

Life & Health



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Life & Health

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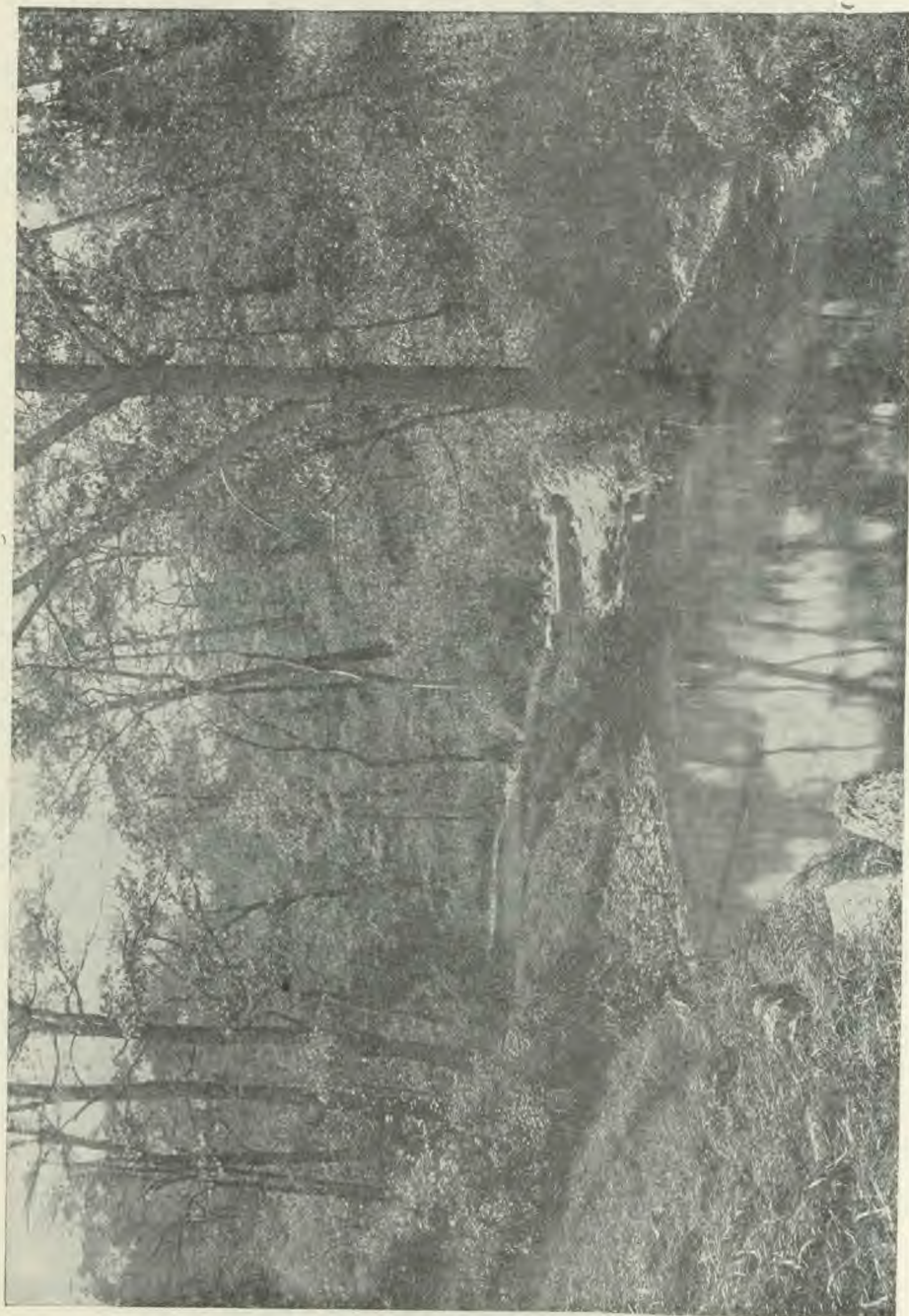
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A BEAUTY SPOT

Life & Health

HOW TO LIVE

EDITORS

L. A. HANSEN

G. H. HEALD, M. D.

VOL. 35

JUNE, 1920

No. 6

EDITORIAL

Our Editorial Object

OUR editorial policy is not merely to present the physical phase of the health question. In our columns is presented much matter that apparently deals only with the physiological side of health. We aim to do our part in making plain the principles of health, and are glad to join in the promulgation of such truth as will make for the highest bodily benefit.

But man is more than a mere body. He has a mind and a soul, and their relation to the body and its interests is too intimate to ignore. It is impossible for man to separate these interests, though he may ignore their relation. One is not doing his full duty who presents health only so far as it affects the body. Man's whole being must be kept in view in our health propaganda.

Why Reform?

The great object of reform in eating or in other habits of living is not merely to get people to eat certain things or to conform to a specified rule of conduct. Neither is it the purpose alone to attain physical perfection. Muscle, strength, form, grace, and beauty may result from following certain methods of health culture. Calisthenics, gymnastics, and athletics all have their returns in physical vigor and development. Even some fads and cults may give a degree of benefit.

The highest development of the mind and soul, as well as of the body, should be our goal. This should be the object of reform, and anything short of this is to that degree a failure to do full duty in any health movement.

Health Happiness

The true enjoyment of health is not realized in the possession of physical vigor alone. To be strong and stalwart, mighty and muscular, able-bodied and robust, is not all that is essential to ideal living.

A man may be brawny, but not brainy; he may be of stalwart build, but not beautiful in behavior; he may have lusty lungs, but lack a loving heart. Sinews do not make a soul.

Breathing capacity, lifting power, physical endurance, or even immunity from ills and aches, is not the measure of good that may be obtained from obedience to the laws of health. Longer life does not tell the entire story. Physical well-being is an important part of living, but not all of it, nor its largest part. Drawing the line at bodily health, falls short of meeting man's place in life.

If physical perfection were the standard of attainment, then the stock section of any county fair would outclass almost any company of men. But man is more than an animal, and he is capable of greater enjoyment than is possible in any or all of his animal tastes and desires. However, as a living creature his physical being, with its organs, members, senses, tastes, functions, and faculties, must be the means of attaining the higher service and capabilities for which he is intended.

God's Making

In spite of the great distance a man may drift, it remains a divine truth that God made him, and that he made him in his own image. No matter how prodigal we may be, it is still true that we belong to our Maker, by right of creation and of redemption. The body, as a temple of the soul, should be the means of making known the virtues of true living. The powers of the body should be free in their development, and to this end every possible care should be shown the body.

Natural laws were designed by God for keeping the human organism in health. These laws are wholly beneficent in their operation. They are intended to promote man's highest happiness not only for the present life, but for all eternity, for man is created to enjoy everlasting life if he will.

The study of health principles should be one of great interest and pleasure. Getting acquainted with this wonderful human organism of ours, learning its laws, understanding its possibilities, and knowing its needs, should be of prime importance to every individual. The heights of attainment possible to men and women are such that no one should stop at mere physical achievements.

Higher Living

When physical development is made a means of mental and moral strength and growth, it serves its true end. Clear thinking goes with clear living. Intemperate living blunts the sensibilities and prevents keen discernment. The mental make-up of man is such that his mind must rule the body through temperate living, or serve it by submission to its gratifications.

In advocating healthful living for all its advantages and its highest blessings, we must present its spiritual part as the most important; it is that which is most enduring and has to do with eternal interests.

We must recognize the place that a true religious experience holds in temperate living, in the life of self-control.

We can offer no greater incentive or argument for right physical living than the fact that it is right living, and that it enables man to render higher service to his fellow men and to God.

We see in health laws the provisions of divine wisdom for man's welfare. They are the evidences of God's love to humanity. We wish to present health as a blessing from Heaven, and the observance of health laws as among our highest privileges.

L. A. H.

AS WE SEE IT

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

HOW MUCH PROTEIN DO WE REQUIRE

PROF. H. C. SHERMAN, of the Department of Chemistry, Columbia University, New York, as a result of experiments performed in his laboratory, as well as of experiments performed elsewhere, has reached the conclusion that the earlier estimates of man's protein requirements were much too high.

In a paper published in the *Journal of Biological Chemistry* for January, 1920, he reports that "from the more recent and more carefully controlled experiments it appears that, even when the protein of the food is almost entirely derived from bread or other grain products, with a diet adequate in energy value, a daily intake of about 0.5 gm. of protein per kilo of body weight [35 gm. protein daily for the man of average weight], is sufficient to meet the actual requirements of maintenance in healthy men and women." Even when numerous and less carefully controlled experiments were included, the average was somewhat less than 2/3 gm. protein per kilo body weight (47 gm. protein for the average man). "A standard allowance," he continues, "of 1 gm. protein per kilo of body weight per day [70 gm. protein per day for the man of average weight] appears, therefore, to provide a margin of safety of 50 to 100 per cent as far as the requirements of adult maintenance are concerned." This is in sharp contrast to the supposed 120 gm. protein, which the textbooks on physiology and the authorities on nutrition have formerly held — a quantity of protein that would almost necessitate the use of considerable animal food in order to meet it.

Sherman does not believe that a diet containing protein entirely from the grains would be adequate, for the reason that the grain proteins are not complete. They lack certain amino acids needed in the body. Therefore, he concludes his article with this paragraph:

"It is plainly desirable in all cases that grain products be supplemented by milk products, and it is clear that in providing for needs of growing children and of pregnant or nursing mothers the proportion of milk in the diet should be more liberal than it need be when only maintenance is concerned, this both because of the superior amino-acid make-up of the milk proteins and to provide amply for the mineral elements and vitamins as well."

Sherman has elsewhere shown that meats do not make up for the lack in the grains, in three important particulars, nearly so well as does milk. These

are (1) the fat-soluble vitamins, (2) the minerals, (3) the alkaline ash. It is probably for this reason that in this article he mentions only milk as a supplement to the grains. It would seem that the results of laboratory research had established Professor Sherman in favor of the soundness of the lacto-vegetarian régime. Regarding the efficiency of cereal proteins Sherman says, in the same article:

"The proteins of wheat, corn, and oats appear to be about equally efficient in adult human nutrition, and need only be supplemented with small amounts of milk in order to be fully as efficient as the proteins of ordinary mixed diets have been found to be in earlier investigations."

NUTRITIVE MEALS WITHOUT MEAT

REFERRING to numerous articles which had been recently written to aid the poor and near-poor in these times of high prices, the *Journal A. M. A.* of July 14, 1917, said:

"We have rarely seen a more specific, sane, and clearly understandable propaganda than that recently formulated by the Bureau of Home Economics of the New York Association for Improving the Condition of the Poor."

The publication referred to¹ gives directions for meals suited to growing children, and the following advice, which the *Journal* prints with approval:

"To get the best results, spend money for food as follows:

"1. Spend from one fourth to one third of your food money for bread, cereals, macaroni, and rice.

"2. Buy at least from a third to half a quart of milk a day for each member of the family.

"3. Spend as much for vegetables and fruits together as you do for milk. If you use half a quart of milk for each member of the family, this may not always be possible. Then spend as much for vegetables and fruit as a third of a quart of milk a day would amount to.

"4. Spend not more for meat and eggs than for vegetables and fruits. Meat and eggs may be decreased with less harm than any of the other foods mentioned. The amount spent for meat may decrease as the amount spent for milk increases."

In these times of rapidly increasing cost of meat, it is important that everybody, the poor especially, should understand that meat is not essential to good nutrition, provided the diet is selected to furnish a sufficiency of protein, carbohydrate, and fat, and the various salts and vitamins needed in the body, all of which are furnished abundantly in the vegetable kingdom.

HOW YOU CAN AID IN PROHIBITION ENFORCEMENT

IN response to a request from editors and publishers, Mr. Daniel C. Roper, while he was Commissioner of Internal Revenue, prepared for publication an article which suggests to law-abiding citizens how they can aid in the enforcement of the prohibition laws. In this article Mr. Roper makes the following suggestions:

¹ "Food for the Family," Publication 120, Bureau of Home Economics, New York Association for Improving the Condition of the Poor.

"1. Organize and work for the development of a strong, healthy public sentiment in favor of obedience to law in general and the prohibition law in particular. This can be accomplished through sermons from the pulpit, and by means of public lectures and addresses; through articles written by prominent men in each locality and published in newspapers and pamphlets, as well as through the efforts of teachers in the public schools.

"2. Support the local officials in the performance of their duties under the law. Advise these officials that all good citizens are looking to them for effective and impartial enforcement of the law. Encourage officers who perform their duties faithfully and vigorously; condemn those who fail to perform their duty.

"3. In some States and municipalities the law and ordinances do not permit of full co-operation between local and Federal officers. In such instances outside organizations can render great service by endeavoring to have the laws of their States and their municipal ordinances so changed and strengthened as to require effective co-operation between local, State, and Federal officers.

"4. Organizations should keep in close contact with the Federal prohibition director, and his assistants, in their State, keep them advised as to enforcement results, and co-operate with them in correcting defective administration."

As Mr. Roper well says,

"No law can be effectively enforced without the assistance and cooperation of the law-abiding element. To every right-thinking man and woman is given his or her part, which is to observe the law, to insist on the observance of the law by others, to aid by advice, information, and outspoken encouragement the enforcement officers of the municipality, the State, and the nation."



WHILE we do not understand fully the relationship which exists between the physical and the psychic, we do know that they bear a close relationship to each other. The psychic condition is influenced greatly by man's physical condition and the manner in which he reacts or has reacted to his environment; his physical condition, on the other hand, depends much upon the equilibrium or loss of equilibrium in his psychic being. Of the two it would seem that the psychic influence over the physiologic body function is greater than the physical over the psychic. We often see those physically weak with apparently perfect trends of thought, but it is rare to see one with a disturbed psychic equilibrium who does not at the same time have disturbed physiological function.—*F. M. Pottenger, A. M., M. D., in "Symptoms of Visceral Disease."*



Too much dependence is put in laboratory findings, while clinical observation is underrated and often belittled. Nothing at our command will detect clinical tuberculosis as early as careful study and examination of the patient, and the evident departures from normal physiological function which he manifests; while dependence on the laboratory will often postpone diagnosis until the chances of cure are greatly reduced.—*F. M. Pottenger, A. M., M. D., in "Symptoms of Visceral Disease."*

How to Secure Health and Efficiency

II—A Healthy Body

R. A. Crawford, M. D.

I CANNOT conceive of efficiency without health. In my previous article I discussed the necessity of having, first of all, a healthy mind. Now I shall consider the importance of a healthy body. One may have a healthy mind without a healthy body, and one may have a healthy body without a healthy mind; but the greatest efficiency must depend upon both.

Speaking of efficiency, let us consider what the truth about it is. We find the human life is shamefully and wastefully inefficient. How many of us, I wonder, can claim a 50-per-cent efficiency? How many of us, indeed, are accomplishing and making of ourselves one half what we might? How many of us are getting out of life 50 per cent or even 40 per cent or even 30 per cent of the happiness and the worth-while things of life that we might? None of us are taking out of life or putting into life—and after all, what we take out of life depends largely upon what we put into it—what we might, and most of us are living only a small fractional part of what we might. The Hercules of Grecian fable was said to have been offered a long life of obscurity or a short life of accomplishment and action. He chose the latter. I think I should rather live thirty years getting all there is out of life and putting my whole self into it, than ninety years of a 30-per-cent existence. If an industrial concern should run its business as inefficiently as the average human being conducts his life, it would soon go bankrupt. And that is precisely what the human being does. He goes bankrupt in the real happiness and accomplishments of life, at least he

finds many empty shelves in the deposit vault of his life, which he might have filled. What matters it if a man has made a million, if at life's sunset he can look back upon a life filled only with an anxious tenseness and a hard-fisted, cold-blooded career of self-gratification and an empty soul? That man's life has been a failure. His business may have been a success, but his life has been a failure. No matter how efficient his business organization, his life has been helplessly and hopelessly inefficient and mismanaged.

We are given our minds and our bodies. What we are depends upon what we make of these gifts and how we care for them. One would not expect to be able to run an automobile long if he neglected to put water in the radiator or oil in the engine, or if he allowed the burrs and bolts to loosen and fall off without replacing them, or ran his car at high speed over stones and ditches, with his tires flat and his batteries dry. And yet many people conduct their lives upon just such principles as these. They either do not feed their minds at all, or else they feed them with poison, and they run their bodies at full speed with the oil cups dry and mud in the carburetor; and then they wonder why they lose out in the race—this race of life—and why they break down. They wonder why they get stuck in the mud while the other fellow who had the forethought and industry to put on chains goes by as if nothing had happened.

Our body is the most marvelous mechanism in the world, next to our mind, and both are made of parts which are exceedingly sensitive and delicate. True,

they are wonderfully made and stand a great deal of misuse, but if we expect to be efficient, if we expect even to approach the 100-per-cent life, if we expect to get the most out of life and to put the most into it, we must apply common-sense methods in the care of our minds and our bodies.

In the last article I discussed mental fitness; now let us talk of physical fitness. There are two reasons why we should be physically fit:

First, because fitness makes it possible for us to enjoy life and get more of the real happiness out of life. It makes it possible for us to stay in the race. It makes us capable of accomplishing something. It makes us ready for the emergency, ready on a moment's notice to put our whole selves into the effort; it makes a more healthy home for a healthy mind.

Secondly, we should be physically fit, because upon our physical fitness depends our ability to resist the great enemy of life—disease. Resistance to disease rests upon the combination of factors which go to make up what we term good health. What insurance is to an individual, what capital is to an industry, what industry is to a community, what preparedness is to a nation, that, and more than that, is physical fitness to the human being.

Life has not endowed us equally with health, but that is no reason why those richly supplied should be careless of their gifts, or why those more meagerly endowed should hopelessly despair, because we have many notable examples of weaklings who, through persevering effort, overcame their physical defects, and even made themselves examples of physical fitness. The late Theodore Roosevelt, through hard work and ceaseless effort, developed from a puny boy into the strenuous, indomitable Roosevelt of our national life. Demosthenes became, in place of the stammering, de-

ficient boy, the silver-tongued orator of his time. Few, indeed, there are who could not improve their physical fitness, and thus their physical efficiency, to a surprising degree, if they were willing to persevere, not spasmodically, but perseveringly, in the development of themselves.

Briefly, good health depends upon good food, proper exercise, fresh air, cleanliness and hygiene, proper dress and the protection of one's body, and a clear, active mind. Exercise and fresh air are free to all. If we do not obtain them, we have none to blame but ourselves. Even the busy man cannot afford to neglect them. Most Americans are able to obtain an abundance of good food—for which we may be thankful. Perhaps it is not luxurious, but that is not necessary. Let me say here that what is good food for one is not necessarily good food for another. Hygiene, cleanliness, the care of the mouth and teeth, the care of the eyes, the hair, the skin, and the bowels, are the privilege of all. Carelessness in regard to hygiene is inexcusable. Improper dress and insufficient protection of the body from atmospheric conditions is more the result of style than of poverty. Those who choose to be slaves to fashion must do so at their own risk.

And as for the mind, it is largely the result of the nourishment which we give it and of its environment; even the poor may dwell among the noble of the earth, and can come close to the greatest personalities of all ages, through literature.

It is largely up to you personally whether or not you will be physically fit; it depends upon you whether or not you will be mentally fit. You are the one to decide whether you shall be 30-per-cent efficient or 90-per-cent efficient. You must choose whether you will live a full, rich, productive life, or one impoverished of happiness and accomplishment.



CHEER UP!

L. A. HANSEN

CHEERING up is not a mere matter of wearing a surface smile, or of dispelling the gloom of our friends. It is not just putting on a cheerful appearance for the sake of brightening the way for others, an object good enough in itself.

To wear "the smile that won't come off," we must have one that is more than skin-deep. The good feeling must spring from the heart center if it is to last. And one must really feel good in order to express good feeling.

While feeling good is much a matter of one's physical condition, it is also true that the state of the mind has much to do with the feelings. We may be subject to pain and suffering; abnormal conditions may oppress; ill health may depress; but for all that, we do not need to surrender completely to our feelings. Joy, cheer, hope, courage, and happiness are not wholly subject to physical sensation, though they may be greatly affected thereby.

There is medicinal power in good cheer. Not only will it drive away gloom and despair from others, but it will help powerfully to heal one's own ills. The sick need to know that optimism operates for good. To look up is to lift up.

"Count your blessings o'er" is good sentiment for song and still better for practice. Gratitude and praise are health promoting; and as there is always something for which we can be thankful, this health measure is always applicable. We may be bad off, but things could be worse. It is needless, and worse than useless, to suffer in mind as if matters were worse; the rather, should we rejoice that we have escaped greater calamity.

There is no benefit whatever in choosing the gloom and melancholy of life, nor do we need to do so. There are thorns, true enough, but there are also roses. Yes, the flowers do die; but they are so beautiful while living, and they are constantly being renewed for us. Why select the dead and dying for our enjoyment? We say enjoyment, for really, it does seem that some take a morbid satisfaction in a contemplation of that which is dark and dreary.

We may not be able to ignore the existence of the unlovely and unpleasant. But we do not need to live on it. We may have aches and pains but these are not the all in all of our existence. Nor does the ill end of life need to be the heavy end. We can control to a considerable degree the amount of mental misery resulting from physical disability.

In dealing with despondency we must take into account physical conditions, and whenever it is possible, remedy what is wrong. Faulty elimination of internal wastes and impurities will most surely affect the outlook. A poisoned internal system produces impure blood, dingy skin, and cloudy thoughts. Clearing the alimentary tract of retained wastes and keeping it normally clean, may create for some persons a big difference in their view of life.

Digestive disturbances do not facilitate peace of mind, hence one's table conduct affects one's general conduct. Impatience and fretfulness can grow big out of a disordered digestion. Warring food elements in the stomach make a hard fight against the soul.

Overwork, dissipation, loss of sleep, and undue taxation of physical strength

rob the mind of vigor, and make it impossible for the brain centers that control courage and cheer to keep at par. The individual whose nerve tone is low finds it difficult to maintain a high hope level. Low vitality leads to low spirits.

But the balance of power in matters mental and spiritual does not hold in the physical state. We do not have to give way to depression. Pain may be severe and discomfort may be great, but letting down in spirit does not lessen them. When suffering is intense, there is all the more need of holding up.

Giving expression to gloomy thoughts and bad feelings only strengthens them. The more we talk of our troubles the bigger we make them. By the same law may we lessen them by saying little or nothing about them. We can still further reduce their relative proportion by talking hope, courage, and cheer.

No one benefits by our telling how

poorly we slept last night, or how long we have been troubled with this or that ailment, or how badly certain foods disagree with us. On the contrary, the effect of such talk is only to call up similar or worse experiences of others and lead to a discussion that magnifies our ills. The actual physical reaction on ourselves is anything but helpful to whatever real trouble we may have.

Then let us cheer up. Let the sigh give place to a smile. Let happiness radiate from us; it will do us good and will be a blessing to others.

"Know, then, whatever cheerful and serene
Supports the mind, supports the body too."

"For which cause we faint not; but though our outward man perish, yet the inward man is renewed day by day."
2 Cor. 4:16.

"A merry heart doeth good like a medicine: but a broken spirit drieth the bones." Prov. 17:22.

"QUIT"



R. B. THURBER

AS a "universal panacea for every human ill," "quit" is one of the easiest and most effective cures ever applied; and yet it is seldom used. Like all the other simple remedies of nature, it is resorted to by only the wise few.

Are you wearing out your nerve energy by worry over imagined future ills that never come? Do you cross three bridges before you reach the first one; do you try to "drive an auto from the back seat"? Quit!

Are your digestive organs a dead weight to your advancement in life, because you are disobeying the laws of your own body as to what, how, and when you eat? Do you want to change your dyspepsia to eupepsia? Quit!

Does the credit side of your personal account always keep a little ahead of the debit side, in spite of every rise in the latter? Do you feel better when you are spending than you do when you are earning or saving? Quit!

In nine cases out of ten we know what is the matter with us; and we know the reason. Our friends suggest this remedy and that, because they do not know the underlying causes of our ailments. But we know—or can find out. When the writer was a boy, he tried cigarette smoking, "to be manly." One trial, coupled with the after-effect, was enough. When his gullet started its back action, mother sympathetically suggested that perhaps he had swallowed a fly or other insect. But he knew—and

he quit. It hasn't always been that easy.

A friend told me the other day that he had tried a great many curatives during a long life; but he had found nothing so effective, other things being equal, as stopping what he was doing. When he feels bodily or mental dis-ease coming on, he quits eating—everything. He quits moving around, and goes to bed. He seeks quiet, closes his eyes, and quits thinking,—that is, he absolutely refuses, by force of will, to make his mind work or let it worry. Then, with the help of some of nature's rational reme-

dies to hasten recovery, he is almost invariably on his feet again the next morning. It is too often that last tempting meal, that last "plug-it-through," that scheme impossible-to-drop, that lays us low for a long siege of sickness. Some day we will quit to die. Why not quit to live?

And the Christian knows where to get the help to quit. But with that he needs a realization that he must quit, and a decision to do it.

There is much more to this, but common sense will reveal it. Try "quit."

Do Diseased Teeth Influence the Whole System?

William Curtis Dalbey, D. D. S

THE teeth are as much a part of the whole system as are the fingers or toes. They are as directly connected with the heart and general circulation and to the brain, as are the arms and legs. They are connected in the same way by veins and arteries and nerves. The teeth depend upon established laws of the whole body in their formation, development, function, and maintenance.

To maintain good health, to furnish the nourishing substances which the various parts of the great whole require, the blood stream must touch every point in the body. If disease germs invade the blood stream, they are carried throughout the system and are lodged at points best suited to their growth. Thus the blood becomes as a railway transport, which not only carries the life-giving properties to the tissues of the system, but may also carry disease germs to every cell of the body, so complete is its service.

Inflammation occurs wherever the teeth become diseased. At first there is

merely a localization of the disease or injury. Inflammation means a rush of blood to the part, which is nature's way to hurry repair. Then begins a battle, sometimes a fierce one, the white blood corpuscles attacking the germs that have brought about inflammatory conditions. If, because of neglected maintenance, the body forces are defeated, the blood stream falls into the hands of the enemy, which in ever-increasing numbers attack those parts that are most susceptible to their action.

The mouth, above all other cavities of the body, always contains an enormous number of pathogenic, or disease-producing, germs, which are resisted only by a healthy condition of the teeth and other tissues of the mouth and throat. When decayed teeth are left in the mouth and not repaired, they become cups of disease ready to discharge at any time their contents into the stomach and out into the system. Thus the whole body may become infected through the instrumentality of caries in this avenue of entrance.

Some Aspects of INFANT FEEDING

G. H. Heald, M. D.

DR. J. C. DRUMMOND, in a paper published in the London *Lancet* of Oct. 12, 1918, drew attention to the importance, in the diet of infants, of certain obscure substances whose presence and importance have only recently been suspected. He thus states the case:

"Animals fed upon a diet of pure protein, fat, carbohydrate, and inorganic salts rapidly decline in health and die within a comparatively short time unless they are provided with an adequate amount of certain other dietary factors. These substances received the name 'vitamines' from Funk; but chiefly for the reason that this term is very misleading, it is now being discarded. These substances are now referred to collectively as the accessory factors of the diet. So far the existence of three individual substances of this type has been detected. At least two of these are of primary importance for growth, whilst all three are undoubtedly necessary for the preservation of health.

"The provisional and noncommittal names which have been allotted to these factors are as follows: (1) Fat-soluble A; (2) water-soluble B, or antineuritic [preventing neuritis or beriberi] factor; and (3) water-soluble C, or antiscorbutic [preventing scurvy] factor. As yet practically nothing is known of the chemical nature of any of these substances."

Not only has it been shown that animals need these accessories, but it has been amply demonstrated that babies and growing children cannot thrive without them. When one or more are absent from the food, there is malnutrition and disease.

Fat-soluble A, one of these unknown food accessories, is formed by plants, and is found in the living (green) part of the plant, the part that might very appropriately be called the factory of the plant, that is, the leaves. It is not found in the storehouse of the plant —

the roots, bulbs, tubers, seeds — except in the germ of the seed, which is in reality a baby plant. Animals cannot produce this substance, but must obtain it either directly or indirectly from the plants. Growing animals require a liberal supply of this factor for their proper development and health. If deprived of it, even though they receive an abundance of all the other food elements, they, after a short time — during which they are probably exhausting the supply in their bodies — cease to grow, and soon show other evidences of malnutrition, and if the diet is not corrected, they lose their resistance to disease, and probably soon succumb to some infection, usually of the lungs. If, however, the diet is corrected so as to include a sufficiency of the fat-soluble A, the animal resumes growth at the normal rate.

As a provision for the growth of the young, this substance is present in the milk of mammals, and in the yolk of eggs. When milk is churned, the fat-soluble substance goes with the butter. It is soluble in fat, whence the name, but it is not found in all fats, as will be seen by the accompanying table.

Another accessory is the water-soluble B, whose complete absence from the food is followed by the disease beriberi. If it is present in insufficient amounts, there may be a failure of growth. The first thing noticed in young animals fed with food lacking this factor, is failure to gain in weight, then if the lack is continued long enough, a characteristic nerve trouble, known as beriberi, develops.

The water-soluble C is the one whose absence from the food is followed by

scurvy. Drummond gives the following tables, the A, B, and C referring to the accessory factors just described:

milk or boiled milk should have orange juice or some other substance containing the water-soluble C. The difference be-

Table 1. Stability of the Accessories

| | A | B | C |
|--------------------------|---|--|--|
| Stability to temperature | Stable at 100° C., ¹ probably at 140° C. | Comparatively stable at 100° C.; slowly destroyed at 120° C. and above | Gradually destroyed above 50° C., rapidly above 80° C. |
| Stability to alkalis | Stable in cold, possibly stable when hot | Slowly destroyed in cold; rapidly destroyed when hot | Rapidly destroyed even when cold |
| Stability to acids | Probably stable | Comparatively stable | Comparatively stable below 50° C. |

¹ 100° C. = 212° F., or boiling temperature.

140° C. = 284° F.

120° C. = 248° F.

50° C. = 122° F., the temperature of a hot drink.

80° C. = 176° F.

Table 2. Distribution of the Accessory Food Factors in Natural Foodstuffs

| | A | B | C | | A | B | C |
|-----------------------|-----|----|----|----------------------------|----|-----|-----|
| Milk | ** | ** | * | Wheat, whole grain | * | ** | — |
| Butter | *** | — | — | Wheat, embryo | ** | *** | — |
| Cream | ** | * | *? | Wheat, endosperm | — | — | — |
| Milk, separated | — | ** | * | Wheat bran | — | * | — |
| Milk, whey | — | ** | *? | Rice, polished | — | — | — |
| Egg, white | — | * | —? | Rice, whole grain | * | ** | — |
| Egg, yolk | *** | * | ? | Bread, white | — | — | — |
| Beef fat | ** | — | — | Bread, whole meal | * | ** | — |
| Lard | — | — | — | Yeast, dried | *? | *** | — |
| Oils, vegetable | — | — | — | Yeast extract (commercial) | — | *** | — |
| Margarins, animal | * | — | — | Cabbage, fresh | ** | * | *** |
| Margarins, vegetable | — | — | — | Cabbage, dried | ** | * | — |
| Meat, lean | — | — | * | Spinach | ** | * | *** |
| Liver | ** | ** | ? | Potatoes | — | * | ** |
| Heart, kidneys | * | * | ? | Oranges | — | — | *** |
| Pancreas | * | ** | ? | Tomatoes | ? | * | ? |
| Brain | * | ** | ? | Onions | ? | — | *** |
| Fish, "lean" (cod) | — | * | ? | Apples, green | ? | — | *** |
| Fish, "fat" (herring) | * | * | ? | Lettuces | * | — | *** |
| Fish, roe | * | ** | ? | Peas, dry | ? | * | — |
| Cod liver oil | *** | — | — | Peas, fresh | * | * | *** |
| Fish body oils | ** | — | — | Malt extract | — | — | ? |

*** Abundant; ** Moderate; * Slight; — None.

Thus it will be seen that the fat-soluble A is the most stable of these substances, being slightly affected either by heat, alkalis, or acids, while water-soluble C is least stable, being destroyed by comparatively low temperatures and by alkalis.

From these two tables it will be apparent why a child who has Pasteurized

tween white rice and white bread and the whole-grain preparations is also apparent, also the difference between butter and the vegetable oils. It will also be plain that if one does not use freely of milk or butter, the green vegetables should be liberally eaten.

Drummond, during a number of years, performed a large number of feeding ex-

periments on growing rats, which showed that if either one of the accessories (A, B, or C) is lacking, growth and nutrition are interfered with, and he has deduced therefrom certain important lessons regarding infant feeding, which are borne out in experience.

The first is that breast-fed babies suffer eventually if the mother does not obtain a supply of each of the accessories in her food, for she cannot manufacture them. For a time, she may at the expense of her health, exhaust the store of accessories in her own body to make a complete milk for the child; then as the supply fails, the child shows the failure

in sore eyes, retarded growth, or other form of malnutrition or infant scurvy. When breast-fed babies are not doing well, the diet of the mother should be studied in the light of the foregoing tables.

Children fed on cow's milk probably obtain enough "A" and "B" (that is, if the cows are not fed on denatured foods), and scurvy will be avoided by the use of a little orange juice, or finely grated apples (or apple juice), or finely comminuted potato or green vegetable. Powdered milk, from the success with which it is used in infant feeding, seems to have all the accessory factors.

Christ's Method of Reaching the People

CHRIST'S method alone will give true success in reaching the people. The Saviour mingled with men as one who desired their good. He showed his sympathy for them, ministered to their needs, and won their confidence. Then he bade them, "Follow me."

There is need of coming close to the people by personal effort. If less time were given to sermonizing, and more time were spent in personal ministry, greater results would be seen. The poor are to be relieved, the sick cared for, the sorrowing and the bereaved comforted, the ignorant instructed, the inexperienced counseled. We are to weep with those that weep, and rejoice with those that rejoice. Accompanied by the power of persuasion, the power of prayer, the power of the love of God, this work will not, cannot, be without fruit.

We should ever remember that the object of the medical missionary work is to point sin-sick men and women to the Man of Calvary, who taketh away the sin of the world. By beholding him,

they will be changed into his likeness. We are to encourage the sick and suffering to look to Jesus and live. Let the workers keep Christ, the Great Physician, constantly before those to whom disease of body and soul has brought discouragement. Point them to the One who can heal both physical and spiritual disease. Tell them of the One who is touched with the feeling of their infirmities. Encourage them to place themselves in the care of him who gave his life to make it possible for them to have life eternal. Talk of his love; tell of his power to save.

This is the high duty and precious privilege of the medical missionary. And personal ministry often prepares the way for this. God often reaches hearts through our efforts to relieve physical suffering.

Medical missionary work is the pioneer work of the gospel. In the ministry of the word and in the medical missionary work the gospel is to be preached and practised.—*"The Ministry of Healing," pp. 143, 144.*

NATIVE

NO WOMAN

(Below) A F
a heavy sack of w
boy rides on the do
countries the donke
and the boy would



A NATIVE GIRL PORTER

The main occupation of this Igorrote girl in the village is to carry loads on her head. In order that it may ride well, her basket is made with a flat bottom. All over the earth, primitive people, especially the women, carry loads on their heads, a practice which is conducive to an erect bearing.



ADWORK

RIGHTS HERE

These woman carries
in her head while the
In more advanced
ould carry the wood
k.



A FASHION TIP FROM SOUTH AFRICA

This woman, a native of the Kafir country, carries her baby in her hat. The goatskin serves as a bed for the baby and as a decorative fringe for the hat. By thus carrying the baby, she is enabled to show off to the best advantage her cape coat, of which she is very proud.

DIETETICS : Food Combinations

George E. Cornforth

IT was shown at the beginning of this series of articles that a variety of food is necessary, but from what has been said since, it will be seen that haphazard choosing of foods from a large variety will hardly suffice to supply a completely adequate diet, containing no surplus nor lacking any of the required constituents.

Another consideration that we have not spoken of, which emphasizes the value to the health of choosing food intelligently, is that the blood is normally slightly alkaline and some foods help to keep it alkaline, while others tend to reduce its alkalinity. The acid-forming foods are meat, cereals, eggs, and refined sugar. The alkaline-forming foods are milk, vegetables, fruits, nuts, and legumes.

Because there are so many more alkali-forming foods than acid-forming, it seems strange that any one should suffer from an abnormal amount of acid in the body. But considering that many people choose as the main part of their diet, meat, white bread, and desserts, it is not strange. The alkali-forming foods should predominate in the diet.

Besides endeavoring to include all the food principles in about the right proportion, we should be careful not to eat at the same meal foods that do not digest well together. These bad food combinations are:

- Fruits and coarse vegetables.
- Milk and sugar in large quantities.
- Mush and milk and sugar.
- Foods cooked in fats.

A skeleton menu may be of help in choosing foods intelligently, so as to include the different essentials in approximately the right proportion.

Skeleton Menu

| | |
|------------------|-------------------|
| Soup | |
| Substantial food | Starchy vegetable |
| | Watery vegetable |
| Salad | Dessert |

One of each of these kinds of food should be chosen at a meal.

In some cases the soup, or the salad, or the dessert may be omitted, if it does not constitute an important part of the meal, as split-pea soup, a Lima-bean or egg salad, or a custard pie or fruit mince pie may do. The foods that may be classed as substantial foods are: Milk, eggs, cottage cheese, beans, peas, lentils, nuts, combinations of the foregoing, such as nut foods, nut loaves, macaroni with milk and eggs.

A poorly balanced meal is one which consists of several foods chosen from the same class, as several substantial foods in the same meal, or a meal consisting only of watery vegetables, or one which contains only starchy foods, or one that contains too many sweetened foods.

As examples of scientifically balanced meals, I include meals for one day, showing the number of calories of protein, carbohydrate, and fat, and the total number of calories contained in them.

These menus furnish between 25 per cent and 30 per cent fat, which is right, and more than ten per cent protein (299 is more than 10 per cent of 2,524), in fact, about 12 per cent. Ten per cent is all that is needed. This shows that there is no danger that a nonflesh diet will not supply sufficient protein, and that a flesh diet supplies a great excess of protein. Omitting the cottage cheese from the supper menu would bring the protein down to more nearly what it should be.

Menus

BREAKFAST

| | Pro. | Fat | Car. | Total |
|---------------------------------------|------|-----|------|-------|
| Cooked rolled oats, $\frac{3}{4}$ cup | 16 | 17 | 69 | 102 |
| Raisins, $\frac{1}{4}$ cup | 3 | 9 | 88 | 100 |
| Milk, 1 glass | 30 | 85 | 46 | 161 |
| Bread, 2 slices | 26 | 12 | 151 | 189 |
| Butter, $\frac{1}{2}$ oz. | 1 | 112 | | 113 |
| Banana, 1 medium | 4 | 4 | 66 | 74 |
| | 80 | 239 | 420 | 739 |

DINNER

| | | | | |
|--|-----|-----|-----|------|
| Peanuts baked like beans, $\frac{1}{2}$ cup | 52 | 178 | 49 | 279 |
| Baked potato, medium | 13 | 1 | 107 | 121 |
| Spinach, 1 cup | 19 | 6 | 30 | 55 |
| Celery, 3 stalks | 2 | 1 | 8 | 11 |
| Graham bread, 3 slices | 39 | 18 | 227 | 284 |
| Butter, $\frac{1}{2}$ oz. | 1 | 112 | | 113 |
| Apple pie, 5 oz. | 36 | 90 | 174 | 300 |
| | 162 | 406 | 595 | 1163 |

SUPPER

| | | | | |
|-------------------------------|-----|-----|------|------|
| Cottage cheese, 1 tablespoon | 24 | 3 | 5 | 32 |
| Lettuce, 8 leaves, 2 oz. | 3 | 1 | 7 | 11 |
| Juice $\frac{1}{2}$ lemon | | | 11 | 11 |
| Bread, 2 slices | 26 | 12 | 151 | 189 |
| Butter, $\frac{1}{2}$ oz. | 1 | 112 | | 113 |
| Stewed prunes, 10 (6 oz.) | 3 | 2 | 155 | 160 |
| Lemonade, small glass (6 oz.) | | | 106 | 106 |
| | 57 | 130 | 435 | 622 |
| Total calories for 3 meals | 299 | 775 | 1450 | 2524 |

Feeding the Sick

Diet is of the greatest importance in the care of the sick, because life depends upon the food. It is nourishment that supplies the strength and power to regain health. In fact, the word "nurse," by derivation, means "to feed" or "give nourishment to." For this reason the greatest care and skill should be exercised, not only in selecting and preparing food for the sick, but even in the manner of offering it to them.

Of course, in serious illnesses the doctor prescribes the diet, and his instructions should be faithfully carried out. He should be consulted as to how far a patient's likes or dislikes may be humored, and to what extent one form of food or drink may be substituted for another. Conditions of the patient's digestion should be reported to the doctor.

Acute disease is accompanied by fever. In fever the appetite is small or absent,

and the digestive fluids are decreased in quantity and quality. For this reason the food must be easily digested, or predigested. It should be in liquid form and given in small amounts at frequent intervals. Fruit juices are of great value, for just this reason, that the nourishment they supply is predigested and they supply mineral elements and acids that are medicinal and assist the body in fighting disease.

In cases where the fever varies during the day, the most nutritious part of the diet should be given when the fever is lowest.

The wasting of a fever patient is due to inability to take and digest food and also to the increased heat production, material to supply which must come from food or from the patient's tissues. This fact emphasizes the need of supplying nourishment in fever to save the patient's tissues. But great care should be taken to supply food that is suited to the patient's condition, and to supply it in quantities and at such times as are suited to the digestive powers of the patient. It should be the aim not to give what cannot be digested nor less than the patient can assimilate, and variety should be chosen with the purpose of including both what is palatable and what will afford adequate nourishment. Ample water also should be supplied.

Punctuality should be observed in serving meals, because an appetite which is ready at the accustomed time for eating, may vanish if the meal is delayed.

Foods to be served hot should be served neither lukewarm nor too hot, but sufficiently hot to be enjoyed and to stimulate digestion. To accomplish this the dishes in which the food is served should be heated. Cold food should be cold enough to be palatable.

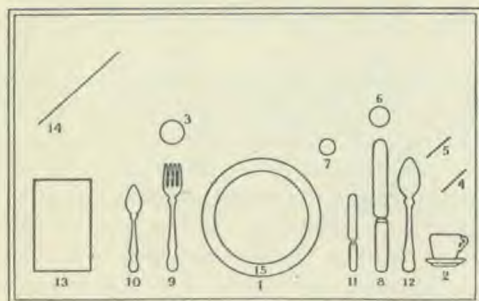
Avoid asking the patient what he likes, but endeavor to learn that without asking, and let the meals be unexpected surprises. Save the patient not only physical exertion, but also the mental exertion of thinking about what he is going to eat.

The noise and odor of preparing food should not be allowed to reach the patient. Whether a patient should be awakened to take nourishment, depends upon which he needs more, the sleep or the nourishment, and upon whether he is likely to be able to go to sleep again after taking nourishment.

The Arrangement of the Tray

- | | |
|----------------------------|--------------------|
| 1. Plate. | 9. Fork. |
| 2. Cup and saucer | 10. Spoon. |
| 3. Bread-and-butter plate. | 11. Butter spread. |
| 4. Individual cream. | 12. Soup spoon. |
| 5. Individual sugar. | 13. Napkin. |
| 6. Tumbler. | 14. Flowers. |
| 7. Individual salt. | 15. Soup plate or |
| 8. Knife. | cereal bowl. |

During sickness the usual stimulants to appetite, outdoor air and scenery, exercise and cheerful companionship, are



wanting, and the times of taking food comprise the chief events of the day (unless the person is fortunate enough to be treated by hydrotherapeutic measures, when these make another interesting diversion), and the serving of meals may be made bright spots to the patient, to interrupt the monotony of confinement in bed. Attractive serving of food may make a stronger appeal to the appetite than careful selection and proper preparation. The appearance of the tray and the manner of offering have much to do with the acceptance or rejection of the food.

The tray on which the food is served should be covered with a clean white napkin, and the silverware should be bright. If there are in the home dainty china and pretty little glass dishes, this is the time to put them to good service. If possible, broth should be served in a thin, light cup, partly filled, and milk and fruit juices in a thin, light glass; the bread should be thinly sliced, the toast should be thin and crisp, crackers and ready-cooked cereal foods freshly toasted, the fresh fruit cut and arranged in some new and unexpected way. A straw placed in a cold drink may make it more palatable. A sprig of leaves, a flower, a quotation from Scripture, or a pretty verse (for a child a picture) may bring pleasure. While a patient may be too sick to mention or apparently to notice such little services, it is said with some truth, I think, that a patient is fed through his eyes as well as through his lips, and these little attentions will, no doubt, in almost every case bring a bit of brightness to the sick person and help to break the monotony of a long and weary day.

The tray should not be too full. It is often gratifying to one who is sick to have the food served in courses, and he is likely to eat more if this is done than if given everything at once.

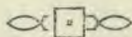
The tray should be supported without any effort on the part of the sick person. If a regular invalid's tray is not at hand, books may be stacked up on either side of the patient's knees to support it at just the right height.

The tray and all traces of the meal should be removed immediately after the patient has finished eating.

The sharp edge of the knife should be turned toward the plate; the tines of the fork, bowls of spoons, and all dishes and tumblers should be placed right side up.



RECIPES



George E. Cornforth

Cream of Corn and Tomato Soup

- 1½ cups strained tomato.
- 1½ cups water.
- 1 cup cream.
- 2 level tablespoons flour.
- 1½ level teaspoons salt.
- ¾ cup canned or fresh corn, rubbed through a colander.
- 1 bay leaf.

Heat the tomato, water, and bay leaf to boiling. Stir the flour smooth with the cream and whip it into the boiling liquid. Add the corn pulp and salt, and the soup is ready to serve.

Salad Dressing

This may be relished by persons who do not like a dressing that contains so much oil as mayonnaise salad dressing contains.

- 1 cup lemon juice.
- 1 egg.
- 1 level teaspoon salt.
- 1 level tablespoon sugar.
- ¾ cup flour.
- 1 cup milk.
- 2 level tablespoons butter substitute.

In the inner cup of a double boiler, beat together all the ingredients except the lemon juice and butter substitute. Heat the lemon juice to boiling and pour it into the ingredients in the double boiler. Place the inner cup in the outer cup of the double boiler, which contains hot water, and cook till the dressing is thick. Remove from the fire and stir in the butter substitute.

This dressing is nice with lettuce, asparagus, spinach, cabbage, fresh tomatoes, or, in fact, almost any salad.

Olive Rarebit

- 1 cup cottage cheese.
- 1 cup cream, or 1 cup milk and 1 tablespoon butter substitute.
- 1 egg.
- 1 level tablespoon flour.
- ½ level teaspoon salt.
- ½ level teaspoon paprika.
- ½ cup chopped olive meats.

Stir the flour smooth with a little of the cream. Heat the rest of the cream to boiling and stir into it the flour mixture. Cook till thickened. Beat the egg, stir into it some of the thickened cream, then stir the egg into the hot cream. Allow this to cook for a moment, then stir in the remaining ingredients. It is well to make this in a double boiler, then it will not scorch or stick to the dish while it is heating after the addition of the cottage cheese. When it is well heated, serve over slices of zwieback that have been moistened in hot water or hot cream.

Peach Salad

Prepare in individual servings as follows: On individual salad plates arrange beds of lettuce. Fill halves of canned peaches, or unbroken halves of stewed fresh peaches, with nicely seasoned cottage cheese. Place one of these filled halves, inverted, on the bed of lettuce on each plate. Pour over each a teaspoonful of French dressing made by beating together vigorously with an egg beater till well blended, 2 tablespoons lemon juice, 1 tablespoon salad oil, and a few grains salt.



The Garden Medicine Chest

Floyd Bralliar

MAN requires food for three general purposes: To supply him with heat and physical strength, to repair the tissue that is broken down constantly, and to replenish the life current as rapidly as it is exhausted. In Eden this latter want was supplied by the tree of life; but as soon as man sinned, the process of death began in his body, and he became literally a being who was slowly dying on his feet. This was as the word of God had told him: "In the day that thou eatest thereof dying thou shalt die [marginal reading]." As soon as Adam had eaten the forbidden fruit, the process of death began in his body, and as a cumulative result he would surely die.

Cut off from access to the tree of life, death would have been sure and soon, had not God given him a medicine that would temporarily stay its course. When he was cast from the garden, to allow him a chance for salvation, God said, "Thou shalt eat the herb of the field," the source from which the animals alone had hitherto drawn their supply of life. From that day forth man's health and vigor have been bound up with the eating of the herb of the field, our garden vegetables.

The benefits from herbs are both general and specific. In general, all the vegetables contain a great deal of crude fiber — indigestible material — that provides bulk. Without this bulk to act as a mechanical stimulus, the peristaltic action of the bowels would be weak and erratic. The food would move slowly in its journey through the alimentary tract, bacteria of various kinds would develop, and constipation and various nerve disorders would be the result. Undoubt-

edly, if every one ate a proper supply of fresh vegetables every day, cathartics and physics would soon disappear from the market.

Nor is this all. The fresh vegetables, together with the acids of ripe fruits, are so changed in the process of digestion that they help to supply the alkalinity to the blood, a condition absolutely necessary to health.

But green vegetables possess other properties still more vital. In their growth they build up the mineral salts so necessary to animal life. But in the green leaves, where these complex materials are stored, are certain obscure substances whose structure or composition is as yet unknown to science. For want of a better name they are called vitamins, which we may interpret as mines of life. And right well they are named, for from them, under God, all the life of this world comes. In the green leaves goes forward, energized by the power of sunlight, the process of building organic material from inert minerals. Here also is supplied that mysterious force that enables a portion of this organic material to live.

When we eat the green leaves, we not only supply our bodies with mineral salts, which the leaves possess in such abundance, but with these we supply our cells with vitamins, giving them new life and vigor.

So important are these green vegetables, or rather the vitamins they contain, that no man can live many weeks without them. Scurvy and beriberi are terms applied to the conditions that arise in which the living tissue dies and decays while the man is yet alive. Green vegetables are the immediate and sure rem-

edy. When there is a sufficient supply of these vitamins to sustain life, but not enough for robust health, children become dwarfed in both body and mind. One needs but go to the tenement districts of our large cities to see in the drawn faces and dwarfed, rickety bodies of the children, the terrible results of the lack of an abundant supply of green vegetables, milk, and eggs.

The mother cow or hen takes these vitamins from the green plants and stores them in milk or eggs for the use of her offspring until they are old enough to get them for themselves at their source; but to adult man, at best these are only a secondary and inferior source of supply.

Many of the garden herbs have specific virtues. Mint contains properties that not only whet the appetite, but stimulate the secretions of the body. Many a mother who was unable to nourish her babe properly has found that if, instead of the risky course of putting him on the bottle, she drinks a cup of sage tea twice or three times daily, she has an abundance of nourishing milk for her

child. Where the supply of milk is adequate but the quality is poor, even this is improved by the use of sage tea.

Cats that have been housed closely for a time go directly to catnip, or if they cannot find this, to horsemint or bee balm, or some other similar plant, and eat ravenously of its leaves and inhale its fragrance, to restore normal action to the cell life. Children can be encouraged to drink catnip tea to advantage.

In case of a cold, where a sweat is desired, there is no better or more effective aid than a cup or two of horsemint tea. It opens all the pores, and greatly stimulates the action of all the excretory organs, without deleterious after-effects.

Let every one grow a garden, and by eating abundantly from its treasures he will not only gain health and happiness, but will profit financially as well. Learn to eat an abundance of vegetables raw, or at least merely boiled in salt water. Excessive cooking, especially parboiling, removes most of the vitamins, the most essential elements the vegetables contain.



The Red Cross in the Influenza Epidemic

THE entire national organization of the American Red Cross was thrown into the scales against the latest influenza epidemic. Red Cross chapters co-operated with the local boards of health, and in communities where there was no regular health organization the Red Cross took charge of the situation independently when influenza conditions warranted.

This great war-time machinery of mercy, so potent in the months before November, 1918, and in the epidemic last year, was again called into emergency service by the moans of the suffering ones all over the United States who were stricken with the dread "flu."

Workrooms hummed with busy effort, for the women who made such a remarkable record in the most active days of the war, turning out surgical dressings and hospital supplies for use in camps and overseas, were engaged in making masks, hospital garments, and other articles needed urgently by the doctors and nurses fighting the epidemic.

Red Cross Motor Corps, which maintained their organization following the war emergency, worked on a war-time basis, moving pneumonia, influenza, and whooping cough cases to hospitals and taking well patients from the hospitals to their homes, so as to allow as many unoccupied beds as possible to meet the continued demand.

Some chapters installed diet kitchens, where special food was prepared for the sick in the hospitals, and for families who were unable to purchase sickroom delicacies.

In New York City, the health commissioner, Dr. Royal S. Copeland, early requested that the Red Cross hold itself in readiness, for emergency action, with

the result that the organization supplemented the work of the city throughout the epidemic. A few hours after the health department had divided Manhattan into seven health zones, each with a health center, ample quantities of blankets, towels, sheets, pillowcases, aprons, pajamas, nightgowns, absorbent cotton, gauze, paper drinking cups, paper napkins, tongue depressors, clothing for adults and children, and layettes were on trucks, moving from Red Cross warehouses to the seven health centers. More than 12,600 articles were supplied within three days.

It was evident that New York hospitals could not long cope with the sudden influx of patients unless assisted with supplies. At the outset of the epidemic, the New York County chapter of the Red Cross gave a thousand influenza masks to the Presbyterian Hospital, lent five hundred sheets to Bellevue, and fifty cots to the Harlem Hospital. Additional hospital equipment was furnished from time to time, as conditions warranted. The warehouse supplies were augmented by thousands of gauze and butter cloth masks and hospital garments, turned out by the great Red Cross volunteer army in dozens of workrooms.

The nursing situation has been acute. At the request of the health commissioner, the Red Cross opened a bureau of registration of nurses in the health department's offices. Here were interviewed and registered hundreds of nurses, both trained and practical, who came in response to Dr. Copeland's telegraphic appeal all over the country. From this office nurses were assigned to cases. Visiting nurses were supplied to applicants who were unable to pay for nursing, and their salaries paid by the

board of health. The office also served as a clearing house to provide nurses for persons who desired full-time services.

The New York County chapter placed at the disposal of the board of health its file of nurses, attendants, and trained and volunteer aids. Volunteer investigators also were furnished for the different health zones to save the time of nurses who were sometimes called on a false alarm.

Directions for making influenza masks were distributed broadcast in the News Letter of the Atlantic Division of the Red Cross, which circulated all over three States, New York, New Jersey, and Connecticut. Butter muslin was advocated, if obtainable, since it is more impervious than the gauze used last year. Thousands of masks, however, were made with ordinary hospital gauze, since

in many instances this was the only material available. The Rockefeller Institute declared the butter cloth mask was the best made, and it was used in all the New York City hospitals.

In Chicago, 14,000 women trained by the Red Cross during the war in a short nursing course, were called to service to aid in checking the epidemic.

In New York City, the canteen was thrown into operation immediately, and served hot cocoa to exhausted nurses in Bellevue Hospital and other institutions.

Chapters provided themselves with loan closets and emergency closets, following suggestions from division headquarters months before. Chapters looked after the health interests of their own communities, but in all cases, what the chapter equipment lacked in the way of supplies was immediately furnished by the division headquarters.



Everywhere the Red Cross workrooms resembled the active days of the war, as the great army of volunteer workers turned out medical supplies to fight the influenza epidemic.

The magnificent assistance the American Red Cross was able to give in the latest epidemic is due largely to careful preparation for just such an emergency. Last October every one of the more than 3,600 chapters of the Red Cross in the United States received from National Headquarters at Washington detailed instructions on how to organize to combat a recurrence of influenza. Chapter committees immediately set to work to ascer-

tain the number of hospital beds, amount of supplies, the nursing strength, number of automobiles and other resources available, should the influenza hit their communities.

The result was prompt and thorough assistance in all districts sorely visited by the epidemic, and incalculable aid to the local health authorities whose normal resources were generally hopelessly inadequate to meet the emergency.

Use of the Cocoanut—Especially in the Tropics

Mrs. D. A. Fitch

THAT the cocoanut contains a large percentage of fat is a fact well known, but how to obtain it and then make use of all the nut material, may not be so well understood. After having lived in Porto Rico for some time, and having by a series of experiments, endeavored to put in practice what had been taught me by others, I decided to add some economical suggestions of my own, the results of which seem to commend themselves to those who have partaken of the prepared delicacies. It is to be hoped that the readers who are where the cocoanut is abundant, will at least try the following directions:

Crack the nut and drain off the water, which is an excellent diuretic. In fact, physicians in the States are sending a certain class of patients here to drink the water of the cocoanut. By any means most convenient, separate the meat from the shell and cut off the thin brown peeling, leaving the cocoanut in pieces convenient for grating, if you prefer to have it grated rather than ground by one of the handy meat mills now so common. The disk next coarser than the one for nut butter is probably

the best one to use in grinding the meat of the cocoanut. More fat will be obtained if it is ground twice. It should be washed before grinding.

On the ground product of one cocoanut pour about one pint of boiling water, more or less, according to the size of the cocoanut. When sufficiently cooled to do so, work it with the hands to assist the oil in separating from the fiber.

Strain off the water, using a strong cloth or bag, and wring the pulp as dry as possible. A pair of tweezers will save the hands. Treat the water as you would a portion of the milk from which you wished to skim the cream. Care must be exercised as to the time of standing, for it ferments readily. The cream is delicious to use in place of cow's cream.

Evidently the water also has something valuable in it, for its look and taste indicate that it has. It can be used in making mushes or soups, or for mixing bread dough. Its value not being generally recognized, it is frequently thrown out, and the pulp is fed to the chickens or meets a similar disposal.

If ice is not to be had, sterilization of the cream will answer a good purpose.

BOOK REVIEWS

Natural Food and Care for Child and Mother

by Susan Harding Rummeler, Ph. B. \$1.60 net. Rand, McNally & Co., Chicago, 1919.

Briefly, the topics treated are: The Prenatal Care of the Child; Care of the Newborn Infant, and the Mother During Confinement; The First Year for the Baby and the New Mother; Artificial Feeding; Weight, Growth, and Normal Development; The Second Year of the Child; The Third Year of the Child; The Care of the Child from the Age of Three Years to Ten Years; Dietetics and Recipes.

The book is largely in the form of answers to questions. Much of the instruction is most excellent, and the book has high indorsement from some well-known physicians. Nevertheless, it would seem advisable to call attention to some points. The author seems to have taken as a foundation the writings of Dr. R. T. Trall, a good physician who said some excellent things, some that are yet true. But he wrote before the days of bacteriology and biological chemistry, two sciences that have practically rewritten the science of medicine. It seems astonishing that a university graduate should not have noted that fact. It is true she has quoted from later writers, but not, in the opinion of the present writer, representative of the present trend of medical thought.

Primer of Hygiene (fourth or fifth grade)

by John W. Ritchie and Joseph S. Caldwell. 48 cents.

Primer of Sanitation (fifth or sixth grade)

by John W. Ritchie. 56 cents.

Primer of Physiology (sixth or seventh grade)

by John W. Ritchie. 68 cents.

All well illustrated. World Book Company, Yonkers-on-Hudson, New York.

Impressed with the thought that the child cannot begin too soon to learn the importance of caring for the health, and to form correct health habits, the authors have prepared this series of health primers which they have admirably adapted to the needs of the school grades. During these early years, boys and girls are forming habits and absorbing ideas that are destined to influence strongly their future lives. For this reason it would seem an adequate course on health building would be one of the essentials of all schools.

That school authorities are awakening to the importance of this instruction is evidenced from the fact that this series has been adopted by all

the Pacific Coast and Southern States and some others,—nineteen in all,—in addition to a large number of cities. They are also adopted for use in our island possessions and in Alaska.

The authors are men well qualified as scientists, and as instructors, for their task. But in addition to this, the books have had careful criticism, before publication, by more than fifty prominent scientists, physicians, and educators.

Personal Hygiene and Home Nursing

by Louise C. Lippitt, R. N., edited by John W. Ritchie. Illustrated. World Book Company, Yonkers-on-Hudson, New York.

The observing physician soon learns that the ordinary cases of illness, especially chronic illness, which he meets, are brought on by the failure of the patient to live a natural life, and that cure must come, not as the result of the administration of medicines, but as the result of the re-formation of the habits, of diet, exercise, sleeping, cleanliness, ventilation, etc.

This book, prepared especially for girls and women, by a trained nurse of large experience as an instructor, is an attempt to fit women in the home to do the many little things that will prevent illness, and to care for ordinary illnesses, and accidents and emergencies when they occur.

The instruction is sound, and the author has not hesitated to show, with appropriate illustrations, the evils of the modern woman's shoe. She has no fault to find with the modern corset. Of the thirty-one chapters, a few only can be mentioned: One each on clothing, how to prevent fatigue, hygiene of the menses, constipation, colds, bed making, food for the invalid, common emergencies, and several on communicable diseases.

It is a practical book by a practical instructor.

A Child's Book of the Teeth

by Harrison Wader Ferguson, D. D. S., edited by John W. Ritchie. Well illustrated. World Book Company, Yonkers-on-Hudson, New York.

The first of a series of health readers for the elementary grades. This book, as a supplementary reader, should give the child much more information on a very important topic than he is likely to get otherwise, unless he is in a school having a full-time school nurse. The book is gotten up attractively for the youngsters, and should hold the attention to what otherwise might be a dry subject.

QUESTIONS AND ANSWERS

ANSWERS THIS MONTH BY G. H. HEALD, M. D.

This is a service for subscribers to LIFE AND HEALTH.

For personal reply, inclose two-cent stamp, and address Editors LIFE AND HEALTH, Takoma Park, D. C.

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

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

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

Is Meat Necessary for a Child?

"I have a boy fourteen months old, who walks like a cripple, looks healthy, is fat and large, but tires soon and does not seem to be able to run or be on his feet much. Does he need meat?"

Meat is never necessary for a child of two years. From a long experience with children in our sanitariums and out we are convinced that children are better off without any meat and that protein is best furnished to them in the form of milk. A child of that age can handle a quart of cow's milk a day very well in addition to cereals and other foods, and in this way gets a much better balanced dietary than he could get with the use of meat. Meat is lacking in some of the important elements of the body. Carnivorous animals obtain this by eating the bones, and in fact, the entire body, and by taking the blood. Meat unbalances the diet in the same way that cereals do. On the other hand, milk balances a diet with cereals.

Condensed Milk and Vitamines

"Does the condensing process destroy vitamins in milk?"

I am not certain. There is some belief that the condensing process does destroy vitamins. At any rate, fresh milk, if it can be obtained, is always superior to the best condensed milk.

To Enrich the Blood

"What can I do to increase and enrich my blood? I have never used tea or coffee and practically no meat, and aim to get plenty of fresh air the year round."

The simplest method of enriching the blood is to eat foods containing iron—such as the leafy vegetables. Many of our foods are deficient in iron. This is especially true of white flour and white rice, although the cereals generally have a low iron content. Milk is richer in iron than meat. The green vegetables constitute our greatest storehouse of iron, so use freely of green vegetables, fruits, milk, etc.

It is possible that your anemia is due, not to lack in your food, but to disturbance of the blood-making organs in your body, or to loss of blood through some heavy hemorrhage, or to a process of blood destruction. If, as a result of a more careful diet, your blood condition does not improve, you should have an examination, in order to determine what may be the cause of this loss of blood.

There is one more consideration. How do you know that you are anemic? You cannot always tell by the color of the skin. The fact that the face is blue or that the hands and feet are cold does not necessarily indicate an anemic condition. It may be simply a nervous condition that prevents the blood from reaching the surface. The only certain way to ascertain whether you are anemic is to have a blood examination.

Books on Infant Feeding and Hygienic Diet

"Please give me the name and address of the best book on the care and feeding of a child from birth and upward; also the name and address of a good book on how to live out the health reform and keep one's strength sufficient for hard work."

An excellent book for your purpose is "Short Talks with Young Mothers" by Charles Gilmore Kerley, M. D., published by G. P. Putnam's Sons, New York. This book gives some very excellent directions for the care and feeding of children. I should judge that this book would be worth about \$1 at the present time. I should also like to suggest to you a little book, "Diet for Children," by Louise E. Hogan, published by the Bobbs-Merrill Company, Indianapolis, Ind. I should judge this book would be 75 cents. I would suggest as a cookbook, "A Friend in the Kitchen," published by the Review and Herald Publishing Association, which sells for 50 cents. A good book on dietetics is "The Home Dietitian," by Belle Wood-Comstock, M. D., Pasadena, Calif. This book may be obtained by sending \$1.75 to her at that place.

Vaccines

"Is any injury done to the system by taking vaccine of any kind, especially if one takes a vaccine supposing he has a certain disease and finds that he does not have the disease?"

I do not think we are in a position to say that vaccines are entirely harmless, though often they are the lesser of two evils. There is, of course, always the consideration that by faulty technic (that is, faulty manipulation on the part of the doctor) some trouble may arise that is not due directly to the vaccine, but this may be said of almost any treatment. In the hands of a blunderer almost any treatment might produce bad results.

Bad Teeth and Skin Troubles

"I have been troubled for a long time with psoriasis, as the doctors call it. Though I have seen a number of physicians, they have given me nothing but temporary relief—often not even that. Is there anything further I can do, or must I go through life with the disease?"

It is possible that your trouble comes from an apical abscess—that is, an abscess at the root of a tooth. Some cases of otherwise incurable skin troubles, as psoriasis and acne, have been cured by removing abscessed teeth.

It is not easy for the nonprofessional person to understand how there can be any relation between diseased teeth and skin disease. It may suffice to say that abscessed teeth may be the starting point for disease in any part of the body. I would suggest that you have your teeth X-rayed. The films may show some inflammatory roots that will explain your skin trouble.

Tapeworm

"What will kill or remove tapeworms? My husband had two, six inches long, pass within a year—the first time in many years. He is thinking of sending for an advertised tapeworm remedy. What is your advice?"

You cannot be sure you have secured the tapeworm unless you find the head. The head is about the size of the head of a pin. Very often ten, twenty, or thirty feet of a tapeworm, or even more, may be discharged, leaving the head, which will continue to form more joints just the same as before. You cannot be certain that any of the advertised remedies will cure the condition. A very simple remedy for tapeworms is pumpkin seed. Why this should affect them when it is perfectly harmless to human beings, it is difficult to say. In order to use this remedy one should go without eating for at least twenty-four hours, or perhaps go on a liquid diet for several days, and cleanse the bowel with a cathartic (Epsom salts) daily.

Then take the meats of about one-half pound of pumpkin seeds. I think, however, that the most sensible method is to place yourself under the care of a physician, and let him treat the case.

Various Symptoms

"I have pyorrhea, a bad stomach, diarrhea, catarrh, bad breath, one nostril stopped at times, some loss of smell, dizziness, and rheumatism. Kindly give suggestions for relief."

Your query presents a case such as we do not expect to help very much by mail. You need a careful examination, not only of your teeth, but of your nose, and, in fact, a complete examination.

I judge that you should have a number of teeth taken out and have a plate made. One cannot have good health with bad teeth, and it may be a little too late to save yours. It is possible that your rheumatism comes from the infection in your gums. Thorough care of your teeth may relieve some of your other symptoms; and, again, catarrhal trouble, indicated by loss of smell, bad breath, and stoppage of the nose, may be a cause of some of your other symptoms.

You seem more anxious to be rid of the bad breath than almost anything else, and this may be due partly to the condition of your nose. This, one would have to determine by means of an examination.

Anemia

"My blood count is 62 per cent. Would sanitarium treatment be of permanent benefit to me? Could my count be raised to 85 per cent or more?"

It would be impossible for me, not knowing more about your case, to state positively how much gain in your blood count you would get by going to a sanitarium. However, in most cases with a blood count such as yours, great benefit would be obtained by such means. Not only would you get the benefit of the sanitarium treatment, but you would be enabled to learn very much about the care of your health, so that when you returned home you could continue the good effects of sanitarium treatment.

Whether your blood count is due to some malnutrition—to some error in diet, such as the lack of some of the iron-containing foods,—or whether it is due to a loss of blood through hemorrhage, or to the failure of the blood-making organs to do their part, is something that the physician at the sanitarium will have to determine.

I have no reason to doubt that a stay at the sanitarium would be well worth your time and money, and that you would be glad that you made the trip. It is due to yourself and to your children. But I cannot say, without knowing more about you, that you could hold your blood count at 85 per cent or higher.

NEWS NOTES

Health Service Hospitals

The United States Public Health Service is now operating 43 hospitals for the care of discharged, disabled soldiers, sailors, marines, and war nurses, who are beneficiaries of the War Risk Insurance Act.

Investigating Botulism

Following a number of cases of botulism, or meat poisoning, reported to State health officers in California, the United States Public Health Service has detailed Surgeon J. C. Geiger to make an investigation in co-operation with State officers.

No Plague in New Orleans

No cases of human plague have occurred in New Orleans since December 19. Rat extermination continues vigorously, however. In November 10,767 rats were killed, and 27,404 in December. The Public Health Service is co-operating with local and State health officers.

Dangerous Dust

Tests of air in one of the factories at Niagara Falls, N. Y., conducted by officers of the United States Public Health Service, revealed the fact that each cubic foot of air contained more than 200,000,000 tiny particles of dust, almost as hard as diamond dust and extremely dangerous to the lungs and air passages.

Health Congress in Brussels

Under the patronage of the king of Belgium, the Royal Institute of Public Health will hold a public health congress in Brussels, May 20-24. Delegates have been invited from the British universities, municipalities, and other bodies interested in public health and from similar organizations in the United States.

Defects Revealed by Draft

As a result of the study of the records of 2,500,000 men it was found that for every 1,000 men there were 468 defective in some particular. That is, more than half the men had no defect of any kind of sufficient importance to record. Over half of the men were thus physically sound. Of the defects about two fifths were mechanical, i. e., relating to the bones and joints. Next to these were defects of the sense organs, sight, hearing, etc. Then came tuberculosis and venereal disease. Of the defects, at least 90 per cent were such as would not interfere with successful work in civil life, and a large proportion were remediable or curable.

Acids and Cancer

Two Austrian physicians claim to have shown that normal blood and normal tissues contain an organic acid having power to kill cancer cells. Cancer tissue does not contain this "normal" acid, but contains instead, another acid which they call the "carcinoma acid," which counteracts the effects of normal acid. Their effort is to learn how the "normal" acid may be secreted in sufficient quantity to decrease the effect of the cancer acid and in this way act as a protection of the body against cancer.

Infant Mortality

Litchfield, having made studies of infant mortality in Australia, concluded that some agency outside of the efforts of health officers has in recent years caused a marked reduction in infant mortality, extending to the second, third, and fourth years of life. Particularly has there been a diminution of the number of deaths from infectious disease, especially those of the intestines and lungs. Litchfield believes that this reduction may be due to some widespread, climatic influence.

Soldiers Under Treatment

More than 10,000 discharged, disabled soldiers were undergoing treatment in Public Health Service hospitals, or under contract with private hospitals, during January, according to tabulated returns. The number of applicants for treatment under the War Risk Act is constantly increasing, as the men become familiar with the fact that they are entitled to free treatment.

Hospital for Soldiers

The Montana Legislature has appropriated \$20,000 for the erection of a building for discharged and rejected tuberculous soldiers. And private funds have been raised for the erection of a second smaller building, for there is already a considerable waiting list. The Government is to pay \$2.50 a day for the maintenance of the men.

Death Rate in 1918

The Census Bureau's annual compilation of mortality statistics for the death registration area in continental United States, which will be issued shortly, shows 1,471,367 deaths as having occurred in 1918, representing a rate of 18.0 per 1,000 population, the highest rate on record in the Census Bureau — due to the influenza pandemic.

Automobile Fatalities

Deaths from automobile accidents and injuries in 1918 totaled 7,525, or 9.2 per 100,000 population. This rate has risen rapidly from year to year, which strongly suggests the need for better traffic regulations and better enforcement of those we now have.

Important Causes of Death

Next to pneumonia and influenza, the most important causes of death in the United States in 1918 were organic diseases of the heart, tuberculosis (all forms), acute nephritis and Bright's disease, and cancer, which together were responsible for 391,391 deaths, or nearly 27 per cent of the total number.

Child Welfare in Missouri

Extensive surveys are being made by the United States Public Health Service of school and home conditions of children in several sections of Missouri. It is expected to result in medical supervision of schools and the establishment of health centers where deficient children may receive medical attention.

Influenza

It was expected that there would be a second visit of the "flu" in the fall of 1919. Instead the epidemic appeared in January and February of this year and has been comparatively mild. As a rule the disease attacked by preference those who escaped the "flu" last year. There was less disposition on the part of health officers to perform spectacular but useless experiments in the effort to stem the disease.

New Preventorium

California's tuberculosis preventorium was recently opened in Marin County under the auspices of the California Tuberculosis Association. It will take care of children between the ages of 6 and 14 who are physically below par. These children will have a course of special feeding, remedial gymnastics, and a maximum of rest, and will receive instruction in an open-air school. There is provision at the preventorium for the care of bone tuberculosis. The treatment will be given free where parents are unable to pay.

War Risk Insurance

Announcement is made that provision has been made for the reinstatement of lapsed War Risk Insurance within eighteen months of discharge upon payment of only two months premiums, provided the insured is in as good health as at the date of discharge or expiration of the grace period (whichever is the later date), and so states on his application. This provision does not protect a man until he actually reinstates. No man who cares to carry insurance can obtain it elsewhere at so low a rate as the Government offers.

Child Hygiene in Missouri

Under the auspices of the United States Public Health Service a health survey is being conducted in various sections of Missouri with a view to the establishment of standards for child hygiene work in the school and home. At its last session, the Missouri Legislature created a Department of Child Hygiene, and the State board of health adopted resolutions asking the United States Public Health Service to demonstrate in Missouri how this department could best function. The Health Service which had already planned to make such surveys wherever in the United States communities were prepared to co-operate, found such co-operation in Missouri. The health survey is in the hands of experts and will doubtless do much good to Missouri, and to the rest of the United States.

Influenza and Pneumonia

Of the total deaths in the United States in 1918, 477,467, or more than 32 per cent, were due to influenza and pneumonia (all forms), 380,996 having occurred in the last four months of the year during the influenza pandemic. The rate for influenza and pneumonia (all forms) is 583.2 per 100,000. Influenza caused 244,681 deaths and pneumonia (all forms) 232,786, showing rates of 298.9 and 284.3 per 100,000, respectively, these being the highest rates which have ever appeared for these causes. The rate in 1917 for influenza was 17.2 and for pneumonia (all forms) was 149.8. In fact the difference (416.2 per 100,000 population) between the 1917 and 1918 rates corresponds with the excess mortality which occurred in the last four months of the year from the influenza pandemic.

Bread Making a Science

For thousands of years bread making has been a craft rather than a science, and it has remained practically unchanged for years. Recently the American Association of the Baking Industry organized the American Institute of Baking, a sort of research body to determine by experiment and otherwise how baking can be more economically and effectively conducted—how the greatest possible proportion of the nutrition of the wheat can be conserved. It had already been determined that by furnishing the yeast with certain stimulants a saving can be effected in both sugar and flour. Other savings will doubtless be effected.

Another Rat-Borne Disease

It is now known that Weil's disease, or spirochætal jaundice, is a rat disease, and is transmitted to humans from rats possibly in a manner similar to the transmission of bubonic plague, though this is still to be worked out. It is now known that the infection is widespread among the rats in different parts of the world.

Doctor Flies to Marooned Patients

On Duffy's Island in the Susquehanna River, cut off by ice pack from communication with the shore, three small children were down with pneumonia. The doctor, hearing of this, had an aviator from the Middletown station take him to the island.

Death Registration Area

The death registration area in 1918 comprised 30 States, the District of Columbia, and 27 registration cities in nonregistration States, with a total estimated population of 81,868,104, or 77.8 per cent of the estimated population of the United States. The Territory of Hawaii is now a part of the registration area.

Cancer

Cancer and other malignant tumors were responsible in the United States in 1918 for 65,340 deaths, of which number 24,783, or nearly 38 per cent, resulted from cancer of the stomach and liver. The rate (79.8 per 100,000) is a decrease from 1917, when it was 81.6. With the exceptions of the years 1906, 1907, 1911, 1917, and 1918, there has been a continuous increase in the death rates from these diseases.

No More Plague in New Orleans

According to announcement made about the middle of February by the United States Public Health Service, there had been no new cases of plague in New Orleans since December 29. During November and December there had been, in all, twelve human cases of the disease, all originating in the food warehouses along the water front. The epidemic started evidently by some plague-infected rats, brought into the port on a vessel coming from some plague-infected city. The rats seem to have spread the infection in the buildings along the water front, but not elsewhere. A vigorous antirrat campaign has been pushed, and the city is probably safe from any further menace from this source.

Sweets Replace Liquor

There has been much complaint that the enforcement of prohibition has greatly increased the demand for, and the price of, sugar. Candy, it seems, is being used more freely than ever before. It is now served with dessert. It might be interesting to those who have a thirst and do not know how to assuage it, to learn that a free use of fruit will do much to lessen the appetite for alcoholic drink.

Fat-Soluble Vitamine in Roots

A series of feeding experiments performed at the University of Wisconsin indicate that when 15 per cent of the diet is made up of sweet potato or carrot, there is sufficient fat-soluble vitamine present to promote normal growth. But in other root vegetables, including rutabaga, dasheen, red beet, parsnip, potato, mangel, and sugar beet, there is a marked lack or absence of this vitamine.

Why the Narcotic Habit?

According to Dr. Alexander Lambert, we must look for the underlying cause of the narcotic habit in the psychology of a personality unable or unwilling to face the problems of life, difficulties, disappointments, and defeats. If this personal problem be solved, the patient is free from the need of a narcotic.

Seven Beautiful Songs for Church and Home, with music for the Piano: "The Mountain Flower," "The Wonderful River," "The Christian Banner," "His Loving Voice," "The Fading Flower," "The Rosebud You Gave Me," and "The Flower Queen." Standard Sheet Music size, ordinary voice. All seven for \$1.00, postpaid. Order from OTTO LUNDELL, 728 Unity Bldg., Chicago, Ill.

Correspondence School Catalogue

The Fireside Correspondence School catalogue for 1920 is now ready. Besides the usual matter, it contains a new plan for ordering books, an announcement of new studies, and pictures of faculty and board of managers. Send for a free copy. Address C. C. Lewis, Principal, Takoma Park, D. C.

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It is divided into departments, so that recipes for certain dishes are readily found, and it is not heavy and cumbersome, but light and handy, and yet it contains 400 carefully tested recipes, as well as tables of food combinations, nutritive value of foods, rules for dyspeptics, household hints, etc.

The departments are as follows:

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