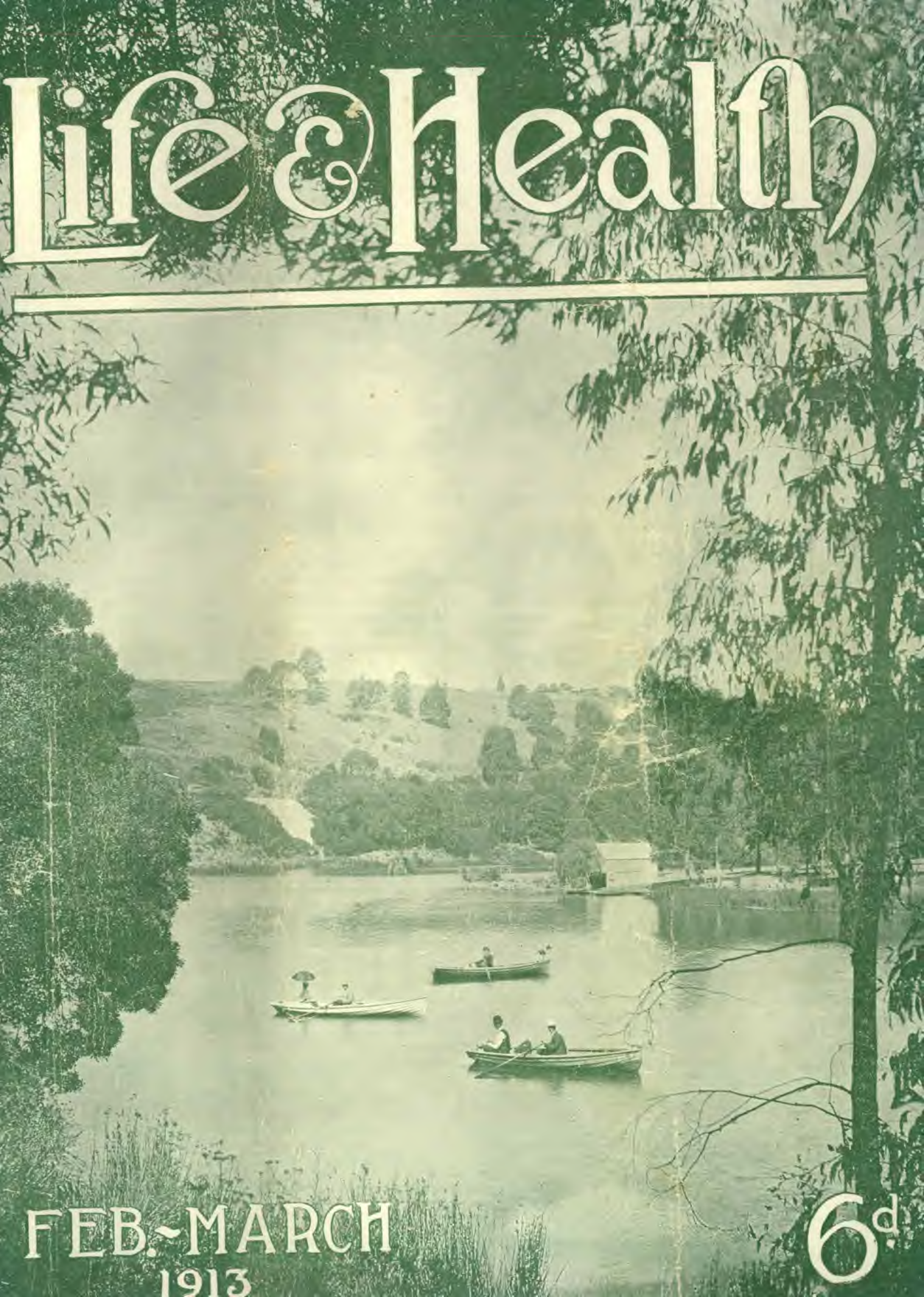
Life & Health



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Life and Health

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Published Every Two Months.
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One of the most pleasing signs of progress which is noticeable of late is the increased attention which is being given to the importance of pure food, pure water, and good sanitation. The public mind is being educated upon the value of hygiene, and instead of regarding the Public Health Department officers as a nuisance, they are gradually being looked upon as essential to the best interests of the community.

This change of attitude is largely the result of the education which the public is receiving through the medium of the press. It is idle to attempt to enforce any reform upon men who are ignorant of their need of reform. It is impossible to make men lead clean and healthful lives unless they are taught the value of health and cleanliness. Dirty people cannot be made clean by simply telling them they ought to be clean. They must be taught to abhor dirt, because of its menace to their physical well-being. They must be led to aspire to cleanliness because of the benefits which will accrue to them therefrom. Every reform, no matter how small, if it is to be effective, must be based upon education. People must be led to do right because it is right and best so to do.

So it is with unhealthful customs. These will not be laid aside because of mere sentiment, nor because of some outside compelling force. It must be demonstrated that unhealthful customs are pernicious and harmful, and that it is unprofitable to continue to follow such customs.

It is the mission of LIFE AND HEALTH to direct the people of Australasia into better methods of living, because they are the most conducive to the health and prosperity and happiness of the nation.

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BRIDAL FALLS, KATOOMBA, N.S.W. T. D. Cleary, Photo., Sydney

Vol. 3 February-March, 1913 No. 1

Sickness a Great National Waste

BY A. W. ANDERSON

THE enormous financial loss to the nation and the appalling amount of individual suffering which are the direct results of sickness should be sufficient in themselves to demand that supreme efforts should be made to minimise this national waste, especially when it can be demonstrated that a large proportion of this sickness is preventable.

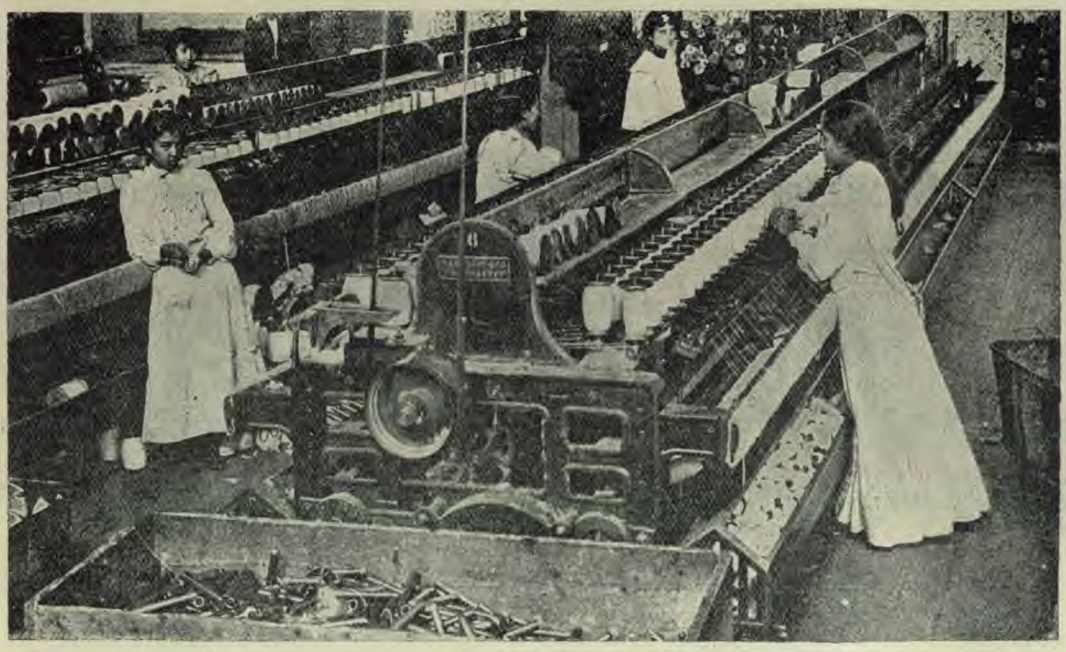
While we do not have any statistics at hand showing the number of cases of sickness which occur annually in Australia, yet some idea of the amount of national loss and suffering which can be traced to sickness, may be gathered from some recent statistics which have been tabulated in the United States. During the year 1911, it is officially stated that no less than 13,500,000 cases of sickness occurred amongst the wage-earners of the United States, and the aggregate loss of wages from this cause totalled the stupendous sum of £73,200,000. Probably a fair percentage of these cases of sickness could be traced to what is termed as "Diseases of occupation"—a class of malady which has a wide range, and which, perhaps, can hardly be classed as preventable. Almost every trade has some special menace to the life and health of its artisans. In some industries the workmen are called upon to handle dangerous substances, while others are compelled to work amidst very rapid machinery, which keeps them upon a constant tension. Others, again, are liable to contract throat and lung diseases, as a result of the inhalation of dust and other injurious substances.

While, under present conditions, it would seem as though little can be done to prevent the occurrence of many cases of sickness which are classed as "occupational diseases," yet it is beyond all question that much of the sickness of the wage-earners of all countries is preventable; and if that is so, strenuous efforts should be made to prevent this unnecessary loss of human energy.

One million and a half people die in the United States annually, and of this vast number it is estimated that one-third could be prevented. That is to say, 500,000 lives are sacrificed to preventable causes in the United States every year. How is it in Australia? While we have, as yet, no means of determining the number of cases of sickness which occur annu-

ally because, as far as we are aware, no such statistics have as yet been collected, yet if we are safe in calculating our probable cases of sickness in the same ratio per thousand of population as those given for our American cousins, the Australian workmen are losing about £3,600,000 per annum in wages as a result of sickness, to say nothing of the suffering entailed thereby.

If a disease breaks out in the orchards, or in the wheat areas, or in the potato fields of the State, an army of inspectors is at once sent out, authorised to take all necessary steps to prevent the spreading of the disease. The greatest interest is also shown by the public departments in the maintenance of the health of the live stock in the State. Horses and cattle must, at all costs, be protected from contracting epidemic diseases. The success of the agricultural and horticultural interests of the Commonwealth demand that our crops and animals shall be as free from disease as possible. Nobody questions the wisdom of this, for the commerce of the nation is threatened if the Irish blight should ruin the potato crop, or if the wheat should be spoiled with rust or smut, or the peaches with the aphis, or the apples with the codlin moth, or the bitter pit, or the black spot. Should any disease make its appearance amongst the sheep, or the cattle, or the horses, or the pigs, great consternation takes hold of the pastoral and agricultural community. No effort is spared to stamp out the disease.



Girls in a Cotton Mill Underwood & Underwood, Photo.

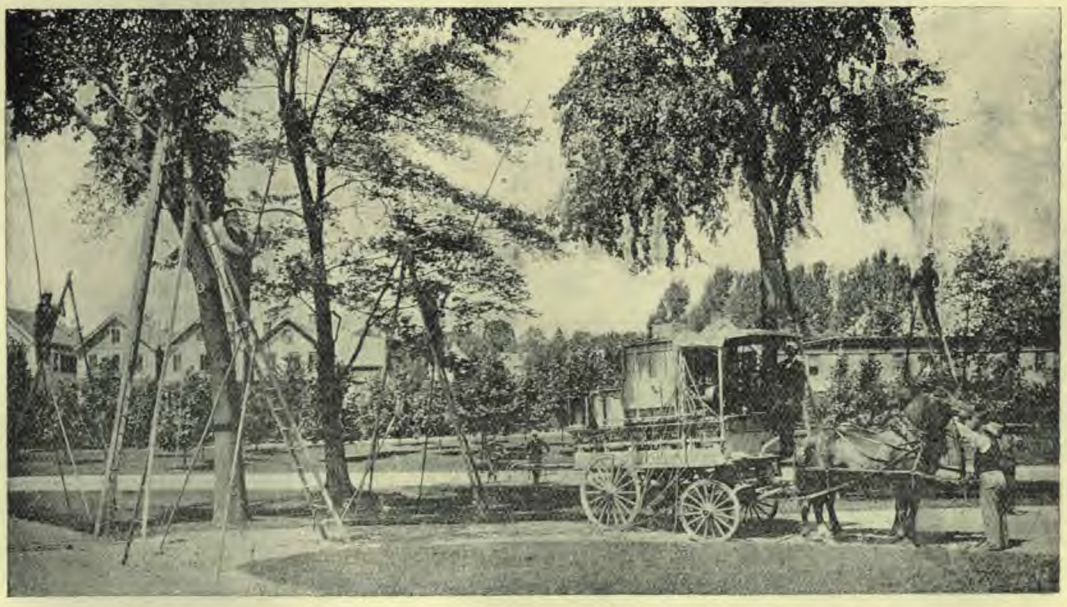
The rapidity of modern machinery is a great strain on the nerves

But when merely human beings are threatened with influenza, or measles, or whooping cough, or scarlatina, or diphtheria, it is apparently regarded as a matter of course, and occasions but little concern on the part of anyone save the immediate sufferers and their near relatives who may be called upon to wait on the sick.

Year after year rolls on, bringing in its train the usual round of epidemics. But what are we doing in a practical way as a progressive community to prevent the

recurrence of these preventable diseases?

Individually we may do much for our own protection. A healthy body is proof against most, if not all, diseases. As one writer has said, "Healthy blood will destroy almost any germ that is known to science, but unhealthy or contaminated blood welcomes them with open arms and says, 'Come and feed and multiply.'" We cannot have healthy blood unless we practise the laws of health. We cannot have immunity from disease without healthy blood. Therefore if we wish to escape the pestilential diseases which stalk abroad unchecked in almost every city and town and village, then it is imperative that we should eat and drink only those things which will make us healthy and strong; live, and especially sleep, in well-ventilated rooms; exercise every day in the open air; and cleanse the skin every day. Pure food, pure water, pure air, pure houses, pure thoughts, are the best and only insurances against sickness. From a merely financial aspect, to minimise the sickness of the community is worth supreme efforts on the part of every citizen.



A Public Spraying Machine Protecting Trees from San José Scale

Eugenics and War

AT the Congress of Eugenists recently held in London an interesting discussion took place on the effect of war on national physique. Many people erroneously believe that war has a most beneficial effect upon the national physique. This idea was strongly opposed by Professor Vernon Kellogg, of Leland Stanford Jr. University, who urged the necessity of peace for the development and maintenance of the best manhood. He declared that nothing could be more disastrous to the physical strength of a people than the direct selection of the most robust for work which carried them away from home, prevented their giving their vigour to children, and returned them, if at all, maimed, diseased, and exhausted. The prevalence of war, draining the country of its able-bodied men, brings with it an era of greatly lowered birth-rate and of the birth of weak and undersized children. This happened during the Napoleonic campaigns. When they were over, even though the survivors were decimated and wounded, France entered on a period in which an

inch was added to the war time stature of its inhabitants.

It was claimed by certain German and English military officers that military service developed the recruits. A German general called the attention of the Congress to the physical strength and high spirits of the young soldiers he had seen marching through the streets of London.

In commenting upon this discussion *The World's Work* said: "There can be no doubt that military exercise and discipline are beneficial to those brought under them—so long as they do not go to war. But the same exercise and discipline directed in other channels—in preparation for duties not destructive but efficient for prosperity—these would give the same result, as a by-product, while their chief purpose would not be wasted. Every advantage claimed for military service could be gained by training for war, not against other nations, *but against the common foes of all* [italics ours]. On the sole ground of the maintenance of a people's physical vigour, war is greatly to be deplored. It inevitably kills many, injures more, and at the best withdraws a large proportion of the most vigorous from fatherhood during their best years, while it leaves the weakest to transmit their deficiencies to the following generation.

A. W. A.

Old-Fashioned Mistakes

Ethel M. Heynemann, L.R.C.P. and S., Edin.

Infectious Diseases

"WHEN Mrs. Smith's children had the measles I let the four of mine play with them. You know all children have to get 'em, so it's best to be over with. Only three of mine caught them—Mary, Willie, and Jack. They were all down together. It seems to have done Mary and Willie good; but poor little Jack, it's left him weakly."

We cannot but be surprised at the remark considering the precaution of the health authorities to arrest and eradicate infectious diseases, yet many mothers still retain the belief that as surely as there is a teething period in the life of a child, so there is a measle or whooping cough period, and will deliberately expose their children to these diseases. It is neither the measles nor any other disease that does Mary and Willie good, but the rest and more careful diet, etc. Why has it left little Jack "weakly"? His resistance against disease was not as strong, and complications followed. There are many such little sufferers. The complications which follow many of the infectious diseases are worse than the disease itself, sometimes causing death, and not infrequently leading to permanent ill health.

Every mother should strive to protect her children from disease in any form. Build up their vitality by simple, nourishing food. Insist on their retiring early. Late picture shows with their exciting scenes are not conducive to sound and refreshing sleep. Teach the children to keep their mouths clean. Let the little ones learn to gargle as soon as possible. It simplifies treatment if sore throats are prevalent. Let the washing of hands be a routine measure before eating. Be pleased to say, "When Mrs. Smith's children had the measles *none* of my little ones got them."

"Lockjaw"

"Johnny, don't be playing with that knife. If you cut yourself between the thumb and finger you'll die of lockjaw." Many people believe just what Johnny has been told, and they will manifest surprise when informed such a statement is untrue. Let us ascertain the truth of the matter. Lockjaw is an infectious disease caused by a germ which is found in garden soil, and it is said to be in some way associated with the manure of horses. The germ can enter the body through wounds inflicted with garden tools, rusty nails, and blades which may have been buried in the soil. It matters not where the wound is situated, if the infection has entered the body the results will be the same. The germs have power to elaborate a poison sixty times more poisonous than strychnine. It affects the nervous

system, causing severe spasms of certain groups of muscles. The muscles of the jaw are affected first, hence the name "lockjaw." Wounds from dirty garden or stable tools, rusty blades, or nails, should not be regarded as trivial.

Thrush

"Mrs. Jones' baby has the thrush. Poor little thing! Oh, perhaps it is for the best. If it has it now it won't get it before it dies. Everybody must have thrush once—either when a babe or on the deathbed."

It is true that thrush sometimes occurs in the final stage of a few wasting diseases. Probably the exaggeration of this fact has led to the idea that thrush occurs at every death unless one was fortunate (?) enough to have had it when a babe.

Babies ought not to have thrush any more than they should have smallpox. Thrush is a disease caused by a fungus. It is generally the result of a dirty feeding bottle or other want of cleanliness. Nursing mothers should keep their breasts scrupulously clean. If the child is artificially fed, see that the bottles are thoroughly cleansed before each feeding.

Cleaning Baby's Ears

Many mothers think that the baby's toilet is not complete unless they have thoroughly removed all the wax from the child's ears with a hairpin or other pointed instrument. This is a mistake. Nature has supplied organs of the body with protectors. If a foreign body enters the eye, tears immediately begin to flow so as to wash out the intruder. If anything unpleasant enters the mouth, even a babe will straightway spit it out. The protector against insect intruders into the ear is the bitter-tasting earwax which nature supplies. This should not be removed unless near the opening it accumulates in excess, which is seldom the case. If there is an excessive discharge from the ear a doctor should be consulted, because much damage can be done to this delicate organ by a person ignorant of its structure.

How to Keep Cool; or Hot Weather a Blessing

By D. H. Kress, M.D.

THE human body in health is capable of adapting itself to the various changes in the external temperature. No matter where the healthy man or woman dwells; whether near the north pole or the tropics the internal temperature is practically the same.

In studying the circulatory system we find in the interior of the body large blood vessels; these divide and subdivide as they come toward the surface. When reaching the skin they are spread beneath it in a web of minute capillaries. So close together are they that it is impossible to introduce the point of a pin anywhere without piercing one of them. It is this wise arrangement that enables the body to maintain an equable temperature. Heat is produced chiefly in the glands and muscles of the body. The more active these are the more heat is produced. The temperature of the liver, heart, and brain is anywhere from 103 to 106° Fahrenheit, while the temperature of the mucous membrane of the mouth is but 98.6° Fahrenheit, and that of the skin little lower.

The heated blood from the muscles and internal organs is brought to the surface and spread over this great area in a thin layer to allow it to cool. It then returns and cools the internal organs. In this way an equable temperature is maintained. A disturbance in this nervous mechanism through the presence of some poison is responsible for various fevers. The heart, the liver, or the brain, sometimes becomes so excessively hot as to result in great injury if not in death. Frequently in fevers the skin is pale and the lips and ears blue while the internal temperature is very high. Hot weather brings more blood to the surface and increases the elimination of the poisonous wastes which interfere with the mechanism which controls the circulation, and thus tends to keep cool the body and prevent fevers. The individual whose tissues are saturated

with uric acid, and who is suffering with gout, rheumatism, neuritis, etc., cheerfully pays a few shillings to spend twenty minutes in an electric light bath or a Turkish bath, but complains of hot weather which does a great deal more for him than these artificial means. Hot weather is a blessing to all. Of course the amount of good we get out of it depends on the amount of good we see in it. By our mental attitude, we may convert any blessing into a curse.

In hot weather the surface of the body becomes red, this is especially noticeable in the face and hands or parts which are exposed; the blood-vessels dilate to allow more blood to come to the surface to be cooled off by evaporation. Insensible perspiration is constantly taking place, as much as three or four pints of moisture is eliminated on an ordinary day. On a very warm day probably as much as two or three quarts of water oozes out through the small openings of the skin, and spreads on the surface. From the evaporation of this moisture which envelops the body the blood is cooled. It is then carried internally and cools off the heated brain, liver, and stomach; then more of the heated blood is sent from the internal organs to the periphery for cooling. Perspiration helps us to keep cool. In cooling butter we sometimes wrap a moist cloth around it, and even though a warm wind should blow against it the butter is kept cool. The moisture on the skin acts in something the same manner as the moist cloth around a pitcher of water. Moisten the finger and pass it rapidly through the air and you will notice how cool it becomes. Water keeps cooler in an earthen jar, because it is porous, than in a glass jar which is not porous. The blood-vessels of the skin contract, the skin becomes pale, or if the weather is very cold it takes on a goose-flesh appearance, the skin becomes less porous, and the blood is kept in the internal organs or prevented from coming to the surface to avoid chilling.

Some seem to have the idea that the best way to keep cool is merely to sit still. You will find that people who have something *to do* feel the heat much less than those who sit still and are constantly thinking and talking about the warm weather. The men and women who work seldom complain of the hot weather. There is something more we can do to keep cool. On a hot day we have not much appetite for hearty food, the butter remains untouched, the beefsteak looks uninviting, we seem to crave only juicy fruits or something light. There are those who think they must eat at all events, and so take something to stimulate the appetite. This is a mistake; it is better to abstain largely from the use of solid foods in warm weather. It is just as sensible to do that as it is to cease to put fuel into our stoves on a hot day.

What fuel is to the fire, food is to the body. When we eat solid food on a warm day we add fuel to the vital fire and increase the heat of the body. By eating lightly and using liquids more freely we shall be surprised at the little effect the heat will have upon us.

There is another reason why we should not eat much hearty food or fats in warm weather. The stomach is relaxed and is not in a condition to digest much food. If the same quantity is taken that we take on a cold day the food undergoes fermentation or decay and causes drowsiness.

Fruits are the best foods in a warm climate or on hot days. When the warm spring weather appears, a change should be made in the diet. All would feel better and enjoy life better if they would add less fuel to the fire in warm weather and take more fruits or green vegetables. Chopped raw cabbage, lettuce, celery, green peas, etc., are excellent foods for warm weather.

Watermelon is also an excellent food in summer. The pulp may disagree with some, if so it should be rejected. The liquid is readily absorbed, and in purity is equal to double distilled water. Lettuce is a good food if scrubbed thoroughly before eating. One wants to know where it comes from. Sometimes gardeners are not very particular, and the lettuce might

A Food as well as a Drink

not be as clean as one could desire. The best way is to wash it well, then place it in a five per cent solution of tartaric acid for fifteen minutes, and wash again. Lemon juice may be poured over it. Lemon juice is a good germicide.

Celery is good. It is less objectionable than lettuce. Watercress may also be used. The cucumber is a good summer relish, but needs to be masticated thoroughly. Raw cabbage chopped, with the addition of lemon juice, is also a nice relish. These raw foods contain little nutriment, they may not even be digested, but they add bulk, and they prevent putrefaction, and aid in cleansing the alimentary canal. Radishes may be taken as a relish, but should be used sparingly.

An exclusive fruit meal might be taken occasionally on a warm day with benefit. Nuts and fruit form a perfect diet, the former containing more proteids than meat. What is lacking in the nuts is supplied by the fruits, and vice versa. There are those who live entirely upon fruits and nuts and enjoy good health. I do not say that this should be done, but it can be done. Fruits, nuts, and grains are the ideal foods for man.

Should one drink water freely on a warm day? It is all right to drink as much water as one desires, as long as it is not taken directly before or after meals, as it would dilute the saliva and gastric juice, thus delaying digestion and causing fermentation. Care should be taken not to drink too much at one time; it is better to take small amounts frequently than large quantities at long intervals. It is a good plan to take a glass of water half an hour before meals and before retiring at night; this will cleanse the stomach.

Water drinking is essential in keeping cool on a warm day, for the water taken internally soon comes to the surface to keep moist the skin, and by evaporation cools the body. Let us regard an occasional hot day as a blessing. The one who regards it in this way will get much more benefit from the warm weather than the one who looks upon it as a curse, for a contented mind itself tends to keep the body cool.

Why Not Before

By G. H. Heald, M.D.

THE following advice is given by a physician of experience to physicians who have to treat persons showing signs of old age:—

When we first discover a moderately high pressure, of say 150 mm. mercury or over, a certain amount of rest and moderate exercise should be enjoined, and alcohol, tea, coffee, and tobacco in many cases should be interdicted.

It is all very well to tell a man that he must give up these things or drop into the grave; and perhaps he does give them up for a while, but on account of the long-established habit, he more likely will, in a short time, give up the attempt to reform, preferring to live comfortably even if he lives a shorter time.

Now, in all honesty, why not begin such reforms before the time that they come to a person as an alternative for death, and when death would almost be preferred to giving them up? Why, in fact, form the habit of using such articles when one can be just as comfortable, just as happy, just as efficient, if not more so, by doing without them?

When we form a habit of indulgence of any kind, we add one more to our *necessities* which *must* be supplied in order to be comfortable. And when it is fairly certain that some day we shall have to decide between the alternative of giving up this created necessity (which has grown immeasurably during the years of indulgence) and dying prematurely, is it rational to begin?

EXERCISE in the open air all you can, and don't forget to breathe deeply; it will be your physical salvation.

Hints for Dyspeptics

BY A. B. OLSEN, M.D., D.P.H.

DISCOMFORT, loss of energy, drowsiness, muscular weakness, varying aches and pains, including most headaches, backaches, and shoulderaches, impoverished blood, nervous debility, and often also irritable nerves, and limited temper —these are some of the more important of the multitudinous symptoms which indicate troublesome digestion or dyspepsia.

The Corner-Stone of Health

Good digestion is the corner-stone of good health, and goes a long way to ensure a sound constitution, vigorous vitality, and steady nerves. Good digestion, with its accompanying sanguine spirits and hopeful optimism, is in itself an excellent equipment for the duties and perplexities of daily life. Without it life often becomes a nightmare, for the dyspeptic sees life through darkened glasses, giving blackened and distorted images, and sometimes life becomes so miserable that it seems scarcely worth while. Food is the fuel and building material of the body, and, as we all know, it serves to repair the daily wear and tear of the tissues, and also to recuperate worn-out energies. The various digestive organs, including the teeth, salivary glands, stomach, sweetbread, liver, and intestines, all have their particular functions to perform in the complex process of preparing food for the blood. Until the food enters the blood to be distributed to every part of the body for nutritive purposes it is useless. Digestion and assimilation then become vital functions for the sustenance of life, and anything that impairs or interferes with the one or the other equally impairs the physique and militates against health.

The Selection of Food

Naturally the proper selection of the diet is a matter of first importance. What shall we eat and drink? The abundance and variety of food material that nature has supplied is very great, and with the advantages of modern transportation it is possible to command supplies from every quarter of the world. To properly nourish the human body it is necessary to have some understanding of food values and food properties, and to give reasonable care to the selection of the diet. Shall it be mixed feeding, or fruitarian diets, or unfired cookery? If fruitarian, shall milk, butter, and eggs be included or not? These are some of the questions to be answered.

Simplicity the Keynote

The key to the problem of nutrition is undoubtedly simplicity. Not how much can I eat, but rather what do I require for my daily labours; not what the perverted appetite dictates, but rather what the body needs for its repair and the restoration of the worn-out energies; not to live for the purpose of exercising the gustatory sense, but rather to eat for the purpose of living well and enjoying good health—these are some of the essential underlying principles that ought to guide us in the solution of the nutrition problem.

Fruitarian Diet

If man were unbiassed by custom and fashion, and were unhindered by precedent or by a fickle taste, the natural choice, we believe, would be such food as is provided by plants, always including the products of the dairy. Here we have not only an ample variety, but also all the food elements required for the support of a strong, active, healthy body. Here we find all the food elements, not only in their simplest form, but also in their purest state.

Objections to Flesh

But why not include animal flesh and thus obtain a still greater variety? The

answer in a word is, that the flesh of dead animals makes a less reliable and less wholesome food. For the maintenance of sound health, strength, and endurance, the best and most wholesome food is naturally required, and we hesitate to believe that it can be readily obtained from the carcases of animals.

Diseases among Animals

That animals, and particularly domestic animals, are subject to a large number of diseases, is a well-known fact, and when we bear in mind that many of these diseases are directly transferable to man, it becomes obvious that there is real danger in the indiscriminate use of animal flesh. Consider for a moment the numerous cases of typhoid fever that have been traced to the consumption of shell-fish, and particularly oysters, mussels, cockles, winkles, and whelks. More recently typhoid fever has also been traced to the use of certain varieties of fish, including plaice. Then there are various parasites, such as tapeworm (about fifty varieties), trichina, and numerous other parasites, not to mention such deadly germ diseases as anthrax, tubercle, foot-and-mouth disease, etc., which are transferable from animal to man. The fact is that a very large number of animals which are slaughtered for food suffer to a greater or less extent from disease. Indeed, there seems to be no exception according to the "report of a commission of eminent scientists outside of the Department of Agriculture who were appointed in 1907 to consider and make recommendations in regard to certain features of the meat inspection." Among other statements we have the following remarkable admission to which we would particularly call the attention of flesh-eaters:—

> The commission could easily undertake to show that not any single animal used for food in any part of the world would, upon microscopic study, be shown to be absolutely free from all infection or lesion.

Uric-Acid Foods

Furthermore, all flesh foods contain a certain amount of organic extractives or waste matter, the effects of which upon the human system are anything but desirable. One of the best known of these tissue wastes is uric acid, which is always found in any animal food, whether it be flesh, fowl, or fish. True, certain varieties contain more than others. Uric acid is believed by many authorities to be an important factor in the production of disease, and particularly of such diseases as gout, rheumatism, neuralgia, neuritis, lumbago, sciatica, etc. Consequently we hold that, for this reason alone, it is wise to exclude animal flesh entirely, or at least take it sparingly, and then only when other more wholesome substitutes are not available.

Unfired Foods

Not all foods require cooking to make them digestible and capable of assimilation into the blood. In the case of fruits and nuts nature has already done the cooking for us, and such foods when ripe may be looked upon as sun-cooked. They are perfectly wholesome and require no further attention of this kind, although on account of deficient mastication a baked apple is sometimes found to be more suitable to invalids than a raw apple. Then there are other foods, such as watercress, lettuce, and celery, which contain practically no nutrition other than some valuable salts. If well masticated the salts are easily dissolved and are utilised by the system, and there is therefore no special reason why they should be cooked. But there are other foods which must be cooked. Take the common potato, for instance, or any cereals such as oatmeal or wheatmeal. The bulk of these foods consists of insoluble starch, which is practically indigestible unless cooked. The heat causes the little envelopes containing the starch to swell and burst, and then, and then only, the starch becomes accessible to the digestive juices, and is finally changed into sugar before being assimilated into the blood. While it is true that many stomachs are able to tolerate unbaked bread, still it must be borne in mind that little or no benefit in the way of nutrition is obtained by the body from such food.

The Purpose of Cooking

Altogether too often the process of cooking is entirely perverted. We understand the real purpose of cooking is to make the food more digestible. When put to this test we shall readily see that much so-called cooking is merely a process of compounding, which renders the article increasingly difficult of digestion in proportion to the amount of preparation it receives in the kitchen. The free use of such complicated messes, and indeed, of all rich savouries, naturally leads to digestive disorders of one kind or another, and becomes a prolific source of dyspepsia.

Proper Food Combinations

Bearing in mind that the keynote of diet is simplicity we can readily understand that it is not desirable from the standpoint of health to take a large variety of food at the same meal. It would be far better to spread the variety over the day or the week. A simple meal with a few varieties of food, and these plainly but thoroughly cooked, is conducive to the building of a sound body. It is not good as a rule to mix fruits and vegetables, neither does milk go well with fruits, especially of the acid kind. Milk and sugar form another poor combination which is quite likely to give rise to fermentation and its accompanying flatulence. Two or three articles, or four at the most, at the same meal are usually sufficient, and are far more easily digested than a larger number.

Mastication

It seems strange, but very few people realise that digestion begins in the mouth with the chewing of the food. Some people seem to think that the teeth are intended only for ornament, but when so regarded they very soon atrophy and decay from want of use. Mastication of the food is the first, and one of the most important steps in the digestive process, and the only one over which we have direct and full control. Chewing the food a sufficient length of time to incorporate it thoroughly with the saliva is a long step towards improved digestion.

Convulsions and Infant Mortality

By P. M. Keller, M.D.

AT the annual meeting in Baltimore, U.S.A., of the American Association for the *Study and Prevention of Infant Mortality*, the secretary of the New York Milk Commission talked about milk depots, but laid the main stress on mothers. "In the last analysis," he insisted, "infant mortality is to be solved not by philanthropy, nor by institutions, nor by the medical profession, nor by the State, but by intelligent motherhood." The solution of the problem was "up to the mothers," as he tersely put it at the end of his talk.

Recently at a meeting of a society organised for the same object in New Zealand, one report showed that out of 1,000 births seventy-nine children died before reaching the age of one year. The world's record shows that one-third of man's children never attain the age of five years.

That it is "up to the mothers," and the mothers may have a material effect on infant mortality, is brought quite prominently before the physician who is called into the homes. He may see often such contrasts—the mother who is ready with first aid and the one who is not—and the sad effect on child life.

Convulsions affecting children are of common occurrence, often the result of trivial causes. The nervous system is much more easily disturbed at this period of existence—the cause may be teething, indigestion, or worms. Many acute diseases are ushered in with convulsions, such as scarlet fever, measles, and inflammation of the lungs. With a child in convulsions a mother can quickly demonstrate her usefulness by making the attack less disastrous than it might be.

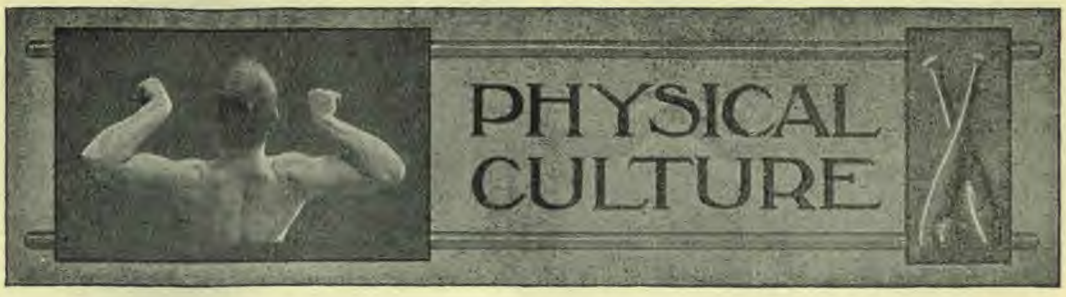
We might look at two actual cases. One night I was sent an urgent message to come to a household. On arrival I found a child of about three years in the midst of a convulsion—patient rigid, face and lips dusky, head bent back, hands tightly shut, arms and legs stiff and work-

ing vigorously to and fro in a jerky manner, muscles of the face working vigorously, eyes set and turned up. Treatment was an urgent necessity, but the fire was out, the room cold, and the child wrapped in blankets, but the legs and arms exposed and cold. Rapidly a fire was lit, and enough water heated to give the child a hot bath.

In such cases the patient may be kept in the bath from three to ten minutes according to its strength; a cold cloth may be placed to the head, but the child's head should not be kept near the fire. It is always advisable to have the room warm. It was necessary in this particular case, as in all such attacks, to have the contents of the digestive tract quickly removed. To accomplish this the mother should administer quickly an enema of soapy, warm water, and give the child also a good dose of castor oil.

In the case under consideration, after the first bath the child was wrapped in warm blankets and made comfortable in a cot, and urged to take drinks of warm water frequently. After a time the attack again appeared, and it was quite evident the nervous system had been much disturbed. Baths were again repeated, and after a long struggle, the child, being in a moist heat, with bowels empty, went quietly to sleep, followed by recovery. We subsequently ascertained that the cause of the derangement arose from the fact that the mother, when making her frequent cups of tea (a nerve stimulant), had placed the tea leaves in a wire case which was then placed in the teapot. The child, when playing, had secured this wire tea-infuser, putting the contents in her mouth, with the above results.

Soon after this case the writer was called to another of the same kind. On arrival the child was no longer convulsed, but was wrapped in warm blankets, with cold cloth to head, and perspiring freely. The mother had given a warm bath immediately, and a warm enema, and the child was receiving frequent drinks of water as warm as he could stand. With prompt treatment this mother was successful in preventing her child from suffering further attacks. The first mother only just escaped adding one more to the infant mortality list.



The Effect of Exercise upon the Brain and Nerves

THE effect of exercise upon the brain and nerves is an important and practical matter. Everyone knows that after a walk in the open air, or moderate exercise of any kind, the brain is clearer, one can think more clearly, and can accomplish a greater amount of mental work than before. When the student finds himself drowsy, and his brain dull, let him take a run out in the open air, and he will come back fresh for his work; his exercise seems to have cleared away the cobwebs from his brain by giving it a fresh supply of oxygen. Oxygen is the most important of all the foods of the brain, and the brain is the most important of the organs of the body. As the brain becomes stupefied and unable to work when the proper supply of oxygen is cut off, so when a new supply of oxygen is given, the activity of the brain is increased.

Another way in which exercise aids the brain, is by removing tissue wastes. The increased amount of oxygen, received by exercise, not only vitalises the brain, but burns up the waste substances, which are poisonous. Dr. Ferrier, some years ago, in experimenting upon monkeys, found that beef juice or extract of meat caused paralysis when applied to the brain, so that it was impossible to stimulate the motor centres so as to cause the muscles to contract. This shows that tissue poisons stupefy the brain. Exercise purifies the blood by causing the reception of a larger quantity of oxygen, which burns up the wastes, and so the brain becomes clear and vigorous.

Everyone knows that nervousness is relieved by exercise. A feeling of nervous irritability is often relieved by walking in the open air. This condition of the nervous system is often due to the accumulation of poisons. It may be due to an accumulation of stagnant blood in the brain; and by a withdrawal of this through exercise, the nervousness is relieved.

The condition known as insomnia, or sleeplessness, is produced by poisons; and these impurities of the blood are taken away by the oxygen supplied by exercise. The Bible says that "the sleep of the labouring man is sweet;" and the reason is that exercise purifies the blood and supplies to the brain and nerves plenty of oxygen, so that the irritability which causes sleeplessness is unknown to him.

Another important point to be observed in relation to exercise in reference to the brain and nerves, is the fact that whenever the muscles are exercised, the brain and nerves are also exercised. Whatever brings the muscles into activity, brings the brain and nerves into activity; and as the muscles grow, the brain and nerves grow also. The nerves which supply the

muscles connected with the nerve centres increase in size and activity and efficiency as the result of exercise, just as do the muscles themselves. We find, then, that exercise is a means of mental development.

In a more direct way exercise aids mental development by cultivating attention. We have an illustration of this in the little child just learning to write. When he first takes his pen in hand, he writes with his fingers, tongue, mouth, in fact with all the muscles of the body; but as he becomes more and more accustomed to writing, this use of numerous groups of muscles in writing gradually disappears; he is better able to segregate his muscles, and finally uses only the muscles of the hand or arm, instead of moving such a large number. What has made the change?—The child has simply developed his control of the nerve centres so that he is able to concentrate his attention and effort to a single group of muscles. In this way exercise cultivates attention.

This fact indicates the importance of gymnastics, the necessity for such exercises as require skill and training; not such exercises as running, walking, or shovelling, but exercises requiring concentration of the mind, and constant, mental activity for their execution. In Swedish gymnastics and calisthenics we have exercises which are useful to the brain as well as to the muscles; because they constitute in themselves a nerve training which is of very great value. The trained gymnast has a control of himself which the untrained man has not. He has control of

"A feeling of nervous irritability is often relieved by walking in the open air."

every group of muscles in his body.

The untrained man is awkward and clumsy because he does not have proper control of his muscles; he may direct a muscle to act, and that muscle may not act, but another muscle may act instead. For example, I often tell such a man to put his hips back. He tries to do as directed, but the shoulders go back instead. Why?—Because he has not trained his muscles to act properly. In the case of the gymnast, his muscles do just what he tells them to do. The average individual has very small command of his muscles. How clumsy most persons are with the left hand. It is only the right hand that is trained to any considerable degree with most persons. We write with the right hand, and if we have any fine work of any sort, it is done chiefly with the right hand; so the right hand becomes fairly well educated. And so with the rest of the body. The untrained man is ignorant of the power of his body, while the gymnast, as the result of physical training, gets the whole body under control. If one could have the whole body under as full control as you have the right hand, how convenient it would be!

The awkwardness of the untrained man is shown in many other ways, for instance, in jumping. One man jumps with his right foot, while another can jump only with his left foot. If the man who can jump with his right foot should try to jump with his left foot, he would fail, because his left foot has not been trained. Now the left foot and hand should be trained to be dextrous. In proper training, both sides of the body must be brought into active use, and must be equally well trained, so that we shall be ambidextrous. The thoroughly trained person will have the whole body under full control.

There is another way in which exercise is exceedingly helpful as regards brains and nerves: it furnishes an outlet for surplus energy. In every steam boiler there is an escape-valve or blow-off valve, the purpose of which is to let off the surplus steam. In a similar manner, exercise is an excellent outlet for the surplus energy which may be pent up in the body requiring an exit. If this surplus strength and vigour (especially in the young) is not consumed in some useful way, it is likely to be utilised in some bad way. It is certain to find expression in some way.

Sometimes a small boy is told to sit down in a chair and keep still as a punishment. But it is next to impossible for him to keep still. He has an amount of pent-up energy furnished by the vital activities of the body which must be utilised, and the boy would actually become sick if this excess of vital energy were not worked off. When a healthy boy is left to himself, if he has no other occupation, he will turn somersaults when out of doors, chase the cat, throw stones at the barn, and build a pyramid of stones and tear it down again. He works just for the sake of working, because he feels an irresistible impulse to activity. No young child should be made to sit down and sit still as a punishment; he can't sit still; it is practically impossible. You see the same tendency in young animals—in the colt, for instance. It is not natural for young animals of any kind to keep still.

Regular, systematic exercise affords an excellent means of working off the surplus energy which is not needed by the internal organs; and it must be worked off, or it will make mischief. This working off of energy affords one of the best possible means of regulating the emotions and propensities; for when this extra amount of energy is consumed, that is, when it is worked off through exercise, it is not left to find expression in harmful ways. So we find that exercise is not only a vital regulator, but one of the very best aids to purity. Man under training "keeps his body under," he keeps his propensities under control; this is one of the essential conditions of good training and development, and for the man under training is by no means so difficult a task as for the sedentary young man. Byron sometimes had lucid intervals in his insanely immoral life, in

which by plainness of regimen and a vast amount of vigorous muscular work, he kept his terrible nature under control.

"The gymnast gets the whole body under control."

Now a few words with reference to the general effects of exercise. In the first place, exercise promotes general vital activity by the stimulation of the vital processes. The increased amount of oxygen taken into the blood, the increased heart-activity, the increased respiratory activity, the increased activity of these two great vital pumps, the lungs and the heart, set in quicker motion all the vital activities of the body, so that we have increased

vital activity of every sort. We see this in all living things. Every living thing exercises; even a tree exercises, it receives a sort of passive exercise, by the aid of the wind; the wind blows and the tree bends to one side, thus loosening its roots a little on the opposite side, and it strikes its roots a little deeper into the earth; then it sways in the opposite direction, and the roots of the tree take a firmer hold on the other side. So the strength of the tree is increased by this kind of exercise. If you have seen a tree standing on the mountain-side where a freshet, perhaps, had washed the dirt off from the roots, you have perhaps noticed that the tree under ground is often twice as large as the tree above ground, because it stands on a high point, exposed to the wind, which is constantly swaying it to and fro, so that it was obliged to strike its roots farther into the earth or the crevices of the rocks in order to hold itself steady. In this way, you see, exercise stimulates the vital activity, even of the tree.

If you examine the wood of the trunk and branches of such a tree, you will find that they are tough and firm and close-grained. The Bible speaks of the cedars of Lebanon. These cedars grow upon the mountain-sides where the winds are strong and blow about them until their fibres become strong, firm, and dense. These cedars were doubtless particularly valuable in consequence of the hardness and firmness of their wood, and its durability.

Now compare such a tree with a tree that grows up in a dense wood. It grows up tall and slim, and its branches are small and spindling; while the tree that stands upon the mountain-side or out in the open field, where the wind strikes it, is thick and strong, and its fibres are dense and firm, and the tree under ground may be even larger than the tree above ground, as I have said, in consequence of the exercise which it receives from the wind.

I have often noticed a man under training, whose former habits had been gross, who had been bad-tempered, whose eyes were dull, and whose skin was tawny, and his step slow; in the course of a few weeks' training, he became a transformed man; his eye became bright, his step elastic, his temper amiable; his skin so white and clear that to use the expression of the English trainers, it was "as white as a woman's." His skin becomes clear and white by means of his exercise, so the expression referred to is used as an indication that the man under training is in good condition. This elasticity of step means a great deal, indicating an increased vitality and activity of the whole body. It is not the skin alone that is clear and clean, but the brain and muscles also are clean. It is not the eye alone that is bright, but every nerve fibre is wide awake and bright. The man is good-natured and even-tempered because the brain is clear and free from irritating substances, which so often make one irritable and sour. We see, then, that the effect of exercise is to take a deep hold of all the faculties of the body, quickening and stimulating them in a marvellous way.—*Good Health.*

Physical Exercise a Cure for Obesity

A LATE writer says in reference to Mr. Gladstone:—

"If we look at his conformation, we shall see that he is a spare man—one who has not developed, as age has advanced, the large stomach and the accumulation of fat which so impede and strangle every function of the body. Part of this leanness is probably inherited, but more is due to his unceasing activity. No man or woman ever will grow enormously fat if he or she perseveres with physical exercise. When have we known a man at eighty-five who so carried out this law of activity as has Mr. Gladstone? Those who live in London have often seen that unusually upright figure, which below the shoulders might have belonged to a man of thirty-five, and they must have been impressed by the rapidity and ease of his movements. It is a known

fact that he would often walk for several hours daily; and until almost the close of his life he engaged in such strong physical exercise as chopping down trees. All physical recreation is good for those whose lives are intellectual."

John Wesley on Exercise

JOHN WESLEY, the great Methodist divine, although not an educated physician, was possessed of so great a fund of commonsense and of such remarkable powers of observation that he became almost as noted among the common people for his instructions in relation to health and the treatment of disease as for his theological teachings. He even wrote a medical work which, although it contained many things of which we could not approve, was, nevertheless, in its recognition of rational and natural remedies, more than a century ahead of the times when it was written.

Mr. Wesley recognised fully the value of exercise as a means of preserving health. He was always a man of active habits, and declared that he owed his excellent health to the fact that when he went up to London to school, his father charged him, in his parting instruction, that he should run three times around Charter-House Square every morning before breakfast. This practice he adhered to during his whole school life, and with the result that he was thereby kept in excellent health, and a good physical foundation laid for the busy life which he afterward led. By request, a friend recently measured the distance around Charter-House Square, and reports it to us to be 445 yards, or a little more than one-fourth of a mile. Three times around the square would be three-fourths of a mile. A vigorous run of three-fourths of a mile, if practised regularly for six months, would convert many a pale, puny, listless school boy or girl into a rosy-cheeked, bright-eyed, vigorous youth or maiden. Exercise is the best of all tonics, and is worth even more than a schoolmaster as a means of sharpening the wits.—*Good Health.*

Vegetable Salads

THE term *salad* is often applied to various unhealthful mixtures of food material, but this fact does not necessitate that all salads must be of this character.

The simple leaf and vegetable salads, when prepared of wholesome ingredients, are not only dainty relishes, grateful to the taste and pleasing to the eye, but are valuable adjuncts to a hygienic dietary. Their nutritive value is not high, but their fluid and mineral constituents serve an excellent purpose in the vital economy. For the dressing of many salads both an oil and an acid element are considered essential. Whipped cream or pure olive oil is well suited for this purpose, and for the acid nothing can be superior to lemon juice. Says a prominent *chef* of the culinary art: "Lemon juice is the most delicately perfumed acid that nature has ever given to the cook. To my mind any manufactured vinegar is too strong for a fine, uncooked salad." Modern science has discovered that the eels of vinegar sometimes take up their abode in the alimentary canal as parasites, and become a source of irritation to the digestive organs.

Vegetables and leaves for use as salads need to be of the freshest, crispest, and most tender. Those that have been specially cultivated for the purpose are best. Tough, stringy leaves are unsuitable.

In the preparation of lettuce salads, the leaves should be carefully sorted, all bruised and tough leaves being discarded. It is a good plan to cut the head of lettuce into four quarters, beginning at the base; then remove the larger leaves one by one until the heart is reached, carefully wash each leaf in very cold or ice-water, and thoroughly drain the whole. A spherical wire-draining basket is most desirable for this purpose. If oil is to be used in the dressing, the leaves should be as dry as possible, even wiped by pressing between the folds of a clean, dry towel, if necessary. Cabbage used for salad should be young, tender, crisp, and juicy. It should also be carefully examined and washed, then chopped quite fine with as little handling as possible.

For the mixing of the salad no utensils are superior to the salad knife and fork of boxwood. The bowl in which it is to be mixed should be sufficiently roomy, offering, at least, one and a half times more volume than will be needed by the salad, in order that there may be plenty of room for turning. It is always best not to season a salad until just a few minutes before it is needed, since most salads deteriorate greatly by standing.

Lettuce Salad

Carefully wash and drain the leaves as directed above, and if not ready to use at once, set on ice or on the cellar bottom to keep crisp and cool. Do not cut the leaves. Use whole, or tear into convenient pieces with a silver fork. Serve with a dressing prepared of equal quantities of lemon juice, sugar, and ice-water, or with a dressing of cream and sugar, in

the proportion of three or four tablespoonfuls of thin cream to a teaspoonful of sugar. This dressing may be prepared, and after the sugar is dissolved, a very little lemon juice (just enough to thicken the cream, but not to curdle it) may be added, if desired.

Beet Salad

Either cold boiled or baked beets, chopped quite fine, but not minced, make a nice salad when served with a dressing of lemon juice and whipped cream, and salt if desired.

Beet Salad—No. 2

Chop equal parts of boiled beets and fresh young cabbage. Mix thoroughly, add salt to taste, a few tablespoonfuls of sugar, and cover with diluted lemon juice. Equal quantities of cold boiled beets and cold boiled potatoes, chopped fine, thoroughly mixed, and served with a dressing of lemon juice and whipped cream, make a palatable salad. Care should be taken in the preparation of these and the preceding salad, not to chop the vegetables so fine as to admit of their being eaten without mastication.

Cabbage Salad

Take one pint of finely chopped cabbage; pour over it a dressing made of three tablespoonfuls of lemon juice, two tablespoonfuls of sugar, and a half cup of whipped cream, thoroughly beaten together in the order named; or serve with sugar and diluted lemon juice.—*Good Health*.

Australians a Meat-Eating Race

HIS EXCELLENCY, Sir William MacGregor, Governor of Queensland, when delivering the opening address at the Interstate Fruit Conference in Brisbane,

made some references to the amount of meat that is eaten by Australians. He said that he thought it would be better for Australians to eat less meat and more fruit. It seemed to him that people out here regarded fruit, not as a substantial, but as a supplementary, semi-social addition to the serious part of our meals, and yet he knew that whole tribes of people practically lived and maintained splendid physique on fruit alone.

Comparing the consumption of meat in Australia with that in Europe His Excellency said that it was clear that there were many people in Australia that ate more meat than was good for them, and consequently less fruit than would be advantageous. Struck by the large number of cases of rheumatism, said His Excellency, which

I have seen in hospitals in this country, I asked several medical men what was the reason of this phenomenon in such a magnificent climate as ours. The answer was that it arose from eating too much meat. An excessive meat diet clogs the human machinery. The argument is all in favour of more fruit and vegetables.

Eating Whole Wheat

WHEN I told the farmer from whom I was buying a peck of wheat that my wife would be especially pleased to get grain like that—scarcely a kernel of foreign substance to a cupful—he asked if she was that particular about what she fed to the hens.

"Unfortunately, we do not keep hens," I replied. "We eat the whole wheat as a breakfast food."

"Well, that's something I never heard of before, and I've been growing wheat right here on this farm for over fifty years. Do you eat it raw, or do you cook it?" he asked, regarding me curiously.

"We cook it several hours, usually a day and a night," I told him. "Each grain bursts open almost like pop corn. It makes a royal dish when eaten with cream."

"But how do you manage to cook it so long—a day and a night?" he asked, somewhat perplexed. "Wouldn't an hour or two be enough?"

"No, two hours would not be enough any more than two minutes are enough for cooking potatoes. Whole wheat requires about twenty-four hours. We use a fireless cooker now; previously, we used a double boiler."

After a few days I met the old gentleman again and found him enthusiastic in his praise of whole wheat as a table cereal.

"I can work on it," said he, "and there's the proper strength, there's endurance in whole wheat, but I've lived all these seventy years without finding this out before. Say, here's your money back again—I don't charge you anything for that peck you got the other day, and when that's gone, just you come back again and get some more."

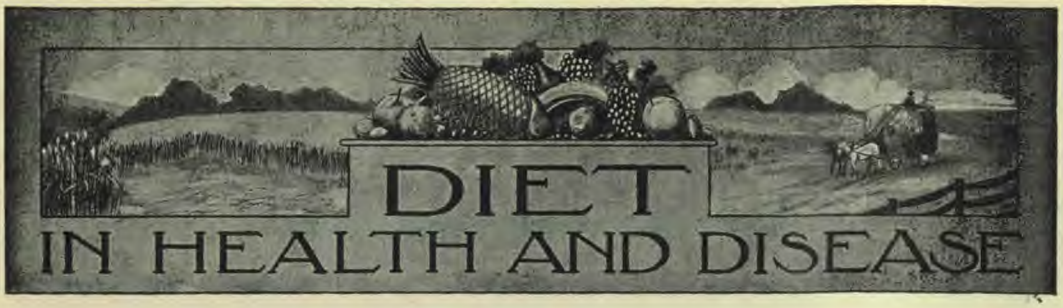
The Prince of Cereals

As a cereal for the table whole wheat has some points decidedly in its favour. One of the most obvious of these is the fact of economy.

Compared with the whole range of prepared breakfast foods, whole wheat furnishes from ten to twenty-five times the food, in weight, for the same money. Compared with the uncooked foods the balance is still in favour of whole wheat, the same amount of money purchasing from three to ten times more wheat than of the other cereals; even corn meal, when purchased in small quantities, being three times more expensive than wheat.

The use of whole wheat as a breakfast food is conducive to the healthful habit of chewing the food longer. One objection to the ordinary cereal preparation is that it does not require sufficient chewing, being already soft or mushy; while whole wheat, on the other hand, offers considerable resistance to the teeth and induces vigorous mastication.

Whole wheat should be eaten with cream; for wheat is almost entirely lacking in fatty elements.—*Henry Thomas Colestock, in Physical Culture.*



The Art of Being Well

BY A. C. GODSMARK, M.D.

MUCH of the suffering and discomfort experienced by the great majority of invalids might be avoided by a little conformity to the simple laws that govern our beings.

There is really little need for anyone who has a reasonable amount of inherited vitality being continually "under the weather" or suffering from disease. A few simple rules of life, if intelligently followed, will place and keep almost anyone above the level of disease. He who keeps his vital resistance sufficiently strong, need seldom fear or be bothered with the aches and pains from which his neighbour suffers.

God intends that we shall live above disease, and unless we transgress His laws, and allow our bodies to fill up with poisons which are the waste material of our own systems, we will have good health, clear minds, and there will be real pleasure in living.

Disease is not a mere matter of accident. Poor health does not come by chance, nor is it a condition that cannot, as a rule, be avoided. Aside from the usual maladies incident to childhood, such as whooping cough, scarlet fever, mumps, and measles, we bring upon ourselves by our own indiscretions, the bodily ailments that cause our suffering.

Our bodies, complex though they be, are simple in their requirements, and the nearer we live to nature's laws the better our health will be. He who sleeps, or better still, lives out of doors, exercises freely in the pure air and clear sunshine, bathes his body freely, and eats and thinks in an intelligent manner, will seldom be sick.

The blood stream which is the great current of life, flows through our bodies and supplies every organ, muscle, nerve, and cell with the necessary material for life and activity. Every organ of our body must depend upon the blood for its proper nourishment, and the blood, in turn, must look to us for proper food and an intelligent supply of elements with which to work.

We are the masters, not the servants, of our own bodies, and it is we who select and furnish the very material out of which we are composed.

The food we eat to-day determines the kind of thoughts, emotions, and activities we will have to-morrow. Our stomachs cannot make good blood out of poor food, and he who eats diseased foods must expect a diseased body as a result. Flesh foods are not good foods; as a rule they are diseased. The animals of to-day are not what they were fifty years ago. Spices, rich foods, and gravies cannot be considered a healthful diet.

A simple, plain menu of fruits, grains, vegetables, and nuts, prepared in a simple yet inviting manner, make the very

best of food. Vegetables and fruits, however, should not be eaten at the same meal.

The blood, besides carrying nourishment to every fibre and cell of our bodies, also, as it returns to the heart, gathers up the poisons and broken down tissues, and takes them to the various organs of elimination, where they are expelled from the system. The lungs, the skin, the kidneys, and the bowels, are the four great organs of elimination through which the poisons that are constantly forming in our bodies are expelled. These waste matters are positive poisons that benumb the brain, becloud our reason, and hinder the healthful activity of every organ in the body. Unless they are constantly removed, sickness and pain is the result, and if left in the body death will result within a very short time.

The most active of these poisons is carbon dioxide which is gathered up by the venous blood and carried to the lungs to be thrown off. It is this carbon dioxide that makes the venous blood of a dark, almost tarry colour. It is a rank poison, for should we stop breathing for only a few moments death would be the result.

This poison is the result of the oxidation, or burning up, of the carbonaceous elements of our food, and must quickly be carried off and eliminated from our bodies.

Healthful and Appetising

It is this actual burning of the food in our tissues that produces our bodily heat and keeps us warm. Each out-going breath carries away from the lungs a considerable portion of this carbonic acid gas, and thus the lungs do their part in getting these poisons out of the blood.

After the blood has emptied itself of this poisonous gas in the lungs, it takes on large quantities of the life-giving oxygen that gives it that bright red sparkling colour. This oxygen gives life

and vitality to every organ in the body, and it can readily be seen how very necessary it becomes that we breathe large quantities of good, pure air. Many a sick man has breathed himself well and strong again. To breathe well is to live well, while to half breathe is to half live or not to live at all.

Stagnant air, or even good air only half breathed means impure blood, sickness, and disease, always. Pure air costs nothing but the effort to get it, yet many invalids prefer not to make the effort, and seem to really enjoy poor health.

While the lungs are throwing off their loads of carbon dioxide, the skin is also pouring out large quantities of impurities through the millions of little mouths of which the skin is largely composed. No less than three and one-half pints, or pounds, of effete matter are eliminated each twenty-four hours through the skin. This poison which comes away in the form of moisture is largely absorbed by the clothing, and if the clothing that is next to the skin is not frequently washed, and the skin also freely bathed, this moisture drys and is re-absorbed into the body by the skin, for the skin is an absorbing organ as well as one that excretes the poisons.

The action of the kidneys in eliminating their poisons from the body is largely affected by the amount of water we drink, and as elderly people, for some reason, drink but little, we find kidney and bladder trouble most common among those of advanced years.

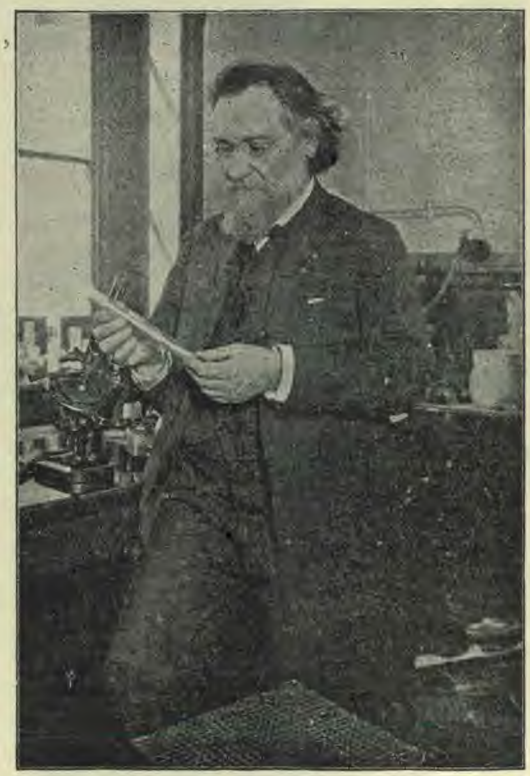
Get them to drink more freely every day of water, buttermilk, limeade, lemonade, and fruit juices, and their ailments will, many of them, pass away. The kidneys cannot act unless we put some fluid into our bodies with which they may act.

The bowels must be regulated by the foods we eat. Figs, dates, apples, and tomatoes are perhaps as good a line of laxatives as we have. Fruit is the great friend of the feeble, and if more money were spent for fruits, less money would be required for doctor's bills.

Above all talk health, live health, and expect health. Never look on the dark side of anything. Live to make others happy, and you will soon forget your own troubles, your own aches and pains, and feelings of gloom will give place to a life of contentment and happiness.

Can Man's Lifetime Be Doubled?

PROFESSOR METCHNIKOFF, of the Pasteur Institute of Paris, declares that he has discovered means whereby the



"World's Work"

Prof. Elie Metchnikoff

ordinary period of man's life may readily be doubled.

The professor calls attention to the well-known fact that germs in the intestines cause a deposit of poisons in various parts of the body. By analysis, these poisons may be traced in the secretions of the different organs. The result of the

action of these poisonous secretions is most serious, and may cause ulceration and the deposit of injurious matter in the brain, liver, and kidneys, the most vital organs of the body, and by this means cause the more or less rapid decay which we call old age.

The important question, therefore, is how to avoid the formation of these poisons in the intestines. Metchnikoff says this may be prevented by a special diet. The foods most likely to prevent the production of poisons are the kinds of fruits and vegetables which contain the most sugar, such as carrots, dates, figs, etc.

The professor not only claims that certain carbohydrates, especially those found in starches, most readily reach the alimentary canal, where poisons are usually formed in the greater quantities, but he has ascertained that, with the assistance of carbohydrates and a special microbe, it is possible to promote the formation of sugar in the canal. He calls this microbe Glyco-bacillus, and has discovered the same in the intestines of dogs. By experiments on animals with this bacteria and boiled potatoes, he has found it to act most effectively in lessening the formation of poisons.

Metchnikoff, as well as his colleague, Professor Wolmann, affirms that the experiment produced exactly the same results when practised upon men kept upon a mixed diet consisting of flesh foods, with an abundance of fruit and sugar-containing vegetables. Under such conditions there is a marked reduction in the amount of poisons formed in the intestines. But mark very carefully that it is the fruit and sugar-containing vegetables that constitute the remedy whereby the formation of destructive poisons is prevented. As most people know, the acid found in fruit is most beneficent in its action on the various organs, especially if the fruit is not eaten at the time when other food is partaken of. On the other hand, flesh foods constitute a most prolific bed for the production of almost every kind of injurious bacteria.

He who eats flesh food freely will, as a consequence, shorten his life. Eat, therefore, more fruits and vegetables.—*M.S.R., in Lys over Landet, translated for Life and Health.*

Why Do We Eat?

Interesting Experiments

IT has always been difficult for thinking people to see why science should claim that man requires 100-120 grammes of albumen per day when men who are vegetarians only need one-third of that quantity; and they not only keep well year by year, but continually improve in health and increase in vitality.

There is evidently a very striking contradiction between this scientific theory and the experiments and results in actual life, and it is therefore most satisfactory to see this question settled by the exhaustive and scientific experiments conducted by Professor Chittenden and his colleagues.

These experiments were conducted with three classes of workers. *First*, with five mental workers: Professor Chittenden himself, his colleague, Professor Mendel, Dr. Underhill, Dr. Deen, and an office worker, Dr. Beer. The trial lasted several months, in some cases over eight months. Day by day the various articles of food were carefully measured and weighed, while the quantities were exactly proportioned by chemical analysis, the food and weight being frequently checked. The experiment demonstrated that these five men, who continually did strenuous mental work, only required an average of forty-five grammes of albumen per day. In addition to this it is also well to note that the heat value of the total quantity of food only averaged 2,140 calories,* while according to Voit's investigations, which hitherto have been considered the most reliable, the requirement would be 3,000 calories per day.

The next trial was with eleven soldiers, placed at the service of Professor Chit-

* Calorie: The usually accepted unit of heat.

tenden by the United States Government. These soldiers thrived well by using an average of 48.75 grammes of albumen each day, while the total quantity of food amounted to about 2,550 calories.

The careful tests of strength are of special interest in connection with this experiment. The soldiers were much stronger at the end of the five months than they were at the beginning. As tested by a dynamometer four had doubled their strength, one had added seventy per cent, four sixty-six per cent, and two had respectively increased their strength by fifty and fifty-five per cent, while at the same time their blood became greatly improved by the average increase in the number of red blood corpuscles to the extent of about 783,000 per cubic millometre.

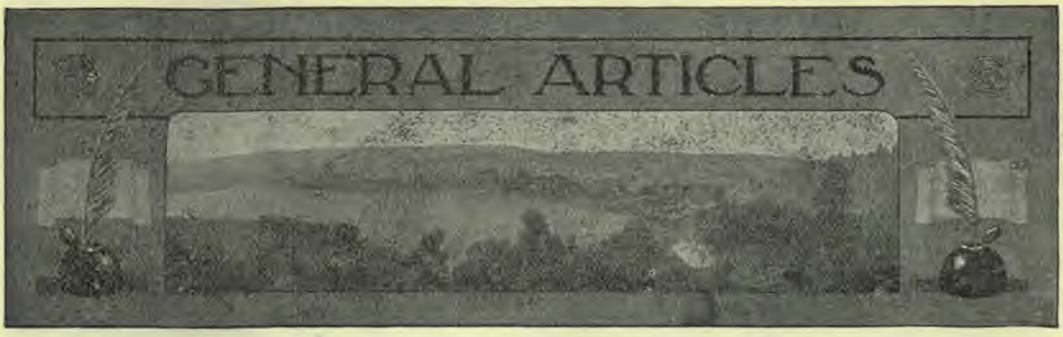
The third test was with students who were also athletes, and therefore men of excellent muscular development. These experiments also covered a period of five months. The trial demonstrated that they could keep in good condition on an average of fifty-five grammes of albumen per day. As their average weight was twenty pounds more than that of the previous cases, it could hardly be expected that they would add to their strength in the same proportion as the soldiers who, before the experiment, had never undergone special athletic training. It is therefore most interesting to note that, notwithstanding the remarkably well-developed muscles of these eight students, one increased his muscular strength by ninety-nine per cent, one seventy-five per cent, two thirty-three per cent, three twenty-five per cent, and one fifteen per cent, making an average of thirty per cent in the increase of the total strength of these men.

After carefully noting these experiments and the carefulness with which they were conducted, there cannot be any doubt that we have placed before us evidence of the greatest importance. And this raises first the very important question, How much albumen does man really need? and what kind of food readily contains the proper amount of albumen in proportion to other substances, especially that of carbohydrates.

In order to be clear about this, let us first note the percentage of albumen in the food used in these tests. In the experiment with the mental workers the proportion was about ten per cent, or actually one gramme of albumen to nine grammes of carbohydrates.

The result was exactly the same with the eight athletes, while with the eleven soldiers it was less than nine per cent, or about one gramme of albumen to eleven grammes of carbohydrates.

This evidence is, without question, conclusive, especially when it is considered that the individuals who were the subjects of these experiments worked hard the whole time.—*J. Ottosen, in Rationel Ernäring, translated for Life and Health.*



Nerve Exhaustion

BY GEORGE K. ABBOTT, M.D.

IN these days of rush and hurry there are few city dwellers who escape the strenuous life. In consequence, nerve exhaustion and nerve weakness (neurasthenia) in a great variety of forms are becoming more and more common. Business cares and worry, with little or no time spent in outdoor work and real recreation, are largely responsible for the rapidly increasing number of neurasthenics among business and professional men. A hurried midday lunch, and a heavy dinner at six or seven in the evening, are also indirectly responsible for nervous disturbances, by throwing upon the digestive organs burdens entirely out of season. Evening banquets are especially to be blamed for headaches, sleeplessness, and many other manifestations of exhaustion of the sympathetic nervous system.

Why the "Blues"?

Then there are those who at irregular intervals, because of anxiety and worry, have attacks of mental depression, sometimes amounting to melancholia. Such persons have an "all-gone" feeling, associated with a sensation of weight and heaviness in the abdomen. Dr. Abrams has not inaptly styled such a condition "the blues," and has especially called attention to the immediate cause of these abdominal symptoms. He has shown that severe worry in susceptible persons causes a marked weakness of those sympathetic nerves that control the blood-vessels, and especially the veins of the abdominal organs. These veins are of great capacity, and when paralysed from worry or other causes, are capable of such extreme distension as to withdraw from active circulation a great amount of blood. The feet and hands, but especially the feet, are habitually cold. The congestion of the brain, brought about by mental over taxation, only adds to this unpleasant condition.

As women enter more into the competitive employments of life, nerve exhaustion among them is increasing at a rapid rate. This is probably due to the greater delicacy and sensitiveness of the nervous system in women, and consequently their greater susceptibility to nerve disturbances. In the case of women in better circumstances, the quietude of home life is left behind for a continuous round of social duties in the mad rush for social advancement and amusement. Those hours of rest when the body should be replenishing its store of energy for the duties of another day are worse than wasted in parties, sociables, and society functions. Not many years of such prodigality are required before the reserve physical forces of the body, especially the nerve force, are exhausted. This leads to headaches, back-

CITY LIFE IS CONDUCIVE TO NERVE EXHAUSTION

Sears, Photo., Melbourne

aches, and fleeting, illusory—though none the less real—pains in various other parts of the body. These are accompanied by nervousness, restlessness, and irritability.

In our high schools and colleges there is each year an increasing number of cases of nervous prostration and acute insanity due to overstudy, and in the case of young men, to the additional cause found in indulgence in cigarettes and lighter alcoholic liquors. Fortunate indeed are those who have inherited a sufficiently strong nervous system to escape actual mental breakdown.

Remove the Cause

To an intelligent public it is of course needless to insist that permanent cure cannot result unless all these causes are removed. For those who are not too greatly prostrated, nothing is more beneficial than an extended vacation in some quiet rural retreat, or in the mountains, or at the seashore. The patient is thus removed from those surroundings that constantly remind him of his cares and perplexities. He is care free, and can devote time to pleasant and profitable recreation in the woods and fields, tramping over the hills and valleys, or to rowing and similar exercises where such are available. Gardening, horticulture, and floriculture are especially conducive to absorbing the thought and attention of the neurasthenic, and are unequalled in overcoming his introspective tendencies and morbid state of mind. Of course these same occupations may be engaged in at home as a preventive of neurasthenia, and as a help in its treatment when once it has been acquired.

Much has been written about the rest-cure, but less interest has been taken in the work-cure for neurasthenia. However, a physician, after five years of systematic endeavour along this line, reports most excellent results from regular employment at agreeable manual work of various kinds for an appropriate length of time each day.

Avoid Stimulants

In case of nerve exhaustion, it is especially necessary that the nerve tone be restored by such means as will not overstimulate. Nerve stimulants are not nerve tonics. The superstition that nerve tonics may be administered in teaspoonful doses from a bottle is a guarantee of commercial success to the unscrupulous manufacture of patent medicines, and an equally certain guarantee of physical bankruptcy to the user of such "nerve tonics." Sir William Broadbent has in very apt language given a correct idea of the outcome of such *stimulation*. He says:—

> "A falsehood that dies hard is the idea that stimulants of whatever kind actually give strength, and are necessary for the maintenance of health and vigour. Such is not the case; and the well-worn comparison that they are the whip and spur, and not the corn and grass, is strictly accurate. Anything accomplished under the influence of stimulants is done at the expense of blood and tissue, and if frequently repeated, at the expense of the constitution."

Tonic Treatment

However, within easy reach of all, are means that may be employed with benefit, and, when intelligently used, are capable of the greatest possible good in the restoration of nerve tone. Most important among these means are sunlight and tonic baths. It has been experimentally demonstrated, and is also a matter of clinical experience, that sunlight is a most effective tonic to both nerve and muscle. After proper, judicious exposure to sunlight, the muscles are able to withstand fatigue longer than otherwise. The same is true of various forms of cold bathing, such as the cold sponge bath, cold shower-bath, and the cold mitten friction. Not only is the muscular power enhanced by such means, but fatigued muscles may be restored to their usual power. Those who find it difficult to react to cold baths may better prepare themselves by standing in a tub or pail of hot water while taking a cold sponge or mitten friction, or in using the cold shower, by preceding it with a hot shower. When some one can be secured to administer treatment, much benefit may be derived from the applica-

By permission of N. J. Caire, Photo., Melbourne

"NOTHING IS MORE BENEFICIAL THAN AN EXTENDED VACATION IN THE MOUNTAINS"

tion of the fomentation to the spine, followed on removal by rubbing with ice the part covered with the fomentation. This procedure should be repeated about three times, and concluded by briskly rubbing the entire body, one part at a time, with a rough mitten dipped in cold water, and quickly drying with a Turkish towel.

Those who are afflicted with a feeling of heaviness and weight in the abdomen will derive much benefit from the daily use of the cold rubbing sitz bath. In the absence of a more elaborate equipment, fill an ordinary wash-tub with cool or cold water to a depth of about eight inches, and beside it place a large pail of hot water. The person to be treated first places his feet in the hot water for a few minutes, and then, with the feet still in the hot water, sits down in the cold water, while an attendant rubs briskly the parts covered by the water. This treatment may last three or four minutes, according to the ability of the person to react. The cold water causes contraction of the large veins of the abdominal organs, and by driving the blood out of these parts, relieves the congestion and consequent feeling of weight. The sympathetic nerves are also directly toned up, and the feeling of depression is relieved.

Many other simple means of preventing and relieving nerve weakness might be mentioned, but all those already described are such as can be carried out successfully in almost any home. As in the use of all natural means of cure, the patient must not expect to be relieved by one treatment. To build firmly a new foundation for health when once it is lost requires time and patient, persevering effort.

"THE Irish fifty miles' cycling championship has been again won by F. Grubb. He finished nineteen minutes ahead of the best of twelve competitors, beat his own time by four minutes, and averaged twenty-one miles per hour on the Dublin roads. He has been a fruitarian for many years."

Where to Begin Conserving

By L. S. Marden

CONSERVATION has become the theme of the wise men (and women) of this time, and little surprise is occasioned, for we see on all sides strenuous efforts to make "ends meet;" and in this consideration the source and supply questions are getting more attention.

Lawmakers are seriously considering measures toward the conservation of natural resources, and scientists are going deeply into the matter of the conservation of the race.

That God planned the best system of conservation for man, physical and spiritual, has lost its connection in the scheme, as man looks at it; hence the question, *How* shall we conserve?

As far as the race of mankind can be linked with the scheme of conservation, we must go back to the children of men, and cultivate their physical, moral, and spiritual nature, looking to full conservation when they will bear the image of their Creator, as did the first man created, whose Author pronounced the work of His hand "very good." Statistics on every hand show heavy mortality of young life, and one cannot wonder at this, when close observation into causes shows ignorance of natural law and indifference toward remedy, a combination which cannot be beaten in affecting race suicide.

Let our lawmakers be encouraged in their efforts toward conservation of natural resources, but parents should consider, in the fear of God (who tells us that children are His inheritance), *how* these little ones are invited into their homes. God may be consistently asked to add His blessing to proper conditions. But God is not always thought of in this matter by parents, and the necessity of institutions in all our large cities for the artificial fostering of infants is self-evident.

Foundlings left on the doorsteps, deserted wives, and deceived girls tax these institutions heavily; and while the old world rolls around on its axis, with its cup of iniquity fast filling, we may expect

these conditions to prevail, if not increase.

St. Margaret's home, of Albany, N.Y., may be cited as a model institution of this character, and its history should inspire other cities and charity organisations to follow its example.

Thirty years ago a motherless little one needed care, and the women of All Saints' Cathedral found a home for it. Other cases called for greater effort, and God, blessing their working faith, gave them the needed "things" which He has promised to those who seek righteousness, and from that day of Christian endeavour to do good to the least of His children, St. Margaret's has grown into the well equipped institution it is.

Bishop Doane has used his large influence in the upbuilding and maintenance of the institution, and though started under the auspices of the Protestant Episcopal Church of the diocese of Albany, its board of managers claim representation from all denominations and creeds, making it non-sectarian in administration.

To Dr. Henry L. K. Shaw, the well-known infant specialist, is due the high standard of the institution and the confidence of the medical profession.

The call for nurses from this institution cannot be supplied, which shows that trained infants' nurses are meeting a larger demand every day.

That the course is finished after eight months' training ought to recommend itself as a profession to a large number of young women of good education.

One important feature at St. Margaret's is the "mothering" element in the care of the babies, who cannot have their natural mothers while there. Nurses and superintendents seem to give most naturally of their best in order properly to mother the little ones in their care, and it is the belief of the superintendent that this natural element has assisted in the recovery of some of the most desperately and hopelessly afflicted babies.

Not Too Young for Conservation

That God is glorified in these "good works" should inspire many others to "let their light so shine," to the glory of our Father who is in heaven.

The Medicinal Aspect of Fruit

BY H. M. LOME

FRESH fruit is made up of water, proteine, fat, carbohydrates, cellulose, mineral matter, and the oils that give it its characteristic odour and flavour. The medicinal elements are found in the water, carbohydrates, cellulose, and mineral matter. The flavouring constituents have their share in the curative properties also, by making the fruit grateful to the palate, and so desired by the healthy and the invalid alike. Some of them are so subtle and ethereal that they have defied the chemist to isolate them. But, curiously enough, they have been made by synthesis from that malodorous substance, coal-tar. The juice of fruit consists of distilled water impregnated with the carbohydrates and other constituents.

One-half to three-quarters of the carbohydrates consist of fruit-sugar, or levulose. Some fruits, including the apple, apricot, and pineapple, also have cane-sugar. Fruit-sugar is capable of passing into the blood without preparation on the part of the digestive organs. On the other hand, cane-sugar calls for work by one of the intestinal juices. Fruits rich in levulose are good for dyspeptic and diabetic patients. The carbohydrates, in addition to the sugars, include gums that on boiling yield jelly, owing to the presence of a substance known as pectose. On being digested, the jellies are turned into a form of sugar called pentose, that is said to have emollient qualities of a high order. Apart from their medicinal qualities, the carbohydrates are practically the nutritious elements of fruits, the proteine and fat forming but a very small portion of their make-up.

While the amount of mineral matter found in fruits is small, something like five-tenths per cent, it has much to do with the curative properties of the fruit. In the main, such matter consists of potash, iron, or phosphorus united with tartaric, citric, or malic acid—organised salts capable of being assimilated by the human system. These salts when taken into the body are converted into carbonates, and so help the blood to become more alkaline. When the blood has too much acid in it, maladies of several kinds are pretty sure to follow. Fruit salts restore the balance in the vital fluid, as it were.

The absence of earthy salts in fruits is noteworthy. Such salts have a bad effect on sufferers from certain diseases, including some forms of tumor and atheroma, or degeneration of the inner coatings of the arteries. Many physicians therefore prescribe the free use of fruit in place of cereals, because the latter are rich in the objectionable salts.

Citric acid, more than its fellow acids already named, occurs in the majority of fruits. As fruits ripen, their acids diminish with the increase in sugar. Ripening is therefore a sweetening process. A few fruits, such as the apricot, become sourer after cooking, because of chemical changes brought about by the heat. It is usually better to eat raw fruit, because it has curative qualities which the pot or pan may possibly destroy. Jams, jellies, and stewed fruits are appetising and wholesome, but fruits taken for medical purposes are better used as nature prepared them. Unripe fruits cause intestinal irritation by reason of their excess of acid.

Prof. Arthur Lonsdale, of London, spoke of fruits as "a globular framework of fine, easily digested, and pharmaceutically valuable cellulose, saturated with distilled water containing fruit-sugar." The distinguished scientist is quoted because of his reference to the cellulose, his opinion being that of practically all members of the medical profession who have investigated the curative properties of fruits. This cellulose appears to have a direct

AN EXCELLENT ARTICLE OF DIET

stimulating action on the bowels. Those persons, therefore, who suffer from constipation usually find ready relief by making fruit a prominent part of their daily dietary. Unlike artificial cathartics, the use of fruit does not entail subsequent constipation, while the action induced by it is of a gentle and bland nature. Where there is much griping or other violent intestinal disturbances following the taking of fruit, it is a sure sign that it was either unripe or not fresh.

Citrus fruits include the orange, lemon, citron, lime, bergamot, shaddock, and grape fruit. These fruits are distinguished by the volatile oils found in their skins and flowers. From the skins flavouring essences are made, and from the flowers, perfumes. Both of these have their place in the *materia medica* also, by reason of their stimulative effects.

But it is because of the citric acid that these fruits are best known; the lemon in particular being prominent in this respect. Many are the excellent medical qualities claimed for this acid. When diluted and sipped slowly, it will increase the secretion of saliva. It seems to be beneficial in muscular rheumatism; its power to allay feverish symptoms is well known. In many forms of skin disease, it acts like a charm. It is a certain preventive and cure for scurvy. Since it became a portion of the daily diet of seamen by law, scurvy, the dread and scourge of seagoers of old days, has practically disappeared. The writer remembers a sailors' song of English origin that was called "The Cantankerous Captain," two lines of which ran thus:—

"He puts 'em on a double watch; cuts 'baccy, that's a fact;
But he's got to pass the lime-juice out, according to the Act."

The allusion is to the stringent British laws, or act of Parliament on the subject. Citric acid is also often used in medicine in combination with iron, magnesium, lithium, quinine, etc., "citrates" being the result.

Fruit acids are germicidal. The harbouring place for many of the most common and dangerous microbes that afflict humanity is the intestinal tract. The use of the citrus fruits is somewhat of a protection against maladies that these microbes cause. As a mouth wash, lemon juice has some virtue. A very dilute solution of the acid can be used with advantage for tired eyes and inflamed eyelids. Scorbutic affections yield to its use. Lemonade is too well known as a refreshing drink to need mention. And as a drink for feverish invalids, it is unsurpassed. It is also good for diabetic patients. Travellers escape tropical fevers by the liberal use of drinks of which lemon or lime juice is the basis.

Apples, pears, and quinces are all members of a botanical family that includes the roses, and is scientifically known as *Pyrus malus*. Ripe apples eaten raw and thoroughly masticated, are sometimes excellent for digestive troubles. In Devonshire, England, there is an apple-cure establishment for dyspeptics that is said to have effected some remarkable recoveries by placing the patients on an exclusive diet of the fruit. Skin and allied diseases yield to a treatment that includes apples as one of the chief articles of diet. Together with the pear, the apple is a mild aperient. Fresh apple-juice, taken before breakfast, is excellent for constipation. The quince is used only in the form of preserves. Owing to its excessive astringency when raw, it is sometimes employed to stop hemorrhage by placing slices of it on the wounds.

Unfermented grape-juice acts as a mild laxative and diuretic, and diminishes the acidity of the urine. It is therefore good for gout, rheumatism, obesity, scorbutic afflictions, kidney troubles, and digestive disorders, including those that have their origin in the liver. And according to Robert Hutchinson, M.D., the famous English doctor, grapes are of the utmost value in the case of chronic bronchial catarrh.

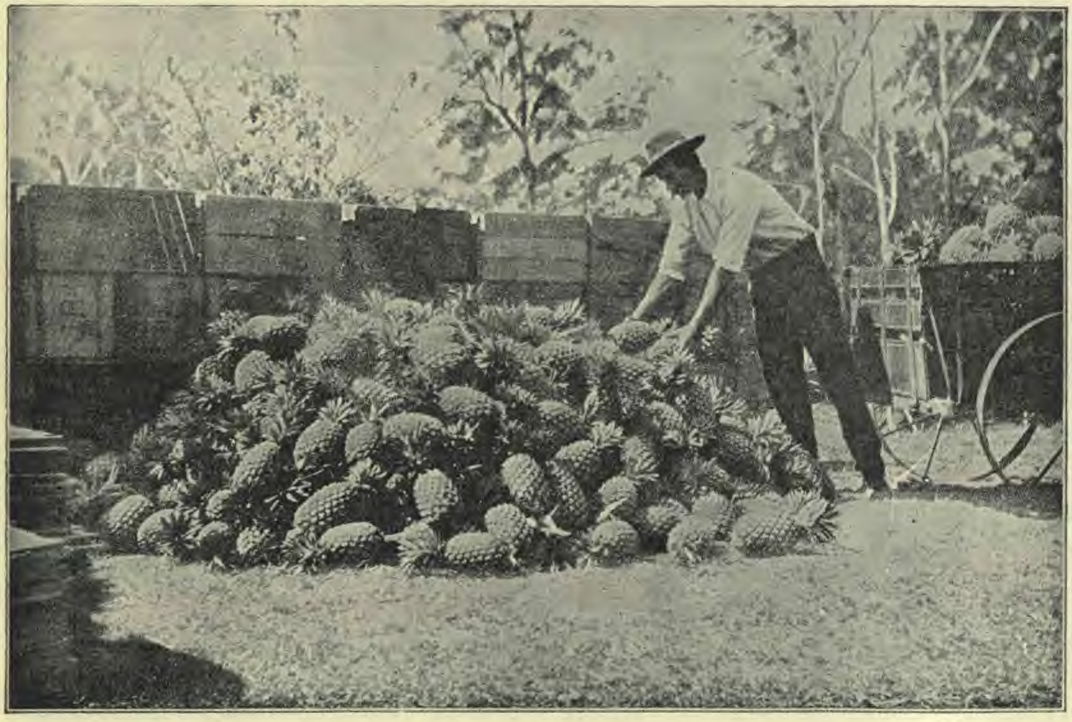
At the European grape-cures, patients consume from one to eight pounds of the fruit daily. The grapes are not used as an exclusive diet, but are eaten between

meals. Each patient has to gather his own grapes. Doubtless this enforced exercise in the open aids the action of the grapes. An American physician who visited one of the French cures, noted that many of the patients were suffering from fatness of the lower part of the body, due to their indulgence in the good things of the table and the habits of inaction. To such persons, the effort of gathering the grapes was an affliction, yet a blessing in disguise. It is said that two or three weeks of grape-eating betters the condition of most of the patients.

Rhubarb, owing to the large proportion of oxalic acid that it contains, is a capital antiscorbutic. In minor forms of scurvy, it acts as a curative. The young plant when stewed and eaten at breakfast, is laxative.

Bananas contain more starch than any other known fruit. For this reason, while they are very nutritious, they are not laxative. They may be used with advantage by those who suffer from looseness of the bowels.

The fig is rich in cellulose. On account of this quality it possesses laxative powers of a high order. Confirmed cases of constipation can be cured by the use of *sound*, dried figs. Many figs offered to the public are mouldy, partly rotten, or maggot-eaten, and unfit for consumption. They should be plump, free from a suggestion of mould or blight, and of a fragrant odour.



"The pineapple contains a substance that assists in the digestion of food"

Peaches, apricots, nectarines, and all the stone-fruits, contain much cellulose, and usually have marked laxative effects. When fully ripe, they have a tonic quality that "picks up" those of delicate appetite. It is said by some investigators that this bracing effect is due to an infinitesimal quantity of prussic acid, which gives the flavour to the kernel of the fruit, and escapes into the pulp. There are many

poisons of the deadliest descriptions that, used in microscopic quantities, are of therapeutic value, and it would seem that that of the stone-fruits is one of them.

The plums have medicinal qualities akin to those of the fruits just named. The prune is especially well provided with cellulose, and hence its well-known effects on the organs of excretion.

Cranberries and gooseberries are plentifully supplied with acid, and are of value to those suffering from harsh, rough skin, or from scorbutic affections of any kind. Currants are also endowed with a liberal quantity of acid, but in addition have a very large percentage of fruit-sugar. Therefore they are fitted for diabetic patients as well as for anæmic; for in both, such sugar can be used when other kinds of sugar would be harmful.

Iron salts enter largely into the composition of the strawberry, and make that fruit particularly acceptable to those who are nervous and run down. The acid of this fruit is also said to be of benefit to sufferers from kidney and bladder troubles. Because of the absence of cane-sugar in the strawberry, it also can be safely used by the diabetic.

The pineapple contains a substance that assists in the digestion of food. The pineapple is not suited to diabetics, owing to its containing cane-sugar. But in the case of others, it is of value for its digestive and antiscorbutic properties and for its stimulative action on the bladder. Also, if eaten in liberal quantities on an otherwise empty stomach, it will overcome ordinary constipation.

Dates are mildly stimulating. Tamarinds are markedly laxative. In the British army in the tropics, this fruit, preserved, is served daily for the purpose of insuring regular excretory action. Melons and pumpkins contain a comparatively large proportion of phosphoric acid.

Blackberries, raspberries, huckleberries, and other similar kinds, are rich in acids and cellulose, and act as blood purifiers and laxatives. The cellulose takes the form of the pithy grains that are embedded in the pulp. These grains cannot be digested. When one eats the fruit, the intestines make a special effort to rid themselves of them; hence the laxative

Bunch of Valencia Oranges

action that usually accompanies the use of berries.

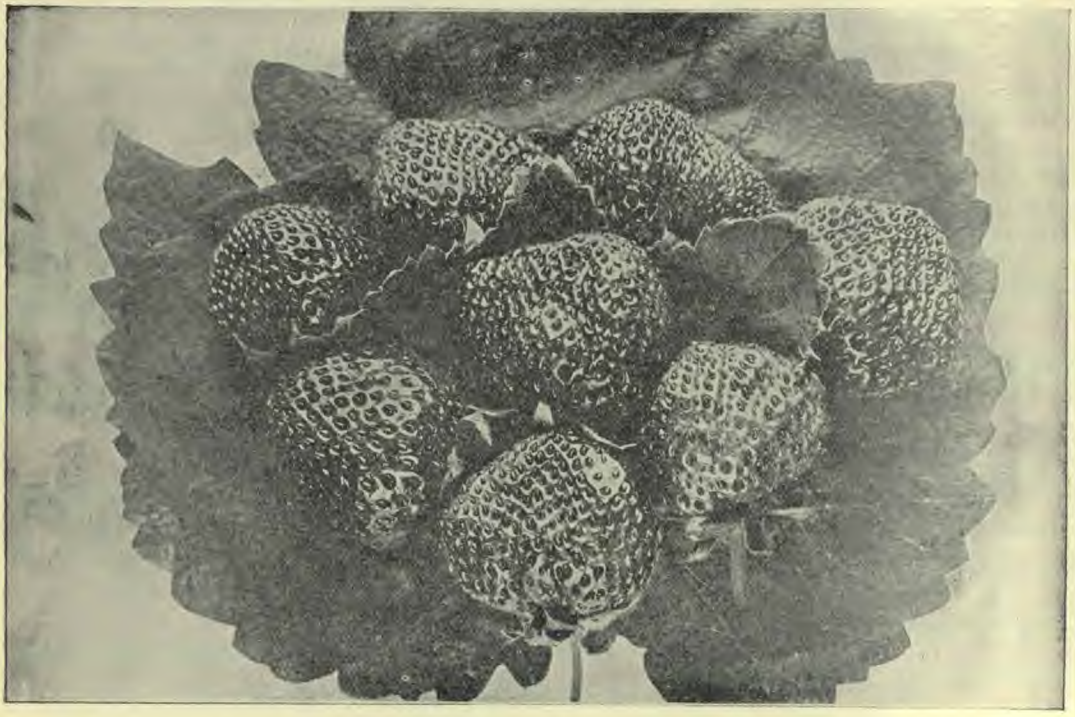
The peel, or rind, of the fruit is usually tasteless or bitter or even poisonous. Therefore, it is well to peel your fruit before you eat it. When the peel is eaten, care should be taken that it is thoroughly washed. Insects lay their eggs, and mould grows, on the outside skin of the majority of fruits, to say nothing of the dust and dirt that gather thereon. The safest and certainly the cleanest plan is to remove the peel.

Diet and Health

RIGHT feeding is one of the very few things in the world that really matters.

If we live near to the laws of nature—study them, understand them, and follow them—the chances of having health now, and of reaching old age in health and well-being will be enormously increased.

When a child is given the diet of every-day life it starts right away to accumulate poisons, going on increasing these until it ends in disaster, unless, haply, it retraces its steps.—*Dr. Alex. Haig, F R.C.P.*



For the Girls I Know

WHEN Margaret went up to bed last night, she stood for a moment self-absorbed in the middle of the room. Then she exclaimed aloud: "Oh, I wish all the girls could have heard!" Then, as the suggestion flashed upon her, she cried joyfully: "I know what I'll do; I'll write it down just as they said it." The next moment, with her pad in her lap and with her sharp pencil, she began to write the following:—

"This afternoon the sewing circle met here, and when I came in after school, I peeped in the front parlour door, and the women were such a pretty, busy sight that I stood to look, and then one of them, a dear, beautiful, old lady, said: 'If I were a girl again, I should be more thoughtful of my mother. Not until I had girls of my own to work for did I begin to realise what my mother had done for me.'

"Then another woman, middle-aged, with a sharp, worried face, spoke quickly: 'If I were a girl again, I should learn to do something to support myself. Here I am forty-two, as you all know, and I couldn't earn my breakfast unless I went out and did housework. Nobody cares for an unskilled and untrained workwoman, and that's what I am. It's a blessing to me that I don't have to earn my breakfast.'

"'If I could be a girl again,' said a woman with a sweet voice, 'I should never leave my Sabbath-school. You can't think how I envy the girls who have grown up in Sabbath-school as if it were a home, and they are as much at home as I am among my children. I've been out of Sabbath-school thirty years, and it is a loss that can never be made up to me.'

"'If I could be a girl again,' a placid-looking woman said, 'I should never give up studying. I should never allow myself to lose the habit of learning things. Why, it is even hard for me now to learn a long Bible verse. I must choose a short one, or humiliatingly write it on a slip of paper to look at the last minute.'

"'And if I were a girl again,' spoke up a lady with a quick tongue, 'I should never allow myself to speak of anybody's faults—no, not anybody's! You can't think how much you get to see faults if you let your mind run on them.'

"Then a lady in the corner spoke sadly: 'If I could be a girl again, I'd begin by not being ashamed to be a Christian. I should take a stand, and stand. You who have never failed cannot think how it helps to have people know what to expect of you. By shilly-shally work you don't know what to expect yourself.'

"I began to go through the two rooms, and every woman had something encouraging or discouraging to say about her own girlhood. 'If I could be a girl again,' came from somebody, 'I should make myself write letters. To-day when I write one of my awkward letters (and I never write a letter if anyone else will do it for me), I regret that I hated to write

letters, and would never learn to make it easy. I always feel that I have lost something when I hear people who have letter friends. My sister writes the happiest letters to twenty invalids. She is doing a cup-of-cold-water work in a way that I never can.'

"'And I,' said a little woman, 'should learn to sew. I am as awkward with a needle as if it were a hoe, and my needle

Read only the best books

makes about as good work as a hoe would.' Everybody laughed.

"Then such a pretty woman said: 'If I were a girl again, I think I should rather be a plain girl. I was pretty, and people told me so, and I was spoiled. I loved admiration better than bread and butter, and twice I lost promotion in school for having company and going to parties. Not but that a pretty girl can have good sense, though.'

"'If I were a girl again,' said an intellectual-looking woman, 'I should not give up everything for study. I should be a womanly and housewifely girl, as well as a student, and if I had one taste that dominated all others, I should not let all the others run to waste. I was deep in mathematics when I could not spell in my own language as correctly as a girl of twelve, and my penmanship was disgraceful.'

"'And I should try to make friends,' remarked a silent-looking woman. 'I forgot when I was a girl I should need friends when I was older; and when I see women with their school friendships keeping them young, it makes my lonely heart ache.'

"'If I could be a girl again,' said somebody whose face I couldn't see, 'I should read only the best books.'

"'I should study and read the Bible more,' someone said in reply. 'I should take it as real and alive, and meant for me, and should grow up on it.'

"Then a rather young woman said sweetly: 'If I could be a girl again, I shouldn't grow so fast. I should stay as fresh and young as I could, not live ahead of my age, but just as a girl flower, and bloom as God gave sunshine and rain.'" —*Selected.*

Breaking a Habit

LITTLE Margaret, aged five, had formed the disagreeable habit of biting her finger nails. All punishment or reproof from her parents had so far failed to induce her to leave it off. Aunt Minnie was Margaret's oracle, her simplest wish, expressed, became to Margaret a law. Looking at the ragged little finger ends one day Aunt Minnie said,—

"I'll give you a gold ring, dearie, if you will stop biting your finger nails."

"I won't bite them any more," she promised.

Weeks passed and once more Aunt Minnie was visiting in the home.

"How about those finger nails? Margaret, let me see."

"I haven't bited dem once," cried the child, eagerly displaying a set of regular little claws which she had utterly refused

to have trimmed till Aunt Minnie should have seen them.

"Are you sure, not once?" critically examining a little ragged thumb.

"I bited my fum—a *little*," she admitted crestfallen.

"Thumbs count the same as fingers," then seeing the brown eyes fill with tears of disappointment, auntie added, "We'll trim them all nicely and you can start over. Remember—thumbs as well as fingers."

When next Aunt Minnie inspected the little hands, after several weeks had elapsed, she found an unbroken set of nails, "the fums and all unbited," and the little ring now adorns as neat a pair of little hands as one could wish to see.

I wonder how many of us larger children could break ourselves of as dearly cherished a habit, and do it as effectually and with as few backslidings as did this little child.

It may hurt our pride a little, but it often pays to enlist the interest of someone outside of the daily family life when little problems like this one arise.—*Jennie E. Stewart.*

If I Were in High School

A CONTRIBUTOR, who is the father of a boy just entering the high school, has had several talks with his son about his plans for the year. "These talks have set me to thinking," he writes; "and sometimes I plan what I should do if, like him, I were to have a chance to go to the high school." Here are some of the things that the father regards as important:—

Do not try to see how *much* you can study, but how *hard*. Learn concentration; much of the time a boy thinks he is working when he is only getting ready to work, or simply holding a book in his hand while his thoughts are wool-gathering.

Learn to do your work yourself. "Did you fellows get the tenth problem?" you may hear some high-school boy ask a group of his classmates, and then you will see him copy in his book the information that is offered him. In real life we must work things out for ourselves.

If you are ever called upon to make a speech, do your best. Every man at one time or another must speak in public, and correct speech is largely a matter of practice. The high-school course offers a great many chances for practice.

Learn to play some athletic game well. There are not many things that bring more real pleasure and profit than clean, healthful, outdoor athletic exercise. It adds to the number of your friends, increases your physical powers, and develops your mental alertness. And later in life, when the tendency grows to sit at the desk or to stick to business to the neglect of physical health, the old habit draws you out into the open air, banishes indigestion, and renews your youth.

Cultivate as fully as possible your friendship for other boys. All normal, healthy boys enjoy the companionship of girls, but you are likely to get the greatest good from the daily rough-and-tumble contact with boys of your own age.

Keep up your studies, but also take part in general school activities. Get as well acquainted as possible with your teachers. Above all things, stick persistently to some one subject, and try to learn it more than passably well.—*Youth's Companion.*

An Intelligent Little Bird

IN the midst of the African forests of the Zambesi region, there lives a remarkable little bird, not much larger than a good-sized sparrow, but of far more use to humans, seeing he is much more intelligent than any sparrow. There is nothing about the form or colouring that would attract your attention; but when you ask someone who is acquainted with him what they have to say in his favour, you will become immediately interested.

He is called the honey-guide, or indicator, from his peculiar habit of guiding the African natives, or other hunters, to a nest of honey in the forest trees. He is very fond of honey, as most of us are.

He is knowing enough to realise that a bees' nest in a tree can be opened only by some creature more powerful than himself, and he seems also to have learned of man's fondness for honey. Not only does this wise little bird lead men to a nest of honey, but he also guides the little animal called the honey-ratel to these nests, having learned of this little creature's favourite food.

The Honey-Guide

The manner in which this remarkable bird accomplishes his desire is as follows: When passing through the forest, the attention of the natives is attracted by the shrill, hissing cry of a little bird fluttering about on the branches near by. It is the honey-guide. They answer his cries by a whistle, and immediately follow, as he flies from one tree to another, trying always to keep in plain view. He may continue this for a mile or more before the tree he is after has been reached. Then he stops on its branch quite near the bees' nest. The natives notice that he no longer flits from one tree to another, so realise what is the next move required. They look at the tree carefully for the little hole surrounded by clay, where the bees' door has been made; and when this is found, and a large bunch of dried grass collected, all is ready. With hatchet in one hand and a wisp of burning grass in the other, the nest gets a powerful stroke from the hatchet, the interior of the bees' residence is broken up, and the storehouse of sweets is exposed. The poor little bees do not even have the chance of escaping, as their wings are so singed by the flames that they fall to the ground helpless, while their store of honey is taken. After the honey is secured in pots or pails, the hunters place a well-filled comb where their little friend, the honey-guide, may partake of it to his heart's content, which he does in real earnest as soon as he is left alone. Sometimes this bird will guide hunters to a nest in which there is no honey. But in such case the bird is not disappointed, as the young bees seem to please his taste about as well as their sweet food supply.

It is said that the Kafirs would not think of leaving a nest to which this bird has led them without giving the bird some of the honey, as they believe if this

is overlooked, the bird will some other time lead them to their deaths by taking them to some lion's den, or the nest of a deadly poisonous snake.—*Young People.*

His Riches

JOHNNY SMITH lived in the country, but he often longed to live in the city, where there are so many things to see and do.

One summer some boys came to the country to board at Johnny Smith's house, and he saw how glad they were to leave the city. He began to wonder about it.

"I should think you would be glad to be so near the bush and the whole outdoors!" said one of the boys.

"Yes, I suppose it is nice," said Johnny Smith, slowly.

"You suppose!" said another. "Why, if I could live in the country, I'd be so glad I should not know what to do! See all the things you have!"

"Why, I haven't much of anything," said Johnny Smith. "I think it is you who have the things."

"Oh, but we haven't half such nice things as you have," said the first.

Johnny Smith stared. "Why, what do you mean?" he asked, when he could find words.

"Just what I said," the boy replied. "We haven't any chickens. We can't have cows in the city. We have no big garden, where you can pick your vegetables fresh every day."

"And," broke in another, "think what a lucky fellow you are to have such a lot of space to play ball in, and you don't have to keep off the grass!"

"Why," said Johnny Smith, "I never thought about that. I've always had such things."

"And we have never had them," said the first boy.

Johnny Smith had never known before that the things he thought so tiresome were really worth speaking about. "Well," said he, after a few minutes, "I shouldn't wonder if they were pretty nice; and," he said, with pride, "I've got something else!"

"What?" asked all the boys.

"Come on, and I'll show you. It is a mile away,—over in the north field."

Proudly he led the way. If the boys thought the things they had seen were worth more than their own, they would open their eyes wider than ever at what he had to show them in that north field. "Is that north field yours, too?" asked one.

"Yes," said Johnny Smith, with joy.

"Think of owning so much land that one of your fields is a mile away!" said the boy.

On they went till they came to the field, and Johnny Smith took them to a row of willows. There he showed them a beautiful brook, running along and making a pretty, babbling song.

Then how the boys' eyes did widen! Think of owning not only a field, but a brook!

Then Johnny Smith began to show them the wonders of the brook. There were things in it that he once thought most common. Now they were riches indeed! There were things in there that the city boys had never seen in their lives! Beginning at the top of the water, there were the water-striders that ran along the surface of the brook without falling into it. Then there were little pinfish in the shallow parts near the edge. What a place it was! The boys hardly could leave when the dinner-hour came.

Never, after that summer, was Johnny Smith known to wish for things he did not have. He began to think of the things he owned. They were no longer poor, common things. He loved them more and more each day.—*B. E. Wade, in Youth's Companion.*

"Think of owning not only a field, but a brook!"

Must Have Something

"MAMMA," said little Dorothy, "I want some water to christen my doll."

"No, dear," replied her mother. "It's wrong to make sport of such things."

"Then I want some wax to waxinate her. She's old enough to have something done."

Back to Lesson Land

BY NANCY BYRD TURNER

We've romped and run in wind and sun,
We've roamed and rowed and tanned;
We're coming back, vacation's done,
To waiting Lesson Land,
Where slowly open, day by day,
New fields we've never ranged,
Yet good old signposts point the way,
Familiar, wise, unchanged.

Through stored-away geographies,
Down crumpled maps tight furled,
Still flows the Mississippi,
With the rivers in the world;
Still nine times seven are sixty-three,—
This has not altered yet,—
Howe'er it seems a mystery.
Howe'er we may forget.

Still some good father leaves by will
His fortune to his sons:
To A and B a share he gives,
What was the other one's?
We've had our chance for all the fun
That heart has ever planned;
Now turn around and homeward bound
For happy Lesson Land.

—*Youth's Companion.*

[Send questions for this department to the Editor, LIFE AND HEALTH, Warburton, Victoria.

NOTICE.— Subscribers sending questions to this department should invariably give their full name and address, not for publication, but in order that the Editor may reply by personal letter if he so desires. Because of this omission several questions have not been answered.

81. Chronic Ulcer of the Leg

"Subscriber" asks the best treatment for chronic ulcer of the leg.

Ans.—The leg is the general seat of ulcers, the reason being that the circulation is less powerful there than in any other part of the body. This fact at once gives an indication for treatment. The leg must be rested in a horizontal position. Very often varicose veins exist, and these prevent healing through not removing the waste products from the parts; the recumbent position helps the veins to return the impure blood to the lungs and other organs. All sorts of local applications are employed, and many do more harm than good. It is nature that heals, and most applications, even antiseptics, actually prevent healing. Antiseptics are used to kill germ life about the wound, and consequently they may be looked on as the lesser of two evils. There is no application equal to plain, boiled water constantly applied on sterilised lint (lint boiled in water). A good method is to boil the lint in the water to be used, and allow it to remain in the water while it cools. The general health may be attended to, if there is any constitutional trouble that must be remedied. Ulcers often heal in the recumbent position, and break out again quickly after getting up. If the constitution were built up, this would not be so. The patient is often anæmic, and requires plenty of good, digestible food and thorough ventilation in his or her room. Ulcers are sometimes of a specific or venereal type, and in that case a physician should be consulted.

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82. Pimples

An inquirer from Middle Park asks, "What causes pimples?" and complains that she has been a sufferer for the last three years.

Ans.—Impure blood and deficient action of the skin are undoubtedly at the root of the trouble. The body should be sponged daily, and Turkish or hot baths should be taken twice weekly. Do not wear more clothes than are absolutely necessary. Inquirer is directed to the next question.

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83. Indigestion and Constipation

A correspondent asks for advice for "indigestion and constipation."

Ans. — These troubles go hand in hand. Cure the indigestion, and the constipation will vanish. Frequently constipation is the only evidence we have that the digestion is not carried on rightly. Constipation can be helped by various foods, such as granose, wheatmeal, and oatmeal biscuits, stewed fruit, especially prunes and apricots. Some find decided advantage from coarse oatmeal porridge, but the use of much milk, especially if boiled, is constipating. The drinking of good, wholesome water

plentifully between meals, on going to bed, and on rising in the morning, is very helpful.

The water may be made more agreeable by the addition of some fruit juice; the juice from dried apricots is especially advantageous. After washing, allow them to soak in water for ten or twelve hours, and drink freely night and morning. Sedentary occupations and want of exercise interfere with the muscular action of the bowels, and tend to constipation. If the digestion is perfect, constipation will not exist. The alimentary canal consists of various parts, and the partly digested food in one part is a stimulant to the next part. If the food be well masticated in the mouth, it will be a stimulant for the stomach. The contents of the stomach, when it is treated fairly, will be a tonic for the duodenal digestion, and when the bowels are supplied with normally digested food, constipation will cease to exist.

"Indigestion" is a very comprehensive term, and only a few general rules in regard to diet can be given. Avoid all foods cooked with butter, lard, or grease of any kind, also foods cooked with baking soda or baking powders. Self-raising flour has the baking powder already mixed with it, and, consequently, should be avoided. This will simplify cooking considerably, and will remove from the table such foods as cakes, scones, and pastry. Dry foods are very helpful to the mouth digestion, and, consequently, right along the alimentary canal. Dry foods require to be well masticated in order to be swallowed. Granose biscuits, toasted corn flakes, plain unsweetened biscuits, and zwiebach, are helpful. Bread often disagrees through want of proper mastication. Many find great advantage in not taking bread of any description, and using the substitutes mentioned above.

Not more than a very small cup of fluid should be allowed at any meal, and, generally, that is better dispensed with. If fluid is poured into the stomach, nature seems to recognise that fluid is not necessary, and thus less gastric juice is secreted. Tea, coffee, and cocoa are undoubtedly injurious to digestion.

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84. Mushrooms; Muscular Rheumatism

"Warracknabeal" and others ask "if mushrooms are good to eat," and also "what are the symptoms and remedy for muscular rheumatism."

Ans.—There are fully 1,400 species of fungi, about a hundred are known to be edible (and are popularly called mushrooms), and not more than thirty have definitely been proved to be poisonous. Mushrooms are not easily digested in the stomach; the difficulty is due to the great amount of cellulose which they contain, and to the toughening of the tissues of the fungi from cooking. Fungi are very imperfectly absorbed when taken into the system. "One observer (Saltel)," says Robert Hutchison in "Food and Dietetics," "took large quantities of fresh mushrooms daily. He found that 19% of the dry substance and 33.7% of the proteid escaped absorption. Another (Uffelmann) got even less favourable results, two-fifths of the proteid being excreted unchanged. Artificial digestion outside the body has yielded similar results. On the other hand, as one would expect, the absorption is considerably better if the mushrooms are taken in the form of powder; but even in that case 29% of the proteid was lost. On the whole, mushrooms and other fungi must be ranked with such substances as green vegetables, carrots, and black bread as amongst the wasteful foods." One-third of the nitrogenous matter in mushrooms is in a form which is useless for the purposes of nutrition. Mushrooms are undoubtedly a very poor food, whether we look at the question from a nutritive or a digestible standpoint.

Muscular rheumatism is undoubtedly due to retention of waste products in the muscle cells. These irritate the delicate nerves and nerve endings, and thus cause

pain. These same products in the joints cause swelling and stiffness. Why one person should suffer from articular rheumatism, another from muscular rheumatism, and another from gout, it is difficult to say. All are probably due to similar waste products, or what we may call "physiological ashes." All nitrogenous foods, and especially flesh of animals, leave a great residue of "ashes" in the system. As long as these are got rid of by the kidneys and the skin, rheumatism and its allied disorders do not exist. The man who works in the open air is not nearly so liable to these troubles as the one with more sedentary occupation, because the exercise and fresh air enable him to burn up the "physiological ashes" more thoroughly, and thus to dispose of them through the excretory organs of the body. The subject of muscular rheumatism must attend carefully to digestion, and must avoid a surplus of nitrogenous food, especially flesh foods. Sugar and all sweetened foods are injurious on account of interfering with the functions of the digestive organs. Exercise in the open air, keeping the skin active with daily sponging and bi-weekly sweating procedures are essential. One writer asks if "hot salt water baths are useful" for articular rheumatism. These are decidedly good if not carried to extremes. To weaken the body by excessive sweating will not enable it to eradicate its poisons. The number of baths taken must vary according to the patient's general strength.

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85. Worms

A New Zealand correspondent writes: "What treatment could you recommend for a little boy two years old who suffers with worms? He has passed altogether about two dozen, some six inches in length."

Ans.—These are evidently the "round worms" (*Ascaris Lumbricoides*). They are very similar to earth worms in appearance, but have no plainly marked segments. The ova of the round worm are produced in great quantities, and pass off in the fæces, where they can be easily found by microscopic examination. They are oval in shape, about $\frac{1}{100}$ of an inch long. The proper habitat of the adult round worm is in the small intestine, but they have frequently been found in the stomach, œsophagus, and mouth, or even the nose, or posterior nares. Sometimes they find their way into the pancreatic and biliary ducts. The ova, or eggs, do not develop in the child's body, but pass out with the fæces and develop rapidly when re-introduced into the alimentary canal. Outside the body they retain their vitality for years. As many as three thousand eggs have been found in a bit of fæces as large as a grain of wheat. The child with unclean fingers, or by placing its toys in the mouth, may readily infect himself with eggs that have passed from his own body. Children crawling about the floor in the dust may similarly be infected. Cleanliness is absolutely necessary to prevent their development. Vegetables that have had night soil used for manuring purposes should be thoroughly cleansed and cooked.

Santonin, made from Levant wormseed, is probably the most widely used of all anthelmintics. Great care should be used in its administration, as it is very poisonous. Santonin is an almost tasteless, white powder, nearly insoluble in water. The dose at the age of two years is $\frac{1}{4}$ to $\frac{1}{2}$ grain; at six, 1 grain; and at twelve or fifteen, 2 grains. Should be given morning and night, and sometimes three times a day, and a good purgative as castor oil every second day.

Spigelia, or pink root, an American plant, is an efficient and safe drug; it is not much used in Australia. The dose of the freshly prepared fluid extract is half a teaspoonful for a child of two years, a teaspoonful for one from four to ten years old. Give with senna twice daily.

Several correspondents have asked for treatment of thread or seat worms. These are sometimes called pin worms (*Oxyuris vermicularis*). This worm in-

habits the rectum and large intestine throughout its entire course, as well as the lower end of the small intestine. The eggs pass out with the fæces in great numbers, and, when swallowed, the embryo is set free in the digestive tract, and descends to the colon, rapidly developing into the adult worm. They are often extremely numerous. Auto-infection is constantly taking place in children with pin worms. The irritation caused by these worms causes the children to scratch about the anus; the eggs become lodged under the finger nails, and finally find their way into their mouths and stomachs through the finger being placed in the mouth, or food and toys becoming infected. Vegetables and drinking water easily become infected just as with the round worm.

The usual remedy is the injection of common salt and water (tablespoonful to pint of water), or infusion of quassia (a small handful on which a pint of boiling water has been poured). These are better used with a long, India rubber tube, so as to reach as much of the bowel as possible. The bowel should be well distended with the fluid so as to dislodge the eggs and worms from all the folds of the bowels, and the application is better used after the bowels have been opened. The treatment should be given daily for ten days or a fortnight. Much of the bowel cannot be reached with the enema, consequently it is as well to administer the same remedies as given under treatment for round worms. A laxative should also be given three times weekly, and those producing watery evacuations are the best, such as Epsom salts, Seidlitz powders, or Hunyadi, or other mineral waters. Syrup of raspberry disguises very well the taste of Epsom salts — about two ounces to half an ounce of the salts.

Plain Castile soap and water is as efficacious as salt or the quassia chips. The parts about the lower end of the bowels should be scrubbed well daily, and anointed with an ointment of boracic acid (teaspoonful to one ounce of vaseline).

86. Diarrhoea; Constipation; Flatulence

E. C. S. complains that she suffers severely with bowel trouble, short diarrhœa, followed by a long period of constipation, suffers tortures with flatulence, pain in head every day, and rushes of blood to head, followed by palpitation.

Ans.—All these symptoms are caused by disordered digestion. A month's treatment in a sanitarium would probably set matters right. The teeth should be attended to, and if they are not sufficient for mastication, artificial teeth should be procured. Food must be thoroughly masticated, no drinks whatever with meals. Avoid all fried foods, foods cooked with butter, etc., meat, and vegetables (especially coarser kinds, as cabbage, parsnips, carrots). Potatoes, if taken at all, should be boiled and mealy, but probably for a time they would be better omitted altogether. Live on fruit, grains, and nut foods. Read directions already given under "Indigestion and Constipation."

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87. Hay Fever

Tasmanian correspondent asks for treatment of Hay fever, which always comes on in November and does not depart till end of December.

Ans.—This disease is generally believed to be due to the pollen of plants or grasses. One of the essential causes is individual idiosyncrasy, a peculiar susceptibility of the nervous system. The one cause alone will not produce the disease. Treatment by drugs is certainly very unsatisfactory. A complete change of climate is the most efficacious of all remedies. Residence at the sea side, or a sea trip, will cure for the time most cases. Great relief can be had by sweating procedures, such as vapour baths, Turkish baths. Hot vapour inhalations are of great value where asthmatic symptoms are prominent. Hot and cold applications to the spine help in some cases. Avoid exposure to draughts and dust.

88. Heart Trouble

A correspondent from Port Broughton asks for advice as to what to do to strengthen the top valve of his heart, and for nose bleeding.

Ans.—Probably the nose bleeding is directly connected with the heart trouble, and what will give relief to the one will also relieve the other. There is no absolute cure for organic valvular disease of the heart, but with care a person so suffering may live to quite an old age. I have examined a man aged 105 years who had heart disease for over fifty years, and even then the heart trouble did not distress him in any way. In disease of the valves, the heart enlarges through the development of its muscular tissue, in order to enable it to circulate the blood as in health. The valvular disease causes loss of power, but as long as this is compensated for by increased development of the muscular tissue, the patient suffers but little inconvenience. An hypertrophied heart, however, is liable to be the seat of degeneration, and the less the enlargement the less the fear of degeneration. Consequently the work of the heart must be made as light as possible. The patient must lead a quiet life, avoiding great muscular work, such as lifting; his work must be regular; extra exertion, long hours, must be avoided; he must not take up work that will entail great mental strain, or of a worrying nature. He must avoid everything that increases or disturbs the action of the heart. Tobacco, alcohol in any form, tea and coffee, should be avoided, as they all disturb the action of the heart. Meals must be plain and simple, and he should be a vegetarian if he wishes to die of old age. The heart of the meat eater beats faster than that of the abstainer from flesh foods.

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89. Eruptions of the Face

Subscriber from Geelong complains of an affection of the skin of the face. Large red blotches form into lumps, and then break. Various ointments and remedies have been tried without avail.

Ans.—Everyone recognises the fact that young men and young women often suffer with acne and various eruptions of the face at the time they "stop growing." In the "growing" period the food taken is utilised for the building up of the tissues of the body; but when that ceases less food is required. If more food is taken than is necessary, or if the food be too rich or indigestible, the waste products increase, and extra work is thrown on the glands of the skin; this often results in local spots of inflammation. Local applications, unless they increase the action of the skin, will not give relief. Hot and cold applications (applied alternately) will keep the glands of the skin active, and to some extent prevent the eruption, but special attention must be paid to diet. There may not be any of the usual symptoms of indigestion, but, nevertheless, rich and unsuitable food impairs the quality of the blood, and this causes the action of the skin to be defective. Those who suffer from ordinary symptoms of dyspepsia are often free from the eruptions, for the unpleasant dyspeptic symptoms make them careful in the selection of their diet. I would advise "Subscriber" to live largely on fresh fruit (at and not between meals). It would be a good plan for the evening meal to consist solely of fruit.

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90. Medicine for Children

A writer from "Yandina, Queensland," inquires, "What is a safe medicine for children (I have five, from two to eleven years), and how often should it be given to keep them in health?" and also desires to know a "cure for thread worms." The latter has already been answered in this issue. It is a very great mistake to get children accustomed to any kind of opening medicine; it is better to let the bowels go for even two or three days than to be continually dosing with laxa-

tives. Let the children have frequent drinks of good water, especially on going to bed, and on rising. Fruit should form a part of two or three meals, being omitted when vegetables are taken. Frequent sponging of the body with cold water and outdoor exercise will also be helpful. Give nature a fair show and no purgatives will be needed. These statements of course do not refer to acute illnesses, when a laxative, such as castor oil, liquorice powder, confection of senna, or an enema, may be very beneficial.

We are extremely sorry that we have only been able to answer a small proportion of the inquiries received. We have selected those which we believe will be most generally appreciated. Lack of time has also prevented us from replying to letters for personal advice. W. H. J.

Triplets Reared on Faliere's Phosphatine Food

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provides everything that a child needs in the way of sustenance. In "The Mother's Testimony" appearing below and in the interesting picture we give is evidence — Australian evidence — of the value of this much-esteemed food.

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Mothers should consider these points:—Children reared on Faliere's Phosphatine Food are strong and healthy; they have good teeth and bone; they are cheerful and happy; there is no trouble to get them to take their food, for they like Faliere's Phosphatine Food, and ask for more. Get a tin right away.

The Triplets at Eight Months *Photo. Swiss Studio*

THE MOTHER'S TESTIMONY

74 Darling Street, Moonee Ponds, Vic., 1st January, 1912.

Messrs. Joubert and Joubert, Flinders St., Melbourne.

Dear Sirs,—Herewith I have great pleasure in sending you two photos of my triplets aged eight months. Shortly after birth, we had the greatest difficulty in obtaining suitable food for them, until through the advice of a friend we tried Phosphatine. I have great pleasure in testifying to the benefits my triplets have received from the use by us of this valuable infants' food.

Yours faithfully, (Signed) H. A. SIMMONS.

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Wahroonga, New South Wales

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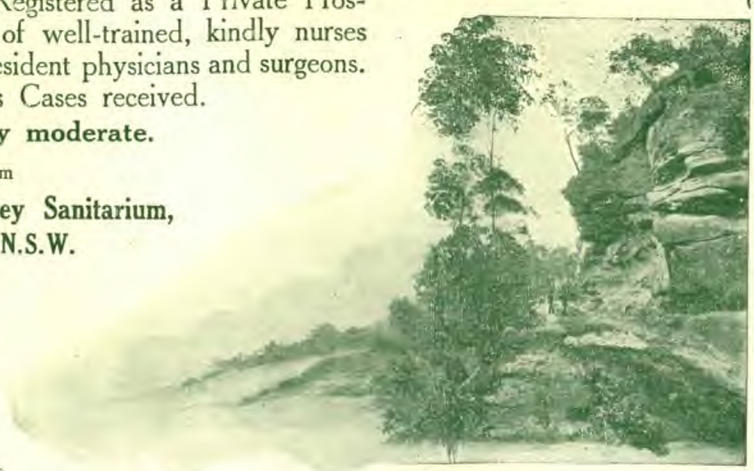

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