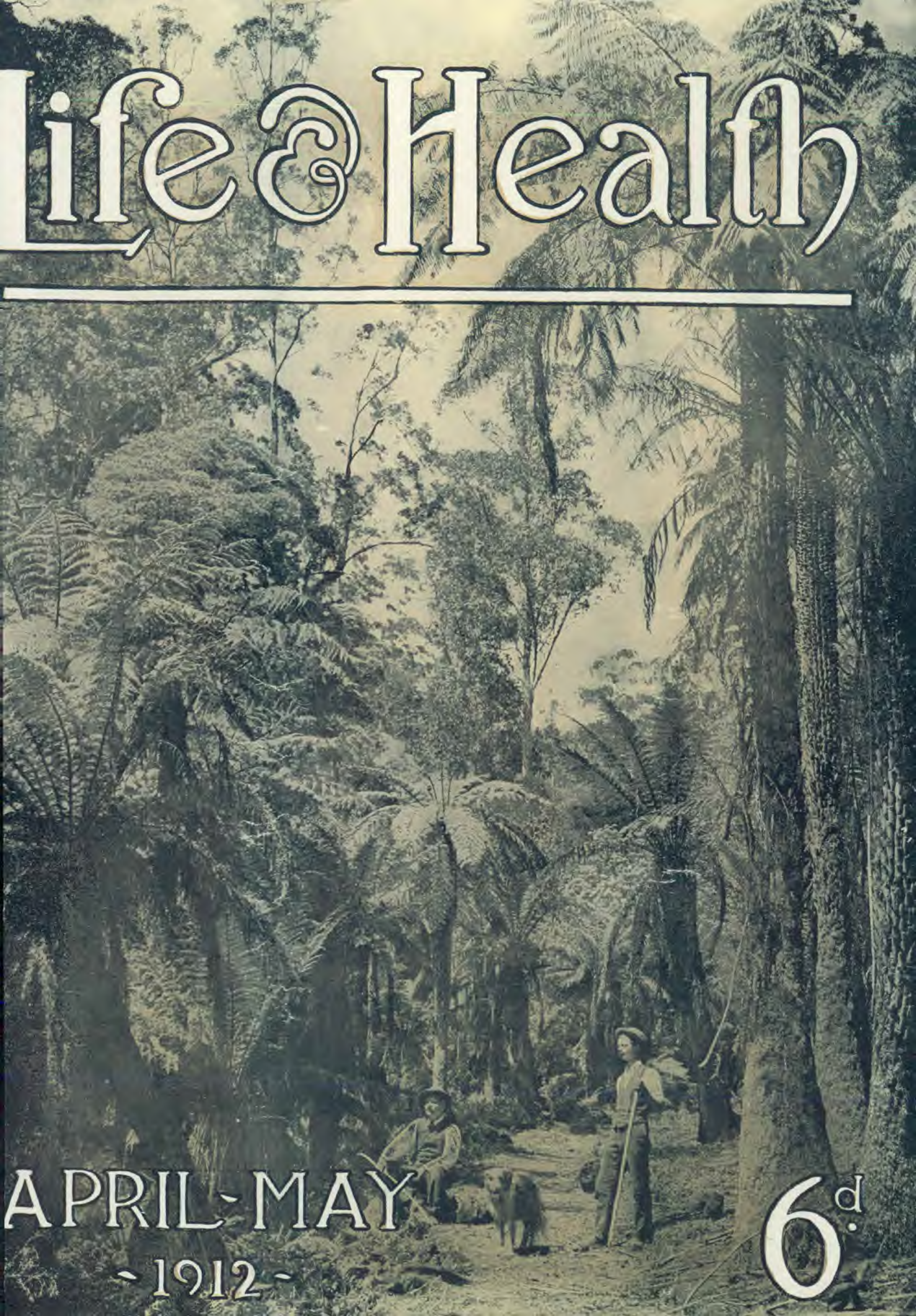


Life & Health

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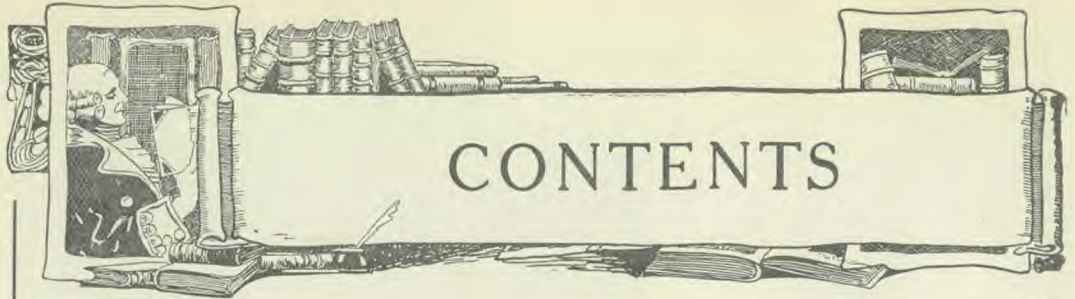
AS stated in our first issue of LIFE AND HEALTH, the aim of the publishers of this magazine is to meet the demand for literature relating to the preservation of health and the timely treatment of common ailments in order to prevent serious results. It is encouraging to know that our efforts in this direction have been somewhat successful. We are receiving letters continually from our large family of readers throughout the Commonwealth and the Dominion of New Zealand, expressing their appreciation of the magazine, and wishing it continued and ever-increasing success. Feeling confident that all our readers would be interested in reading extracts from some of these communications, we have culled the following :—

"We have enjoyed reading LIFE AND HEALTH, and always look forward to the next edition. I have no suggestions to make in regard to its improvement; in fact, I think it would be hard to improve so good a paper. I am very much interested in the articles on 'Home Nursing,' 'Quiet Talks with Mothers,' etc. You have succeeded in making LIFE AND HEALTH one of the best health magazines in the Colonies, and I would not be without it if it were twice the price it is, as I consider it a clean, wholesome, instructive paper for old or young to read."

"I appreciate LIFE AND HEALTH very much, as it is filled with up-to-date matter on health topics, and I believe by following the instructions contained therein many persons will receive great benefit."

"Kindly receive postal note for 3/6, subscription for LIFE AND HEALTH for 1912, which I willingly and gladly contribute to. My family are delighted with it. It is the best book for the money; so instructive and so interesting, and leads one to think of the better and high ideals. I cannot express my grateful thanks enough for all the good things I have learned from its pages. I trust it will have a successful career."

"I will with pleasure take LIFE AND HEALTH for another year. I quite look forward to the time of receiving it every two months. The matter is A1. Mrs. ——— has got a lot of information *re* cooking, as we have given up eating meat. Wishing the magazine every success for the coming year."



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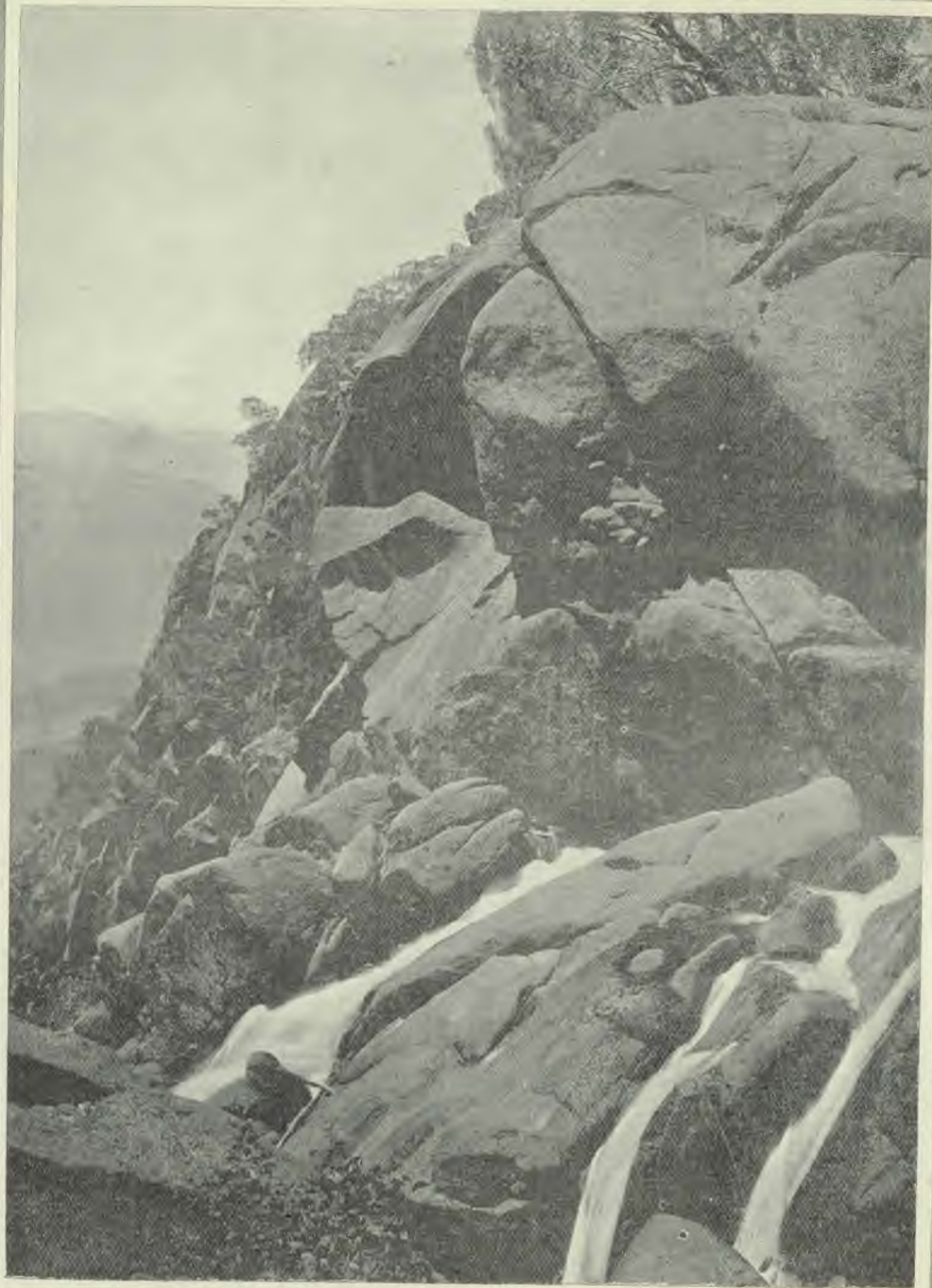
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EDITOR: A. W. Anderson.

CONTRIBUTING EDITORS: F. C. Richards, L.R.C.P. and S., Edin.; Eulalia S. Richards, L.R.C.P. and S., Edin.; W. Howard James, M.B., B.S., Melbourne; A. Stuttaford, M.D.; A. V. Heynemann, L.R.C.P. and S., Edin.; Ethel M. Heynemann, L.R.C.P. and S., Edin.; P. M. Keller, M.D.; Florence A. Keller, M.D.; Margherita M. Freeman, M.B., Ch.M. (Sydney).

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April-May, 1912

Fresh Air

SOME years ago the writer well remembers attending a case of pneumonia at the request of a fellow practitioner. Every care had been taken of the case; not only were the chimney, windows, and doors kept closed, but every crevice that could admit air was most scrupulously sealed with paper and paste. This undoubtedly was the plan followed in past ages in the treatment of lung troubles. It was felt that the great enemy was cold and draughts, and, consequently, that the patient must be most carefully protected against them. Now it is recognised that fresh air is not only a food but a fire for destroying rubbish. When wood is burned with an insufficiency of air, charcoal is formed; but when an unlimited supply of air is present, it is reduced to ashes. Disease is due in many cases to what we may call "charcoal" in the system, food that has not been burned up or oxidised. These big, insoluble ashes cannot be got rid of

by the excretory organs. They need further oxidising, a more thorough burning, so that they may be dissolved in the blood, and carried to the lungs, skin, and kidneys to be expelled from the system.

By far the greater part of our food is utilised, not for the building up of the tissues of the body, not for the remedying of wear and tear, but for the production of the various energies of the body. Liebig, the celebrated chemist, taught that all foods must first be converted into the various tissues before they could be utilised as energy. All the tissues are nitrogenous, and therefore it was argued only nitrogenous food will produce energy. Sugars and fats, non-nitrogenous foods, it was contended, could not produce muscular, nerve, or gland activity; they only produced heat for the maintenance of the body at a uniform temperature. The experiments of Drs. Fick and Wislicenus, professors of physiology and chemistry respectively at Zurich, in the early sixties,

proved this theory to be altogether erroneous. The muscle, nerve, or gland cell is made up of two essential parts, which we may call the machinery and the fuel. In the mechanisms constructed by man, these two parts can be easily differentiated; but in the cell this is not the case, the powers of the microscope are not sufficient to enfold these details. The cells, we know, enlarge on taking assimilated food into their structures, and diminish after work has been performed, after that food has been oxidised and converted into energy. Undoubtedly there is a certain amount of wear and tear of the essential elements of the tissues, and this is repaired by the food taken into each cell, but the amount is very small; our tissues are much more stable bodies than they were once thought to be. We do not build houses in order to have a bonfire, and nature does not build up tissues in order to produce energy by destroying them.

Food taken into the alimentary canal will not, apart from its oxidation, produce either energy or build up the tissues, neither will the oxygen inhaled through the lungs and circulated in the blood. It is the union of the oxygen with the food that produces energy and gives the cell power to maintain its organisation. Bread, milk, and other alimentary products, do not constitute food apart from oxygen, nor does oxygen constitute food by itself, both are absolutely necessary. Thus the air we breathe has as much right to be called a food as the more solid substances taken into the system.

It is not the man that eats most that lives most. To live a full life we must

breathe well, and thus get the energy out of what we eat. Unconsumed food is poison, and must produce sluggishness. To breathe well we must have an abundance of fresh air and exercise, and most of the exercise should be in the form of useful work. The various exercises for the development of the different parts of the body are undoubtedly good if persevered in, but it must be admitted they are tedious because they are not natural. It is not natural to develop the body by mere exercises, but by work. Many of the exercises recommended are neither



OPEN AIR TREATMENT CAN BE SECURED BY SLEEPING ON A VERANDAH OR BALCONY

work nor recreation, but we must remember that a substitute is better than nothing. The man working in the open air has both physical and mental energy because he inhales not only pure air, but plenty of it. The clerk or the student after a heavy meal in a close room goes to sleep, or at best only half exercises his mental powers, because he lacks the fresh air that would liberate the energy from the food taken. Physical labour means full breathing, and, consequently, a good appetite and abundance of energy. If the man of sedentary occupation cannot get exercise, he must eat less. You can

get more heat and energy from burning thoroughly a little wood than from a closely packed pile, which only consumes away into smoke and unsightly ashes.

We should recognise that a third of our time is spent in our sleeping apartments. It is at this time we throw off the surplus ashes produced by the day's work, and also take into every cell fuel for future use. Fresh air is much needed at night time for both purposes. The notion that night air is injurious and should be excluded from the room, is quite a thing of the past. The freer the interchange of the air of the bedroom with the outside air the better. The bedroom should have a chimney, and the doors and windows should be open to the fullest extent compatible with comfort. A gentle breeze over the head and face is not injurious so long as it does not interfere with sleep. One soon gets accustomed to these things.

Open air treatment should not be confined to consumptive patients only; it is beneficial for all, the healthy as well as the sick, and almost every complaint is benefited by it. All the advantages of open air treatment can be secured by sleeping on a verandah or balcony, care being taken to secure protection from rain and draughts by suitable screens. A well ventilated room with plenty of open windows, one that can be flooded with sunlight during the day, will answer almost as well. The discomforts from rain, wind, and cold must be avoided as far as possible. It is fresh air that does the good, and not the inconveniences. A sound sleep in a well ventilated bedroom is infinitely better than a disturbed sleep in the open air. Many pin their faith to tent life, but tents are mostly too small and ill-ventilated. Air does not circulate well through thick canvas. The walls of the tent should be at least six feet high, and the sides should be so constructed that they can all be rolled up. At least one side of the tent should be rolled up right through the night, and in good weather all may be advantageously thus dealt with.

Abundance of fresh air day and night wonderfully reduces the liability, not only to lung complaints, but to rheumatism, gout, dyspeptic troubles, and almost every disease the being is subject to. It may take time to accustom ourselves to it, but we will be repaid both in activity of mind and health of the body.

W. H. J.

Diabetes and Its Treatment

A STARTLING statement was made in an address given by Dr. J. N. McCormack, chairman of the Committee of Organisation of the American Medical Association, that one-third of the 5,700,000 people who were ill or died in the one year in the United States might have remained in health through the observance of the simplest rules of health. A startling illustration of the devastation wrought by disease is found in the statement that while 210,000 men fell in battle during the Civil War in U.S.A., at the present time the United States loses every four years more than 150,000 persons from tuberculosis alone.

As a practitioner I have often been impressed by the observation of Dr. McCormack—the advantage to the patient in adhering closely to the simplest laws of health. Particularly is this true of such a disease as diabetes. To show the contrast we could take two of many cases.

Four years ago, the one patient came to me very much disturbed at a loss in weight and an evident inability to perform as usual his daily work. The appetite was good, but there was great difficulty in thoroughly masticating the food; the tongue was constantly dry, and very little saliva formed in the mouth, and the patient suffered persistent constipation. There was also an unquenchable thirst, and I was asked if there was not something he could take to allay the difficulty. Further questioning brought out the fact that at times the patient found he suffered from an intense and distressing itching of the skin, and an occasional headache, as well as a great depression of spirits.

There had been for some time a frequent passing of large quantities of clear water, pale in colour. The patient was asked to bring a specimen of water, and after examination it was quite apparent that we had a case of diabetes.

The diabetic, to reap health, must sow for health; the farmer would be quite surprised if he sowed wheat and water-melons came up. It is a fixed law that you reap the same kind of seed you sow. Plant an acorn, and an oak comes up. The diabetic must adhere closely to those simple laws of health which have to do with a good, personal hygiene and a diet with the sugars and starches eliminated, until the sugar has disappeared from urine, and afterwards gradually replace them, noting the effect of each addition. It is an advantage to have an equitable climate, perhaps a change of scene and plenty of rest and sleep, regular hours of eating and sleeping. Good, warm clothes are a necessity, and it is advisable to promote a regular action of the skin by tepid sponging, followed by skin friction, warm bathing, massage, and Turkish baths; fomentation and massage to abdomen to promote improved intestinal digestion. Regular daily exercise could be taken, but fatigue should be avoided.

The general experience of practitioners is now, that too strict a diet is not desirable, except in severe cases, and those perhaps for a limited period. The following foods are of value, and can be recommended:—

Eggs, buttermilk, cottage cheese, zwieback, granose biscuits, gluten biscuits, gluten porridge, greens of various kinds, spinach, celery, lettuce, tomatoes, French beans, cauliflower, asparagus, in moderation. Nuts of all kinds except chestnuts. Vegetable broths; fruits, except dates and figs. Baked, mealy potatoes may be used.

Each case is a law in itself; the foods and quantities can be varied to suit individual conditions.

The patient whose experience is here related was placed on the foregoing regimen, with most excellent results.

In contrast to the progress made in the former case, another can be given showing the results of a lack of adherence to simple laws of health. I was called to a case because of a vomiting and diarrhoea, an intense dryness of mouth and throat, with very difficult breathing, pulse rapid and weak, indications also of a stupor. Further questioning brought out the fact that the patient had grown rapidly thin. For about a year there was great thirst, and passing of large quantities of water. Examination of urine showed a large quantity of sugar, and apparently the patient was in an advanced and fatal diabetic coma. The discovery of the condition of the patient and adherence to diet perhaps months before could have produced different results.

P. M. K.

A Few Health Facts

Two multiplied by two equals four. A true mathematical principle, leaving no room for argument, unless it is from someone who is ignorant of mathematical principles, and does not know the multiplication table.

Clean out, clean up, and disinfect. A true principle in the treatment of the sick, leaving no room for argument. Wise people do not argue about facts. To the one who comes in contact with the sick and works from effect to cause it is quite evident that a list of such health facts can be given.

Kill, or drive out of the sick room all flies or other insects.

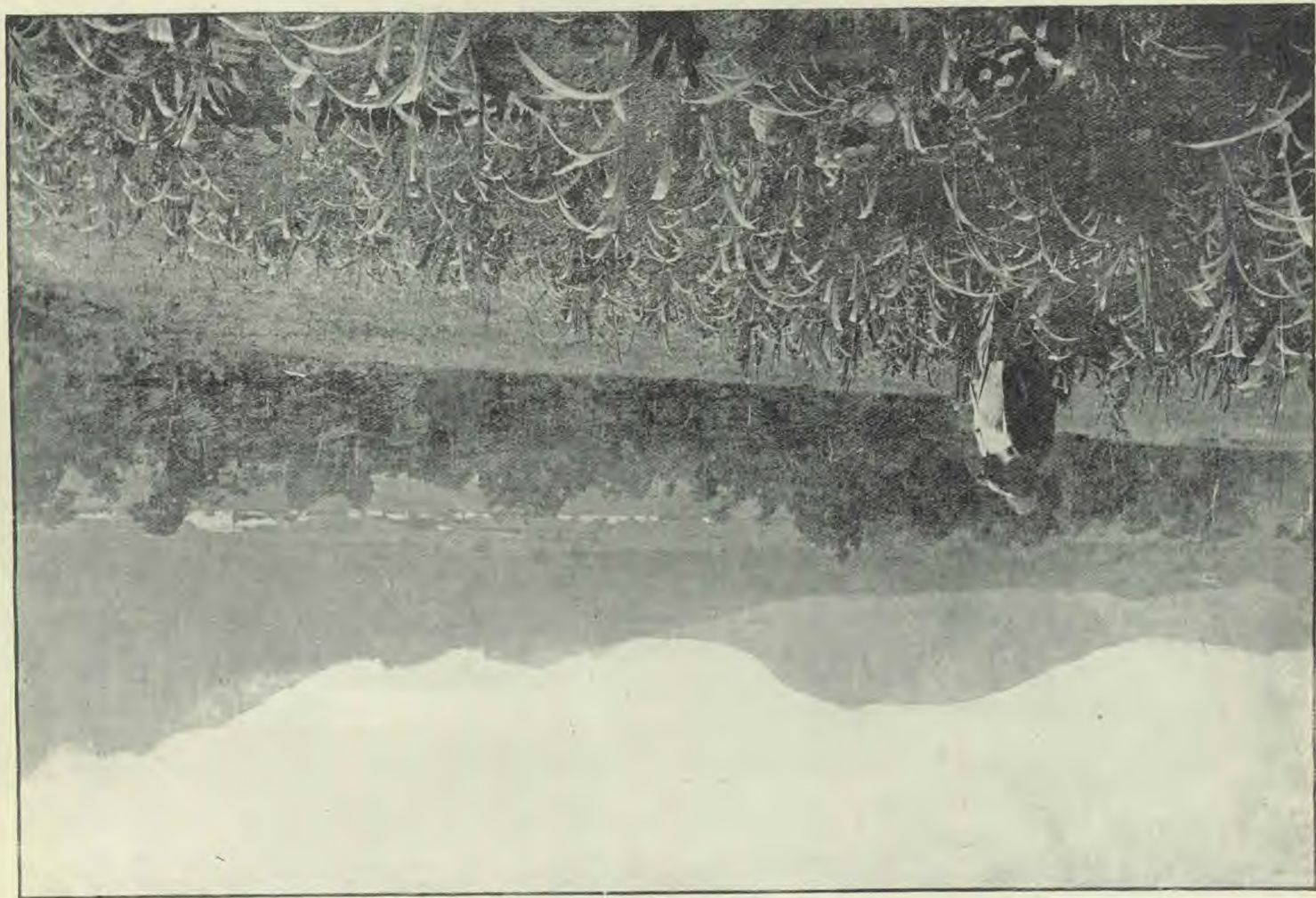
It is a good rule in contagious diseases to consider everything that has been in or near the sick room is subject to infection.

If a child is attacked with vomiting, purging, or convulsions, place in a hot bath for a few minutes, then carefully wipe it dry with warm towel, and wrap in warm blanket.

See that hands and feet are warm. Do not labour when you do not feel in a proper condition to do so.

• Make an effort to avoid partaking of food when thoroughly tired out.

A SUGAR PLANTATION, CAIRNS, QUEENSLAND



Do not partake of food without carefully masticating it, and avoid drinking at meal time.

A person does not gain strength by eating large quantities.

It is a mistake to think every hour taken from the required sleeping hours is an hour gained.

The smallest room in the house is not the best for sleeping purposes. Have good ventilation, but avoid direct draughts.

Be clothed properly for the season, and take care in changing the clothing.

Violent exercise is not good because a little work may have been a help.

Patent medicines do not cure everything as advertised. Do not think that because the nostrum makes you feel better you are on the road to health. To remove the pain in rheumatism is only to prevent the effect rather than removing the cause (uric acid).

F. K.

Appendicitis

By Alfred B. Olsen, M.D., D.P.H.

AT the beginning of the large bowel, and just below its connection with the small bowel, is a small slender body about three inches in length which, on account of its resemblance to a worm, is called the *vermiform appendix*. Appendicitis is inflammation of this appendix. There are several varieties: first, catarrhal, which is perhaps often a very mild form of inflammation, but may be also very severe at times; second, ulcerative, when ulcers occur; and third, where there is a marked breaking down of tissue and not infrequently gangrene.

The Causes of Appendicitis

For reasons that are not very well understood males suffer more frequently with appendicitis than females, and, although it may occur any time in life, the favourable age in either case is from fifteen to thirty years. Catarrh of the bowel is generally regarded as one of the important predisposing causes; and undoubtedly constipation, which so frequently accompanies catarrh, is an im-

portant contributing factor. Exposure which might lead to chill of the bowels, and injuries of various kinds must also be regarded as causal factors in the production of appendicitis.

But perhaps the most important causes have to do with certain errors regarding both diet and drink, which are exceedingly common in the land. There can be but little doubt that appendicitis is a germ infection of some sort, and pus microbes, that is, germs which produce pus or matter, are probably the exciting cause in most attacks. Even under favourable circumstances a certain amount of fermentation, decay, or putrefaction, takes place in the contents of the bowels, and gives rise to the formation of foul gases and poisonous matter. Such putrefaction is more pronounced and also of a more dangerous type when it is associated with certain articles of diet, and particularly those which come from the animal kingdom. Persons who wish to control this decomposition process, should as far as possible avoid flesh foods and partake largely of fruits, the mild acids of which discourage the activities of the germs and the consequent putrefaction of the food. It is a notable fact that those who follow a plain but wholesome and nourishing fruitarian diet have far less offensive bowel discharges than meat eaters.

While it would not be correct to say that vegetarians are immune from appendicitis, still we have good reason to believe that they are far less liable to an attack than the average flesh eater.

Symptoms

Although the symptoms of appendicitis sometimes resemble those of typhoid fever or even gall-stone or renal colic, still, as a rule, they are characteristic, and not easily confused with other disorders. The attack is sudden, and there is a pain which seems to come from that part of the abdomen which lies about midway between the navel and the uppermost point of the right pelvic bone. This same area is also tender and sore, and often rigid as well. There is a mild fever with a temperature

of from 100° to 103° F. A swelling may be noticeable at the seat of the pain and tenderness, or it may be developed later. When the pain is great the patient lies with the right knee drawn up. There is also a loss of appetite with a feeling of nausea, or sickness, oftentimes vomiting, and the bowels are usually constipated.

The Treatment

At the first sign of appendicitis the wisest course is to send at once for the family physician and submit the case for his examination. Appendicitis, which has an average death-rate of about fourteen or fifteen per cent, is not a disease to be trifled with, and the sooner it is handled in a skilful fashion the better the chances are for recovery. Of course the patient should be promptly put to bed and absolute rest enjoined. Enemata for the purpose of clearing the bowels are in order, and should be repeated as often as necessary. It is safe to apply hot fomentations or hot packs to relieve the pain. Cold compresses and cold packs are also useful for the same purpose, and may alternate with the fomentations. All hot applications are in order. It is a wise plan to give the patient plenty of water to drink, and especially hot water.

The diet will necessarily be of a fluid nature. Pure milk, which should be sterilised if necessary, and thin milk drinks and gruels, barley water, rice water, albumen water, and similar preparations, are all in order. We would also recommend fruit juices and unfermented grape wines. The latter are exceedingly wholesome and nourishing, and rarely fail to benefit patients. Fruit juices possess additional advantage in that they exert a mild laxative influence, and thus assist materially in regulating the bowels. Milk and milk preparations, on the other hand, are constipating as a rule. Metchnikoff soured milk, however, is an exception, and is believed to be a mild laxative like the fruit juices. When properly prepared in a scientific way, it must be regarded as a wholesome food for patients suffering from appendicitis.

Surgical Interference

It is impossible to lay down any fixed rule with regard to calling in the surgeon and submitting to an operation. Each case must be decided upon its own merits. If the attack is very sharp it is usually wisest to submit to an operation at once. This is emphatically true when the treatment carried out does not promptly bring relief to the patient and give evidence of improvement. In mild cases, however, it is rarely necessary to resort to the knife, but should the patient suffer from repeated attacks at varying intervals, it sometimes becomes desirable to have an operation so as to put an end to these attacks. Naturally the most favourable time to operate is between attacks, when the patient is in good condition, and the inflammation in the region of the appendix has subsided. Under these conditions the danger from the operation is very slight indeed, and the vast majority make a prompt and successful recovery, and are no longer subject to appendicitis.

Preventive Measures

It is rather difficult to give explicit directions with regard to the prevention of appendicitis, seeing that we know so little about the direct exciting causes. As we have already intimated, the diet appears to be a most important matter. If people would learn to chew their food well, avoid taking too large a variety at the same meal, and also avoid the more complicated dishes, as well as all preserved meats, fish, and similar preparations, we believe there would be far less appendicitis. Shellfish of various kinds are scarcely fit for human consumption, and not infrequently bring trouble of one kind or another. Potted meats, veal, and pork pies, and similar concoctions, as well as tinned fish, usually contain some form of preservative. There are authorities who believe that these preservatives have a distinct tendency to provoke appendicitis, but even though this be not the case, they are unwholesome, and should be avoided.

The sharp chippings from cheap, enamelled kitchen ware are believed to cause

mischief, and should be carefully avoided. We welcome the new aluminium utensils which appear to be superior to enamelled ware, and we hope the prices will soon be reduced sufficiently to put them within the reach of every home.

The old-fashioned idea that grape seeds and similar articles cause appendicitis has been exploded. We believe there are but very few cases which have been proved definitely to have been caused in such a way.

Another rather important consideration is the condition of the bowels. Those who are subject to constipation would do well to give careful attention to diet for the purpose of regulating the bowels and securing a daily movement. The gathering of waste matter in the bowels is of itself a very harmful thing, for some of these wastes, which are more or less poisonous, get absorbed into the system, and thus cause a certain amount of auto-intoxication, or self-poisoning. We believe that a great deal can be done in the way of preventing appendicitis by keeping the bowels in an active, healthy state.

Light and Health

FRESH-AIR enthusiasts, says the *Christian Herald*, are familiar enough to most of us, but we hear less of enthusiasm for light. Darkened parlours, darkened bed-

rooms, darkened sick-rooms, are too common. Sir B. W. Richardson, the eminent London scientist and physician, declared that when the professors of healing enter a sick-room, their first words in most cases ought to be Goethe's dying exclamation, "More light! More light!" The light of the sun is God's own microbe-killer, germicide, disinfectant, prophylactic, sickness-healer. There is no physician, no chemical antidote, no compound prescription to be compared with sunlight. Without it, nature could not perform her functions. Man, beast, bird, insect would fall victims to the deadly gases that would prevail. The horrid mists and deadly gases are dispersed and decomposed by the action of light. Let it in, everywhere! Let the light in more and more abundantly. Faded carpets are not as pitiful as faded cheeks. Spoiled cushions are trivial compared with spoiled health. Darkened rooms are too suggestive of darkened lives.

"GENTLEMEN, you need not give yourselves any trouble about the revenue. The question of revenue must never stand in the way of needed reforms. But give me a sober population, not wasting their earnings in strong drink, and I shall know where to obtain the revenue."—*Gladstone's reply to the London brewers.*





The Home Treatment of Sprains and Strains

IT is undeniable that sprains and strains are looked upon as very trivial things, but from the neglect or indifferent treatment of them much permanent disability and inconvenience arise, remedied often only by operation or a long course of treatment.

A sprain may be defined as a subcutaneous laceration, a wrench resulting in stretching and tearing of the soft tissue under the skin without any external wound.

Since the increased use of the X-rays for working purposes, it has been clearly shown that quite a large proportion of so-called simple sprains are complicated by fracture as well, and this is a very important point to be considered in relation to their treatment.

A fracture can hardly occur without a sprain at the same time, but a sprain may, of course, and frequently does occur without a fracture.

Sprains and strains result from sudden violence applied to a part either directly or indirectly. Certain parts may be susceptible to great stretching without actual tearing, to a degree that will cause excruciating pain. This condition of stretching followed by great stiffness and pain we term a "strain."

We might classify sprains under three headings:—

1. *Simple sprains.* Here only the soft tissues are involved.

2. *Sprains complicated by fracture,* the symptoms of the fracture being so slight as to make its presence unsuspected, the symptoms of sprain being altogether predominant.

3. *Sprains with a severe nerve injury.*

Symptoms of Sprain

Simple sprain. There is heat and swelling at the seat of injury with pain which is greatly increased by movement.

Symptoms of Sprain with Fracture

We regard any case in which the symptoms of sprain near a joint are unduly exaggerated as being complicated by fracture.

Symptoms of Sprain with Severe Nerve Injury

Speaking generally in cases of sprain, the pain is felt at the seat of injury, but if it be referred to a distant part, to the side of the foot, for instance, in a case of sprain of the knee, then there is undoubted evidence of nerve injury. Also in all cases of sprain or injury of joints, if there is numbness of any portion, no matter how small, of the limb beyond the injury, there is positive proof of the nerve having been damaged. Numbness may be over-

looked at the time, and even the injured person's attention may not be drawn to it till ten or twelve hours later.

Symptoms of "Strain"

Here there is no swelling of the injured part, but there is intense pain and marked stiffness. Movement is almost impossible on account of the extreme pain produced.

It is wisest to show all sprains and strains to a doctor where it is possible, to make sure of their nature and to receive skilled advice as to how treatment should be carried out.

Treatment

Sprains. All sprains complicated by fracture or nerve injury should be treated by a physician. Our aim in treating sprains is (1) to relieve pain; (2) to reduce the swelling and heat; (3) and later to prevent muscle wasting; and (4) still later to prevent stiffness of the part.

Pain may be relieved very quickly by gently sponging with water as hot as can be borne, or fomentations may be applied for ten or fifteen minutes, and this followed by a cold compress or ice bag for two or three hours, and then use hot treatment again followed by cold. The injured part should be placed in the most comfortable and restful position possible during all treatment.

After the first twelve hours the patient should be encouraged to perform easy, voluntary movements, the extent of these being determined by the amount of pain produced.

After twenty-four hours, gentle stroking downward should be given for five or ten minutes several times daily, and as soon as the heat and swelling are appreciably diminished, massage is needed to effect a thorough cure.

At all times when the part is not being treated it should be firmly bandaged and supported in some way to ensure rest. A good bandage is formed from chamois leather cut in strips. This is soft and very comfortable, and can easily be washed from time to time.

We must aim to have regular and repeated movement of the parts, daily in-

creasing the range of movement, or permanent stiffness and wasting of the muscles will be likely to occur.

Strains may be treated in the same way, but they require very little treatment after the first twenty-four hours, beyond rest. By rest, I don't mean that no movement at all should be given the part, but that it should not be taxed to perform the usual duties carried out by it, but it should be moved a little from time to time to prevent permanent stiffness.

A neglected sprain may originate tuberculous disease in those who are so predisposed, while if a joint is involved, osteoarthritis is a by no means uncommon sequela.

Other consequences of sprains preventable if properly treated are as follows:—

1. Persistent pain. This is usually caused by keeping the parts too long without movement, so matting together of the injured tissues takes place.

2. Stiff joint. This is due to the prolonged use of splints and delay in exercising the part.

3. Wasting of muscles is always due to delay in exercise.

4. General relaxation of joint or "loose joint" follows on muscle wasting, as the muscles become so weak from disuse that they are unable to maintain the equilibrium of the joint.

5. Permanent deformity of the joint usually occurs where there has been a fracture which has been untreated.

Full functional activity of the part may be obtained, even in the worst cases, if treatment is systematically carried out.

Splints are not required except in cases where the ligaments are very badly torn.

M. M. F.

Spray for the Throat

FILL an atomiser with oil of eucalyptus and oil of turpentine, equal parts, mixed, and spray the throat every half hour. This is stated to give prompt relief in diphtheritic croup, and cure in a day the majority of cases.

Bathing a Bed-Ridden Patient

HAVE everything in readiness before disturbing the patient. It is a great mistake to start the operation and then find that the flannel is missing, or that the clean clothes are not aired and ready for use. Next close the windows if the weather is cool, and if there is a fire in the room place the clean clothes before it. Then procure the water, which should be between 105 and 108°, as it cools quickly.

Place the mackintosh on the blanket, and roll it up to the half with the blanket on the inside. Turn the patient on his side, and place the roll behind his back.

Now turn the patient on to his opposite side, and he will pass over the rolled blanket and mackintosh, which can now be unrolled to cover the remaining half of the bed. The edges of the blanket should overlap down the middle of the patient, while the mackintosh or brown paper should protect the under bed-clothes. Next turn back the upper bed-clothes and remove the patient's night clothes, taking care to keep him covered as much as possible. If there is an injured limb, the sound one should be uncovered first, as this will give more room in the garment for moving the painful injured one.

In putting garments on, the injured side should be attended to first. Now proceed with the washing. The face is washed first with the water in the small basin, which should be soapy; it should be then thoroughly rinsed with the water in the larger basin; next, the arms and neck. Place one towel beneath the limb, and follow the same direction with regard to the soap and rinsing water. Each part should be thoroughly dried. The trunk of the body is next washed, and after that the limbs, each one separately. The back should be washed last. If the patient is very weak, he can be turned on his side, and while the nurse is supporting him with one hand and arm she can with the other wash the back. If it is necessary to wash the head, the water should now

be changed and the basin containing the clean, soapy water should be brought close to the bed, and as much on a level with the patient as possible. Place a towel on the pillow beneath the head. Rub the hair with soapy water, taking care to prevent the soap from going into the eyes, and afterwards thoroughly rinse in clean water in a large basin. Now turn the remainder of the towel over the head, and dry thoroughly.

When the bathing is finished, replace the clean clothes, which should be aired and warmed. Give the patient a hot bottle to his feet, and if necessary something warm to drink.—*Good Health.*

Who Knows

- He who knows, and knows he knows,
He is wise—follow him;
He who knows, and knows not he knows,
He is asleep—wake him;
He who knows not, and knows not he knows not,
He is a fool—shun him;
He who knows not, and knows he knows not,
He is a child—teach him.
-

Origin of the Safety Pin

THE mother of a little boy, an English blacksmith's son, had died, and the child had to look after his baby brother all day while his father worked at the forge. The baby often cried, and its tears were usually traced to pin-pricks.

The boy-nurse, who had a tender heart, tried a long time to bend the pins in such a way that they could be used with safety to the baby's flesh. In this he failed; but his father, the blacksmith, seeing how useful his little son's idea might be, tried twisting pieces of wire himself, and soon turned out the safety-pin that is in use to-day all over the world.

Whether the safety-pin would have still been undiscovered but for the tormenting of one little English baby no one of course knows.—*Selected.*

Dealing with an Influenza Cold

JOHN SMITH was a man who took good care of himself. He was regular in his habits, ate moderately of plain dishes, skipped the indigestible things, and prided himself on being able to keep in good working order by commonsense adherence to the ordinary rules of hygiene.

"No medicine for me," he said. "I used to take it, but I have learned how to get along without it. If I find myself lacking appetite, I eat fruit and skip a meal. I exercise freely, eat fruit, spinach, and vegetables if I find any tendency toward constipation, and never miss a day at my job."

John's job was selling goods on the road. One day he found an old customer absent from his place of business.

"He is up at the house," said the clerk, "sick with an influenza cold."

"Could I telephone him?" was John's question.

"Sure," was the reply.

In a moment the connection was made.

"Are you too sick to talk business?" said John with the familiarity of an old friend.

"I don't feel very well, but you can come along up if you want to."

In a short time John was there. His friend and customer was dressed, but looked pretty languid.

"I suppose you know I have an influenza cold," said he. "If you come in, you may probably get it."

"Get nothing!" said John, and marched in. His customer gave him a good order, and he went out feeling very cheerful—a cheerfulness which continued during the next day. It even lasted over the second day. But the third day discomfort began. His eyes began to weep; his nose to run; and a numbness, smarting, and tingling was felt in the back part of his head and above his throat.

"That fellow was right," muttered John. "I certainly picked up some germs, but I guess I can stave it off."

He resorted to his usual regime—a very light diet, a little extra out-door

exercise, and long walks in the fresh air. This method kept his appetite good, his digestion in fair shape, but it did not stop the malicious work of these little germs which certainly had secured a lodgment in the back of his head, and not only made his eyes weep, but made him have the unpleasant feelings of a real attack of influenza.

"Awfully bad time of the year to get a big cold fastened on," said John who had long since learned to take care of himself in order to keep in good working order. "I can spare a couple of days now better than I can spare a couple of weeks a little later on. Here goes for the sanitarium."

At the sanitarium they were glad to see John, for they had seen him before, but they were sorry he had a cold. He arrived at six, ate a little lunch, and at eight o'clock he was in the men's bathroom, every stitch of clothes removed, his feet in a hot foot bath, and a short folded blanket wrung out in very hot water applied to his chest. The hot foot bath was renewed every five minutes, keeping it as hot as John could bear it.

"What's that?" said the patient to the lightly clad attendant.

"Another hot one," said the young man.

"You are certainly right," said John, as the steaming mass was pushed down on his skin, covering his entire chest and a portion of his stomach. He felt very comfortable a moment later, however, and the almost immediate relief of the distressing head symptoms was noticeable. The hot foot baths and the hot fomentations continued for perhaps fifteen or twenty minutes, until John was enjoying a comfortable perspiration.

A Douche and Spray for a Cold

"Do you know what a douche is?" said the attendant.

"Yes," said John. "Let 'er go."

A stream of warm water from a hose struck his legs, up one leg, down the other, gradually growing hotter, and soon ascending his spine to the very nape of his neck, up and down, up and down,

hotter and hotter, making him squirm a little at first, but giving on the whole a sensation not unpleasant.

"Now cold," said the attendant, and gradually the temperature was reduced until the surface was cooled, when the warm and hot were again applied. This



alternation of the hot and cold, with the peculiar pounding effect caused by the force of the stream, has a marked influence on the nervous system, and stimulates powerfully all the body functions.

The douche treatment was followed by an "alternating spray." The spray is familiar to many people. It is a sort of "bath," in which upright pipes filled with small holes surround a person who steps in and receives needle-like streams of water under pressure on every part of his body at the same time. Here also the sensation after the first moment is not unpleasant. One feels as though the surface of the skin were receiving a thousand gentle pricks at the same moment. Hot first and then cold; hot again and cold; alternating from cold to hot, so that the perspiration of the hot foot-bath and of the fomentation is neutralised without chill and without discomfort.

Rubbed thoroughly dry, and tucked into bed, John Smith muttered, "I really believe that cold feels better already."

The Second Day

The following morning John was really hungry for breakfast, although the inflammation in nose and throat was still much

in evidence. In the middle of the morning he was called to the bath-room for another "treatment." This time it was a "fomentation" to the feet and to the spine. John lay prone upon his face on the cot. A hot flannel blanket steaming from almost boiling hot water was wrapped about his feet, and another one, folded, was laid on his back. If John complained of the heat, the attendant lifted the fomentation promptly, or passed a cold towel over the hot place. In a few moments a wonderful sensation of comfort stole over the patient, and he was sorry when he was requested to get up.

Led to another portion of the bath-room he was asked to step into a tub of hot water while the attendant rubbed his whole body with salt, producing a feeling well described by the name of the treat-



THE HOT FOOT BATH

ment itself—a "salt glow." This treatment ended with alternating douche to the legs; the same as the night before. This was followed by an alcohol and oil rub designed to dry the skin, and stimulate it so that there would be no danger of taking cold.

"That was a good treatment," said John. "It leaves me feeling fine."

In the afternoon he was given full massage—a treatment which stimulates the muscles to work in throwing off any kind of germs or effete matter.

Next morning an electric light bath followed by a douche, a spray, and an oil rub, completed the course.

"Let me see," mused John as he paid the moderate bill, "didn't I have a cold night before last? This is better than chills!" All of which is a literal record of a real experience, except that his name wasn't Smith.—*Healthy Home*.

Effects of Hydrotherapy on the Composition of the Blood

By G. K. Abbot, M.D.

THE white blood cells are the policemen of the human body. They constitute the standing army designed to repel the invasion of bacteria. It is upon their number and efficiency that the body depends for its resistance to, and immunity from, bacterial diseases. The white cells and other cells of the body accomplish this resistance in two ways, or by a combination of these two methods.

One is by the production of substances which neutralise or antidote the poisons produced by the bacteria. These substances are known as antitoxins. Or the cells of the body may produce substances which weaken or destroy the germs themselves.

Second, the white blood cells may actually eat up and digest the bacteria, thus destroying them.

It will be seen, then, that whatever agent produces an increase in the number of white cells in active circulation, and makes them more energetic, is a most powerful means of combatting infectious diseases. Both these results—*i.e.*, increasing the number of white cells, and accelerating their activity—are produced by cold applications. While a simple cold treatment cannot be expected to cause the production of more white cells, yet the

frequent repetition of suitable tonic cold applications does actually stimulate the blood-forming organs to produce more cells.

Notwithstanding the many antiseptics, germicides, etc., that have been vaunted for the treatment of infectious diseases, the white blood cell itself is the most efficient "germicide" known, and will always retain its high place in the defence of the body against bacterial invasion; furthermore, the agent which assists the body by augmenting its natural powers of defence will never occupy a place secondary to purely artificial and chemical means of destroying the invaders.

A Morning Prayer

Let me to-day do something that shall take

A little sadness from the world's vast store,
And may I be so favoured as to make
Of Joy's too scanty sum a little more.

Let me not hurt, by any selfish deed

Or thoughtless word, the heart of foe or friend.
Nor would I pass, unseeing, worthy need,
Or sin by silence when I should defend.

However meagre be my worldly wealth,

Let me give something that shall aid my kind—
A word of courage, or a thought of health,
Dropped as I pass for troubled hearts to find.

Let me to-night look back across the span

'Twi'x dawn and dark, and to my conscience say,
Because of some good act to beast or man—

"The world is better that I lived to-day."

—Ella Wheeler Wilcox.

Keeping Clean Inside

By W. J. Cromie

MOST of us are very careful about keeping clean on the outside, taking a certain number of baths weekly, and washing the hands and face when necessary; but how many of us give any thought to keeping clean inside? While we may not eat the proverbial peck of dirt, there are still many things that tend to make us dirty inside. We may not swallow dirt, but it is certain that we

breathe it in through the mouth and nostrils.

The first thing, then, is to take pains to breathe only fresh air, as free from dust and gases as possible. When we must breathe bad air in crowded halls and street cars, we should be careful to keep the inside mechanism of the body clean and in good working order, so as to withstand these enervating influences. Micro-organisms in the air will not hurt us unless they lodge in unclean and diseased tissue or, in other words, in suitable soil for propagation.

Practise deep breathing while in the open air; for this is an "air-drinking" exercise that will help to keep one clean internally. A little daily physical exercise is absolutely essential in keeping the internal mechanism well oiled; it acts as a polishing device, keeps away rust, and burns up dirt and filth that have not been eliminated. Every day bend the body forward and backward, sideways to the right and to the left, and twist about from right to left, repeating each of these from ten to thirty times. Lie on the back, raise both legs, then raise the body to a sitting position. Take a brisk walk out-of-doors regardless of the weather. Over-eating causes more internal "dirt" than anything else. Improper foods and too rapid eating form the cobwebs of disease. Laxative foods should be included in our dietary, as they are "the broom of the stomach." One of the following foods should be in each meal: apples, peaches, prunes, strawberries, cherries, currants, raspberries, grapes, plums, oatmeal, figs, lettuce, spinach.

A glass of cold water should be taken in the morning, and another at night, besides seven or eight during the day. This tends to give the body an internal bath; besides, the system needs at least this much water. However, do not drink much at meals, as liquids dilute the gastric juice, which is so necessary for digestion.

"A MAN'S character is like a fence—it cannot be strengthened by whitewash."

A Sure Cure for Constipation

By H. F. Rand, M.D.

ONE of the common causes of the clogging of the system with impurities is constipation of the bowels. And many of the stomach disorders and many of the other diseases with which people are afflicted are due to this cause.

In handling a great number of these cases during the past twenty-five years, I have found that the following simple methods, conscientiously adhered to, will conquer the most stubborn cases.

One of the things that gives the greatest relief is whole wheat, cooked for four or five hours in a double boiler. I have seen cases of over twenty years' standing, in which all the laxatives have been used to no effect, respond to this treatment in a few weeks' time. Some of the wheat prepared in this way should be eaten with each meal.

Another great help is to take a glass of water as soon as one wakes in the morning. In about ten minutes take another, repeating this three or four times, if possible, before breakfast. In case the water cannot be taken alone, the juice of a lemon or an orange may be added.

An exercise of great value in these cases is to lie on the floor or something equally firm, before the body is clothed in the morning. Raise the limbs at right angles with the body, taking five seconds to raise and lower. Raise first one limb, then the other, then both together. Keep up this exercise for four or five minutes. This will strengthen the muscles of the abdomen, and is one of the very best of exercises.

Deep-breathing is also excellent, especially if conducted in the open air.

These are some of nature's simple remedies; and their continued practice will give relief. You will readily see that they could not possibly inflict upon you injury. Of course, if the patient is in such a weakened condition that he cannot follow such directions, he should see his family physician before entering upon this programme.



Exercise: Its Importance and Benefits

By Alexander Hing

EXERCISE is a prime necessity for one's development and best welfare. This is true not only in the intellectual and spiritual worlds, but in the physical as well. Intellectual giants are always hard brain-workers; and the man who enjoys vigorous spiritual health will always be found to be one who takes the time and pains to give his spiritual faculties an abundance of exercise; yet many people foolishly seem to think that they can neglect bodily exercise, and yet thrive physically. But it cannot be too emphatically stated that if one is to enjoy a due degree of physical health and strength, he must not neglect the exercising of his physical powers. Exercise means life, health, and growth; without exercise there will inevitably be stagnation, atrophy, sickness, and premature death.

The Sedentary Person and Exercise

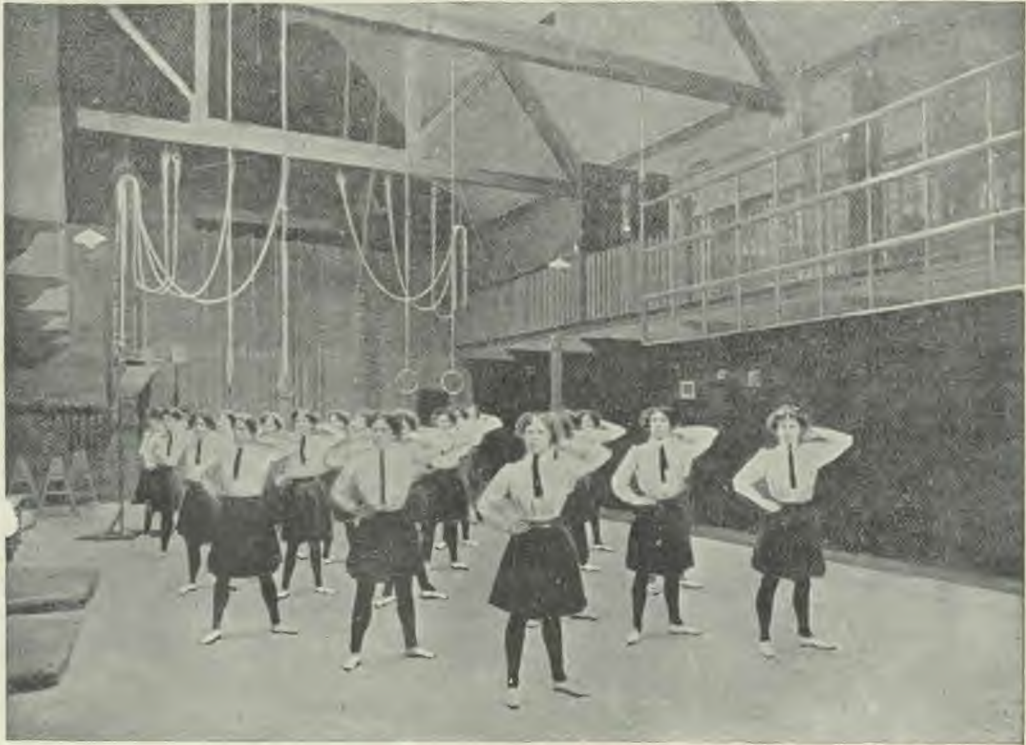
It is the sedentary man or woman who is most likely to transgress in the matter of exercise. And these are the very ones who are suffering most through its neglect. The business or professional man and woman would enjoy better health and a greater measure of vitality, and moreover would bring clearer and more vigorous minds to bear upon their work, if they gave a little daily attention to suitable exercise. The benefits would not be

physical merely; for one's physical condition, according as it is good or bad, influences favourably or unfavourably one's mental and moral nature. With an improved physical foundation, our sedentary man or woman would possess fresher and clearer minds, and the quality of their intellectual output would be considerably improved, and the quantity would not suffer.

Judicious and regular exercise means increased vitality and vim, and of these qualities the professional or business man must not suffer himself to be deprived, for they go a long way in the attainment of success. He will get along all right without a massive muscular development, for he has little or no use for this in his work; and it is altogether a perverted idea of physical culture which looks upon it as a means of attaining a huge or excessive muscular development merely. An excessive muscular development may be associated with a strained, enlarged, or weak heart, or with a feeble digestion. Professional athletes, it is said, usually die young. But what all men and women do need, for the attainment of the best success in life, is health, vitality, energy, and a reasonable degree of strength, things that make life a reality and existence a joy; and these things cannot be obtained, or long possessed, without due attention to exercise.

"Activity of the muscles," says one writer, "is absolutely essential to the attainment of symmetry and beauty, as well as health and strength. No human being ever acquired handsome proportions without some measure of physical training, and the result of such training is that it enables one to retain the vigour and energy of youth, years beyond the usual time for showing age." The examples of

Man. At the age of eighty-five, so remarkably preserved were his powers that he is reported on good authority as once saying, "What difference does it make to me whether I speak to 400 or 4,000 people?" Part of the secret of Gladstone's long-retained health and vigour may be found in the private gymnasium that he had erected and in which he delighted to exercise. The great states-



LADIES' GYMNASIUM

The Child

William Ewart Gladstone, the celebrated British statesman, and William Cullen Bryant, the famous American poet and editor, are worthy of consideration, as demonstrating the help exercise gives in the preservation of physical and mental health and vigour even unto a great age.

Gladstone retained the freshness and vigour of his phenomenal powers up to the great age of eighty-eight years. His physical attainments even in old age were so remarkable that they earned for him the popular nickname of the Grand Old

man was also a noted axe-man, and delighted in hewing down some sturdy giant of the forest.

Bryant, who died as the result of an accident at the advanced age of eighty-four years, retained his wonderful physical and mental vigour until the last. It was Bryant's habit to spend an hour or more, after rising, in gymnastics or other exercise, and when his mind was wearied from literary work, he would go out on his farm or into his garden, and employ himself at some outdoor work until his

freshness of mind returned. Every morning he *walked* to the office of the *Evening Post*, a distance of *three miles*, and after some hours walked home again; and this he did no matter what was the state of the weather or of the roads. No wonder

but considering what a splendid form of exercise walking is,—one of the very best,—it is to be regretted that people do not practise it more. “I do not often drive out,” said Bryant, “preferring to walk.” His example is certainly worthy of imitation.



ROWING IS A PLEASANT FORM OF
PHYSICAL CULTURE

that a newspaper friend could say of him, “During the forty years that I have known him, Mr. Bryant has never been ill.”

Influence of Modern Civilisation on Exercise

Our modern civilisation has in some ways had an unfavourable influence upon exercise. There are so many facilities for easy, rapid, and comfortable travelling nowadays that these things constitute a constant temptation to people to neglect the use of their legs. Tram fares are usually cheap, and it is easy to form the habit of taking the cars instead of walking. When people will take a conveyance whenever it is possible to do so in preference to walking, they should not be surprised to find, after a time, that their legs have grown weak, and that it tires them greatly to walk even moderate distances. There is undoubtedly use for the cars,

Awakened Interest in Physical Culture

In recent years there has been awakened a considerable interest in the subject of physical culture. All our cities, unless they are behind the times, can boast their gymnasiums, and teachers and schools of physical culture abound. The physique of the manhood of the nation has not alone benefited through the exercise taken in the gymnasium and out of doors, but womankind has benefited also. A hundred years ago it was considered outrageous for girls to play any game that chiefly involved the use of muscles, but nowadays the members of the fair sex have not only gymnasiums, but swimming associations, hockey clubs, and even cricket clubs, and they play golf and tennis with as much zest as do their brothers. In the recent regatta at Albert Park, Melbourne, one of the most novel and interesting items was the ladies' four-oared interstate championship, in which teams from Albert Park, Warrnambool, and Queensland competed.

Outdoor games have been exceedingly beneficial in discouraging the use of the corset by women. Girls and women have seen that if they are to excel in feats of physical prowess, their breathing must not be interfered with; and if physical culture did the fair sex no more good than inducing its members to abandon the corset, it would do untold good even then.

Taken within reasonable limits, exercise cannot but affect beneficially the physiques of girls and women. It means improved health and strength, and it gives them that which they prize so highly—a supple, graceful figure and a good complexion. Yet even exercise may be overdone, and then it is likely to be productive of harm. An American journal stated recently that young women who indulged in athletics

excessively lost the well-rounded, graceful outline usually associated with a healthy young womanhood, and became angular in appearance; and they also lacked rosiness and bloom. The report also stated that in basket ball, girls have been known to become as rough as, if not actually rougher than, their brothers at football.

Ways of Taking Exercise

In an article of a general nature such as this is, it is impossible to enter into the details of any specific form of exercise. Yet it might be of interest to mention here, in a general way, some useful forms of exercise.

To the person of a utilitarian frame of mind gardening furnishes an excellent form of exercise, affording as it does the opportunity for outdoor work in the fresh air; and it will also give him the happy consciousness and pride that he is beautifying his home, and thus making it more attractive for himself and his family. Fruit and vegetables, also, should not necessarily taste any the worse because he has grown them himself. Wood chopping is another useful form of exercise; it broadens and hardens the chest, develops and strengthens the arms and shoulders, and acts beneficially upon other muscles also.

Swimming is one of the very best of athletic exercises. It is one of the most useful, too, for one never knows when he may have to use it for the saving of his own life or that of others. In swimming, the back and neck muscles are exercised in keeping the head above water; the chest is broadened, and the breathing improved; and the legs and arms both come in for their share of work. Swimming is the one form of athletics in which women are fitted by nature to excel, and the only

one, perhaps, in which their records bear favourable comparison with those of men. The layers of fat round the muscles of women are of great service in long-distance swims, as they keep the muscles from chilling. Men lose considerable vitality in keeping up the heat of the body.

Walking and running are other excellent forms of exercise. Properly performed, walking is highly beneficial, and if taken amid attractive scenery and with a pleasant companion or two, it is likely to be one of the most agreeable forms of exercise. Dickens was a noted pedestrian; it is said his daily habit was to walk nine or ten miles before breakfast, and that sometimes he walked twenty-five or even thirty miles before his morning meal.

Rowing furnishes another excellent form of exercise. Properly done, it exercises practically every muscle in the body. The air just above the water, too, is very free from dust.

The gymnasium has also proved itself a useful factor in the improvement of the



OUTDOOR PHYSICAL CULTURE FOR SCHOOL CHILDREN

physique. Men and women whose work is sedentary would certainly do well to spend an evening or two each week at a well-appointed gymnasium under a competent instructor. They would be amply repaid in health and strength.

Home gymnastics, either with or without dumb-bells or other apparatus, are also highly beneficial. They can, and should,

be made extremely interesting, and if persevered in regularly and systematically, will not fail to yield a rich return in increased health and strength, a more marked sense of well-being, and in suppleness, symmetry, and grace of figure.

Surely with so large a variety of exercises, such as the foregoing and others that might be mentioned, to choose from, no one can be held without excuse who neglects such a valuable aid towards health, strength, and general efficiency.

Fourscore Years and Eight

By F. Magee Rossiter, M.D.

FOR the origin of Mr. Gladstone's extraordinary vitality and of the unprecedented vigour of his old age, we must go back more than two centuries to the sturdy Scotch family of Gledstones. The very name—*gled* meaning hawk, and *stane*, stone—is indicative of fierce activity and rugged strength. Sir John Gladstone, William's father, was a man of great energy and ability, and, like his distinguished son, seemed destined never to grow old. One of William Gladstone's brothers possessed a magnificent physique, being six feet and seven inches tall, and of fine proportions.

Mr. Gladstone himself was endowed by nature with an iron constitution. That he entered life with a large capital of vitality and an enormous potential energy, to be manifested later in physical and intellectual power, has been without doubt the most important factor in the development of his personality and career. If his active work had ended when he was fifty years old, his life would have been no more remarkable than that of many other distinguished leaders in Parliament. It is true that many other men have been born with as many or even more chances of success and length of days; but by squandering their vital forces by the needless expenditure of energy and by wrong habits of life, they have cut short their usefulness at fifty years when they might have rounded out a full cycle of fourscore

years and ten. But Gladstone made a conservative use of his capital of vital force, living most of the time on the interest instead of the principal; and, as a consequence, at the advanced age of eighty-eight, he was still styled the "Grand Old Man."

The majority of mankind to-day are living artificial lives, drawing upon their future reserve for present existence. All such are sure, sooner or later, to pass into physical bankruptcy. On the other hand, there are many who, coming into life with the disposition to make a grand success, being actuated by noble and lofty principles, and inspired by high and worthy ambition, are handicapped by a deficiency of vital force; consequently their energies are exhausted before the zenith of life is reached.

In this inherited difference in vitality more than in any other natural feature exists the inequality of man. While many forces combine to produce a character, yet it must be admitted that one of the most potent of these is heredity. It is an inestimable blessing to be well born; and if more of our race to-day had been the recipients of this greatest of all natural endowments, there would be more Gladstones in the world.

A good inheritance, however, is not enough to insure success; it must be conserved and developed. Mr. Gladstone appreciated his great natural force, and was able to use it to advantage. He was not an athlete in a professional sense, but was noted from his college days for his pedestrian disposition. From youth to old age he was a great walker, and many stories are told of his long tramps through the forests. He took very little interest in the recreations that absorb the attention of the average Englishman, but he always had a passion for fresh air and physical exercise. He sought an outdoor life. Hawarden Park was his hermit refuge from the city and the exacting duties of the premiership. One form of exercise to which this great statesman has given world-wide celebrity, is that of chopping wood. Not alone did his opponents in

Parliament, but the huge elm trees of his famous park as well feel the thundering energy of his tremendous blows.

A glance at the accompanying illustration shows that the noted Englishman had a spare frame. As years advanced upon him, he did not develop the bulging waistcoat so characteristic of many of his countrymen, nor was he encumbered by any accumulation of superfluous adipose tissue. He was unceasingly active, developing muscle instead of storing up fat. His outdoor life was a shining illustration of the benefits to be derived from physical recreation by those who lead intellectual lives.

Mr. Gladstone was not confined to any one system of exercise or to physical hygienics alone. He was always careful to avoid continuous labour of any one kind on the same level of intensity. He recognised that the brain needs what the eye requires, a change in the accommodation and the angle of vision—it requires rest. Mr. Gladstone recognised the value of a symmetrical development of mind and body. He realised that too close concentration upon one line of effort is destructive to nerve force; that all who hope to develop a symmetrical life must have the rest that comes from a change in employment, and that irregularity in work tears down and wastes both mind and body before their time. Regularity was therefore a fixed habit of his life. He was always punctual at meals, and partook of his food with great relish, casting aside for the time being all perplexing problems. He was a moderate eater, but was not a teetotaller as to drink. He never used tobacco in any form. Doubtless, had he known and accepted all the latest scientific principles of health, and carried them out with the same ardour that he threw into those he did know, he might have lived to be as hale and hearty at one hundred as he was at eighty.

It is said he was able to dress for dinner in three minutes if pushed, and ordinarily in five minutes. If he had to wait for a meal or a train, he was never at a loss to know how to improve the spare moments.

The most studious and the most successful men have always been those who made a judicious use of the odds and ends of time.

Another influence that tended to keep Mr. Gladstone in health and add to his years was the gift of sleep. Sleep had been his servant, waiting his command. At a moment's notice he could take a nap, and though it lasted no longer than ten minutes, he awoke refreshed. His nightly



THE "GRAND OLD MAN"

allowance was usually seven hours. Once in bed, he was there to sleep; immediately his mind was shut off from business cares. For this reason sleep to him was an exceedingly healthful recreation, and one that conduced largely to the serenity of mind which he always enjoyed. The fact that he could at once turn his attention from the exciting scenes in which his waking hours were spent, indicates that he had absolute control over his thoughts, and hence over his body. No one agency tends to perennial freshness of youth like an abundance of natural sleep.

Mr. Gladstone was free from worry, a characteristic that he turned to good account. It is said that at one time when he was in the midst of a cabinet crisis, he attended church three times on one Sunday. Amid all the turmoil of politics he was enabled to maintain a uniform and undisturbed peace of mind. This "Grand Old Man," by his noble and persistent conservation of strength, has shown to the whole world that "the days of our years are threescore years and ten," yet "by reason of strength" they may be fourscore years. Though none may escape the "trouble and sorrow" by right living, they may be minimised, and man may go to his long home blessed of humanity and of God.

Keep "in Condition"

TWO men are walking along the street, one half a mile behind the other. They are of about the same age, size, and weight.

The one that is ahead slips on a cunning little curl of orange-peel that lies there quietly as if expecting him. He turns his ankle slightly, and presto!—he is a lame man. He has become so for three, six, ten months perhaps.

After the first man has limped or been carried away, number two comes along on the same path. The pleasant little pitfall from the tropics is still in its place—no one having thought far enough to throw it into the gutter; and pedestrian number two slips upon it, as did his friend, a few minutes ago. His ankle turns in the same way; but he is not lamed, or more than temporarily inconvenienced.

Why?—Because he is "in condition" while the other man is not. He is in the habit of exercising each day all the principal muscles of the body; they are all ready to defend him against an attack upon any particular one; and it takes ten times as much to hurt him as it does the other man.

Keep "in condition."—*Everywhere.*



PROFITABLE RESULTS OF OUTDOOR PHYSICAL CULTURE



How to Prevent Tuberculosis

WE take pleasure in reproducing the text of a leaflet entitled, "How to Avoid Consumption," over a million copies of which have already been circulated in America:

Things Every Man Can Do

No one citizen, or group of citizens, alone, can abolish tuberculosis from New York City. Neither money nor action by public officials can stamp out this disease, unless supported by all classes of people.

While no one man can do everything, every man can do something. Every man, woman, and child can do one or more of the following things which will aid in preventing consumption.

You can tell people that the germs of tuberculosis are much less dangerous to those who are in sound physical condition; that they find their most favourable soil in those who are ill and whose powers of resistance are lowered through bad habits and adverse conditions of life.

Advocate fresh air, sunshine, rest, no overwork, wholesome food, temperate habits. You can co-operate with and support every organisation which aims to make these seven things possible for every person in the city. These are the essentials in the campaign against tuberculosis.

You can refuse to rent apartments with dark rooms. If you are living in rooms where the ventilation is poor, move to

other apartments where you can have more light and better air. You can see that some windows are kept open in your home both night and day, in winter as well as in summer. You can provide properly ventilated rooms for your servants.

You should insist that some windows be opened, or partly opened, frequently where you work. No man has a chance for a fair fight against this disease who is compelled to live and work in dark or badly ventilated rooms.

Dry sweeping of streets is a menace to public health. It stirs up disease germs which are inhaled by passers-by. You can protest against this dangerous practice and insist that the streets be cleaned with water.

The feather duster does not clean; it simply stirs up the germ-laden dust which floats in the air, and finally settles again. Your family may become infected by breathing this germ laden dust. You can refuse to permit the use of the feather duster in your home, or where you work. Insist upon the use of moist cloths which collect the dust and do not distribute the germs.

Flies spread many diseases, and among them is tuberculosis. They carry the germs from the sick to the well. You can keep flies out of your house by properly screening the windows. You can refuse to purchase fruits, vegetables,

and meats that are not properly protected from flies. You can keep your food covered so as to protect it from germ-laden dust and flies. You can destroy the places where flies breed by keeping your home and premises clean.

You can learn to recognise the early symptoms of this disease. Consumption is curable if taken in time. A word of kindly suggestion, or intelligent information, to one who is weak or run down, or coughing, or has a cold that hangs on, or is suffering from afternoon fever, or night sweats, may lead to an early recognition of the disease and the cure of the patient.

In half of the families where an older person has tuberculosis one or more of the children contract it from them. You can have your children examined by a doctor if you suspect they have the disease. You can see that their teeth are kept in good condition and are cleansed thoroughly every day. You can teach your children to sleep with the windows open, to eat proper and nourishing food, and to observe the laws of health. You can keep them in the fresh air and sunshine as much as possible, and not allow them to begin work at too early an age. You can teach them to put nothing in their mouths except food. The protection of children is the greatest means of preventing tuberculosis.

Consumptives in advanced stages are frequently a source of danger to those around them. You can see that such persons are removed to hospitals where they themselves will receive better treatment, and where the danger to their families and friends will be removed.

You can arouse public sentiment against promiscuous spitting. If it is necessary to spit while on the street, spit in the gutter. When in the house or office or shop, spit in a spittoon, or into a cloth or paper that can be destroyed. You can see that every consumptive you know understands about the danger from the germs in his spittle, and can tell him the best methods of destroying it.

Croup

THERE are several affections that are commonly called croup, some of which are of comparatively slight moment, whereas others are more serious in character. Any affection of the larynx, indeed, occurring in childhood and accompanied by a peculiar cough, which once heard can always be recognised, but which is hard to describe, is called croup. The most common kind is a simple catarrhal inflammation of the larynx. This in adults is called laryngitis, and is not usually serious—at least, it seldom causes any difficulty in breathing.

The child's vocal cords, however, readily become swollen and obstruct the breathing, and there is likely to be more or less nervous spasm to interfere still further with the passage of air. The trouble usually begins as a simple cold in the head, and then, extending down into the throat, causes hoarseness, slight sore throat, and a hoarse cough. The trouble is usually worse at night, the child has a more or less constant hoarse or ringing cough, and in some cases there is spasmodic difficulty in breathing. The breath is short, and has a wheezing inspiration that alternates with the cough. The child is frightened, sits up in bed, and sometimes has an attack of convulsions.

There may be two or three of these croupy attacks in the night, or one may occur each night for several nights in succession. They seldom or never occur in the daytime, but the child is hoarse, and coughs more or less. The attacks are not often dangerous, but they have a most alarming appearance, and frighten the mother or nurse as much as they do the child. The mother must not betray this alarm to the small patient, for that will only tend to increase his panic and to make the spasm of the larynx more severe.

The room should be quiet, and not too brightly lighted. The child should have cloths wrung out of water as hot as he can bear applied to his neck, and may be made to breathe the steam from a pitcher of hot water into which has been put a

teaspoonful of compound tincture of benzoin. In mild cases that in itself may suffice to quieten the attack; in any case it may be resorted to until the doctor comes.—*Youth's Companion*.

A Test of the Kidneys

AT some good sanitarium the patient undergoes a "three-day research;" that is, he is given a prescribed diet, the constituents of which are known, and certain examinations are made. To test the efficiency of the kidneys, common salt is administered on the second day.

When the kidneys are healthy, nearly all the salt taken reappears within the same twenty-four hours. When the kidneys have been seriously damaged by disease, and especially when acute nephritis or any other cause of salt retention is present, the salts of the second day may not be at all increased, or the increase may be very small. There are, of course, exceptions to this rule in chronic cases. Nevertheless, this test often gives most valuable information, especially in cases of Bright's disease with acute exacerbation. In diabetes insipidus and diabetes mellitus, when the chloride of sodium or salt content of the urine is very low and does not increase after the administration of salt, the case is certainly one requiring grave consideration.—*The Healthy Home*.

Singing and Consumption

A VERY agreeable cure and preventive for consumption is that recommended by Mme. Jeanne Jomelli, formerly of the Metropolitan and Manhattan opera houses.

Her remedy is singing. "If you are consumptive," she says, "sing; if you think you are drifting into consumption, sing. I do not advance the ridiculous claim that singing alone will save you from consumption or cure you; besides singing you must have plenty of fresh air and good food. And, speaking of fresh air, I must say that not one person in a

hundred knows how to inhale it. People seldom breathe deeply enough; they seldom ventilate properly their lung cavities, which resemble stuffy, unsanitary apartments, where all germs thrive undisturbed. Acquire the habit of taking the big, deep breath which is a primary requisite of any kind of singing, bad or good, and the physical joy derived from it will never allow you to relapse into lazy breathing.

"The breathing exercises recommended by certain physicians, and which are so monotonous in themselves, become much more pleasant when some artistic pleasure is attached to them. Furthermore, the mere effort of singing compels the singer to stand straight and to throw the chest out, a good corrective for the bad physical habits of weak-chested people.

"Finally, the exhilaration of singing is not a negligible element as a mental adjuvant to the cure. If you doubt my statements just turn your glasses on every singer, man or woman, and see what a wonderful chest development they have attained. Personally, I have never heard of a singer becoming consumptive."—*New York Tribune*.

Insomnia

IN considering the subject of insomnia, it is well to treat it under two heads—major insomnia and minor insomnia.

Major insomnia, happily, is a disease that concerns few persons, and its treatment is a matter for the trained physician only. It may be associated with several organic diseases, or it may be the beginning of acute insanity. These cases, of course, are neither for home diagnosis nor for home treatment. But almost anyone, sooner or later, and for one reason or another, may be called upon to deal with minor insomnia.

In such a case, the first thing is to look for the cause. When a person who is habitually a good sleeper has a restless, tossing, wakeful night, the reason is generally not hard to find. A mistake has been made somewhere, and in most cases

a dietary mistake. The last meal was too large, or too late, or it contained some substance that refused to be digested.

The insomnia of indigestion is a particularly disagreeable type, as it is allied with a nervous restlessness that not only forbids the sufferer to sleep, but makes him feel as if he would never sleep again, and keeps him turning and tossing in mind as well as in body. This is the kind that makes mountains out of mole-hills, and even darkens the thought of the coming day.

Discretion is the better part of valour in such a case. It is a waste of time to

ination is a sad misuse of the blessed darkness.

Many people find it wise to cool their brains at the end of the day with a little light reading or soothing talk, keeping their problems and their politics for the daytime.

Some fairly good sleepers accuse themselves of insomnia simply because it bores them to lie awake, and every minute is magnified into an hour. These should learn that a little occasional wakefulness is not to be counted a tragedy.—*Youth's Companion*.

Sesquipedalian Words

MARK TWAIN is not the only person to find amusement in the German language. A writer in the *Paris Siècle* thus accounts for the deliberation with which the negotiations over the Moroccan difficulty were carried on.

"Our interlocutors cannot end their explanations," he says. "With the best will in the world they cannot pronounce rapidly such words as this: 'Antialkohol-congressmitgliederverzeichnissesdruckkostenvoranschlagprüfungscommissionsversammlungseinladungskarten.' This little word means 'Invitation cards for the meeting of the commission for verifying the accounts of the expenses of printing the list of members of the Anti-Alcoholic Congress.'"

The effect of the German tongue is thus seen to be the exact opposite of what it might be supposed to be; it is a deterrent to war instead of a provocation.—*Selected*.

"WITH regard to the harmful influence of the use of tobacco upon our university students, most people will agree with the following observation of Prof. Andrew D. White, of Cornell University: 'Let me say that I never knew a young student to smoke cigarettes who did not disappoint expectations. I have watched this for thirty years and cannot recall a single exception to the rule.'"



MODERATE EXERCISE IN THE OPEN AIR IS A GOOD SLEEPING DRAUGHT

toss and try. Get up speedily and move about for a while, slowly drinking several glasses of water. Realise early that until you have helped your stomach to the victory, you will not sleep.

On the other hand, an empty stomach may keep you awake just as obstinately as an overfull one. In this case, however, the answer is easy—a cup of hot milk sipped slowly will generally do the work.

Some people keep themselves wakeful by getting mentally excited late in the evening, and of all forms of mental excitement, anger and fear are the worst. To lie and fight your enemy in your imag-

The Girl and Her Folks

But the Young Man Was the Right Sort

ELIZABETH had never noticed how plain and provincial her family were until young Haddon began calling on her.

The contrast between his polished courtesy and her father's bluff good nature was positively painful, and she began to wish that her father had a club to go to evenings, and that her mother wouldn't always come into the parlour and discuss the weather with Mr. Haddon. As for her boisterous brother Jack, she could almost find it in her heart to regret that he was not many miles away.

"Mother," she said, one evening when she had reason to expect young Haddon, "won't you please make Jack go to bed early to-night?"

"Make Jack go to bed early? Why, Bess, I don't tell Jack when to go to bed any more. He's too old for that."

"He isn't too old to drink lemonade and eat cookies as if he had never seen evening refreshments before," complained Elizabeth. "He acted like a big and a wild Indian the other night. He stamped around and whistled so loudly that we couldn't hear ourselves talk, and he uses the commonest slang, mother. I don't know what Mr. Haddon thinks of him."

"Oh, I guess he knows a rollicking boy when he sees one," said Mrs. Day, comfortably.

"Mother," Elizabeth hesitated a moment. "I wish you wouldn't wear your apron when you come into the parlour evenings."

"Why not, Bess?"

"Well, it looks so—so bourgeois."

"What's that?"

"Why, you know, sort of common."

"Well, that's funny. I always feel real dressed up when I have on one of my pretty aprons. But I won't wear an apron if you don't want me to."

"That's a dear," said Elizabeth, gratefully. "And, mother, do you think you could coax father to wear his coat when Mr. Haddon is here? It looks just dread-

ful for a man to go around the house with his coat off."

"But your father likes to be comfortable, and I don't think he looks a bit untidy without his coat."

Elizabeth sighed deeply. Just then the door bell rang. Eager to get there before her brother, she ran and opened the door herself.

"Say, you're getting awfully anxious, aren't you, Bess?" Jack called.

Elizabeth, in her endeavour to appear unconscious of this thrust, greeted her visitor with what she knew was stilted politeness. They had not been settled in the parlour two minutes before her mother appeared. She spoke pleasantly to young Haddon, asked him if he didn't think the evenings were getting cool, and then, glancing down at her apron, precipitately left the room. A moment later she returned, consciously smoothing out the front of her skirt from which she had just removed her apron. Elizabeth's annoyance at this was not lessened when Jack bobbed in and asked loudly: "What time are you going to have the handout, Bess? I'm going down to 'Bud' Brown's, but if there's to be a feed here I'll beat it back."

"Oh, Jack, I wish you'd—" began Elizabeth.

"Run on, dear," said Jack's mother. "I'll save you something if we have anything to eat. Oh, there's father." Mrs. Day's face beamed with welcome for an instant, and then suddenly clouded over. "Father, don't you think you ought to have on your coat? It's a little chilly."

"Chilly! Gammon, mother. You know I never wear my coat in the house. Say, Haddon, these women are always fussing at their men folks. Some day you'll know what it is to have a wife worrying about you."

Elizabeth's face turned scarlet, but Haddon laughed and said, "I certainly hope so."

"Now, father, come out in the dining-room. I want to show you something." Mrs. Day smiled at her own tact and led

her husband away to be gently lectured on the subject of wearing his coat.

"Do you know," said Haddon to Elizabeth as soon as they were alone, "I think you are about the most fortunate girl in the world?"

"Why?" was her astonished query.

"Because you're surrounded by such whole-souled relatives. I feel like embracing your sweet little mother when I see her wearing that crisp white apron. It takes me back to the time when I had a mother up in Maine who wore white aprons. And your father! How hearty and kind he is! I tell you, in these days of affectation, it's a privilege to meet people like Mr. and Mrs. Day."

"What about Jack?" asked Elizabeth, hesitatingly.

"He's an all-around boy—the kind that makes the real man. It's the real people who count."

"I fear," murmured Elizabeth, "that I'm the only one in the family that isn't quite real."

Haddon laughed. "You're real enough to suit me," he answered.—*Chicago News*.

"Is It Right to Do That?"

THIS question is constantly put to every doctor, often about matters concerning which he cannot make a definite reply. People ask, "Do you think it is right to bathe in hot water?" "Do you think it is right to bathe in cold water?" "Do you think it is right to drink coffee?" "Do you think it is right to wear cotton next the skin?" as if all these things were "right" or "wrong," irrespective of the individual case.

If we dared to attempt an epigram we should say that suicide is the only thing a man must never commit. If this is found too general, the answer is that hygienic rules must be general in their statement, but individual in their application.

"Is it right to bathe in cold water?" Right for whom, when, where, how? A

strong young man looks on the cold morning plunge as a life-giver, and could not be persuaded to miss it at any season. The view of it is perfectly correct for that person. It is a life-giver, and the fact is proved by the exquisite sensations of increased vitality that follow it. Yes, it is "right to bathe in cold water."

Then some anæmic person with a poor blood circulation goes and does likewise—with what result? An imperfect reaction, shown by chattering teeth, fatigue, chilliness, and all the signs of depressed vitality—no, it is wrong to bathe in cold water. In matters of health, each person possesses a personal equilibrium, the maintenance of which means health for him; general maxims must be tested, modified, and applied to his particular case.

Perhaps the most pernicious of all foes to health is the "fad." The spirits of the expert in hygiene sink to zero when he reads that open-work silk stockings are to be worn by young women through the winter season, or that while skirts remain so narrow, it will be out of the question to wear petticoats under them. He is perfectly aware that thousands of young women will follow the dangerous fashions and remain unscathed; for he knows that there are thousands of young women who cannot be killed except with a club.

But already he is, metaphorically speaking, in tears for the thousands of other young women who will follow suit rather than look queer—the helpless candidates for grippe, bronchitis, and pneumonia.—*Youth's Companion*.

I RECENTLY met the finished article of the liquor trade. He was lying in the gutter. He had no hat: the trade was suffering. His coat was full of holes: the tailoring trade was suffering. He had no shirt: the hosiery trade was suffering. He was dirty: the soap trade was suffering. Indeed, I can hardly mention an industry which was not affected by that man's insobriety.—*Lief. Jones, M.P.*

Prescription for a Long Life

CULTIVATE a good temper ;
 Live a natural life ;
 Eat moderately of the food that agrees
 with you ;
 Keep on the sunny side of the street.—
Robert Collyer.

"The Painted Lady"

TIME was, not so long ago, says the editor of the *Ladies' Home Journal*, when the "painted lady" was the woman marked by society, and the bar sinister. There was then but one interpretation for rouge. But recently women have done a curious thing: the little distinctions that once clearly marked the demi-monde grow fainter; the woman with the painted face is tolerated by women to-day where once she was shunned. Can any woman tell a man why the use of rouge, that was never in good taste, has by women been absolved from the stigma that once was attached to it? I say "by women" because the stigma has never been removed by men, and is not, in their minds, to-day. Of course some woman will answer that every woman wants to look as well as she can: that if nature has not been kind to her she resorts to artifice: she wants to look her best. But to a man's mind a strange obsession rests in the minds of some women as to what their "best" is. His mind may be pathetically simple and untrained, but he has never yet been able to make out how a decent woman can make a "painted lady" of herself and thereby lower her standing of sex, and yet think that she has improved herself in appearance or bettered the impression she has made. If the woman thinks that the man is deceived she flatters herself. For dense as man may be about the mazes of woman's toilet he is never deceived by the painted face. Rosy cheeks cannot be imitated, and he always knows the difference between the real and the false. A man is not as easily fooled about some feminine things as intelligent women

believe. And, for one thing, the "painted lady" has not a very pleasant position in the mind of a man.

When Old Age Is a Curse

WHEN it has lost self-respect.
 When the old have not won the respect, the confidence, and the admiration of relatives and those nearest to them.
 When they do not stand for anything in their community.
 When their neighbours would not consider their departure any loss.
 When the imagination is foul and the thought impure.
 When all the youthful fires have gone out and only embers remain.
 When the individuality has been burned out by the fires of dissipation.
 When all the reserves of energy and force have been prematurely exhausted by a vicious life.
 When the individual has not learned the art of self-control and patience.
 When young people cannot live with it with any comfort.
 When it has developed only vulgarity, coarseness, and animality.
 When it has left the individual ugly, disagreeable, touchy, cynical, critical, uncharitable, unkind.
 When hope and cheer have fled.
 When ambition and aspiration are dead.
 When they have lost the zest for life, the desire for usefulness.
 When they have no aim in life.
 When the sap of life has gone and the individual is like a juiceless orange.
 When all that is good, sweet, and noble has evaporated and life is empty.—
Success.

No one supposes that law can make man temperate; but law can shut up these bars and dram-shops, which facilitate and feed intemperance, which doubles our taxes and trebles the perils to property and life.—*Wendell Phillips.*



HOME LIFE IN TAHITI.

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Diet That Helps Consumptives

B. J. KENDALL, M.D., of Geneva, Illinois, claims that the most certain method ever adopted for the cure of the "great white plague" is through the diet used by directions given below, which can be taken at home and comes within the reach of the poor as well as the rich.

The *modus operandi* is to force the body to take on fat, a desideratum long felt by the medical profession, but never before attained to.

The all-important thing is to drink large quantities of milk strippings—the very last of the milking. This seems so simple and easy that many have refused to follow directions and demanded medicines to cure them; but there has not yet been discovered any medicine that is a specific for consumption.

To get best results, a healthy cow should be selected, one that does not cough, and one that gives very rich milk. A Jersey cow is preferable. The milk should always be tested to be sure that there is a large per cent of cream in it.

The last quart should be milked into a separate dish, which rests in a larger vessel containing warm water just sufficient to prevent the strippings from cooling below blood heat. The cow should be thoroughly cleaned to prevent any dirt getting into the milk, so the patient can blow back the froth and drink at once without straining, as this cools it too much.

The patient should begin by drinking nearly a pint in the morning and the same at night, increasing the quantity gradually,

so that in ten or fifteen days a full quart will be taken twice a day. It should be taken immediately after milking, before it has had time to cool at all. All should be taken that can be without too much discomfort, and then after two or three minutes' rest more may be drunk, and after another rest, still more, and so on until a full quart has been taken as rapidly as it can be conveniently.—*Technical World.*

Unpasteurised Milk

THE investigation of an epidemic of sore throat in the vicinity of Boston in which about a thousand persons were affected, forty-eight of whom died, showed it to be due to the use of milk from one of the best dairies, which has conducted its farms in the most careful manner, and has employed a competent laboratory worker to control the entire process. The investigation failed to reveal any neglect or carelessness on the part either of the company or of the bacteriologist.

Similarly there was an epidemic of diphtheria among the students of the University of Minnesota, which was traced to the use of milk from one of the model dairies of Minnesota.

The fact that from two well-regulated dairies have sprung serious epidemics is a strong argument in favour of the position of those who believe in the Pasteurisation of all public milk supplies.

It is true that disastrous epidemics from clean dairies are comparatively rare, but possibly there are other epidemics less severe which are not traced to their source because not fully investigated.

Pasteurisation, properly performed, is open to little objection, except where it is used as a substitute for cleanliness; and if it were more generally used, it would doubtless materially diminish the risk of infection from the use of milk.

Sassafras Oil for Mosquito Bites

It is not generally known how valuable a preventive against the bites of mosquitoes, fleas, gnats, midges, and so forth, oil of sassafras is. If in a susceptible person the oil is applied at once to the place that has been bitten, it almost invariably prevents the poisoning altogether.

If applied to the inflamed spot a day or two after the bite, it at once stops the irritation. To those who live in the country, and whose life is made a burden by undue susceptibility to insect bites, and to those who have not yet returned from holiday making in regions infested by biting insects, oil of sassafras should be a great boon, and it is harmless as an external application.—*Dietetic and Hygienic Gazette.*

Electric Sterilising

AN apparatus that sterilises milk by electric light has been invented in Holland. It contains a mercury-vapour lamp, so arranged that a thin stream of milk may be made to flow over the surface of it. The ultraviolet rays from the light quickly destroy all bacteria in the milk. Demonstrations were first made with water containing various kinds of bacteria. The water was purified in a few minutes with but slight increase of temperature. If this method of sterilising milk without heating proves to be practical, it will have a wide field of usefulness.—*Selected.*

Electric Cooking

AT the recent electrical exhibition at Olympia, near London, particular attention was attracted by the exhibits of electric heating and cooking apparatus. Since the exhibition of 1905, very great advances have been made, especially in the electric cooking devices. The economy of the method has been shown, and, moreover, it is asserted that the results of electric cooking, "from the point of view of the epicure," are unexcelled. It has also been proved that the percentage of food wasted in electric ovens is much less than the lowest attainable in ovens of other types, a fact unknown in 1905.

Punishment of Street Vendors

A SECTION of the New York sanitary code forbids the display of uncovered foods for sale, and, after a fair warning, a squad of food inspectors made a raid on a large number of cheap candy shops, and condemned and destroyed a large quantity of exposed candy and other confectionery. The commission announces that the crusade will be kept up and the careless vendors punished if necessary.

Flies the Filthiest of Creatures

IF you value the health of your family, keep your house and premises as free from flies as possible. See that nothing goes into the garbage-can which may as well be burnt; and keep the cover of the can in its place. Clean out the dark, unwholesome corners, condemn rubbish of all kinds, and have house and premises perfectly sweet and clean. Be especially careful to keep your food where the flies cannot defile it. The innocent-looking creature which buzzes over your well-set table has very likely just been trailing its legs in the sputum of a consumptive patient, or in some other pestilential filth. Beware of the common house-fly. It is a chief promoter of disease, and one of the filthiest creatures in the world.

Thumb Knife for Picking Fruit

A VERY convenient device for picking fruit, says the *Scientific American*, has been designed by a man living in the fruit regions of California. It consists of a thimble, which may be tied to the thumb, and which terminates in a blade with a keen edge. The fruit is seized in the hand, and the stem is severed by means

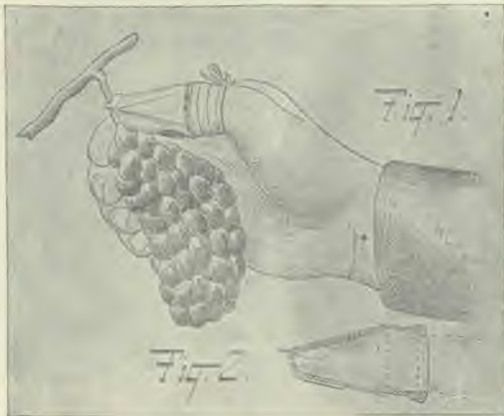


FIG I. THUMB KNIFE IN USE.
FIG II. DIAGRAM OF THUMB KNIFE.

of the thumb knife. With such a device as this the picking of fruit is materially expedited, and there is no danger of tearing the branches or marring the fruit when it is plucked.

“DRESS, to be perfectly compatible with healthy life, should fit loosely, should be light, warm, and porous, should be adapted to the season as to colour, should be throughout every part of the clothing, upper as well as under, frequently changed, and should be, at all times, scrupulously clean. The wearing of clothes until they are threadbare, is an invariable error in all that respects the health, to say nothing of the comfort of the wearer. All bands or corsets which in any way restrict the course of the blood in any part of the body are directly injurious. Dresses dyed with irritating dyestuffs ought to be carefully avoided.”

Hints on Cooking

By E. G. Fulton

GOOD cooking is not the result of accident, a species of good luck, as it were. There is reason in every process; a law governing every chemical change. A course of medical lectures does not make a physician, nor will a collection of choice recipes make a cook. There must be a knowledge of compounding, as well as of compiling; of baking, as well as of mixing; and above all, one must engage in the real doing. Theory alone will not suffice; but experience, which practice only can give, is of the utmost importance.

Mention will be made under this head of those forms of cooking only which enter into vegetarian cooking as usually understood.

Boiling

The term “boiling,” as applied to cookery, means cooking in a boiling liquid. Many kinds of food need the action of water or other liquid, combined with heat, to cook them in the best manner, and boiling is one of the most common forms of cookery. When water becomes too hot to bear the hand in it with comfort, it has reached one hundred and fifty degrees, or the scalding point. When there is a gentle tremor or undulation on the surface, one hundred and eighty degrees, or the simmering point, is reached. When there is quite a commotion on the surface of the water, and the bubbles breaking above it throw off steam or watery vapour, two hundred and twelve degrees, or the boiling point, is reached. After water reaches the boiling point it becomes no hotter, no matter how violently it may boil. The excess of heat escapes in steam. This important fact is rarely understood by the average cook, and much fuel is often needlessly wasted because of the mistaken idea that rapidly boiling water cooks food more quickly.

In all ordinary cooking, simmering is more effective than violent boiling. The temperature of the water may be slightly raised by covering the saucepan. If sugar or salt or anything to increase its density,

is added to water, it takes longer for it to boil, but its boiling temperature is higher. This explains why boiling sugar syrup and boiling salt water are hotter than boiling fresh water. Boiling effects partial destruction or removal of organic and mineral impurities found in water, hence the importance of boiling the water where such impurities exist. Boiling also expels all the air and the gases which give fresh water its sparkle and vitality. Therefore, the sooner water is used after it begins to boil, the more satisfactory will be the cooking.

Fresh water should be used when the object is to extract the flavour, or soluble parts, as in soups and broths. Salt water should be used when it is desired to retain the flavour and soluble parts, as in most green vegetables. Cold water draws out the starch of vegetables. Boiling water bursts starch grains, and is absorbed by the swelling starch, and softens the cellulose in cereals and vegetables.

Steaming

Steaming is a process of cooking food over boiling water. It is a very satisfactory and convenient method, without much loss of substance. It takes a longer time than some other ways of cooking, but requires less attention. There are two methods of cooking by steam: (1) In a steamer, which is a covered pan with perforated bottom. This is placed over boiling water, and the steam carries the heat directly to the food. (2) By means of a double boiler. By this method the heat is conveyed from the boiling water, through the inner boiler to the food. When cooking by steam, the water should boil steadily until the food is done. Watery vegetables are made drier by steaming, and flour mixtures develop a different flavour than when baked.

Stewing

Stewing is cooking in a small quantity of water at a low temperature for a long time, and is a form of boiling. The food

loses less nutriment when stewed than when rapidly boiled.

Baking

Baking is cooking by means of dry heat, as in a close oven. The closely-confined heat of the oven develops flavours which are entirely different from those obtained by other forms of cooking. The baking of many kinds of food is as important as the mixing, and every cook should thoroughly understand how to regulate the oven. Nearly all flour mixtures, as bread, cakes, and many kinds of pudding, are more wholesome when baked than when cooked in any other way.

Mock White Fish.—Rice flour, one third of a cup; butter, one scant teaspoonful; mace, one quarter of a teaspoonful; salt to taste; milk, one cup; onion grated, one tablespoonful; potatoes, mashed, three cups.

Heat the milk to boiling, stir in the rice flour, butter, onion, mace, and salt. Cook all ten minutes, stirring frequently. Have the potatoes ready, freshly cooked and mashed; while hot add the rice mixture, and put into a pan to cool. When cool, cut in slices about five inches long, dip in egg and crumbs, put in oiled pan, and bake until nicely browned. Serve with parsley sauce. Farina can be used in place of rice-flour.

Mock Turkey with Dressing.—German lentils, one cup; chopped walnut meats, one half of a cup; milk, one cup; salt; celery salt; granola or breadcrumbs; minced onion, one quarter of a cup; chopped celery, one cup; eggs, two; sage; sliced bread.

1. Thoroughly wash the lentils and soak overnight. Boil slowly until tender, and run through colander. Add the walnut meats, one egg, and the minced onion browned with the chopped celery in a little oil. Add salt and sage to taste. Thicken with granola or breadcrumbs.

2. Dip thin slices of bread in a mixture of one egg and a cup of milk, or thin slices of nuttolene may be used instead.

Make alternate layers of 1 and 2.

Dressing No. 1.—Stale breadcrumbs; hot milk, two cups; eggs, one or two; butter, one tablespoonful.

Mix breadcrumbs with hot milk, eggs, and butter. Season with salt, sage, and onions. Serve with cranberry sauce.

Dressing No. 2.—Large onions, two; fresh breadcrumbs, one cup; milk, three-quarters of a cup; sage, one tablespoonful; beaten eggs, two; chopped parsley, two tablespoonfuls; butter, one-quarter of a cup; salt to taste.

Peel onions and parboil. Drain and chop fine. Soak breadcrumbs in the milk; then mix all ingredients together. Stir the mixture over the fire until it is reduced to a thick paste, without allowing it to boil.

Serve a slice of the roast with a spoonful of dressing on one end and cranberry sauce on the other.



"How Can I Keep My Baby from Crying?"

How Thousands of Mothers Do It and the Results

By Caroline Wormeley Latimer, M.D.

SOME years ago one of the most popular infant remedies then in use advertised its virtues in these words: "Babies taking So-and-So's Soothing Syrup do not cry any more." These words may well serve appropriately as a warning against all remedies of the kind, since babies taking any one of them are only too likely not to cry any more in this world.

It is hardly too much to say that all soothing syrups, teething cordials, infants' friends, diarrhoea mixtures, cough drops, and other "patent medicines" employed to pacify or relieve babies depend upon opium for their effects. Even the time-honoured paregoric contains one grain of opium in every tablespoonful. There are a few exceptions, but they are very few, and they usually contain drugs only one degree less harmful than opium. Out of twenty-three remedies of this kind recently analysed by the United States Department of Agriculture it was found that one contained opium itself, while fourteen contained morphine, two codeine, one morphine and codeine together, and three heroin, all of which are products of opium, more frequently used nowadays because they are not so apt to be followed by disagreeable after-effects. The remaining

two remedies contained, respectively, Indian hemp and chloroform, both of which drugs have their own peculiar dangers.

Dangers of "Patent Medicines" Containing Opium

Now whenever a "patent medicine" containing opium is given to babies or young children one of three dangers is present:—

First, the child may die of narcotic poisoning. Sometimes this happens because the mother or nurse, in her anxiety to do the child as much good as possible, administers a larger dose than is called for by the directions. But even where the ordinary or prescribed dose is given, the child's heart may be weak and unable to support the depressing influence. Sometimes the remedy is given when the child is suffering from some acute disease—such, for instance, as pneumonia—in which the use of opium is dangerous.

The second danger is present when a remedy containing opium is used habitually. Such a condition of things usually arises from the fact that a certain medicine is found to quiet a baby on some particular occasion, and then is used every time the child is fretful or restless, until at last the baby becomes dependent upon

it for every hour of sleep and ease, and has to be dosed with it at regular intervals. When such a child is attacked by an acute disease, whether one of the ordinary diseases of childhood or something more serious, the chances of recovery are much lessened, for children dependent upon opium have not the same vitality and power of resistance to disease as normal children. If the remedy is discontinued during the illness, the possibilities of recovery are smaller still, for the sudden stoppage of opium is a great drain upon the strength, even with a person in ordinary health, and to withdraw it at a time when every atom of strength is needed to combat acute disease means, of course, that the fighting power is much diminished. If the doctor is aware that the child is taking opium, he will take care not to stop it until recovery sets in; but unfortunately the signs of opium may be so completely masked by the disease that the doctor has no suspicion, and the parents, thinking to give his measures full opportunity, quietly withdraw the remedy upon which the child's power of resistance depends.

Many a child has died because his strength was diminished by the habitual use of opium in some patent remedy, and many more children probably, because their reduced strength was still further lessened by the stoppage of the drug.

Just "a Little Dose of a Mixture"

A third danger connected with the habitual use of soothing syrups and kindred remedies is the formation of a drug habit. It may seem impossible that such a habit can be formed in infancy. But the fact is fully established. Such cases are far more numerous than the world in general imagines, and it is astonishing how they will withstand every effort at relief.

Recently a prominent and wealthy man told a physician that his daughter, when an infant, was given a "little dose of a patent diarrhœa mixture," and whenever the trouble for which it was given recurred the remedy was repeated. Of course the

child became completely dependent upon it. The parents had no idea that the remedy contained opium, and no suspicion of the real state of things crossed their minds until it was discovered by a doctor who demonstrated it to them by stopping the "patent medicine" and giving plain morphine instead, with precisely the same results.

But by that time the little girl had grown so dependent upon the drug that all efforts to do without it were useless, and by the time she was nineteen she had become a nervous wreck, in spite of the fact that everything money or affection could compass had been done for her cure. Her father told the doctor that he would rather see her in her grave than what she was.

The Actual Story of Many a Death

Let no one suppose that I have drawn a too highly coloured picture of the state of things arising from the use of this class of "patent medicines." It is not too much to say that thousands of children "of two years old and under" meet their death every year, either directly or indirectly, from opium contained in soothing syrups and other like remedies for infants; or else become slaves to the opium habit from the same cause.

Many a child who dies suddenly and unaccountably is the victim of opium poisoning brought about in this way. Many another, whose death appears on the certificate as pneumonia, nephritis, or some other acute disease, might have survived the disease if his powers of resistance had not been weakened by his dependence upon opium. Many another, still, has entered into life crippled in body and mind by reason of the opium habit contracted in babyhood.

What is the cure for this state of things? First, a widespread knowledge of the existence and the extent of the evil. Second, a conscientious use of the means of protection now provided against it. Doctors, editors, teachers, and social workers are doing all that they can to bring about the first essential, but the

accomplishment of the second belongs to the public. The Food and Drugs Act now requires that every "patent medicine" shall have its ingredients plainly printed on the outside, and this regulation has effected one great good; namely, the extinction of the secret remedy. Up to the passage of this act it was often not within the power of either parents or nurses to ascertain the contents of the medicine they administered. Now they have only to read what is set before them. But this useful reform will be of no service unless the public does its part.

It is the duty of every one who contemplates giving a patent remedy to an infant or young child to read attentively the statement of contents printed on the outside before buying it. If it contains any one of the following ingredients, it is unsafe to give it to the child: Opium, morphine, codeine, heroin, or paregoric—morphine, codeine, and heroin being alkaloids of opium.

To give a remedy of this kind simply to pacify a restless, fretful baby is not only wrong but unnecessary as well. A healthy infant, if he is properly cared for, does not cry in any distressing manner. He will shout and squeal from animal life, and as he grows older and the "Old Adam" develops he may cry from temper, but cries of this nature are soon over and may be disregarded. Constant, peevish crying, with restlessness and fretfulness, in a child with good health shows that something is wrong in the child's surroundings; in other words, he is not properly cared for.

A baby's surroundings are limited to his clothing, his bed, the surrounding temperature, and his food. Each of these ought to be investigated carefully, and when this is done the reason for his crying, in most cases, will be made manifest. Remember that a baby is perfectly helpless, that a very trifling discomfort will suffice to make him miserable, and that crying is his only means of remonstrance.

I once knew an infant brought to the office of a wise old doctor, with the statement that he had cried all day without

any cause that his mother, a labouring woman, could discover. The doctor had all the child's clothes taken off, and examined him without discovering anything that accounted for the crying, when his eyes fell upon the child's feet, which were covered with little knitted socks, and he desired the mother to take these off also. When this was done it was seen that the strings of the socks had been tied so tightly around the fat little ankles that they had made angry red lines, from which the skin was rubbed off in spots. No wonder the poor little thing had made the only protest in its power.

If all the surroundings are investigated without revealing anything that can reasonably account for the crying, the doctor should be consulted, even though the baby seems quite well. He should be sent for, of course, in the beginning, if there is the slightest suggestion of health disturbance. But to give a patent remedy in order to avoid paying a doctor's fee, or to quiet fretfulness, or to secure a period of rest for the parents, is nothing less than criminal to the baby.—*Ladies' Home Journal*.

The Study of Infantile Paralysis

AS the result of research in the Rockefeller Institute, Dr. Simon Flexner has made discoveries which promise to be of interest to all mothers. Dr. Flexner announces that he is very near the cure for infantile paralysis. If the plans of the Institute work out successfully it may soon be possible to cure this dangerous and so far little understood disease of children.

It is now known where the newly discovered germ resides, how the disease is spread, how it enters the body, and the available means of combating it.

NOTHING will make us so charitable and tender to the faults of others as by self-examination thoroughly to know our own.—*Fenelon*.

The Policeman as a Foe

A SERGEANT of police recently made a good point. He said that if mothers in general could see the abject terror and distress of the lost children brought by the police to his station-house they would use a little more judgment, and check their thoughtless habit of teaching their children to regard every policeman as a man to be feared. How often do we hear a mother say: "If you don't stop your crying I'll hand you over to a policeman," or "There comes a policeman after you to lock you up," or a similar threat, which not only fills a child with terror, but also gives him a wrong and harmful impression of every officer of the law. We cannot too carefully explain to a child that a policeman, or any other officer of the law, is our natural protector, whose duty it is not to punish but to keep peace and to guard us from harm.

Much of our present widespread lawlessness comes from a mistaken fear of the law instead of a respect for it. And the time to lay the right seed of a respect for the law and those who represent it is in childhood. A policeman can and should be pointed to by every mother as a splendid example of the protection that the law affords: not as a bugaboo to frighten the children and make them regard every policeman they see with fear and trembling, and as a foe instead of a friend. What we all need more of is a stronger faith in the law, and not a fear of it.—*Ladies' Home Journal*.

THE duty of physical health, and the duty of spiritual purity and loftiness, are not two duties; they are two parts of one duty—which is living the completest life which it is possible for man to live.

AS Florence Nightingale said, more than half a century ago, "Three-fourths of the whole mischief in women's lives arises from their excepting themselves from the rules of training considered needful for men."

Do Your Children Cover Their Heads with the Bedclothes?

MOTHER used to impress on her children the importance of keeping mouth and nose outside the bedclothes. A spanking was in store for us if we were found with our heads under. She knew that the air of the bedclothes was poisoned air. We never dreamed that it was a not uncommon thing for many people to actually sleep with bedclothes over their heads.

This especially happens to children whose parents allow them to entertain fears of ghosts and other fears, and then refuse to give them comfort by letting the light burn until sleep comes.

Such children cover up their heads in terror, sleep the night through with heads covered, poisoning themselves with their own poisons, and wake up with a swollen face that is foolishly attributed to sleep.

Most of us spend one-third of the time in bed. If everybody, children and adults, breathed pure air during sleep, the daytime bad air of factories, shops, stores, and dwellings, would be in large degree neutralised.

Leave the windows open, put on blankets enough to keep warm and comfortable, put on a nightcap if necessary, and let the wind blow. Screens may stop the direct draught if it makes you nervous and wakes you up. Be sure that little children, especially, have good air to breathe while they are asleep. Make sure that throughout the night your lungs and your blood are supplied with the pure oxygen that carries the poison from all the cells of the body into the lungs to be expelled.

Some people do not know that cold air as well as pure air is a great tonic. It is all right to dress and undress in a warm room because it is more comfortable. It is all right to jump into a warm bed, for it is much more comfortable, but when the children are in bed and covered up warmly, mother should let the cold air in. Next to sunlight it is the greatest tonic in the world.—*The Healthy Home*.

Punishments Which Punish

I COULDN'T endure Nancy's contrariness any longer. Ever since she awoke this morning she has been mischievous and disobedient and cross. I just made up my mind that she ought to be punished, so I gave her a whipping and locked her in the clothes press.

"I hope you will think that I did right. I'm not quite sure just what is the best way to punish Nancy, for nothing seems to have any effect upon her."

A wail from upstairs punctuates the confession of Nancy's tired mother who has met the child's father with her story of discipline on his home-coming in the evening. It worries and frets him. The young mother is already worried and fretted to the point of a nervous breakdown—and Nancy?

She has been all that her mother claimed that day, disobedient because she is a strong-willed little girl; mischievous, because she is full of enthusiasm, fun, and humour, and likes to play with everybody and everything in her environment; and when the end of the day comes Nancy is cross, mainly because she is tired with the world and her mother, both of whom have been at odds with her all day long.

Did the physical pain which was a shock to the little girl's delicate nervous organisation, and the confinement in a small, dark, illy ventilated room really punish Nancy in that it followed as a natural consequence of her naughtiness? Or, did it not, rather, punish Nancy's mother in remorse, and the physical strain of the clash of her will with that of her child's? May it not have tasted, a little, of vengeance on the part of the mother, unintentional of course but vindictive, nevertheless.

Is not the average case of child punishment a clear case of retribution on the part of the adult, the paying back of the parent for the wrong the child did the

grown-up, rather than the direct result of the child's act?

Every act has its consequence. With Kipling we grown-ups may say that—

"The sins ye do by two and two,
Ye shall answer for one by one."

We do answer for sin, and the answers follow in direct line with our course of conduct in breaking some moral law. The criminal who violates a social code is imprisoned, and deprived of the rights of society. The debauchee who abuses his body is maimed, handicapped physically, diseased, and denied the blessing of a healthy body. Nature is very just in inflicting punishment, and never does she allow the thought of vengeance to enter into the matter.

Why not follow nature in child punishments, and develop child character by so disciplining him that he punishes himself?

This method is a difficult one for the mother to follow, it means that she must put completely in the background her pique, nerves, weariness, and any other emotions which have been stirred by the children's misbehaviour. She will need to study each child's fault as to its cause and what are its direct consequences in the child's life. Then she will need to plan such punishments as will make a child realise that he punishes himself, that he is never like the innocents of the Old Testament, the victim of cruelty and vengeance. Corporal punishment will not enter into our discussion at all. It is such a mooted question, and it is possible that a small measure of quick, humanely inflicted physical pain does have a place in the life of the strong-willed child of two or three years old who is not yet to the reasoning age, or in the case of the mentally or morally difficult child, but in both these instances the children have been governed successfully by means of kinder measures.

It is the case of Nancy that we must consider. What are we going to do with the normal, difficult, naughty child who is a very real and moving little figure in the home canvas? How is Nancy to be taught to govern herself through a series of just and natural punishments? How is she to learn that she must avoid certain faults if she is to be happy?

The child who is disobedient should not be scolded. He forfeits something, instead, loses some joy perhaps because he broke a law. He was forbidden to leave the garden, to go alone across the street but, childlike, he forgets and opens the forbidden gate, following the mirage of his immediate desire. Nancy's mother, many mothers in fact, would follow this disobedient child, bringing him back screaming and unrepentant, but the wise mother waits for the return of the little wanderer who comes home to find his punishment awaiting him. It is nothing which his mother inflicts upon him, mercilessly. It is the punishment that he, himself, metes out. His dearest friend came to play while he was across the road enjoying in the dust and sun the spirit of the Wanderlust. His mother could not allow his little friend to stay, though. How could she, or how could she save him the little tart pie she baked, or let him go for a long delightful drive to the village with grandfather when he was not there? A little boy who runs away loses all those charming surprises. Home is full of wonderful happenings at every turn and at every hour, but the child who wishes to enjoy all these delights is the child who does not run away. It is purely his own fault that he lost his playmate, the little tart, and the drive with grandfather. He understands all this. He is his own punishment, and his mother acts the part of the comforter rather than judge as she explains to him the unwisdom of putting the forbidden gate between his own small self and his little daily joys.

Does this seem a simple, inefficient means of punishing a child? It is vastly more efficient than pointless scolding and physical force. The former dulls a child

mentally, and the latter warps him both mentally and physically. The method of depriving a child of some pleasure as a result of his disobedience is such a reasonable punishment that it makes a deep impression on the child's plastic brain tissue, and is recalled the next time he is tempted to disobey. He invades the pantry and eats forbidden sweets. As a result he has no sweets for several days—how could he when he ate them all? He upsets his father's ink well, spoiling books and papers on the library table. He is required to assist in cleaning the table, but no further notice of his carelessness is taken. The next day, the next week, possibly, he sees a fascinating new book in the toy shop which he wants, oh so much, but the book is denied him. How can he be given a new and beautiful book when he was so careless as to spoil with spilled ink his father's precious volumes? A few such deprivations will suffice to cure a child of any habits of disobedience. It will be a wholesome cure, too, brought about naturally by the child himself and at the expense of no nervous strain on the part of the mother. He learns to weigh his actions, asking himself what will be their consequences as far as he himself is concerned. Gradually he forms this habit of forethought, weighing in the balance the possible result of his disobedience upon the world at large—and at last wins the fight. He learns to obey.

This same line of procedure may be followed in cases of child mischief, ill-temper, or any of the other petty faults which are really not so serious in themselves, but whose sum makes up a trying day for the tired, busy mother. The child who wantonly breaks his toys or destroys the playthings of his brothers and sisters, instead of being spanked for his mischief is required to forego some longed-for pleasure as he spends the time mending the toy, or doing some homely task by means of which he earns money enough to buy a new toy to replace the one which he destroyed. The child who sulks or gives vent to bursts of ill-temper should be isolated, deprived of human

companionship for a while until he recovers his ordinary good temper and becomes again a cheerful member of the family. Each of these penalties should be rigidly enforced by the mother, but with such a measure of sympathy that the child does not look upon her as a judge enforcing a sentence, but rather a sort of sympathetic mediator who has gone through the same round of self-inflicted punishments and is ready to advise, assist, and comfort the little penance worker.

Home discipline is so easily accomplished if a mother can form the habit of putting herself in her child's place—"small-en-ing" herself as one small boy put it. In each instance where punishment is necessary for the child's best welfare, she will forget her own vexation, her own weariness and anxiety, and put the penalty where it belongs—in the child's own hands.—*Carolyn Sherwin Bailey, in American Motherhood.*

"Let Your Head Save Your Heels"

A Word about Method in the Home

"SCIENTIFIC management" is fast becoming an absolute fact and a fixed mercantile necessity. So controlling is it that we are told that the world, popularly speaking, will soon accept it as a new magic, a thing to be accomplished by a "Hey, presto! Change!" forgetting the labour, the hours of thought and planning, and the gradual development that underlie the movement.

Yet it has always existed, in small space and narrow opportunity, perhaps, but none the less absolute for the littleness of its beginnings. In bygone generations the motto of "scientific management" was as it is now, "Let your head save your heels," and it dominated every home where a careful housewife turned and twisted and eked out her capital of money and assistance to smoothly running domestic perfection.

At all times discretion of management has been a fine art, although past genera-

tions have been slow to recognise it as such. Ruskin, it is true, writing fifty years ago, said, "It means carefulness and inventiveness and willingness and readiness of application." It is interesting to compare with this praise an extract from a recently written book, a pæan of the "modern efficiency" movement. "She used her head even in little things. When she was cooking breakfast and had a good fire she'd have half her dinner on at the same time. When she was busy she was the busiest woman you ever saw. She worked with her head, both hands and her feet." Both statements are merely an amplification of the rule by which your head saves your heels, an axiom used even in leisurely Greece, where it runs, "Aimless the mind, double the trouble."

Undoubtedly "scientific management" has come to stay. Then why not swing into step with the movement at home? Happy indeed are the households where the children have been bred in system and order, the bases of "modern efficiency;" where shoe-laces, books, caps, coats do not have to be found when the last bell is ringing. But such cases are too uncommon. If the head only thought, say the night before, how few tired heels—particularly of the mothers—would be found next day!—*Youth's Companion.*

The Force of Example

A MUSICIAN once gave a splendid illustration of the force of example when a friend complained to him that the children she was drilling would not sing a certain measure correctly.

"Can't you help me?" she said. "Can't you tell me some way of making them do it right?"

"Do you play it right?" he asked.

"Yes, she did."

"Well, then," said the musician, "keep on playing it right and *hard* and they must follow you in time."

So we can teach our children by means of our own good examples.—*Selected.*

The Child That Is to Be

By Sarah Curtis Mott

THIS is to be an intimate talk on those thoughts which should lie deepest in every woman's mind, on those actions which touch too lightly the surface of her daily life, but which reach sooner or later—often too late—the profoundest depths of her soul. Let us go apart into the room that is your own, close the door against disturbing influences, and, in the silence, sit face to face with conscience, in sympathy and with open heart seeking the truth. Let us take account of our motherhood.

The bond between a husband and wife is sacred, but that between a mother and child is holy. The love of the one may be consecrated; that of the other is divine. For the sake of the child are all things done. He is the hope of the ages, the symbol of Deity, the pledge of God to man. But the fact remains that in actual practice motherhood is not always the clean, wise, protecting agency it was meant to be. Knowing what the child is and is to become, yet do we do it much evil—seldom intentionally, sometimes unavoidably, often unthinkingly; but, however occasioned, the child is the victim of our unwisdom, whether it spring from ignorance, from indifference, or from intent.

I am constrained to think that prenatal influence is not clearly understood. Indeed I have met quite intelligent women who were strangers to the term and the idea. Some women even deny it.

The fact that it is not only possible to mark a child, but it is also necessary to use precaution not to do so, should be incontrovertible evidence that the unborn is susceptible to both the physical and mental conditions of the mother. It is not clearly enough understood, however, that during the entire period of approaching motherhood every care should be observed to spare the expected child the

deleterious effects which result from three causes: the mother's overwork, exposure to unpleasant sights, worry.

A prospective mother should not do herself the injustice and her unborn child the wrong of sacrificing her strength in the doing of hard household duties which, however incumbent upon her at other times, are of little consequence in comparison with the sacred undertaking of bringing a normal human being into the world. The wealthy, of course, can save themselves at this period. And at the other extreme there are undoubtedly women whose circumstances are such as to make it practically impossible for them to save themselves at such times. These women I do not censure: on the contrary I exempt them. Fortunately for the race they have a vitality that very often overcomes ills that in the cases of other women would be handed down to the children. But between these two types of women, the wealthy and the very poor, there is a very large class—perhaps the largest—who could at these times do differently if they chose to, provided they were to give the matter sufficient thought. I have seen such women, whose husbands were well able to provide help in the house, stand over the washtub, the gas-stove, or the canning-table when they should have been flat on their backs. I have known them to move heavy pieces of furniture, carry tired children up and down stairs, scrub floors, and wait upon husband and little ones when they were fairly trembling from weakness and almost faint because of pain. It was not that any of these women could not afford a maid, nor always that the husband would raise an objection, but that the wife felt that no one else would keep the house in as good order as she required; or she feared that her husband would form the

habit of spending his leisure elsewhere if less effort were evident in the care of the home and providing for his comfort; or she persuaded herself that she ought to economise as much as possible in view of the expense to be incurred by the expected event. These and a dozen other foolish reasons—reasons? No, with greater exactness let us say “excuses”—have I heard expressed to account for the absurdity of this course. For it is absurd. Not only that, it is also, unfortunately, something far worse: it is wicked.

Let a woman look at it from any standpoint. Can the most immaculate house-keeping, the most devoted attention to the ease of the family, atone for even the slightest possible injury to an unborn child? Can the criticism of neighbours, or the fact that you are spending a few extra shillings, have weight in your mind against the possible invalidism of yourself or of the little life that is to come? Is anything on earth of so much importance at this time to both you and that life as the one great fact of a strong and healthy child? On your hands rests the responsibility of the little soul and its posterity. This is not a matter in which you alone are concerned, even chiefly. The child's welfare is of paramount importance—even more so before than after birth. Upon the treatment to which you subject it depend its health, its mental ability, its moral fibre, its traits, and its inclinations, its future usefulness, and its happiness.

It cannot be too strongly said to every wife, nor too strongly urged upon every husband, that a prospective mother should be spared, and the greatest care should be exercised to spare her from all shocking, painful, or unbeautiful sights. She should be shielded not only from these actual things, but also from the suggestion of deformity, the ravages of disease, or suffering in any form. When the tremendous importance of this is more generally understood, civic authorities will be called upon to clear the public thoroughfares of those beggars whose bodies or limbs have been mutilated by accident, as well as of born monstrosities.

The fact is not sufficiently clear in the minds of a great many persons that a woman's mental condition is not normal during this period. Persons, sights, sounds, odours, conduct, ideas, and duties, which usually cause her no uneasiness nor anger, may become highly repugnant to her at this time. Her moods change quickly and without apparent reason. Her likes and dislikes are acute. The eccentricities of this nervous state must be allowed for. This does not mean that her effort to self-control should be abandoned or abated, but that whatever is offensive or unpleasant should be kept outside her environment. On the other hand those persons who have a soothing effect upon her, which keeps her cheerful and happy, with a wholesome outlook upon life, and which encourages hope and love, tranquility and content, should be her constant companions.

That the unborn child is a sensitive plate which records and later develops and reveals whatever impressions are thrown upon it through the medium of the mother's emotions and sensations has been tested and proved. For example, it is quite possible to implant the love of books, music, pictures, and flowers, or to instil other helpful inclination in the coming child. One may even make it a predominant characteristic. A woman I am acquainted with, who wished her child to possess an aptitude for art, made a point of visiting picture galleries and feasting her eyes on the beauties of line and colour. When the child was old enough to notice his surroundings, the first object to attract his wandering attention was a picture. In a way it was familiar. He was vaguely conscious of having seen a like object before. This taste is developing with his growth, and, though he may not choose an artist's career, his love of art will always be a refining element in his life, a personal pleasure and a resource of possibly greater benefaction to his posterity. See how far-reaching may be this one woman's idea. It is not possible, of course, for all of us to reach art galleries, but the poorest of us can have good pic-

tures in the home, even if they only cost a penny each.

As stated, love of music and of books can likewise be instilled in the forming child. If you can play any musical instrument at all, this is the time to exercise your ability. Make it a gift to the little one. When vexed or tired go to the instrument as to a friend, and let it soothe the troubled mind and bring repose to the fainting spirit. A pretty illustration occurs to me in this connection. A friend who was in this impressionable condition heard a new lullaby. It appealed to her strongly. She learned it, and when feeling distressed or depressed, sang it to comfort herself. When her baby came, he had ill health; but no matter how intensely he was suffering, if she sang the lullaby he stilled his crying and listened attentively, apparently soothed by it as the mother had been before him. Oh, yes, it is possible to influence a coming child. Only the narrow-minded and ignorant refuse a belief in prenatal influence.

Let a prospective mother keep her mind habitually filled with healthful thoughts, pleasing fancies, beautiful imaginings, tender hopes, the fairest expectations. If they do not spring up naturally, let her make a supreme effort and plant them resolutely and cultivate them with all the patient care she can bestow. And she shall rejoice and be exceeding glad, for great shall be her reward.—*Ladies' Home Journal*.

A Mere Pastime

SINCE people differ on every subject under the sun, they naturally differ on the subject of work. Certainly not many would agree with the idea of work held by the woman of whom *Lippincott's Magazine* tells:—

"A weather-beaten woman, somewhat over six feet tall, with shoulders proportionately broad, appeared at a back door in Wyoming and asked for light house-work. She said that her name was Lizzie, and explained that she had been ill with typhoid fever, and was convalescing.

"'Where did you come from, Lizzie?' the woman of the house inquired. 'Where have you been?'

"'I've been workin' out on Howell's ranch,' replied Lizzie, 'diggin' post-holes while I was gittin' my strength back.'"

Long Hatpins

"LONG hatpins, the unprotected points of which project beyond the wearer's head, are no longer fashionable. There are, indeed, indications that hatpins may be wholly discarded. Queen Mary, just before she sailed for India, gave orders that all her hats should be fitted with the old-fashioned elastic cord. None of her hatpins were invited to the durbar."





THE CHILDREN'S HOUR

Poison for Boys

A FEW years ago a boy and his sister amused themselves by blowing soap-bubbles from one of their father's old pipes. In doing this they unhappily swallowed some of the tobacco juice stored up in the stem and bowl of the pipe.

This juice is a deadly poison, as the two poor children found to their cost. Both of them fell dangerously ill, and one of them—the brother—died from the effects of the tobacco poison.

Too many of our boys are trying hard to poison themselves nowadays with this self-same poison, only, in place of sucking in the poison by mischance from an old pipe, they are knowingly sucking it in from the deadly cigarette.

Only a few weeks ago a schoolboy died in the northern district of Glasgow, and his doctor said that his death was caused

by the tobacco poison which he had swallowed in smoking cigarettes.

And hundreds of boys, in this and in other countries, are either injuring or killing themselves in the same way. In Germany, for example, it used to be said that one-half of the young fellows who died before arriving at manhood were killed either wholly or in part, by smoking.

No wonder, then, that the cigarette is regarded as the worst enemy of our boys. No wonder that in Germany, in America, and in many of the British possessions, it is a crime for boys to smoke before they are at least sixteen or eighteen years of age, and also criminal for shopkeepers to sell tobacco in any shape or form to children.

The following newspaper cutting shows what is being done in New York: "Several New York shopkeepers have just been

summoned for selling cigarettes to children, in violation of the law. The principal of one of the public schools produced in court several of his scholars—pale and nervous boys—as examples of the effects of cigarette smoking. He stated that some of his pupils appeared to be on the verge of losing their reason through the baneful habit, and in their interests he declared his intention of prosecuting every person caught serving minors with cigarettes."



SHUN SMOKING, BOYS, AS YOU WOULD SHUN
SELF-DESTRUCTION

And it is to be hoped that all nations will, ere long, make laws to prevent boys from killing or injuring themselves by cigarette-smoking, and also to prevent shopkeepers from selling the poison to children.

Yes, boys, I repeat it, the deadly cigarette is your worst enemy, and the worst enemy of your country; and you who smoke it are helping this enemy to ruin the empire by making its future men pygmy dwarfs with little bodily strength, and even less strength of mind.

A hundred years ago the average height of a Briton was five feet ten inches, *i.e.*, nearly six feet; to-day the average Briton

is five inches shorter, or only five feet five inches high. That is what the cigarette, smoked by foolish boys, has done, and is doing, for our race.

I say this because, a century ago, the boy-smoker was unknown, and because doctors agree that one of the chief reasons, if not *the* chief reason, for this falling off in height and strength, is the deadly cigarette in the mouths of foolish lads.

Look at the sallow face and the lean and stunted figure of the young man who, when a boy, was a cigarette-smoker. He is like a broken-down old man. If he looks down from a height he becomes dizzy. And how stupid and lazy he is. He seems a regular loafer. And then he has no pluck. The least thing makes his limbs tremble and his heart beat fast.

Such is the evil work of the cigarette upon the tender frames of growing lads. It is easy to understand that drop from five feet ten to five feet five, and to see why Britons are, in proportion, weaker in mind and in body than their countrymen of a hundred years ago, who were not, in their boyhood, foolish smokers of the baneful cigarette.

Tobacco does no good to grown-up people; but upon the tender, unformed bodies of growing youths, whose organs are delicate and whose frames are unset, tobacco acts as a terrible poison, certain to injure, and capable of killing the feeble-minded lads who smoke it.

Once again I say that to smoke now that you are growing, and therefore at your weakest, is hurtful to you in so many ways, that it is madness for you to form the deadly habit. *Shun smoking, boys, as you would shun self-destruction.*—T. Cartwright, B.A., B.Sc.

STRATTON D. BROOKS, superintendent of public schools, Boston, Massachusetts, says: "My experience with boys leads me to believe that the vice of tobacco has detrimentally affected the mental, moral, and physical characteristics of every boy under twenty-one who has made use thereof."—*Youth's Instructor*.

The Boy's Motto

A BOY walked into a merchant's office in search of a situation. After being put through a catechism by the merchant, he was asked: "Well, my lad, what is your motto?"

"Same as yours, sir," he replied; "same as you have on your door—'Push.'"

He was engaged.—*Selected.*

Maple-Sugar and Tapioca

BLANCHE and Harry, aged five and six respectively, were very fond of maple-sugar.

Blanche, being of an inquisitive turn of mind, asked her mother how it was made.

Her mother explained how maple-trees were tapped, and the sugar made from the sap.

The explanation was not convincing to Blanche, however, and she asked her brother if he believed it.

Harry, who never doubted anything his mother said, immediately replied: "Why, of course; you tap maple-trees and get maple-sugar just the same as you tap an oak-tree and get tapioca.—*The Linnean.*

A New Language

IN his recent book, "Memories of a Labour Leader," Mr. John Wilson, M.P., gives an amusing instance of the confusion which arises from the differences between the names of articles of home use in England and their names in America.

Mr. and Mrs. Wilson formerly lived in America. They had as a neighbour, in a Pennsylvania mining town, an old lady who had left Tyneside some years prior to their acquaintance with her. She gave them an account of her first attempt to make herself understood at the general store. She described to them the many misunderstandings which arose between her and the storeman until she came to the last article, which was treacle. She had never changed her dialect, but spoke

the pure Wallsend, with the burr untouched.

"Aa want some treacle," she demanded, in unadulterated Northumbrian.

"I don't understand what you mean, ma'am."

"That in there," she said, pointing to a hogshead.

"That is molasses."

"That's what Aa want. Gi' me a pund of it."

"We don't sell it by weight, ma'am; we sell it by measure."

The old lady gasped in utter amazement.

"Dee ye mean to say," she faltered, "that ye sell treacle by the yard in this country?"



BOYS WHO DO NOT SMOKE CIGARETTES
ARE WISE

When Martha Scrubbed the Floor

HAROLD ran into the kitchen and helped himself to a slice of bread and jam, and, as he stood eating it, he watched Martha's strong hands making the floor clean with the aid of soap and water and a stout brush.

"Why do you always scrub one way, Martha?" Harold asked presently. "Why don't you sometimes scrub across?"

"That would be going against the grain," she answered. "This way, it is going with the grain. The grain is the little veins in the wood, you know. It makes the floor cleaner to scrub with them, besides being easier."

"I shouldn't think that would make much difference," Harold said.

"You'd find out, if you had to scrub the floor," Martha smiled. She added, as she arose to get a pail of fresh water, "If you go with the grain in folks, instead of against it, it keeps them much sweeter-tempered, and it makes things easier."

"Do people have grain?" Harold asked.

"Surely," Martha answered. "This morning, when Polly wanted her ball and you hid it, you were going against her grain. Maybe you call it teasing, but that's only another name. When your mother wanted you to go to the store, and you said 'in a minute,' and when she called again, 'pretty soon,' that was going against her grain. Whether you're dealing with folks or floors, it's best to go with the grain, I've learned. It saves a good deal of trouble."

Harold thought this was a queer way for Martha to talk, still he decided that he would try not to go against the grain in folks after this.—*Exchange.*

"If you look on the bright side of things, it takes the drudgery and worry and pain out of life, snatches the sting from poverty, robs defeat of its conquest and disease of its worries."

AGE that is healthy and vigorous is always pleasing to notice. Lord Strathcona, at ninety-one, has just made a journey from London to Winnipeg and back—about ten thousand miles—in seventeen days. "My age is nothing," he remarked. "In a few years men should look upon a man of ninety as merely middle-aged." This sturdy Scot went to Canada seventy-three years ago, as Donald Alexander Smith, to take a place in the Hudson Bay Company. He is now the head of the company and a man of title. Perhaps it is significant of character that the same strong little leather trunk that came with him on the first trip came also on this latest. It is significant of the character of the trunk, at any rate.—*Youth's Companion.*



Chats with the Doctor

[Send questions for this department to the Medical Superintendent, Sydney Sanitarium, Wahroonga, N.S.W.]

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.

49.—Gastro-Intestinal Catarrh; Medical Clairvoyancy; Herbal Medicine.—"What is the best mode of living for a person suffering from bad catarrh of the stomach and bowels?"

Ans.—The best mode of living for a person suffering with catarrh of the stomach and bowels is one which conforms to all the rules of hygiene. A person so troubled should give special attention to diet, eating only foods which are simple, wholesome, and easily digested. When milk agrees, this may be made the principal food. It is more easily digested when eaten with bread or biscuits than when taken by itself. Some cases do very well on boiled zwieback and milk. Other suitable foods are: Toasted corn flakes, cereals, strained gruels, fruit jellies, lactosa, melsitos, and bland fruits, such as very ripe bananas, persimmons, or date plums, and sweet, soft pears, etc. Vegetables are best avoided in their ordinary form, but smooth purées and strained vegetable soups and broths may be taken, such, for example, as potato soup made with milk and green peas purée. Very tender cauliflower is also suitable.

Aside from dieting, attention should be given to water drinking and the care of the bowels. Cold water should be taken about an hour before each meal in amount from one-half to one glass. If the bowels do not spontaneously act, a small, cool enema is best taken daily—from one-half to one pint of water, from 80° to 85° F. The water used for the enema should contain common salt in the proportion of a level teaspoonful to the pint. Olive oil may be taken once daily, or at least several times a week, in tablespoonful

doses before dinner or on retiring. Attention should be given to bathing, as an unhealthy condition of the skin imposes extra work on stomach and bowels. The baths required are a warm soap bath once or twice weekly and a daily cool sponge or friction bath. Deep breathing and out-of-door living aid in the cure of this condition. Chronic cases often require treatment in a modern health institution under medical supervision.

2. "Can we put much faith in medical clairvoyants and in herbal medicines?"

Ans.—Personally I have no faith in clairvoyants, either medical or any other sort. A person who takes fees on the pretence of looking into the human body and seeing things which are wrong is obtaining money dishonestly. There is a decided difference between carefully examining a person and deducing certain conclusions from obvious symptoms and facts, as is done by the regular physician, and in calmly closing one's eyes and asserting that such and such things are the matter, as is done by the average clairvoyant. In the one case a long course of study of the body in health and disease qualifies for giving an opinion; in the other, no trouble at all is taken to understand the body and its workings. The average farmer knows far too much about machinery to call in a clairvoyant to ascertain what is the matter with a mowing machine which will not work. It would be well if the sick person were equally wise about his body.

As to putting faith in herbal medicines, that is quite a different matter. Herbal medicines do produce effects provided you get the right herb and give it in suitable quantity and concentration; in other words, in proper dosage. For example, the poison nut, *Strychnos Nux Vomica*, is effective whether it be given by a herbalist or dispensed by an ordinary chemist.

The only difference is this, the herbalist has some crude preparation of the drug which is uncertain in strength and action, while the modern chemist provides an active, concentrated preparation which has been carefully tested. The fact that this and various other drugs which are products of plants, whether given by the herbalist or chemist, irritate, excite, or disturb the various organs of the body, is by no means evidence, however, that they are productive of good when given in cases of illness. It simply proves that they are active, or, as previously stated, effective. We can put faith in them just that far. To believe that these drugs cure disease is to misplace faith altogether, for the fact is the body heals itself. In other words, "the life is in the blood," and it is the blood which does all the healing. Whether drugs be given or not, this is a fundamental fact. In most cases drugs do not help the blood in restoring the body. In many cases they hinder. This is equally true of the herbalist's and chemist's preparations, or of those of the nostrum vender. The only persons competent to judge whether drugs will help or hinder in a given case are those who possess a deep insight into the body and its functions and a wide knowledge of the drugs. In other words, the giving of drugs should be left to qualified physicians. If this were done there would be far less drugging than at present.

50. Effects of Tea; Molasses.—"What do you think of the enclosed extract from a contemporary? I am a vegetarian, and abandoned tea some time ago owing to what I read in your "Good Health" magazine. The results were highly beneficial in my case."

Ans.—The extract enclosed reads as follows: "People have been told so often of the health-ruining, nerve-racking effects of tea drinking, that it was a welcome surprise to the lovers of the cup to hear a word of praise uttered for the favourite beverage at the Medical Congress. One of the speakers spoke of the discovery made during the South African war that

the Australian troops fared far better when they were allowed to drink their homely tea than when they consumed the official lime juice, and it was afterwards found that tea-drinking troops suffered far less from certain diseases than troops who did not enjoy the cheering cup. So the bushman triumphs again. He never took any notice of those who condemned tea; he had found out its virtues for himself, and he stuck to it. Shearers drink cold tea all day long; a bucket of it—strong and black—hangs in the shed all the while that work is going on; and it keeps up their strength. They never use milk in it, except at meal times. Men doing heavy bush work, as timber-cutting and splitting, find it impossible to work without tea. When on water they grow weak quickly. Water with a little oat-meal mixed with it keeps them in better fettle; but cold, black tea is more satisfying and strength-preserving."

These statements are a mixture of fact and fiction. They serve as a few samples of erroneous ideas which prevail regarding tea drinking. It may be true the tea-drinking troops suffered less from certain diseases than did troops who did not drink tea. The virtue was not in the tea, however, but in the boiling of the water used for making the tea. The men who did not drink tea probably drank unboiled water which often came from questionable sources. They were thus infected with disease germs which, in the other case, were destroyed in boiling the water used for making the tea. As to tea keeping up the strength of shearers and timber-cutters, that is impossible, as a bucketful of tea contains less nourishment than a tablespoonful of milk; indeed, it contains none at all. The bucket of tea does contain, however, a large amount of stimulating drug. But stimulation is not strength. And to work on the stimulant obtained from copious draughts of black tea has proven a ruinous policy in innumerable cases. Your own experience of improved digestion and better health after leaving off tea is the common experience of thousands who have followed a similar

course. The non-tea-drinker never reports benefit through beginning the use of this drug-drink.

2. "Is any benefit to be derived from taking molasses, as now prepared and sold for human consumption, and is any ill-effect likely to be experienced by the daily use of a small quantity taken after meals?"

Ans.—Molasses has a laxative effect, but it is somewhat irritating to the stomach and bowels. Any apparent benefit experienced from its daily use is more than counterbalanced by its tendency to induce a catarrhal condition of the gastrointestinal canal.

51. Preservation of Peanuts; Daily Ration; Food Values.—"Will peanuts keep better when washed and dried in the sun than when baked in the oven?"

Ans.—Raw peanuts washed and dried in the sun keep sweet for a much longer time than when treated by baking in the oven. The process of baking frees the fat, and the free fat then becomes rancid after a few weeks or months, depending on climatic conditions. Nuts which are simply washed when taken from the ground and then thoroughly dried in the sun keep sweet for many months or even years. They may be baked just before using, though they are less digestible when prepared in this way than when steamed under pressure.

2. "How much proteine, fat, and carbohydrates does a person need daily? and how much of these elements are contained in the following foods: Currants, apples, pears, peaches, plums, pineapple, bananas, apricots, strawberries, cherries, dates, figs, prunes, beans, beetroot, cauliflower, carrots, table corn, cucumber, lettuce, onions, peas, pumpkin, parsnip, radish, tomatoes, potatoes, bread, milk, honey, oil, and biscuits."

Ans.—In order to answer this question in a simple and intelligent manner, it is necessary to explain briefly the unit or standard of food measurement which has been recently adopted. This convenient unit is the calorie. A calorie represents

as much food as will liberate energy in the form of heat sufficient to raise the temperature of one pound of water 4° F. Such an amount of a given food as will liberate 100 calories, we may conveniently designate a "portion." One ounce of dry sugar, starch, or proteine is rather more than a portion, as that amount is sufficient to produce 116 calories. In caloric value these are equal, though each serves a different purpose when introduced into the body. The caloric value of pure fat is more than double that of starch, as an ounce yields 264 calories. With this explanation of the unit of measurement applied to foods, we can give in calories, or portions of 100 calories each, the amounts of proteines, fats, and carbohydrates required daily by the average person. This is roughly:—

Proteines 2 to 3 portions, or 200 to 300 calories; fats 5 to 9 portions, or 500 to 900 calories; carbohydrates 10 to 18 portions, or 1,000 to 1,800 calories.

Of these the proteine builds blood and tissue, while the fats and carbohydrates furnish warmth and energy for work. The figures vary with different persons and under different conditions.

TABLE OF FOOD VALUES

Fresh Fruit	Ounces in Portion	Calories in Portion		
		Proteid	Fat	Carbohydrates
Apples ...	7	3	7	90
Apricots ...	6	8	0	92
Bananas ...	4	5	5	90
Currants ...	6	10	0	90
Cherries ...	4½	5	10	85
Grapes ...	5	5	15	80
Peaches ...	10	7	3	90
Pears ...	5½	3	7	90
Plums ...	4	5	0	95
Pineapple ...	8	4	6	90
Strawberries	9	10	15	75
Dried Fruit				
Dates ...	1	2	7	91
Figs ...	1	5	0	95
Prunes ...	1½	3	0	97
Raisins ...	1	3	9	88
Vegetables				
Beans ...	16	15	45	40
Beetroot ...	9	2	23	75
Cauliflower	10	12	60	28
Carrots ...	6	10	30	60
Corn ...	3½	15	10	75
Cucumber ...	20	20	10	70
Lettuce ...	18	25	15	60
Onions ...	8½	10	40	50
Peas ...	3	25	25	50

Pumpkin ...	5	8	12	80
Parsnips ...	6	10	30	60
Radishes ...	17	18	2	80
Tomatoes ...	15	15	15	70
Potatoes ...	3½	11	1	88
Miscellaneous				
Bread ...	1½	10	5	85
Biscuits-Granose	1	15	5	80
Milk ...	5	20	50	30
Honey ...	1	0	0	100
Oil ...	$\frac{2}{5}$	0	100	0

52. How to Keep Young; Cause of Wrinkles; Headaches.—"Could you give me a few of the best rules for keeping young?"

Ans.—Rule 1. Be loving, kind, and sympathetic; keep young in heart and mind.

Rule 2. Be optimistic. "Take no [anxious] thought for your life what ye shall eat, or what ye shall drink; nor yet for your body, what ye shall put on." "Be anxious for nothing."

Rule 3. Rise and retire early, and live a wholesome, simple, outdoor life.

2. "Cause of wrinkles appearing in the forehead of a young person, and how prevented?"

Ans.—Wrinkles on the outside of the forehead may often be regarded as the puckers due to sour, discontented thoughts inside. The remedy consists in keeping sweet.

3. "What would be the cause of a severe headache across the forehead in a person of twenty-five unaccustomed to headaches? It lasted for about a week, and after that it completely vanished. It got much worse the third and fourth days, then gradually got better. The digestion seemed in good order, and though fasting and a simple diet were tried they had no effect."

Ans.—This severe headache may have been due to worry or anxiety of some sort, or to simple eye-strain, the eyes having been more taxed than usual. Or, the headache may have been due to any one of several other causes, an exact diagnosis being impossible without further information. If the headache recurs at regular intervals, the cause could be searched out; if it does not recur, it is a matter of indifference what caused it.

4. "Please give advice for a lady of forty-nine who suffers a great deal from headaches at the back of the head, about the nerve centre. They trouble her more in the warm weather, and are very severe at times, lasting two days. Sometimes there is a feeling of emptiness in her head. Noises of various kinds easily irritate and upset her. She has a strange feeling that she just wants to be alone, and, indeed, to live by herself, and does not wish to see or meet anyone. She lives on a dairy farm, and has for years managed the business of it, but feels it too much now. She lives a good deal in the open air, and is very fond of nature and out-door life. Is this a serious condition to be in?"

Ans.—This is a much more serious form of headache. It is due in part to the change through which the patient is passing. She should be relieved of all responsibility in connection with the dairy farm. Unless relieved of all care, and given an opportunity to live a peaceful, quiet, happy life, the headache may prove the forerunner of serious nerve and brain exhaustion.

53. Lactosa.—"In the August-September number of LIFE AND HEALTH you mention "the taking daily of a pint or more of scientifically soured milk." Is it possible to "scientifically" sour milk other than in the ordinary way? If so, can it be done by the ordinary person, and please explain how? Do you recommend the taking of the above as a powerful factor in the helping to keep a person in robust health? Will you please give some information and advice regarding the use of it?"

Ans.—In reply to this query I may say that the scientific souring consists in the addition of selected germs to previously sterilised milk. These tablets, crushed and added to sterilised milk, cause the milk to turn sour through the rapid multiplication with resulting acid formation of the lactic acid bacillus. Milk prepared in this way differs from accidentally soured milk in very much the same

manner that a flower garden differs from waste land. In the one grow plants which have been selected; in the other grow weeds and such plants as have been carried there by chance.

Because of its disinfectant action, scientifically soured milk is useful as a cleanser of the alimentary canal; while milk which has simply gone sour or rancid, or has otherwise altered through having stood unprotected for a dangerously long space of time, may not only be of no value, but may be injurious as well; indeed such milk sometimes develops deadly toxins and ptomaines.

Scientifically soured milk is known at our sanitariums and health food cafés as lactosa. You may obtain tablets for the preparation of lactosa from the Sanitarium Supply Dept. The price is 3/7, post paid, for a bottle containing two dozen tablets.

54. Swollen Glands; Greasy Dandruff.—"I would like to ask your advice in reference to the treatment of a baby that has a hard swelling in the neck just under the ear. The mother has had the local doctor's advice, who stated it to be glandular swelling. The baby gets feverish now and then, otherwise it looks fat and well. The doctor also told the mother the lump was too deep to be lanced. I looked it up in "Home Hand-Book," and as far as I could understand, thought it to be what is described there as scrofula, but would like to be sure that this is correct."

Ans.—The doctor's diagnosis is quite correct; the lump in the neck is a glandular swelling, and the further information which you obtained from "Home Hand-Book" is also correct, as the condition was called scrofula years ago. It is really tuberculosis of the lymphatic glands of the neck. This is the mildest form of tuberculosis, and is one from which the

patient usually recovers. The swelling should not be lanced unless an abscess forms, which will be shown by softening and redness of the skin where the abscess points. With nourishing food and proper care such an abscess ought not to form. One of the most essential points in treatment is an abundance of pure air and sunlight. The child should really live out of doors, but during the warm summer weather care should be taken to protect against sunstroke.

2. "I would also like to ask what would cleanse the scalp from greasy dandruff that causes the hair to get oily very soon so that it has often to be washed to get somewhat rid of the greasiness?"

Ans.—I would suggest that the scalp be shampooed with some good soap as frequently as convenient, and that it be cleansed daily with equal parts of spirit and water. Resorcin added to the spirit in the proportion of five grains to the ounce has a beneficial effect.

55. Phosphaturia.—"I would feel most grateful if you would inform me how to treat discharges of phosphates in the urine. They are often most copious, and everything I eat seems to bring them on."

Ans.—It is hardly necessary to treat this condition other than by means of diet. You should partake freely of fresh, juicy fruits such as oranges. You should also drink plain and lemon water freely. Your diet should consist of cereal foods, fruits, vegetables, eggs, and dairy products. Do not take proteid foods too freely, and abstain from tea, tobacco, and alcoholic drinks. Out-door exercise and cool friction baths will help to improve your condition. A few weeks' treatment and dieting at one of our sanitariums would also benefit you greatly. F. C. R.

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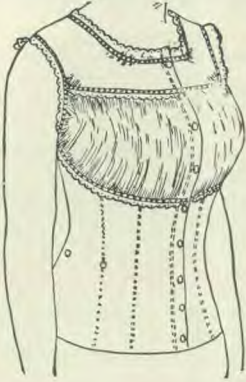
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