottles around it. The patient is kept in this pack until he perspires freely.

This treatment is of special value in those cases of influenza where the fever runs high and kidney action is poor. The sweating is greatly hastened by the patient's drinking hot liquids just before and during the pack. The patient may be safely left in the pack from fifteen to thirty minutes, the head being kept cool during the entire time.

When the pack is finished, the blankets should be taken off and each part of the body given a cool or tepid application of water by one of the methods previously described, care being taken to have only one portion uncovered at a time, and to see that the patient does not chill by being placed in a cold bed.



BLANKET PACK COMPLETED

Moist Chest Pack.—As a precautionary treatment to prevent pneumonia, the moist chest pack is valuable. Two cloths are used for this treatment, an inner lining not less than six inches wide and two and one-half yards long, made of about six thicknesses of cheesecloth, and an outer strip of flannel or woolen blanket eight inches wide and three yards long. The inner cloth is wrung nearly dry out of ice water and is wrapped around chest, beginning under left arm and passing obliquely across chest, over right shoulder, obliquely across back, under left arm, and directly across chest, under right arm, obliquely across back, up over left shoulder, and across chest, finishing under right arm.

Follow the same course in applying the outer dry covering, but continue it around the back, finishing under left arm. The pack is now held in position by safety pins. It is important that each portion of the wet bandage be completely covered in order to avoid chilling the patient. On removing the chest pack, care should be taken to sponge off with cool water and thoroughly dry the skin by briskly rubbing the chest in front and back, or wherever the pack was applied.

The previously described treatments should be continued throughout the period of the symptoms of influenza, varying the procedures in accordance with the severity of the symptoms. Where there is rest, warmth of body should be maintained, and mild tonic measures of hydrotherapy should be continued until the temperature is normal, and the severe coughing and the aching pains have disappeared.

Influenza patients are very subject to relapse, and extra caution must be used in the care of each case for some time after the cessation of the active symptoms.

Medicinal Treatment

When we state that no specific remedy for influenza has been found and that no one medicine has been chosen generally by the profession as of distinct value in this disease, we do so with the authority of the body of medical men of this country. The use of every medicine proposed has been even more widely criticized than it has been thus far commended. Stimulants have been given, such as whisky, strychnine, etc. For the control of pain, sedatives have been given, such as opiates, aspirin, veronal, bromides, and a number of other proprietary preparations. Numerous other remedies have been tried, but none of them have had any power whatever in limiting the period of the disease or its severity. Such remedies only serve at times to benumb the senses so that less pain is felt. Aspirin, given in 5- or 10-grain doses as often as once or twice a day, may occasionally be permissible for the relief of headache and as a means of stimulating perspiration; and yet some able men greatly question the advisability of administering this drug under any condition.

At present much is said about the vaccines which are put up by certain manufacturers and advertised very widely as having a preventive and curative effect, but an editorial in the *Journal A. M. A.*, of Oct. 4, 1919, gives the conclusions of the majority of the medical profession in respect to the use of vaccines, either as a cure or as a preventive:

"The question as to the value of vaccines in the prevention of infectious diseases of the respiratory tract other than influenza is still under investigation. Other procedures, such as good ventilation, cleanliness, and hygienic measures in general, are of value in that they contribute to good personal and home hygiene. But no one of them is all-important to the exclusion of the others. There is no scientific evidence that gargles and sprays, no matter what drug may be used, are of value, except as temporary cleansers.

"There is one point in regard to influenza, however, on which there is general agreement: The pulmonary complications of influenza, which make it so serious a disease, may be avoided to a large extent by rest in bed at the onset of the illness. Influenza itself is not usually fatal, and general insistence on the importance of rest and warmth at the onset of illness will accomplish more than all else in preventing complications and reducing fatalities from this disease."