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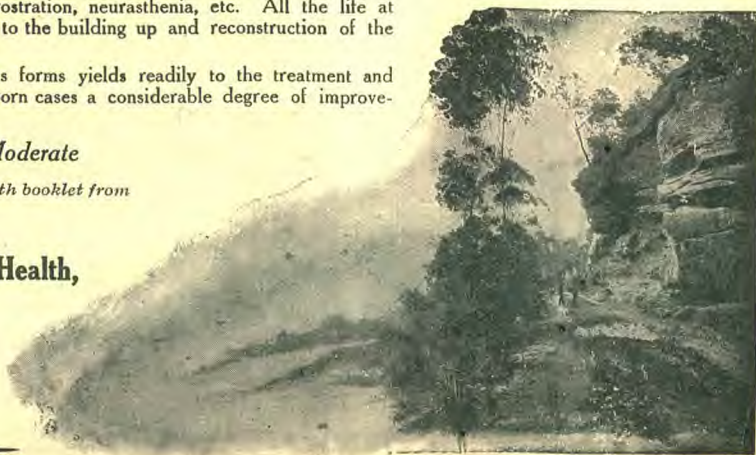
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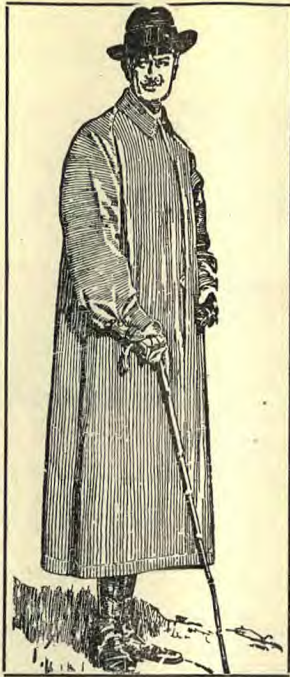
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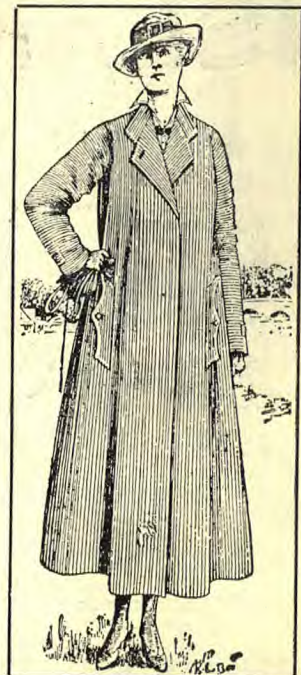
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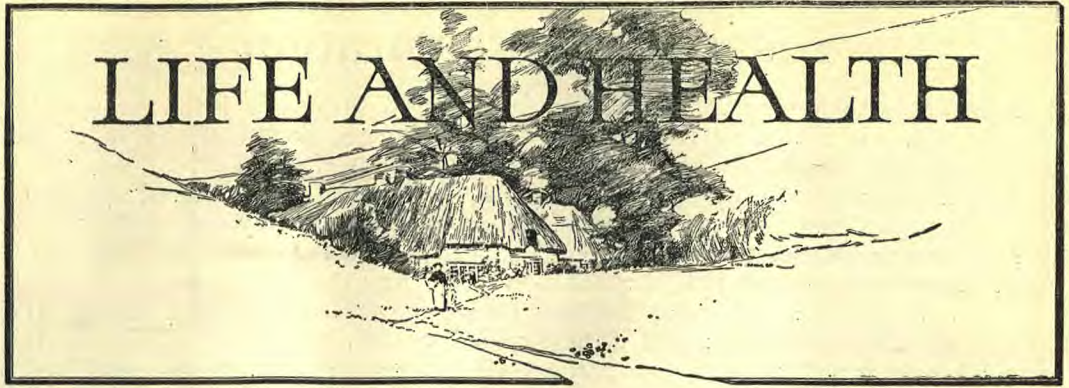
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Our War Cripples

THE man who wears a wooden leg or an artificial arm, or walks with a crutch, may be handicapped for some jobs, but be able to do a full man's work in others. Because a man is a cripple, he is not necessarily an inefficient.

The Red Cross Institute for Crippled and Disabled Men (New York City) has prepared a great quantity of leaflets and booklets describing what has been done to rehabilitate the cripples of the war, and what kind of treatment the public should give them. The message of these publications is being scattered broadcast. We quote:—

“The cripple is not helpless, but capable, provided the right job is found for him. . . . In the past we have done everything possible to make the cripple a failure. We have been lavish with charity, but short on giving him a real opportunity to make good. The attitude of the public has been a more baffling difficulty than the loss of a limb. With our new responsibilities to the men disabled in this war, we must make our influence a help rather than a hindrance. The responsibility for making the work done by the Government in their behalf effective rests with the public. We can help to make life worth while for our crippled soldiers:—

“By showing them real gratitude and respect, but avoiding hero-worship or sentimental sympathy.

“By expecting them to continue doing their duty, and encouraging them in the effort.

“By helping to find them real jobs which they can hold down. If you are a worker, by seeking out positions in the shop or office which cripples can hold; if an employer, by reserving for cripples jobs they can properly fill, not as charity, but on the basis of competency alone.

“By helping others to a sensible and intelligent view of the matter.

“We cannot now afford to leave in idleness men who can be useful producers. So as good patriots we can start with the cripples now among us and continue the work with the crippled soldiers when they return.

“We may have cripples in the physical sense, but the moment we get them at a useful job the vital handicap disappears.

“Can our crippled men count on you as a real friend?”

We hope they can; for in many cases these crippled men have not only themselves to support, but wives, mothers, or children. Help the crippled man to find a place, and give him what encouragement you can in filling it effectively.

Diseases of Respiration

IN dealing with any organ, any system of the body, whether it be that of the circulation, the respiration, the nervous or the glandular system, we must recognise the dependence of every organ of every system on all the others. We cannot treat any part as a unit in itself. The apostle well puts it: "For the body is not one member but many; and if they were all one member, where were the body? But now are they many members, yet but one body, . . . and whether one member suffer, all the members suffer with it; or one member be honoured, all the members rejoice with it."

We cannot treat the diseases of respiration without giving thought, yea, much thought, to the digestive, the circulatory, and the nervous systems; they are interdependent the one on the other.

We do not wish to enter into the anatomy (the structure) or the physiology (the functions) of the respiratory system, but some facts must be clearly recognised for the successful treatment of diseases of that system. By the act of breathing we inhale the oxygen by which we are surrounded, and exhale air contaminated by the waste products, the physiological ashes of the body. There is a decided similarity between respiration and the burning of fuel. From the fire we get warmth and energy by the union of the elements of the fuel with the oxygen of the air. Similarly our food must be oxidised for the warmth of the body and the energies of every tissue and organ. And again, in the fire there are waste products—smoke, gas, and ashes—which are produced in the burning.

Our food, before it can be utilised for warmth and energy, must also be burnt up, or oxidised; the burning or oxidation is not so rapid as that of the wood and coal, there is no flame or light produced, but nevertheless heat, energy, and the life of the body are the result. Similarly, waste products, which we may call physiological ashes, are produced, and these

are separated from the blood through the lungs, kidneys, skin, and the other excretory organs of the body.

Every organ, every fibre, of our body must receive its energy and its heat from oxygenation of the elements of our food; consequently the food must be digested, turned into blood, circulated through the blood vessels, and finally stored in the cells of the muscles, nerves, and every fibre of our being. The fuel thus stored up must, however, receive its oxygen if it is to be utilised, and consequently the oxygen must be taken in by the lungs, circulated through the blood, and brought to the stored up products in muscle, nerve, and gland cell.

Quick Breathing

The study of quick breathing will illustrate well the dependence of the organs of the body on one another. Through the nerves under certain conditions the need of more oxygen in the tissues is made manifest. If there be any inflammatory trouble in the lungs, if the blood brought to the lungs is deficient in quantity or quality, the acts of respiration must be increased in frequency in order to supply the requisite amount of oxygen to liberate sufficient energy from the stored-up food to carry on the energies of the body.

All are acquainted with the effects of running or other violent exercise; the respiration is increased in frequency at once, more energy is required, and consequently more oxygen must be taken into the system. In feverish conditions, again, there is not only more burning up—oxidation—of stored-up food, but of the tissues themselves, and this cannot be carried on without an extra supply of oxygen which is brought about by increased frequency of the respiration.

Again, if the blood in the lungs is deficient in quantity or quality, the breathing is increased as the power of the blood to carry oxygen is lessened. In heart disease and in anæmia (poorness of blood

in iron) the circulation of blood is not so good in the lungs, and consequently increased frequency of respiration is the result, especially on extra exertion. In impurity of the blood, as in kidney disease where the waste products are not excreted as quickly as in health, any extra exertion will bring on quick breathing. In injuries to the chest wall, such as fracture of ribs, in pleurisy, in inflammatory and painful conditions of the abdomen, deep breathing causes pain; consequently the respiration is shallow and in order to supply the requisite oxygen it must also be quicker.

Colds

The expression "a cold" has rather a loose application as popularly employed. It may be "a cold in the head" (coryza or acute nasal catarrh), a sore throat, a tonsillitis (inflammation of the tonsils), a laryngitis (inflammation of the larynx or voice box), or a cold in the chest (a tracheitis or an acute inflammation of the main air tube leading to the lungs). Generally the cold extends "downwards," beginning with the "running of the nose," perhaps headache, pain in the forehead and eyes, and with some feverishness. It may remain at this stage or affect the throat, producing sore throat—a general congestion of soft palate and tonsils; or it may extend into the chest, producing first of all a tight feeling, some difficulty in breathing, and finally cough, and a raising of mucus which afterwards becomes a yellowish colour. If the cold extends beyond the main tube (trachea) into the bronchial tubes, it constitutes "bronchitis"; if it extends still further, "capillary bronchitis"; and if into the lung tissue itself, "broncho-pneumonia." The termination "itis" signifies inflammation. Rhinitis (inflammation of the lining of the nose), tonsillitis (inflammation of the throat) are examples.

Causation

The causes of colds are generally put down to chill, exposure to wet, draughts, etc. Some individuals are very prone to "catching cold"; others very rarely

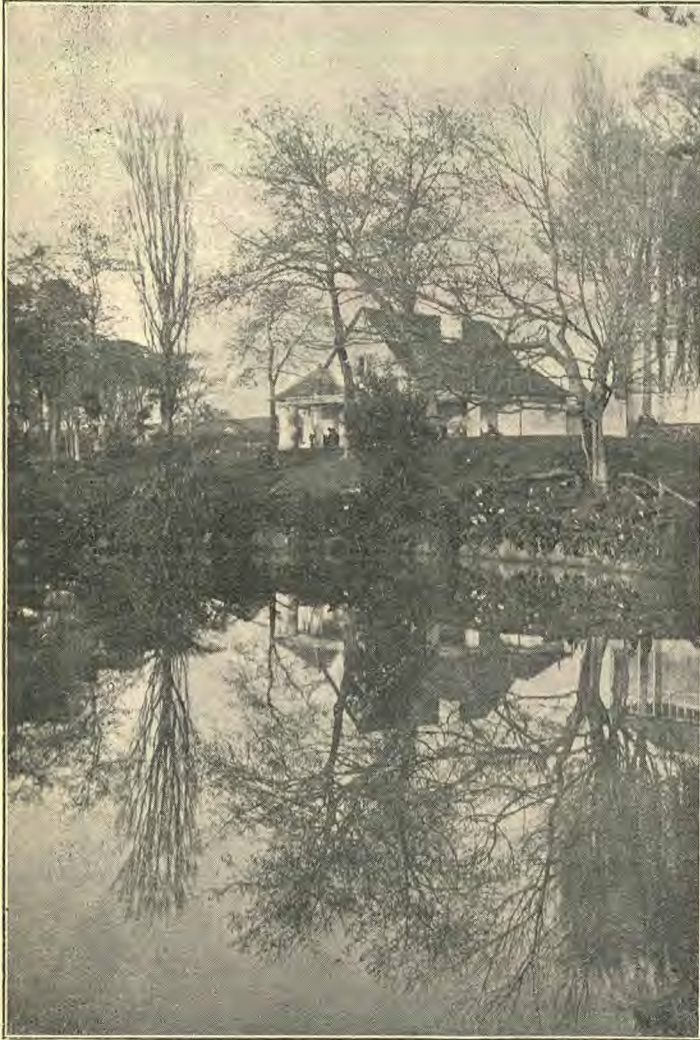
"catch cold" although constantly exposed. Exposure or draught will give an individual a cold at one time, while at another a similar exposure would have no effect; with some exposure will develop a coryza, with others a bronchitis, with others, indigestion, and so on. In all diseases we have what are called "exciting" and "predisposing" causes, and unless both are present the disease does not set in. These chills in the healthy would produce but a temporary congestion of the air passages, which the system would soon dissipate; but with underlying causes this happy result is not so easily brought about. These predisposing or underlying causes may be grouped under two headings: (1) unhealthy condition of the air passages themselves, such as chronic catarrhal inflammations and enlarged tonsils; (2) unhealthy state of the blood, the result of overeating, want of exercise, contaminated air as in overcrowded rooms, and excessive clothing. Excessive eating, unsuitable foods, and excess of flesh or even of other nitrogenous foods, fill the blood with suboxidised products such as uric acid, xanthin, etc. Sedentary occupation and stuffy rooms lessen the amount of oxygen taken in by the lungs and produce the same result. Blood so contaminated does not flow so readily through the capillaries of the lining membrane of the air passages, and thus the congestion caused by chills, etc., is not dissipated. One of the best remedies for a very early cold is abstinence from food. This, by lessening the work of the blood, enables it to excrete the suboxidised products, and the congestion thus disappears through the vital action of the body itself. Excessive clothing night or day interferes with the action of the nervous system, which modifies the condition of the capillaries of the skin and of the lining membranes of the air passages according to the temperature of the air. In cold weather the capillaries are contracted and thus less heat is given off; in hot weather they are dilated, which causes more radiation and evaporation of heat. When the surface

of the body is kept excessively hot by clothing, this regulating function of the nervous system is only feebly carried on, and chills with internal congestions are thus more readily brought about. Alco-

into the skin and exposing it to the colder atmosphere.

The experience of Dr. Page as related by Dr. Heald is an illustration of the good effects of healthful living in the prevention of colds.

"From the fact, observed by him [Dr. Page], that people sometimes escape cold after a severe and trying experience, and again catch cold from a trivial exposure, or without any known exposure, he reasoned that colds must be due to something besides exposure. Suspecting that his constantly recurring attacks might be due to disturbances in his stomach, as well as in his skin, he made a complete change in his diet and clothing, abandoning heavy-weighted flannel garments and the practice of "bundling up" on exposure. He gave up the three-meal system, and the use of fish, flesh, and fowl, and most of the accompaniments of a flesh diet, and lived mostly on vegetable food. Nominally, he ate twice a day, but often he skipped a meal when he noticed any sign of indigestion, or when he had reason to think he would be better off without eating. He averaged, as he says, 'about a dozen meals a week, each less in amount, though more nutritious,



J. H. Kinnear, Photo.

A BEAUTIFUL AND HEALTHFUL OUTLOOK

hol is undoubtedly a predisposing cause of colds; it also interferes with the regulating power of the nervous system in the contraction and dilatation of the blood vessels of the skin according to the temperature of the atmosphere. Alcohol chills the system by bringing the blood

than formerly.' He found that when he lived up to this system of diet, he had no symptoms of cold, and no physical inconvenience. Determined to assure himself more fully as to the influence of diet on the production of colds, he resolved to carry out an elaborate and

extensive series of experiments on himself.

"He walked, with low shoes, in snow and slop, until his feet were soaked, and sat for an hour or more in that condition. He wore all-wool undergarments in moderate weather, and removed his undergarments when the weather became cooler, without using his accustomed overcoat. He slept in winter with a current of air blowing directly about his head and shoulders. He sat, for fifteen minutes, entirely nude, exposed to draught, on a cold, damp night in autumn. He used a flannel gown and heavy covers one night, and cotton sheet and light bedclothes the next.

"Making these experiments repeatedly, he says he invariably failed to catch cold when on his restricted diet; but on returning to his former generous diet of three meals a day, he would catch cold even though he took extreme care to avoid what are commonly regarded as exposures, keeping his feet warm, paying attention to wraps, etc.

"Whenever he had fed the cold as long as he cared to, he banished it by fasting and taking extra rations of outside air. He has never known the method to fail, he says, in breaking up a common cold, in from twenty-four to forty-eight hours, whatever the age, sex, or occupation of the individual, and regardless of the origin of the disease.

"When he continued eating heartily, the symptoms would increase in severity to acute catarrh, headache, slight feverishness, languor, sore throat, pressure over the lungs, and hoarseness, requiring two or three days' fasting, possibly part in bed, with sponging of the skin, in order to effect a cure.

"One thing he says he never did; that is, to breathe impure air, such as is breathed by ninety-nine out of every hundred families, and hence his colds were always more amenable to treatment than those of his neighbours."

It is overloading the blood with impurities and waste products that brings about a slow circulation in the capillaries, and tends to internal congestion. It

must, however, be remembered that debilitated conditions of the system, as in early consumption, will also tend to the production of colds, and in these conditions a liberal diet of easily digestible food, such as milk, eggs, and cream, are essential.

Undoubtedly many colds are infectious and are due to the development of special germs. These "colds" run through a family, they are associated with more or less fever, loss of appetite, and prostration, and should, in fact, be looked on as mild influenza; or the symptoms may be due to some form of tonsillitis. The infectious nature of colds with fever should be recognised and treated accordingly. The secretions from the nose and throat contain the germs; consequently in sneezing a handkerchief should always be held in front of the nose and mouth and these should be boiled at the earliest possible moment and before they have time to become dry. Kissing and embracing should be interdicted and the patient should sleep in a bed by himself.

The Prevention of Colds

It is when the system is run down or overloaded with impurities that we are so liable to disease. Under conditions of good health, exposures to cold, wet, and draught produce but temporary effects, for Nature has her remedies for every change in external temperature. Through the wonderful supervising power of the nervous system, the blood vessels of the skin are contracted in cold weather and the loss of heat by evaporation and radiation are thus materially lessened; in hot weather these vessels dilate and heat is more readily dissipated. Thus the body is kept at one even temperature. If, however, the blood is filled with impurities from overeating or any other cause, it circulates but feebly in the fine network of capillaries throughout the body, and what would be a temporary congestion of the lining membrane of the respiratory tract becomes more permanent, leading to "colds" in the various forms already mentioned. An excessive consumption of

highly nitrogenous food, and especially of animal food, loads the blood with impurities, physiological ashes, which are mainly excreted by the kidneys. Nitrogenous foods are not so thoroughly burnt up, oxidised, as the non-nitrogenous, and their excessive use must therefore be avoided if colds are to be prevented. Excessive use of fats and sweets upsets the digestion, deranges the liver, and prevents the excretion of nitrogenous waste products. Pastry, rich cakes, all foods cooked with or in fat, and sweets of all kinds should be avoided, especially when the tongue is coated or there are other signs of indigestion or high-coloured or turbid urine. These precautions are especially necessary in those of sedentary occupation. Muscular work always means deeper respiration and a fuller oxidation of food, and thus the tendency to overload the blood with impurities is lessened, consequently daily exercise in the open air is an important preventive measure against "taking of colds." The blood cannot carry a sufficient supply of oxygen in close, stuffy rooms, consequently every room, and especially the bedroom, must be well ventilated. Proper ventilation does not mean cold, draughty rooms but fresh clear air. When one is in a room all the day long, he will not notice the effects of ill ventilation. The moment one enters a room after being outside in the open air is the time for testing the condition of the air in a room. The temperature of a room should range from 65° to 70 F., anything above will tend to debilitate; the bedroom temperature is better at the lower point, 65°F.

The activity of the nervous system in contracting and dilating the blood vessels of the skin should always be maintained; consequently excessive clothing must be avoided. The least amount of clothing that will keep the body warm and comfortable should be adhered to. Excessive clothing not only keeps too much blood in the skin and thus increases the danger from chills, but also prevents evaporation of the natural perspiration and clogs the pores of the skin, preventing them from

excreting impurities from the blood. The child of wealthy parents, muffled up from the ears to the feet, is often much more subject to colds than the uncared-for urchin of the streets without boots and socks and perhaps but a ragged shirt over his shoulder and arms; the former is "fortified" (?) by clothes, the latter by a very active nervous system. Nature thus does for the child that which through poverty or neglect the parents do not do.

We, however, would not advocate that the feet and legs be left uncovered, especially in cold weather, even though Nature often makes up for the deficiency. The legs and feet require clothing more than any other part of the body; these parts are farther from the heart than the rest of the body and are consequently more liable to suffer from cold environment. Cold feet and legs certainly tend to congestion of the nose and throat, and produce catarrhal conditions of these parts.

The man who takes a cold shower bath every morning very rarely, if ever, contracts a cold; the same may be said of those who take a daily cold general sponge. Except in the debilitated, these applications of cold are followed by a healthy glow of the skin, a decided reaction, and a general stimulation of the heat-producing centres. A certain amount of warmth is removed by the cold application, but this is more than compensated for by the increased heat production. The best time for cold application to the skin is directly after rising from a warm bed; cold baths or showers should never be taken while the body is cold or chilly. If a cold sponge, or cold shower, is not followed by a reaction but by chilliness instead, it should not be taken. Often, however, a previous hot sponge, or standing in hot water at the time of the cold application, will help toward the necessary reaction. A hot bath should always be followed by a cold sponge or shower bath.

Treatment

In the treatment of colds or acute bronchitis, the stages through which the diseases pass should be remembered. Firstly

there is congestion of the lining membrane of the air passages; they contain more blood than in health and are dry, thus rendering breathing (gaseous interchange) more difficult. This is followed by the secretion of a thick mucus which is expectorated with difficulty; but after the cold has thoroughly loosened, the quantity of mucus is greatly increased, is quite fluid, and is thus easily expectorated. In the stage of congestion the chest has a "tight" feeling which, however, disappears as the mucus appears and the expectoration becomes fluid. The first essential is to remove congestion. Abstinence from food prevents the formation of more blood, and as nature requires the extra blood in the congested areas for other parts of the body, the congestion tends to disappear. Many find fasting a sure remedy for colds. Certainly all meals should be of a very light nature, and food taken should be only that which can be easily digested, such as fruit and dextrinised foods. Vigorous exercise, as wood-chopping, long walks, or gardening, will bring the blood into the muscles and skin and thus also help to relieve internal congestion. If sweating is produced by such exercise the good results are more apparent, but in order to avoid further chill the body should be sponged with cold water and thoroughly dried, or in the more vigorous a cold shower may be taken.

Unless the "cold" is taken very early some artificial method of producing a sweat must be adopted, such as hot foot or leg baths, repeated hot fomentations to spine or chest and throat, and hot blanket or trunk packs. Hot lemonade or hot water drinking, inhalations of steam (plain or medicated with eucalyptus oil) will also be found helpful.

Similar results can be produced by drugs, such as ten to fifteen grains of aspirin or ten grains of Dover's powder on going to bed. Drug treatment always has its drawbacks and should only be adopted when hydropathic measures are unavailable. After the sweating treatment tonic measures should be adopted.

The hot fomentation to the chest should be alternated with cold compresses. Each fomentation should be left on the chest as long as it is really hot, which will be not longer than ten minutes; the cold compress must be of shorter duration, not more than two minutes. A general cold mitten friction twice daily will help to maintain a healthy circulation in the skin and mucous membranes of the respiratory tract.

In acute coryza (cold in the head) alternate hot and cold applications should be made to the forehead and nose from the start, and repeated several times in the day. This treatment should be combined with the hot foot bath and inhalations of eucalyptus oil in hot water. A teaspoonful should be placed in a jug of boiling water, a towel or small sheet should cover the head and jug of boiling water, and the steam inhaled; the inhalation should be as strong as the patient can bear.

When proper hydropathic treatment has been given no drugs will be necessary. Should the cough be troublesome the following mixture will be found helpful:—

R̄	Ammonium chloride	ʒii (2 drams)
	Vini antimonialis	ʒiv (4 ")
	Tinc. camphoræ co.	ʒj (1 ounce)
	Extract glycyrrh. liq.	ʒvi (6 drams)
	Aquam ad	ʒviii (water to 8 ounces)

Take one tablespoonful three or four times a day.

If there is much depression, one dram of carbonate of ammonia may be substituted for the ammonium chloride. When the cough has loosened, infusion of senegæ can well take the place of the water.

Acute]Bronchitis

The symptoms of bronchitis are those of a severe cold, except that the cough is more violent, the breathing is more difficult, and on placing the ear to the chest rattling or wheezing sounds are heard. There may be some feverishness. The patient should be kept in one room at a uniform temperature of about 65° F.; the air may be moistened by the boiling of a steam kettle to which oil of eucalyptus

has been added (five drops to a pint) or compound tincture of benzoin (one drop to the pint). In severe attacks the patient should be confined to bed, and if necessary be propped up by pillows. The diet, especially in the early stages, should be light and consist of hot milk and water, oatmeal gruel, or similar dishes. Avoid beef tea and all animal broths. Hot fruit drinks are very acceptable. As the feverishness passes off more solid food may be taken. The hydropathic treatment is the same as that given for "colds." After sweating treatments, a cold sponge and the rubbing of the skin with methylated spirit should be administered. See that the bowels are opened. The soreness of the chest is relieved by some stimulating liniment such as turpentine or compound camphor liniment. Mustard leaves may be applied to the chest instead, but not allowed to blister. The cough may be controlled with barley water or lozenges of liquorice or marsh mallow. Inhalation of menthol and camphor may be necessary for this purpose, such as:—

℞ Menthol
Camphor aa grs 12
Chloroform
Spt. Vini. Rect. aa ʒj (one dram)

Twenty drops or more to a pint of hot water.

Hot sponges, spinal fomentations, or drinks of hot milk at night may be necessary to induce sleep. If the cough is troublesome and prevents sleep, half a dram of paregoric (tincture camphor co.) may be given except when there is any duskiess of the skin due to imperfect respiration. A child of eleven or twelve should take only half this dose. Poultices

by their weight debilitate and do harm; hot fomentations are much to be preferred.

Before phlegm appears the following prescription may be given:—

℞ Vini Antimonialis
Sp. Aeth. Nitrosi. aa ʒv (5 drams)
Liq. Ammoni. Acetatis ʒiv (4 ounces)
Syr. tolu ʒj (one ounce)
Aq. Camph. ad ʒviii (up to 8 oz.)

One tablespoonful three times a day for an adult.

After the phlegm begins to secrete, the



J. H. Kinnear, Photo.

MEALS AT ALL HOURS

following will be found to give relief:—

℞ Ammoni. carb. ʒj
Vini Ipecac. ʒiiss
Ext. Glycyrrh. Co. ʒvi
Tinc. scillæ ʒiv
Inf. senegae ad ʒviii

A tablespoonful in water three times a day.

For a child of twelve years, two teaspoonfuls; for one six years, one teaspoonful, three or four times a day. W.H.J.

“ALCOHOL confuses prompt judgment, hastens fatigue and lessens resistance to disease and exposure.”

How Much Sleep Must You Have?

WILLIAM EASTMAN

DO YOU sleep too little or too much? Are you slowly, insidiously undermining your health and vitality through a persistent shortage of sleep? Or do you habitually drowse overtime, thus wasting precious hours that might be profitably employed?

How much sleep do you need? You know in a vague way that sleep is necessary, but how necessary? Let me tell you. If you should wish to go mad—raving, raging mad—then contrive to go without sleep for about five or six days and nights in succession.

Incidentally, the insomniac who tells you without a wink that he has not slept a minute for days or weeks is an unintentional prevaricator. No sufferer from insomnia goes for many days and nights without sleep. The truth is that he is simply not conscious of his lapses of consciousness.

The author of the once popular song, "Please go away and let me sleep; I would rather sleep than eat," perhaps wrote from feeling or instinct, but his words were none the less well founded. Sleep is a far more immediate necessity than food. Dogs that are starved though allowed to sleep will live a long time, but dogs well fed, but deprived of sleep will die in four or five days.

We know that we wish to sleep when we feel tired. But there are two forms of fatigue. In the bodily or muscular sense, fatigue may be said to be of chemical origin, being the result of an accumulation of waste products in the tissues which tend to poison them and deprive them of strength. This type of fatigue is purely local and may be relieved by massage, warm baths, and other measures which tend to cleanse the cells and tissues of these waste-poisons.

There have been theories of sleep based upon the hypothesis that it was due to the toxic effect of fatigue products or other poisons in the system, thus benumb-

ing the brain and nerves. There would seem to be some basis for this theory, inasmuch as various poisons are characteristically sleep producing. Alcohol, for instance, is a poison that puts the nerve centres "out of business," paralysing the mental faculties in varying degrees, and perhaps, if enough is used, inducing a stupor that resembles sleep. But it is not true sleep. Various drugs, the opiates in particular, have a similar effect, but they paralyse the nerve and brain cells rather than induce anything in the nature of true sleep.

We must remember that sleep is not mere rest in the sense of inaction. Sleep is a very active vital process in the nature of repairing and rebuilding used-up nerve and brain cells. And it involves rest for the conscious mind because it is essential to discontinue all destructive activity in these cells in order that this building-up process may be accomplished.

Now, the second form of fatigue is one which cannot be relieved by bodily relaxation or influences which relieve the system of accumulated poisons. This form of fatigue consists of more or less exhaustion of the nerve cells making up the nerve and brain structures. This is fatigue of a more serious character.

Sleep, in short, seems to be either largely or entirely a matter of rest for those parts of the brain and nervous system which are concerned in what we call consciousness or "being awake." You must understand that no matter how you try to relax or rest, the mere fact of being awake uses up nervous energy. Indeed, sleep seems to be made necessary not only by prolonged consciousness and purely mental operations, but also by the use of those parts of the body which are under conscious or voluntary control, or in other words, those parts affected by consciousness. Activity of those parts of the body with which consciousness has nothing to do, such as the digestion, the heart beat,

and the functioning of various glands and organs, does not seem to have anything to do with the need for sleep, except perhaps indirectly as the energy of the body as a whole is depleted by lack of sleep. In other words, sleep is concerned with the higher brain centres, the prolonged lack of it having been found to produce degeneration of the cells of these parts of the brain.

The fact is that you can rest your body quite satisfactorily without going to sleep, if you recline on a comfortable bed or chair and relax so far as the muscles are concerned. It is for this reason that the manual worker can find true recreation by reading in the evening. He may secure rest for the body even while indulging in some effort or activity of the mind. Indeed, where there is extreme muscular fatigue, this can be relieved more quickly by massage than by sleep.

But how much sleep must one have? There are some writers who claim we sleep too much. They point to Napoleon Bonaparte and others as evidence that some men of great mental power need but little sleep. So much has been said about Thomas Edison in this connection that we secured from him a personal statement on this point to cover all doubts on the subject. Mr. Edison says:

"For about forty-five years I averaged about four hours sleep in twenty-four hours, and for the past five years about five and one-half hours. I have had assistants who for years did not get much more sleep than I had myself. I have never heard of any harm arising from this.

"I think that four hours of *deep* sleep are as good as seven or eight hours of dreamy sleep. In my opinion, people sleep too much as a rule; in fact, everything that men do and enjoy, such as eating, sleeping, etc., is apt to be overdone fifty per cent."

There is no question that this plan has suited the needs of this wizard of modern science, but that it would be satisfactory to the average man or woman is still doubtful. Mr. Edison is convinced that everybody sleeps too much. But he

touches the keynote of the problem when he refers to "deep" sleep as contrasted with a longer period of dreamy sleep.

When we speak of the amount of sleep necessary, do we mean the quantity as measured in time, or do we mean the quality or intensity? Do we mean duration or depth? Considering that sleep is not a mere matter of external inactivity, but a positive, active recuperating process, the question is in part: How fast do we sleep? There is no question that some people sleep much faster than others. Their sleep is more intense, they build up more rapidly. They get more sleep in less time. Under such conditions, one would naturally need to spend fewer hours in bed. It is partly a question as to whether or not you are really asleep. If you are half awake when you are asleep, naturally the brain will not be rested in the same degree.

This, then, would seem to answer, at least in part, the question as to why some persons need less sleep than others. Their sleep is deeper. The restorative processes are carried on more perfectly, more rapidly, more vigorously. On the other hand, it is probable that some persons require less sleep than others for the reason that they are less fatigued at the end of the day, even when doing the same amount of work. A stronger organism is less affected by fatigue poisons, on the one hand, because of more active and perfect elimination, but especially it is not so easily exhausted because of the vigorous and healthy condition of the nervous tissues. The same work, or even more work, may be done with less effort and less fatigue by the stronger man perhaps because of having a more healthy brain or a more perfectly adjusted mental mechanism.

It is probable that both of these considerations apply in the case of such a remarkable man as Mr. Edison. He is a human wonder in a great variety of ways, and we cannot assume that everyone could follow him in his sleeping habits, any more than in his achievements in the field of science and invention. In this

connection, we may state it as a general principle that those who are strong can get along with much less sleep than those who are weak. This is illustrated by the seeming impunity with which many young people keep late hours. The same men and women, however, reaching the age of forty or fifty, are no longer able to lose sleep without feeling it seriously the following day. If you are suffering from lowered vitality, therefore, you certainly cannot afford to emulate Mr. Edison in this respect. The more sleep you can get the better.

There are naturally varying degrees of depth of sleep. Sleep consists in a lapse of consciousness, or rest of the higher brain centres. The person who dreams is not deeply asleep. In other cases, certain brain centres may be active while others are at rest, and yet the individual may be unconscious. One's sensibility to sound and touch are definite indications of the depth of sleep. Sensibility to sight is naturally lost first, as we gradually enter the realm of slumber. As we reach deeper degrees of sleep, we also lose sensibility to sound, although we may still be sensitive to touch. The greatest depth of sleep is measured by insensibility to touch. One can often be awakened by shaking, when sounds will no longer arouse him, showing that one is more sensitive to touch impressions. When it is difficult to awaken one by shaking him, he is indeed "fast" asleep.

It has been found that the greatest depth of sleep is reached during the first couple of hours. From that time on, sleep gradually becomes lighter in degree until morning.

It is during the later hours when these

lighter degrees of sleep are reached, that we commonly experience what we call dreams. You may possibly be mistaken, therefore, in your occasional notion that you have spent a restless night because you have been dreaming. You may have enjoyed a satisfactory depth of sleep earlier in the night.

It is not our purpose here to discuss insomnia in detail. But in the case of a fairly healthy person, it is probable that



"YOU CAN REST YOUR BODY QUITE SATISFACTORILY WITHOUT GOING TO SLEEP BY RECLINING IN A COMFORTABLE CHAIR."

good, hard mental work, bringing about brain fatigue, would have a good effect in promoting sound sleep. By this we mean healthy brain work and not emotional strain. We must distinguish between thinking and emotional excitement. What many insomniacs need is more work and less worry.

But on the other hand probably most cases of insomnia indicate a degree of neurasthenia or exhaustion of nerve force. In such cases mental rest and avoidance of any special brain fatigue are probably required, until the brain and nerve cells can regain their normal strength. Healthy brain cells apparently have what may be called a rhythmic habit of alternating activity and rest. The ability to cease functioning in the direction of mental

work and to enter into that other form of equally important vital activity in the direction of repair and recuperation which we call rest—the ability to do this would appear to be a manifestation of healthy strength. In a condition of weakness and exhaustion, however, these brain cells lose the ability to restore themselves or recuperate in this way, just as they lose their capacity for purely mental effort. And so the nervous man complains that he can neither work nor sleep, that he is half awake when he is asleep, and half asleep when he is awake. Under such conditions, to attempt increased mental work on the theory of promoting the fatigue that induces sleep would only make matters worse. What one needs is relaxation, even during the waking hours. It is for this reason that a vacation in the country, a boat cruise, or a change of scene in which the mind has the opportunity of resting from the strain of its usual work is found valuable as a means of restoring nervous vigour and mental strength. Aside from all physiological considerations, there is a psychic factor that largely determines the amount of time spent in bed. That factor is mental interest. It is an interesting fact that savages commonly sleep a great deal. Peasants sleep far more than the cultured classes in the city. Their lives are uneventful and devoid of stimulating influences. It is quite probable that savages sleep more than we, not because they require more sleep but simply because their lives are dull and they have little or nothing to keep them awake.

Mental interest is the most stimulating thing in the world. Taking the average case, any unusual source of interest or a variety of interests will tend to keep one awake and the mind active a disproportionate part of the time.

It is on this account that civilisation tends to undermine the nervous stability of the race. Nothing is more important than sleep. And yet thousands of us habitually secure too little. If one is compelled to use an alarm clock in order

to get up in the morning, he is drawing upon his reserves of nerve force.

There are degrees of fatigue. Ordinarily the desire to sleep asserts itself long before the nerve cells are entirely exhausted. Complete exhaustion of nerve force would mean death. When we use up a certain part of the available nervous energy, the impulse to sleep is felt so that this energy may be restored, although there is still a reserve. It is when we draw upon this reserve energy that we are courting trouble. The sufferer from neurasthenia lacks a sufficiency of this reserve nerve force.

It is wise therefore to secure sleep before one has reached an excessive degree of fatigue. In a case of moderate fatigue, recuperation is easy and quick. If, however, one remains awake too long the increasing fatigue or exhaustion is out of all proportion to the amount of work accomplished, and recuperation is naturally much more difficult to secure.

Influence of the Atmosphere on Colds

LEONARD HILL (*British Medical Journal*, April 15, 1916) states that colds are most common when the humidity is great and the temperature variable but on the whole cool; when there are raw winds with thawing snow, or strong winds charged with cold rain, and the ground is cold and wet. The common cold may be caused by infection. There is a class of people who suffer from nervous derangement of the nasal membrane, the nasal reflexes being unduly excitable. Sudden changes in the weather may in these cases bring on an attack. In crowded rooms infection takes place from mucous spray sneezed or coughed or sputtered out when talking.

“ENOUGH is as good as a feast.” Remember that it is better to leave the table a little hungry than to suffer the pangs of indigestion after eating heartily.

Measles and Their Treatment

A. W. SEMMENS

MEASLES is a disease most prevalent in childhood, although it sometimes attacks adults.

Incubation Period

The full development of the disease may take from five to fourteen days. A person suspected of the disease should be isolated for two weeks, and may then be permitted out of quarantine, if free from catarrh.

Duration

The disease usually lasts about fourteen days, if free from complications. Temperature is generally normal in eight days. The period in which the disease is infectious is from the commencement of the disease to about three weeks after the rash fades, but continues when there is bronchial catarrh, or nasal discharge.

Direct Contagion

Measles is generally propagated by direct contagion; hence the necessity for absolute isolation. Children who have been exposed to infection should be quarantined apart from the patient, and not sent away.

The patient should be kept in bed to prevent the risk of getting broncho-pneumonia.

Many people have the idea there is no danger in measles. In this they make a fatal mistake, and through this lack of knowledge many grave complications often follow.

Care and Room

The room, if possible, should be airy, and should have as little furniture and drapery as possible. A room with an open fireplace is the best. It is an advantage if there are two communicating rooms. The bed clothes should be light.

Thorough ventilation should be maintained without exposing the patient to draughts. If light screens are obtainable, they should be placed around the bed to shield from direct draught.

The temperature of the room should be 60° F., or, if there is much bronchitis, 65° F. A bronchitis kettle should be kept in use. The room should be darkened according to the patient's wishes. This sometimes seems imperative on account of the condition of the patient's eyes.

It is also well to maintain strict antiseptic measures. The nurse should be quarantined with the patient, and should not associate with other members of the family until a complete change of clothing has been made, and a shampoo taken in an antiseptic bath of one to five thousand mercuric perchloride, or lysol, one-half per cent.

The nurse should also use an antiseptic gargle, such as listerine, one-third of a teaspoonful to one-third of a glass of water; also a nasal spray frequently.

All dust from the room should be removed by damp cloth, which should be burnt after use. The furniture, floor, and woodwork should be wiped over daily with five per cent lysol solution.

Bedclothes and linen after use should be allowed to soak in carbolic acid (one in two hundred solution) for six hours, and then boiled two hours.

Feeding Utensils

Knives, forks, etc., should be boiled in water containing a little carbonate of soda for half an hour.

Excretions

Urine and stools should be collected in a bed pan containing four ounces of a solution of carbolic acid (one in twenty), and then sixteen ounces of a solution of chlorinated lime (one in ten) should be added, and should be allowed to stand for four hours before being emptied into the drain. The bed pan should be well washed in boiling water and afterwards with carbolic solution.

Treatment

In fever, marked with nervous symptoms, neutral or tepid sponging (92° to 97°) will often allay the nervous condition, and reduce temperature. Vinegar sponging, wet sheet pack at 100° with friction, and cold enemata at 70° are also useful.



J. H. Kinneear
SHE WALKS THE WATERS LIKE A THING OF LIFE
AND SEEMS TO DARE THE ELEMENTS TO STRIFE.—Byron.

High fever, with cyanosis, feeble pulse, and cold extremities, requires hot packs, ice to head, hot water-drinking and hot sponging.

The mouth should be washed out two or three times a day with a few drops of listerine in water. The eyes and also the naso-pharynx should be washed with five per cent boracic acid solution to lessen the chance of complications. The eyelids should be smeared with a little vaseline. To diminish the danger of broncho-pneumonia, the chest should be rubbed

daily with a little oil, and protected with flannel.

If there is any itching of the skin, this can be relieved with a little vaseline being rubbed in. If there is a complication of laryngitis, give steam inhalations and hot fomentations, followed by the heating compress. The complications are usually bronchitis, pneumonia, tonsillitis, diarrhoea, and conjunctivitis.

Convalescence

This is the time of greatest care in these cases, if tuberculosis, ear-disease, and other troubles are to be avoided. If there are no complications, the patient may leave his bed, but not his room, after a week.

As soon as the rash and fever are gone, a daily warm bath should be given. After the bath, the body should be well oiled to assist in the shedding of the skin, and to prevent the dissemination of the fine scales.

Diet

Care should be taken to see that a sufficient quantity of easily-digested food is given. During the fever-stage, gruels, fruit juices, and vegetable broths are the best.

The clothing must be warm. The patient may be allowed to move about the room when the fever is gone, and at the end of three weeks can go out in a chair or on a cot. No open air walking exercises to cause fatigue should be permitted for at least a month after the first symptom.

For at least six months the child's health needs to be carefully watched, and everything done to build up the general health.

“Do not permit your palate to get your stomach into trouble.”

Constipation, Biliousness, and Headache

Dr. B. K. Hayes

IT has been estimated that ninety per cent of all medicines are taken to relieve constipation or an attack of "biliousness." Constipation is the result of neglect, and "biliousness" comes from over-eating. Every physician will tell you that the best remedy for constipation is to form the habit of attending to nature's call at a given hour each day. When that hour comes let nothing stand in the way, but go, even if there is no inclination. A diet composed largely of vegetables and of fruits gives a laxative tendency, while meats are constipating. When purgatives are taken, they tend to make one dependent upon them, each dose calling for another, and usually in increased quantity. I freely admit that it is far better to take medicine than to remain constipated, but it is also better to relieve the constipation by habit and diet than to depend upon medicine. It is needless to add that for the so-called "biliousness" the only cure is to be found in a correct diet.

Headache

Second in frequency as a condition which calls for medicine is headache. There is no known remedy which is harmless. Opium, the coal tar derivatives, and bromides make up the bulk of the headache remedies, and these are all poisonous and habit-forming drugs. Headache is a symptom, and indicates that something is wrong with the body. Its cause should be considered, and, if possible, removed. Among the most frequent causes of headache are fatigue, loss of sleep, and nerve strain. The remedy suggests itself. Rest and sleep. Digestive disturbances are a frequent cause of headache. If proper dieting will not relieve this, it would be well to consult a physician. The first symptom of Bright's disease is often headache (never a pain in the back), and for this a physician should certainly be consulted. Eye strain, neuralgia, and many other conditions

may produce headache. Not one of them is cured by "dope." A headache which rest, diet, and the removal of worry will not cure should receive medical attention.

The Athlete of the Body

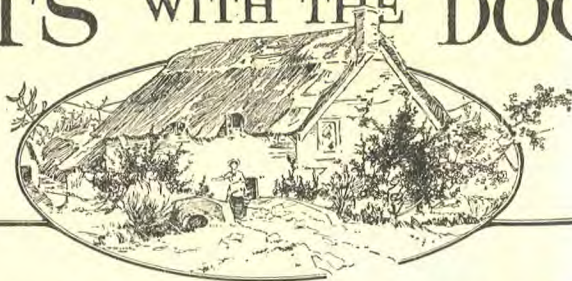
THE enormous power of the human heart may be illustrated in a striking way. Take a two-pound weight in the palm of the hand, rest the elbow on a table, and then raise and lower it from the level of the elbow to the shoulder. This is exactly the work done by the heart at each beat. Do this weight lifting about seventy or eighty times a minute and see how long you can keep it up. The heart keeps it up from before birth to just after death, perhaps seventy years. It never takes a rest. It never sleeps.

At each contraction the heart does enough work to lift a two-pound weight one foot. The heart of a young and healthy person is almost immune to weariness or strain. But if its muscles be weakened by the accumulation of body poisons or by anæmia, it is very easily strained. The heart has been known to break from the strain of sudden emotion. Anger will increase the work of the heart from 152 to 224 units (foot-pounds) a minute. Therefore, keep your temper!

Running to catch a train, running upstairs, or any sudden and unusual exertion, puts a great extra strain upon the heart. The healthy heart of youth is generally equal to such strains, but not so the heart that has been weakened by disease, dissipation, or old age. The heart of a healthy man was tested before he ran to catch a train. It was beating 76 to the minute and doing 152 foot-pounds of work a minute. Immediately after the run it was beating 180 to the minute and doing 360 foot-pounds of work a minute.

"ONE good hearty laugh is a bombshell exploding in the right place, while spleen and discontent are a gun that kicks over the man who shoots it off."

CHATS WITH THE DOCTOR



NOTICE TO SUBSCRIBERS: All questions for this department must be addressed to the EDITOR, "LIFE & HEALTH," WARBURTON, VICTORIA. Subscribers sending questions 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. To avoid disappointment subscribers will please refrain from requesting replies to questions by mail.

281. Pains in the Back

"A.Mc.K" writes that she has an aching pain on the left side of her back just where the rib bones finish. She feels it when she has been working hard, standing a long time, and is tired. Formerly she had a severe pain at the seat of the spine but the doctor replaced her fallen womb and the pain ceased.

Ans.—The pain referred to is probably due to a wrench and would come under the heading of lumbago. While the pain is severe there is nothing better than repeated hot fomentations. The fomentation cloths should be made of blanket. Cut a single blanket up into cloths about thirty inches in length and use two cloths for each fomentation. The cloth, wrung out of boiling water, should be wrapped in a dry cloth and applied to the parts so that there is only one thickness of dry blanket between the foment and the skin. Have a second foment ready before removing the one from the body. Apply every ten minutes for thirty or forty minutes. Where the fomentations cannot be obtained, use a mustard and flour poultice (one tablespoonful of mustard to one of flour mixed with tepid—not hot—water), and leave on the parts thirty or forty minutes. Capsolin sold in tubes makes a good daily application. When the pain is not severe, daily hot and cold applications are the best for a permanent cure; the cold wet cloth should only remain on the skin about two minutes.

Pains in the lower part of the spine in women are mostly due to womb trouble and are often more severe at menstrual periods. Pain across the kidneys is mostly put down to kidney trouble, but in general it is due to some form of dyspepsia and constipation; in these cases the urine is of a dark colour and acid. If flesh foods, sweets, and rich foods are omitted from the dietary these pains will disappear.

282. Pimples on Face

"A.McK." also states that her boy develops pimples on the face. At present he is "off his food" and the face is much better. She gives him granose biscuits and butter and about four cups of milk a day, and wishes to know if the dietary is wrong.

Ans.—Much butter will certainly develop pimples, or any food cooked in or with fat; the same may be said of all sweets. Do not use much sugar with milk preparations. Continue the milk, it is an excellent food for children. See that he has plenty of fresh water to drink and give him fruit (ripe) with his meals. Sponge the whole body daily.

283. Wetting the Bed

"G.D." asks for a remedy in a girl six years of age.

Ans.—This frequently is one of the in-

dications of general nervous instability; it may be hereditary, congenital, or acquired. In a few, want of proper training may keep up the habits of infancy. Every child should be taught to control its bladder and make known its desire to empty it, and this should be learnt before the age of two years. Those cases due to nerve trouble only are difficult to treat successfully, especially when the involuntary passing of water occurs in the day as well as at night. The chief exciting causes are post-nasal growths, stone in kidney or bladder, inflammation of bladder, excessive acidity of urine, constipation, and, in boys, a long foreskin.

Treatment. Make the child sit at intervals to pass water. Avoid flesh foods, spices, much salt, and all rich articles of diet, also tea and coffee. Give hot bath at bed time, and give no drinks after 3 p.m. Teach the child to sleep on its side. Some hard object strapped to the small of the back will wake the child up should it turn over. Punishment of the child in any form is emphatically to be condemned, especially in a child over three years of age. The younger children must be taught to empty the bladder at intervals. Relieve constipation. Evacuation of the bowels just before bedtime will sometimes cure the trouble. For a child of six years the following prescription may be given:—

R̄	Potassium citrate	ʒii (2 drams)
	Tincture of hyoscyamus	ʒiiss (1½ ounces)
	Infusion of buchu	up to 8 ounces

Take two teaspoonfuls at 4 p.m. and bedtime.

284. Anaemia and Pains over the Heart

"G.D." writes: "I suffer from anæmia. I have been under two doctors but have received no cure. I frequently suffer from a pain down my left arm, sometimes unbearable, and sometimes in the region of my heart. I have felt the pains for about six years and have been anæmic for the same time. Sometimes a feeling comes over me as though my breath is leaving

me. My eyes are also painful, but an oculist states that the sight is good."

Ans.—Anæmia, poorness of blood in iron, frequently causes similar symptoms to those mentioned by correspondent. Treatment must be continued for months to be effective; probably the treatment under the doctors was not continued long enough. Tea and coffee must be eliminated from the meals, as they destroy the iron in the food, and interfere with the digestion, the bowels, and the nervous system. Lightly-cooked eggs, fresh milk, wholemeal bread, and granose biscuits should figure largely in the daily menu. White bread lacks mineral matter and therefore iron. The bedroom should be well ventilated and the windows up from the bottom all night. The body should be sponged with cold water every day. All food should be thoroughly masticated, and the teeth kept in good order. An occasional visit to the dentist is necessary in most cases. Some form of iron should be taken regularly for at least three months. The citrate of iron and ammonia is a good preparation—as much as will go on a sixpenny piece after meals. The sugar coated Bland's pills are excellent, at first ten and then fifteen grains after meals three times a day.

285. Wholemeal Bread

"H.E.L." writes: "The writer is told that the wholemeal loaf is not a complete food because of its lack of sufficient fats. Would you please give the public information as to the amount of oil we should take to a pound of bread?"

Ans.—Wholemeal bread contains about one per cent of fat. We need about two ounces of fat in summer and three ounces in winter. Thus from twelve to eighteen pounds of bread would be necessary to supply the fat needed by a man of eleven stone weight. Wholemeal bread is valued on account of containing the mineral ingredients, sixty-five per cent of the valuable minerals reside in the bran separated from white bread. Two or

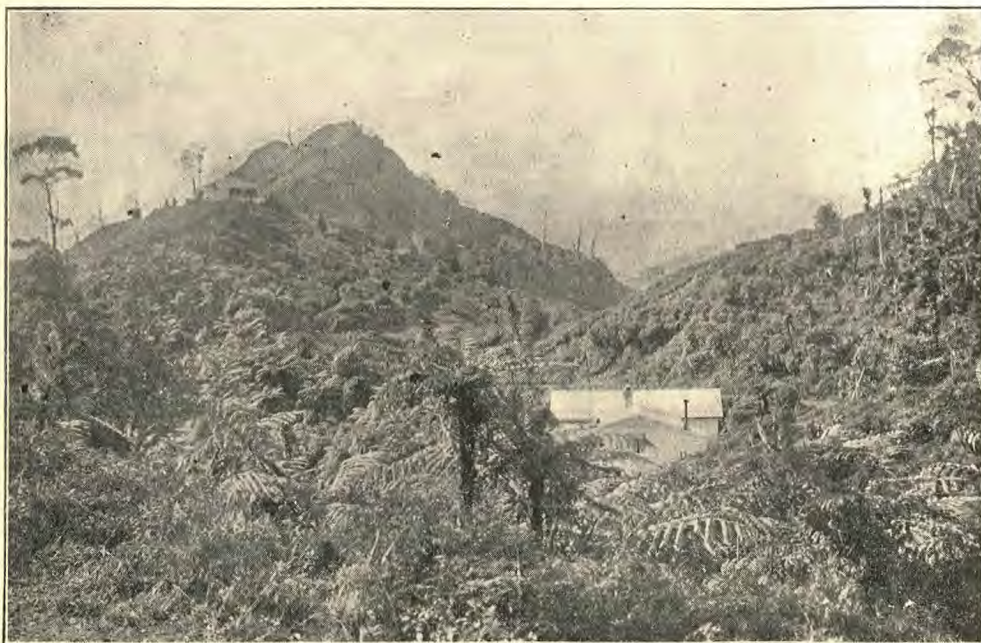
three ounces of olive oil or fresh butter would be needed by one living on whole-meal bread. We would not advocate such a monotonous diet. When variety is supplied in the food, Nature has an opportunity to assimilate what is required and reject the surplus.

286. Sore Nipples, etc.

"Mrs. T.'s" questions.

Ans.—During the latter months of pregnancy the nipples should be kept

oil. Take one tablespoonful at bedtime. Cascara sagrada is a good purgative, but the tablets frequently lack power; the liquid extract is preferable—half a teaspoonful or more in water at bedtime or before the evening meal is sufficient as a rule. Regulation of the bowels with such food as granose biscuits and fruit, and drinking of water between meals is better than medicine when effective. There is no special food for "making milk." Take such foods as milk, eggs, and cereal



J. H. Kinnear, Photo.

GO FORTH UNDER THE OPEN SKY, AND LIST TO NATURE'S TEACHINGS—*Bryant*

clear of all dried secretions by washing with weak alcohol (one part of spirits of wine to four of warm water). If the nipples are sore during suckling, paint them with a mixture of equal parts of glycerine of tannin and solution of carbolic acid (one in twenty), or glycerine boracic. Be careful to thoroughly wash the nipples before allowing the baby to take the breast. Do not use castor oil during pregnancy if repeated laxatives are necessary. Liquid paraffine in the various forms on the market is not followed by constipating effects like castor

foods, as granose biscuits, granola, gluten, etc. Use milk freely.

287. Frequent Urination

"Mizpah's" question.

Ans.—Frequent micturition at night in men over fifty years of age is frequently due to enlarged prostate and mild inflammation of the bladder (cystitis). Avoid all drinks in the latter part of the day. See that the bowels are kept regular. Take a good hot half bath before going to bed (the water to be above the level of the

brim of the pelvis). Avoid all foods and drinks that increase the acidity of the urine, such as flesh foods, pastry, and all indigestible foods. Tea and coffee increase the quantity of urine and are better omitted. The evening meal should be light, such as bread and butter with fruit (fresh or stewed). Men with enlarged prostate can empty the bladder more thoroughly with a catheter. The operation for removal of the prostate is very satisfactory except in case of cancer or very feeble health.

288. Pains in Back and Stomach

"Miss. A. L." writes: "About seven months ago I was carrying a heavy can of milk and I had a sudden pain across my back as though I were paralysed. From that time I have terrible pains across my back and stomach, and often so severe that I cannot walk about for days."

Ans.—This case looks like the rupture of a part of a muscle, but a stone in the kidneys may be the cause. For the latter an operation is the only cure. We would advise hot fomentations across the back before going to bed. Alternate the fomentations with cold wet compress, leaving the latter on for two minutes only; the fomentations will keep hot for ten minutes if properly applied. Give three or four fomentations at each treatment. Some stimulating liniment as linimentum sinapis or Capsolin (sold in tubes) should be rubbed in after thorough drying of the parts. Massage is also very helpful.

289. Eczema in Child

"M.L.T." asks for treatment for her child, four months old, who has had eczema for ten weeks on the head, eye-brows, and about the nates.

Ans.—All dry crusts should be softened and removed by vaseline or olive oil. The parts should not be washed with water. When the napkins become wet, remove at once, and dry the parts thoroughly with soft and absolutely clean lint or old linen. Obtain eight ounces of the

strong liquid subacetate of lead (liquor plumbi subacetatis fort). Add dessert-spoonful of this to half a pint of boiled water and sponge parts after they have been dried. This is especially good when the parts are moist and weeping. At night apply the following ointment (Lassar's paste):—

℞ Salicylic acid grs. 20
White vaseline one ounce
Oxide of zinc half an ounce
Powdered starch half an ounce

This ointment may be used twice a day for the head and face. Persist in this treatment for one week, and if there are no signs of improvement, use the following lotion:—

℞ Calaminae
Zinci oxidi aa ʒj (of each—one ounce)
Liq. plumbi Subac. fort. ʒii (2 drams)
Aqua calcis (lime water) ad ʒx (10 ozs.)

The child must be kept to the breast or other milk, no biscuits or other starchy food must be given. A couple of teaspoonfuls of the juice of a sweet orange three times a day or oftener will be healthful.

290. Diabetes

"J.M." asks for advice on the above.

Ans.—We have posted him as requested the November-December (1918) number of LIFE AND HEALTH, where he will find principles of treatment.

291. Influenza

"Miss G.J.D." asks for treatment of above.

Ans.—The bed is essential. A sweating treatment should be given, such as one of the following: A full bath with seven pounds of bay salt in thirty gallons of very hot water. Keep cold cloths on the head and take hot drinks such as hot lemon water during the bath. If faint, cold drinks should be substituted for the hot. If the bay salt is not available, give spinal fomentations and hot foot or leg bath. Patient should sit in a chair, the

feet being placed in very hot water; by getting the patient to bend forward a little the spinal fomentations can be readily given. They should extend from the neck to the lower part of the back. Use blanket cloths for fomentations; ordinary flannel is not thick enough. The hot wet foment is wrapped in dry blanket cloth, folded appropriately to cover the spine. See that only one thickness of dry blanket intervenes between the hot foment and the skin. Prepare a second foment and apply in ten minutes directly the first foment is removed. Three or four such fomentations should be used. Sponge patient with tepid water, dry thoroughly, and put to bed. During the fomentations a warm blanket should envelop the patient. One sweating treatment as a rule is all that is necessary; if the temperature again rises to 102.5° or more it may be repeated. The sweating treatment is best given at bedtime. Sponge the whole body two or three times a day with tepid water. With a high temperature (103° F. or more) use wet cold compresses over the front of the body from the neck to the lower part of the abdomen. A couple of thicknesses of thin towelling will do nicely for the cold compress. Cover with dry flannel and reapply every five minutes till the temperature reaches 101° F. Get the bowels open at the beginning of treatment. Very little food is needed and this should consist of milk, grange, or gruel made from groats. Fresh fruit, such as oranges and pineapple, are appreciated by the patient and are undoubtedly beneficial. Cold water or fruit drinks may be given as often as the patient calls for them. See that the room is well ventilated and that the temperature is kept about 65° F.; it is a mistake to keep the rooms much above this temperature. During hydropathic treatment the windows should be closed, but at other times they are better open to the fullest extent as long as draughts are avoided. For cough apply fomentations to the chest two or three times a day—three or four fomentations at each treatment. If the cough continues troublesome and

especially if it interferes with sleep, the following mixture may be given—

℞ Ammonium carbonate ʒj (one dram)
 Vinum Ipecac. ʒii (two drams)
 Tinc. camph. co. (paregoric) ʒj (one oz.)
 Extract Glycyrrhizæ Liq. ʒvi (six drams)
 (liquorice extract)
 Aquam (water) to ʒviii (8 ounces)
 Take one tablespoonful three times a day.

Patient should remain in bed in very mild cases for twenty-four hours after the temperature is normal; in the severe cases two days to a week should elapse before the patient is allowed up.

292. Dry Eczema

"G.J.D." also asks for remedy for dry eczema.

Ans.—We would recommend the following ointment after the rough parts have been softened with vaseline or olive oil:—

℞ Unguentum zinci oxidi
 Unguentum plumbi subacetatis
 Unguentum hydrargyri aa ʒj
 (of each one ounce)
 Apply morning and night.

293. Painful Menstruation

"G.J.D." also asks for treatment of above.

Ans.—Keep the general health good. See that the bowels are regular, especially when menses are expected. For three nights previously use hot hip and hot foot baths, the former at a temperature of 104° F. and the latter 106° F. or more. Fomentations to the lower part of the abdomen may be given if necessary. Ten grain doses of salicylate of sodium after meals for a week before menses gives relief in some cases. Frequently an operation, dilatation of the neck of the womb, is advisable, but unfortunately it is not always successful. The general health must be attended to, and anæmia especially must have appropriate treatment.

294. Constipation and Torn Perinaeum

"Bundaberg, Q." writes concerning chronic constipation. She seems to be

enjoying good health except for the above and requires to take one teaspoonful of liquid cascara every second night in order to get the bowels relieved. She was torn in her first confinement and not being attended to by a medical man the parts were not stitched.

Ans.—Apart from treatment of the torn perinæum "Bundaberg" seems to have treated herself intelligently. The torn perinæum, however, tends to displacement of both the bowel and womb, and would

at the same meal. Sugar, sweets, pastry, and rich foods should not be taken. A good digestion is necessary for cure of constipation. Drink freely of pure water between meals, at bedtime, and on rising. Daily exercise in open air is very helpful especially gardening or any light occupation requiring the use of the abdominal muscles.

295. Rheumatic Fever

"Anxious mother" has had her boy in



J. H. Kinnear, Photo.

THE COURSE OF NATURE IS THE ART OF GOD

interfere with the action of the bowels. An operation is certainly advisable to restore the parts. The operation is very rarely a failure and gives immense relief. Where the tear extends into the bowel, operation is more imperative. We would advise "Bundaberg" to discontinue tea, coffee, and cocoa. Use no white bread but substitute for it granose biscuits or a little wholemeal bread. Avoid cooked milk or hard cooked eggs. Get a good sample of wheat, clean thoroughly and boil well; take a tablespoonful at each meal. Take fruit with breakfast and tea, vegetables with dinner; avoid fruit and vegetables

bed for six weeks with rheumatic fever. "He has one leg which is very troublesome. First he over exerted his legs doing tricks. His leg became stiff and a swelling appeared in the groin and drew his knee up to relieve the pain; it is still drawn up."

Ans.—Avoid all flesh foods, broths, beef tea, etc., also tea and coffee. Give him plenty of good fruit at meals. Sponge the leg with very hot water, followed by short cold sponging, three times a day. Rub in warm olive oil after sponging and drying. Let him drink freely of orange or pineapple juice and water between meals.

296. Brown Spots on Face

"Subscriber" writes: "There are brown blotches on the face under the skin. Other parts of the face are quite clear. My head and eyes often feel heavy and drowsy, and I am sometimes down-hearted and oppressed."

Ans.—Probably the trouble is digestive. Avoid fats and sweets and all foods cooked in or with fat, also tea, coffee, and cocoa. Take fruit with breakfast and evening meal. Do not use much butter or eggs. Wear a brown or red veil; the heat rays have no effect on colouration of the skin, but the actinic (the rays that produce chemical changes) must be avoided, hence the colour of the veil is important. Moisten the spots with the following lotion until irritation is produced: a one per cent solution of corrosive sublimate in alcohol. Reapply after irritation ceases.

297. Pimples on Face in Children

"A.McK." writes: "My two babies (two years, and two months old) get a red looking spot on one cheek, sometimes covering nearly all the cheek but often not bigger than a shilling. My little boy is easily upset by food and gets a lot of pimples on his face if he uses ordinary sugar. The baby girl has nothing but the breast but I am now trying a little strained oatmeal and granose."

Ans.—Baby is altogether too young for the oatmeal and granose biscuits. The trouble is evidently digestive. See that baby does not have the breast oftener than once in two and a half hours. The intervals should be regular. Give a teaspoonful of sweet orange juice three times a day. Sugar must not be given to either children except in the smallest quantities; avoid also jams and foods containing much sugar. Avoid lollies and food of any kind between meals.

298. Development of Children

"Mrs. L.E.T." asks for information about her child. He weighs 19 lb. at 10

months. She is afraid this is not sufficient. At birth he weighed 7 lb. 11 ozs.

Ans.—The average weight at birth is about 7 lb. The average length of child at birth is 19 inches. In the first year there is an increase of 5-6½ inches, in the second 2⅔-3½ inches, in the third 2⅓-2⅔, in the fourth about two inches, and from the fifth to the sixteenth year the annual growth is from 1⅔ to 2 inches. The daily increase in weight should be from ¼ to ⅓ of an ounce. Correspondent's child has thus made very good development. We would recommend the use of granose biscuits; they are excellent for the development of children and keep the bowels regular. Break the biscuit up and pour hot milk on it. We do not think any advantage whatever will result from the use of emulsions of cod liver oil. Good, plain, wholesome food is far preferable.

299. Hair on Lips

Ans.—Yes, superfluous hairs on the lip can be removed successfully without causing any scar. Consult a skin specialist and not an unregistered practitioner. The means used is a heated electric needle which destroys each hair at its root.

300. Development of Chest and Brittle Grey Hair

"Nelly" asks how she can develop her chest and prevent grey hairs appearing. She is only 29 years of age. She suffers a good deal with headache.

Ans.—The development of the chest should be a muscular development. In normal breathing the muscles contract and increase the size of the chest with the result that the air naturally fills the chest. In all exercises the body should be kept erect and the shoulders well back. All the various movements of the arms as given in books on gymnastic exercises develop the chest. The chest should be developed uniformly and not by deep inspirations, but by actual muscular movement of the chest walls; the air should not ex-

pand the chest, but fill the chest in obedience to the contraction of the muscles. The contraction of the muscles of the chest should be done through will power. Place the hand on upper part of the chest and will the muscles to contract; there will or should be no movement of the muscles of nose or face. After a few muscular movements of the upper part of the chest, do the same with the sides and lower part of the chest. It takes a little practice to get the chest to expand by actual muscular movement.

Probably the headaches have a good deal to do with the grey hair. Remove the cause of the headache. Often there is a slight amount of seborrhœa (dandruff). Full directions for washing the hair with spirit soap and subsequent applications of remedies are given in last issue of LIFE AND HEALTH.

301. Consumption

"T.B." writes: "Would you please give me your advice on the case of a consumptive, a man of 30? Meals consist of meat, a liberal allowance three times a day, baked custard with baked apples, or stewed dried fruit with lunch and tea, and half a pint of lactosa with each meal. Great deal of wind and discomfort after eating. Takes charcoal tablets and gol-crist. Bowels regular. Occasional night sweats. Has sponge morning and night. Weight under nine stone, 5 ft. 10 in. in height."

Ans.—We do not advocate the use of flesh foods even in consumption; they are certainly stimulants, and this gives them undue prominence as food in the eyes of the general public; they certainly give the liver and kidneys an extra amount of work in ridding the system of waste products. Chicken and fish are not so objectionable for consumptives as the red meats; we would, however, advise that the nitrogenous element of the food be obtained from milk and eggs. Rich milk from a Jersey cow is the best; a quart at least of this should be taken in the day.

Milk is more digestible and less constipating in its fresh condition, but if obtained from a doubtful source it should be sterilised—brought to a temperature of about 180°F., which is close to boiling point, and maintained at that temperature for ten minutes. The milk is better sipped during the meal and not taken as a large drink. One raw egg, either taken as an oyster or beaten up, should be taken with each meal. If raw cream can be obtained from a reliable cow, we believe it better than ordinary butter. Consumptives require a large amount of fat and more nitrogenous food than the healthy adult. We believe there will be less discomfort from wind if the patient omits meat from his diet. It makes a bad combination with the other foods. Cod liver oil and oil emulsions are unnecessary when plenty of milk and cream are taken. Clotted cream will agree well with most cases. Malted nuts with meals supply a large amount of nourishment, and are easily digested. Gluten meal makes a good porridge and agrees with most people. Fruit and vegetables should not be taken at the same meal. If stewed or fresh fruit does not combine well with milk, take an orange an hour after meals. Fruit is essential to keep the blood in a healthy condition. General sponging once or twice a day is good and necessary. Patient should live out of doors as much as possible. Sleeping on a verandah or balcony, protected from the wind, is an excellent plan. If the patient sleeps in a room see that it has plenty of light, very little furniture, and no drapings or carpets. A couple of strips of carpet for the patient to stand on when dressing and undressing provide comfort, and these can be frequently dusted and exposed to the air. Exercise should be taken daily in the open air; not enough to fatigue, but little and often. If the amount of exercise can be increased gradually it is a good sign and much to be preferred to putting on of a great amount of weight in the form of fat. It is advisable to maintain a weight a few pounds above the standard for the height of the individual.

302 Flatulence

"M.R." writes: "Would you give me some advice as to diet, etc., with a pro-lapsed stomach? I am a woman of thirty and have been to your sanitarium for treatment. I suffer a great deal with flatulence and constipation. Meals consist of: *Breakfast.*—Three wheatmeal biscuits. *Lunch.*—One granose with melsitos and spoonful of malted nuts, 2 glasses lactosa.

some better than fresh milk, but this is not always the case. We have had cases at the sanitarium who did well on gluten porridge three times a day; others have improved on zwieback and milk. "M.R." evidently avoids drinking with meals; this is to be commended. We would advise cold sponging night and morning, that "M.R." sleep in the open air, or a well ventilated bedroom, and take plenty



IN EVERY RANK, OR GREAT OR SMALL, 'TIS INDUSTRY SUPPORTS US ALL—Gay

Tea.—Same as lunch with baked apple added. I cannot eat any vegetables or fruits with the exception of the apple, but have put on weight with this diet. Can I cure the stomach of the prolapse with walking and ordinary exercise of household work? I weigh seven stone, height 5 ft. 1 inch. I have enlarged ovary, pain and prostration at periods, and sleep badly."

Ans.—The breakfast certainly is very light. Probably a poached egg with granose biscuit would agree well. All food should be thoroughly masticated. A glass of fresh milk with a couple of granose or three or four wheatmeal biscuits would make a change. Lactosa agrees with

of exercise in the open air; the exercise, however, must not over fatigue. Abdominal massage and general cold mitten friction are excellent. "M.R.'s." general health should considerably improve under the above curriculum, but care will be necessary regarding diet to the end of the chapter.

WHEN the love and sympathy that Christ manifested for the sick are combined with the physician's knowledge, his very presence will be a blessing. Sympathy and tact are of great benefit in the restoration of the sick.—*Ministry of Healing.*



THE HOUSEKEEPER

Kitchen Economy

G. H. HEALD, M.D.

IN these times of unprecedented prices, kitchen economy is important for two reasons:—

1. Foods are rapidly increasing in price.
2. The majority of people are particularly wasteful in the kitchen.

It has been said that a French family will live well on what an average English family wastes. If this statement seems exaggerated, the fact remains that observing foreigners comment on the reckless kitchen waste of English families.

The following is a convenient classification in kitchen economy:—

1. Careful buying.
 - a. Selection of foods that give greatest nutritive value for the money.
 - b. Careful marketing, verifying weights and measures of foods purchased, and scrutinising the quality.
2. Avoidance of waste in storage and preparation.
 - a. Through decay and deterioration.
 - b. In discarding the refuse.
 - c. In the use of fuel, time, labour.
3. Avoidance of waste of prepared foods.
 - a. The utilisation of leftover foods.

It may be said in brief that people use too much animal food. They use too much prepared food. We are addicted to the baker's bread habit, and baker's bread is not so nutritious, nor so palatable, nor so economical as good homemade bread.

One miller is credited with saying that not one-tenth as much flour is sold to the grocers now as twelve years ago. We are using large quantities of carton foods and canned foods, which, while they may

fill an important place in the provisioning of the nation, are expensive as compared with some other foods.

The careful housewife will supervise the buying of her own foods. To trust this function to the average servant is usually most expensive. Every kitchen should be provided with scales and standard measures, and the quantity of each purchase should be verified. When goods are delivered, such as potatoes or apples, they should be poured into another container before the deliveryman leaves, and if they are short measure, or are inferior to the sample, they should be sent back. An "easy" customer, who accepts underweight and inferior goods, is a gold mine to the dealer.

By all means pay cash and buy where you can get the best value for your money. One who runs an account invariably pays dearly for it. The credit merchant must charge enough to pay the additional expense of bookkeeping, collecting, and bad debts.

Storage

Waste occurs with both the raw materials and the cooked food.

Care in the storing of foods will prevent serious losses from deterioration.

Perishable foods, as fruits, vegetables, and milk, should be kept in a cool place. Butter and other foods that must be kept cool, may, in the absence of ice, be placed on bricks which have been dipped in

water and laid on the cellar floor, preferably in a draught of air. The evaporation of the water lowers the temperature.

Cereals should be kept in a cool dry place, and canned fruits, if in glass, should be kept in the dark.

To prevent the drying of root vegetables, the tops should be left on, and also some of the soil. Sweet potatoes keep better in cool dry sand.

Vegetables, such as cabbage, cauliflower, and lettuce, which have a stem, may be kept in good condition for a comparatively long period by standing the stem, but not the leaves, in water. The water would tend to rot the leaves. Wilted vegetables may be restored by soaking in water for an hour.

Fresh berries should be washed in their original container soon after they arrive, and then be poured into a shallow dish, the bad ones being picked out to avoid contamination of the sound fruit.

Preparation

Avoid waste in separating the refuse from the edible portion of the food. Too often a considerable portion of the good goes into the garbage barrel with the refuse. In the preparation of vegetables, a little care will save an appreciable amount of nourishment, such as is ordinarily thrown away. By using a small, sharp knife to pare potatoes, apples, etc., one can make the peel much thinner, and thus avoid unnecessary waste. This is particularly important as regards the potato, which has a moderate supply of protein immediately beneath the skin. The protein of potato is more valuable as a flesh former than that of wheat or other cereals. It is a remarkable fact that potato and rice—foods generally looked upon as having a very low percentage of protein—have protein in a form that is much more fully utilised in the formation of tissue than are some of the other vegetable proteins. This may explain why it is that vast populations live on a diet consisting essentially of potato or rice, with a minimum of animal protein. As the potato is ordinarily pared, a large portion of this

protein is wasted, and what is left is largely starch. The ideal way to prepare potatoes is to peel them after boiling. This saves not only the protein, but also the mineral matter which dissolves out in the water if the potatoes are peeled before they are boiled. The baked potato, while it has excellences that recommend it, is open to the objection that a considerable proportion of the nutriment is sacrificed with the skin.

Beets should not be pared or cut into until after they are boiled, otherwise a large part of the nutriment, flavour, and colour is lost. If potatoes or other vegetables are pared before boiling, the water may be used as an ingredient in soup or gravy.

The stems of root vegetables, often thrown away, make good greens, valuable for their content of iron and other minerals.

Small pieces of cabbage stem and other solid vegetables, dried in the oven and ground, are valuable as an addition to soups, both as a flavour and as a source of vegetable salts.

Leftovers

Many bits of leftover foods may be utilised as the basis for a soup that is, in fact, more nourishing than the bouillon soups. Other leftovers may be mixed with breadcrumbs and made into a roast. The ingenious housewife will thus make such successful dishes that she will be asked for the recipe, which, of course, it would be impossible to give, for such dishes are never made exactly the same.

Leftover bread, even when dry, should be saved, and dried in the oven, either in the form of rusks, broken into crumbs, or in the form of zwieback. The former can be used in the same manner as some of the expensive breakfast foods, and probably has as high a nutritive value as the proprietary foods, especially if the bread is made from the whole wheat. Such dried bread can be used as a thickening in soups, or in the preparation of roasts, and in various other ways.

Toasted Potatoes as Bread

GEORGE L. McNUTT

THE nearest approach to conventional methods of cooking potatoes as a bread substitute, is, of course, a perfectly baked potato, but a perfectly baked potato is very rare. There is nothing more repulsive, more destructive to appetite and digestion, than the baked potato too often served on our tables; it is liable to be half-baked, burned to a crisp, or so waterlogged that it cannot be served with a clear conscience or eaten with digestive safety to the average stomach.

Even a perfectly baked potato served at the psychological moment does not give that subtle sense of bread function that the piece of bread or toast held in the hand affords. To satisfy the bread craving and give to the potato such a perfect bread function that it can be a one-hundred-per-cent bread substitute, prepare according to the following directions:—

Wash good-sized potatoes as if to bake, being more scrupulously careful than usual to scrub and cleanse the skin carefully and remove all bad spots. Cut the perfectly cleansed potato lengthwise into slices one-fourth of an inch thick. Put the slices loosely into a wire basket or steamer and steam until they are properly "tempered"—that is, until they are in part, but not completely, cooked. If they are completely cooked by the steam, they are of no particular value as a bread substitute. As a rule, about ten minutes' steaming is adequate. After this initial steaming, dry the slices well between clean towels, and toast as you would slices of bread, or put them in a wire basket or perforated pan and bake in a very hot oven until the slices are delicately browned on both sides. Sprinkle lightly with salt. Serve as you would toast. The skins can be removed before serving or while eating, but if one is a connoisseur, he will eat the toasted slices skin and all.

The first taste of a steamed and toasted sliced potato gives a delightful surprise. There is such a delicate, delicious appeal

to the palate that people say, "I never tasted potatoes before!" They are right. And there is a reason. Potatoes that are pared lose much of their flavour and food value. Even potatoes that are carefully cooked in their jackets, boiled, steamed, or baked, inevitably lose much of the precious mineral element that is the basic factor of all food values.

If the sliced potatoes are steamed too long, they quickly collapse. If the tempering is reasonably correct, after they are toasted and cold, they can be reheated and still be crisp and palatable. Being sliced with uniform thickness, the slices steam, toast, and brown uniformly. There are no too little and too large pieces to cause trouble by burning the little or serving the large partly uncooked.

Without doubt, one reason for the delightful taste is the increased amount of starch that is turned into dextrin by toasting the two sides. It is that same something that gratifies the age-old craving for toasted, roasted, and fried starchy as well as flesh foods. The toasted potatoes will be just a little more irresistible in appearance and taste if, after they have been steamed and thoroughly dried ready for toasting, they are lightly brushed with oil. This insures a glossy surface, with very little saturation of the starch with fat. One big advantage in serving potatoes sliced and steamed and toasted is that the caramel taste of the toast without starch soaked with fat is obtained.

After the slices are steamed and toasted or browned, they can be cut into strips about half an inch wide and served as bread sticks, or they can be diced and served with butter or any favourite dressing. The best bread use, however, is to take them in the hand, salt, butter, and eat them. With a little knack and experience in tempering just long enough and toasting carefully, there is no more dainty and delicate dish than a plate of sliced, tempered, golden-brown, toasted potatoes.



QUIET TALKS WITH MOTHERS

Good Advice On Common Disorders of Childhood

IRVING WILSON VOORHEES, M.S., M.D.

I.—Malnutrition

It is a curious fact that nearly all the fatalities of early infancy are associated directly or indirectly with some disease of the stomach or intestines. Mothers have been very slow to appreciate this fact, although physicians for years past have been trying to teach them the great importance of the food problem in infants. Every summer there is in every large city great mortality among babies from causes easily traceable to ignorance of feeding requirements. It is the very vast importance of malnutrition which has led us to use this subject as a text for this important article.

By malnutrition we mean a condition of the body in which the food taken in is not properly utilised in the essential processes of growth and repair. Diagnosis in such cases is so easy that every mother should be able to make it for herself. Furthermore, she should be able to use her common sense in following a plan of treatment as laid down by the physician which will prove satisfactory.

In the first place we should remember that the stomach of a new-born babe is exceedingly delicate, that its capacity at most is only about two ounces, and that its function can be very easily disarranged or permanently impaired. It is better not

to force a new-born babe to suckle too soon. At least twenty-four hours should elapse after birth before it is invited to take the breast, or, if this is done sooner, the purpose should be to encourage the formation of milk in the mother and to get the child accustomed to nursing.

There is no danger of a young infant starving. He usually has plenty of fat in his body which nature will utilise for present purposes, and it is much better to keep the child a little hungry than to run a risk of overfeeding. Plain water or barley water is sufficient for the first forty-eight hours, after which regular nursing may be encouraged every two hours. At first ten minutes is long enough to keep the baby at the breasts, alternating five minutes to each. For, if the infant is allowed to nurse longer, the stomach is sure to be overfilled and the way will then be paved for vomiting, diarrhoea, and other signs of gastro-intestinal disturbance. We should all remember that nothing in this world can ever replace healthy mother's milk for the wants of a child. There is no modification, no proprietary or predigested food, that can replace mother's milk, and it is a particularly hopeful sign that during the past few years children's specialists everywhere have been taking up the cry of "back to

nature." Medicine has its fads, as well as millinery. The modification process was one of them, and is now fairly on its way to oblivion. Instead of analysing cow's milk and laboriously computing the amount of fat, carbohydrates and proteids which should be added to make it suitable to the needs of a given infant, physicians now prefer to analyse mother's milk and if it is deficient in quality or quantity they try to bring it up to the necessary standard. In case this is impossible, the alternative is a suitable wet-nurse, but such a person with the proper qualifications is hard to find. Now that we understand so much of the theory and practice of hygienics we must realise that wet-nurses should be recruited from the highest rather than the lowest ranks of humanity.

Cases of difficult feeding are frequent in which the greatest tact on the part of the physician and the most patient co-operation on the part of the mother or wet-nurse are needed to support the child until it grows strong enough to subsist on a mixed diet. This is, of course, particularly true of immature babies, which have a hard struggle for existence during the first year, and often succumb to some acute infectious disease, such as bronchopneumonia, whooping-cough, measles, etc. The resistance of such a baby is so bad that it becomes the host of every form of germ that crosses its path.

When such an infant's stomach has once rebelled against food, it becomes extremely irritable, throwing off everything that is put into it and absorbing nothing into the system. In such a case the physician must direct his efforts to cleansing the stomach and intestines of all irritating particles or poisonous germs. When the stomach begins to quiet down and take up its normal functions, barley water or thin gruel may be given in small dosage, and the stomach may be very gradually educated to tolerate milk by introducing a very little at each feeding, after the stomach washings, this can then be gradually increased. The mother's milk will probably have to be pumped off,

modified, and fed to the infant "by hand." In this way good results are possible and may be expected if patient devotion to a fixed plan is followed out. During this trying stage, the child must be carefully guarded against every possible infection and must be studied from every angle. Weight and temperature charts will of course be kept, as well as daily notes of the actual conditions present.

There are, of course, cases of marasmus, which cannot be cared for in this way. Here there is no simple gastro-intestinal irritability, but real disease of some other organ, such as the liver, heart, spleen, kidneys. There may be an actual mechanical obstruction in the stomach, "pyloric stricture," etc., preventing the onward moving of food into the small intestine. Such conditions are now well understood by baby doctors and are to be looked for in every case before elaborate feeding methods are undertaken. It is, of course, impossible to nurse away a mechanical obstruction. That must be attended to surgically.

Just now there is a common sense movement on foot in the matter of feeding babies, which is destined to work a great good. No doubt there are cases which do well on modified cow's milk, but who is going to say that they would not have done better on modified mother's milk? All mothers should accept full responsibility for the rearing of their children. One of the ways to do this is to make every effort to encourage breast feeding. Cow's milk may do for children who are always well. It is by no means an ideal food for sick children, no matter how it may be modified.

II.—Disease and Facial Expression

It may be said with a fair degree of accuracy that the face is the mirror of the emotions. There are very few people who can undergo a strong feeling of fear, anger, hate, love or pain and conceal their expression from the eye of the onlooker. And so it comes about that after the character is thoroughly formed, in most cases that is to say before the thirtieth

year, the face becomes a most interesting index of personal worth. If we are anxious to know what is in a man's mind, we engage him in conversation, ask him questions and watch his face for some evidence of what is going on within his brain. To be sure there are hardened criminals who are great actors in this respect, who can utter the most profound sentiments

being that we sometimes fail to remember how beautiful may be the soul which dwells in a very unprepossessing earthly home. In any case we do not remain deceived for long, every inflection of the voice tends to apprise us of that inner essence which is so dominating and yet so utterly intangible.

Now, fortunately for the diagnostician,

disease is very prone to express itself in the human features, either disease existing from birth or disease acquired as a result of one of the incidents of living and dying. Hippocrates knew so well the importance of this symptom that physicians to-day speak of the "hippocratic faces," meaning the definite classical signs of a given disease. Oliver Wendell Holmes tells us with great enthusiasm that this ability in diagnosis was one of the very distinctive qualities of his great master Louis, who was a famous teacher of medical students in Paris during the first half of the nineteenth century. I have myself walked through the wards, with great teachers of modern medicine and have had them describe to me at twenty paces the condition of heart, kidneys, liver or lungs, in patients upon whom they had never previously cast an eye.



A HEALTHY CHILD IS A HAPPY CHILD

and insist upon the most emphatic denials, when the exact opposite is in reality within them. But they are exceptions to the great human rule.

Many seem to cultivate a second insight into character and feel a very definite antipathy to certain individuals, although they realise there is no good reason for such aversion. Beauty of mind is so closely associated with beauty of physical

But it is one thing to acknowledge that disease exists and it is quite another to tell how its ravages can be overcome. The importance of recognising the possibilities of permanent deformities in the faces of growing boys and girls cannot be over-estimated, for it is very likely to influence their entire careers. First of all we have those facial irregularities, which are a part of our inheritance.

A defect, not rarely seen, is the so-called cleft palate and hare lip. These are usually found coexistent, but may, of course, exist separately. The cause for this condition is as follows: In life before birth the two halves of the body develop at the same time and to the same degree from certain growth centres. For instance, each bone of the skull develops from a little nucleus of bone, an "ossific centre" so-called, and by gradually growing from this toward the outer margins these centres approach each other and become slowly united. Proof of this is seen in a baby's skull, where both in front and behind, at the "fontanelles" (little fountain) there are soft places which pulsate directly under the applied finger. These do not completely close until the fourth year of life.

In the same way the two halves of the upper jaw grow out from definite centres until they approach each other and unite in the middle line of the body to form the roof of the mouth. Any delay or arrest of this growing process results in a fissured or cleft palate and the resulting disfigurement is very great, leading to all sorts of disorders of nutrition from inability to nurse properly. Such a condition should be repaired by a special surgeon at the earliest possible moment, for the gap will only increase by waiting.

There are, too, cases of sunken cheeks, where the hollow bone which forms one of the resonating cavities of the nose fails to bulge outward as it should. The indentation or bulging inward decreases the

resonating area of the nose and causes great wrinkles to form about the mouth at an early stage. It is possible to change the entire contour of the face by early surgical intervention.


Narrow upper jaw and high V-shaped roof of mouth are probably due to a superabundance of adenoid or other nasal obstruction; for all such cases are pronounced mouth breathers. The mouth being always open, the lower jaw drops, becomes elongated and tends to over-ride the upper. This condition can in these days be very well cared for by the regulating dentist or "orthodontist" as he is called.

Scars and depressions in the skin frequently occur after smallpox, or chicken pox and a skin disease known as acne. They can be almost entirely prevented if the child is protected against himself by the use of mittens, and if need be, by tying the hands behind the back. The pustules must not be disturbed, for the little crust will come away of itself when Nature is ready for it, and the skin underneath will be left smooth and fairly normal.

While the ears do not belong to the face, it is surprising how their position affects our judgment of facial expression. If they are naturally very prominent, a slight operation will put them in perfect adjustment with the other features.

All of this goes to prove what can be done in these days of advanced scientific knowledge to make our children conform to the grace and beauty of outline which Nature always intends but sometimes fails to accomplish.

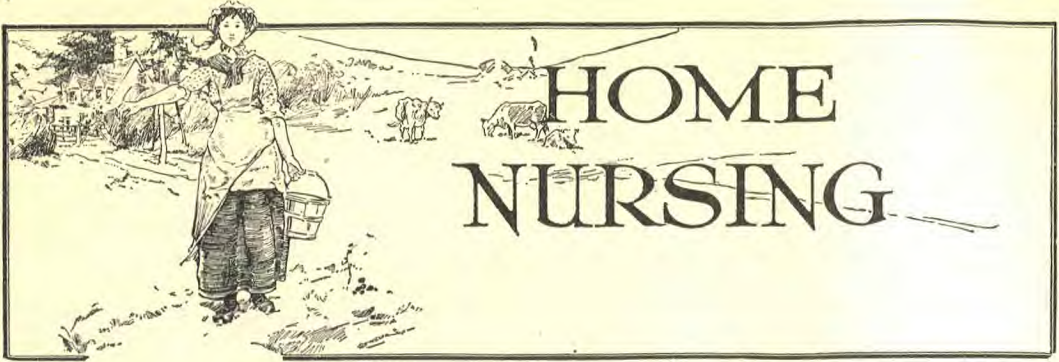
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Emergency Remedies

Bruises

1. ONE of the best remedies for a bruise is to apply fomentations immediately, as hot as can be borne. Or, apply hot and cold alternately. This treatment relieves the pain and soreness, and diminishes the discolouration.

2. To prevent discolouration, rub the bruised spot at once with butter.

3. Bathe freely with a solution of salt and vinegar.

4. Apply a plaster made of brown sugar and camphor.

5. Soak a piece of common brown paper in vinegar and place it over the bruise.

Bites of Animals

Very little treatment is necessary unless the flesh is badly lacerated. Cleanse the wound, remove any foreign matter that may be in it, and bind it up the same as a cut.

If the animal was enraged at the time, the wound may be poisoned, and should be treated as a poisoned wound.

Foreign Bodies in the Ear

If an insect crawls into the ear, drop into the ear a little warm water or warm sweet-oil. Particles of gravel or any solid substance may usually be removed by syringing the ear gently with warm water. Incline the head to one side during this treatment. Never use any sharp instrument in the ear. If the object is not removed by this simple means, use a pair of small forceps or a loop of fine wire.

Foreign Bodies in the Nose

If any foreign body like a bean, pea, or kernel of corn becomes lodged in the nose, close the mouth and the unobstructed nostril and blow the nose with as much force as possible.

It may be removed by syringing out the nose. Force the water up through the open nostril.

Sometimes the object can be removed with a loop of wire or a pair of small tweezers. Be careful not to push the obstacle farther into the nostril.

If none of these means prove successful, consult a physician.

Dirt in the Eye

If a particle of dirt can be seen upon the eyeball, it may be wiped out with the corner of a handkerchief or a piece of soft linen. Sometimes it is necessary to turn the lid back over a lead pencil or some other small instrument before the dirt can be seen; then it can be wiped out.

There is no virtue in placing flaxseed or eyestones on the eyeball except to produce an extra flow of tears that may wash away the intruder.

Sometimes a particle of metal becomes embedded in the eye; it will need the attention of someone of experience to remove it, and a surgeon should be consulted immediately.

Nausea and Vomiting

If nausea is caused by the introduction of something into the stomach that should

not be there, it is best to give an emetic of some kind that will induce vomiting. The sooner the stomach can be relieved in this way the better.

If it is desirable to avoid or check vomiting, several simple remedies may be employed. Drinking hot salt water often gives relief. Apply hot and cold to the stomach or to the spine. Put ice in an ice-bag, or wrap small pieces in a cloth and apply to the throat and back of the neck. Permit the patient to swallow bits of ice.

Hiccoughs

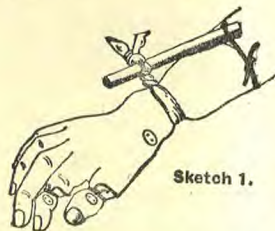
A few mouthfuls of cold water, taken while holding the breath is generally effective. Sugar mixed with vinegar or water and taken in small quantities is a good remedy.

Convulsions

If there is plenty of hot water, place the patient at once in a hot full bath, with cold applied to the head. Use ice if it can be obtained. When there is not hot water enough at hand for this treatment, give a hot foot-bath, always keeping the head cool.

Discover the cause of the convulsions if possible. If it is a result of constipation, give a copious enema of warm soapsuds to relieve the bowels. If the trouble is in the stomach, give an emetic. A part of a cup of salt and water may

be given as soon as the patient can swallow.



Sketch 1.

Snake-Bite

The Board of Public Health, Victoria, advises the use of the following methods of treatment for snake-bite, in the order set out:—

1. *Ligature.* When the bite is on any part of a limb, apply a ligature between the heart and the bite. It must be placed near the bite, and must be sufficiently tight to stop blood circulation at the part. The most efficient means of tightening a ligature is by the use of a

switch rod, inserted and applied as shown in the accompanying illustrations.

2. *Cutting out or incising.* Pinch up the skin at the bite, and cut out the pinched up skin with one sweep of the knife. If it be impracticable to cut out with one cut, incise around the bite, and cut out as quickly as possible. If it be impracticable to cut out the bitten part, make small incisions around and across the bite.

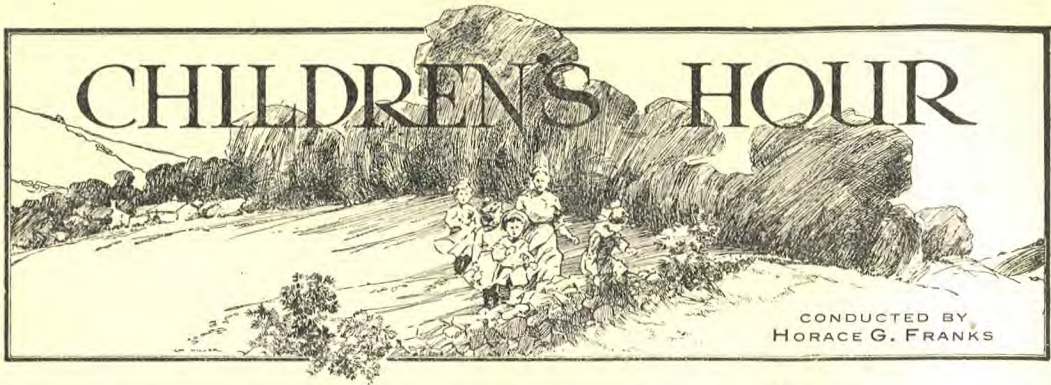


3. *Antidote.* Rub powdered permanganate of potassium into the wound. Repeat at short intervals. Encourage bleeding by rubbing the limb downwards (from the heart), and by squeezing the wound. If no antidote is available, the wound, if not bleeding freely, should be sucked.

4. *Removal of ligature.* If the antidote has been applied, remove or loosen the ligature fifteen minutes after the bitten part has been cut out. In case no antidote has been used, the ligature after fifteen minutes should be loosened for about five minutes, and then re-applied.

5. Send for a physician.

ACCORDING to Langdon Brown, in his "Physiological Principles in Treatment," "the beneficial use of lactosa or soured milk depends on the reaction of the fæces. If they are acid the treatment by lactosa is unsuitable; if they are alkaline at first, but yield a fair quantity of gas in the fermentation tube, showing an acid reaction after, the treatment will probably be unsuccessful. Good results can only be expected in the cases where the fresh fæces are alkaline, and remain alkaline after twenty-four hours, yielding hardly any gas to the fermentation tube. The reaction of the fæces is ascertained by the use of litmus paper. If alkaline, the red litmus is turned blue; if acid, the blue litmus paper is turned red."

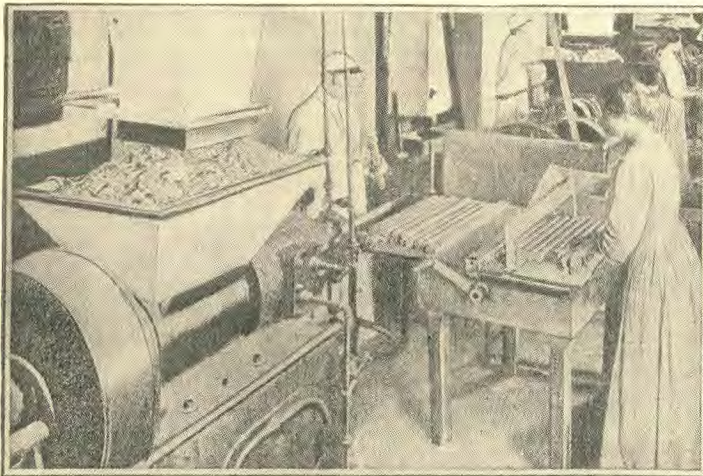


In Unknown Soapdom

The Story of the Companion of the Bath-Tub

THIS is the children's corner, and so we are going to tell in this issue the story of something which all children have seen—but which some younger children dislike.

Have you ever thought, children, who



PRESSING CHIPS OF SOAP INTO BARS

first invented soap, or how people used to cleanse their bodies before there were any cakes of soap? We do not know exactly who invented soap, but we do know that it has been used for many hundreds of years. When explorers were digging in the ruins of Pompeii, that city which was destroyed by a volcanic eruption in A.D. 79, they found not only a few cakes of well preserved soap, but also a complete soap-making establishment. Other dis-

coveries tell us that before soap was used, the ancient people cleansed themselves with fuller's earth, olive oil, and the juices of certain plants.

And even to-day, in different parts of the world, most strange substitutes for soap are used. For instance, in China they use a mixture of rice and bran, the same cleansing agent that they have always used. A small mixture of bran and rice is placed in a cotton bag, washed in warm water, and then passed over the skin like a sponge. In Singapore and on the Malabar coast the people use little balls of clay to take the dirt off their hands and faces. These soap-balls are dirty brown in appearance, rather heavy, and not satisfactory for white people to wash with, at any rate.

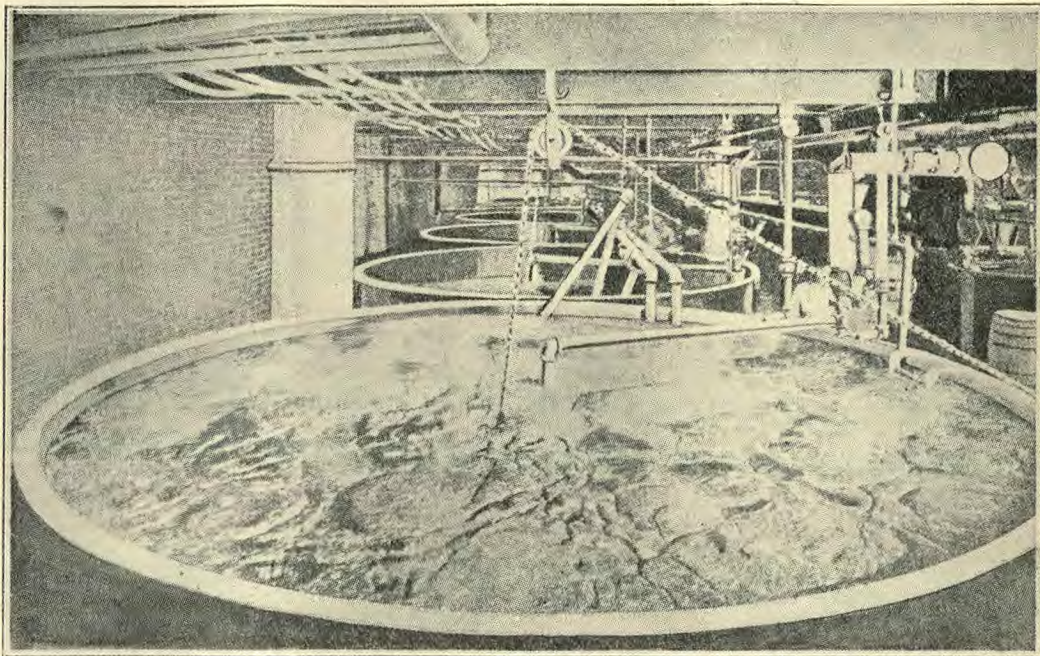
Other peoples at different times and in different places have used soap-berries, soap-nuts, soap-roots, and soap-barks, while even to-day in some countries soap-paper is used instead of the usual tablets. One small piece of this soap-paper, about as large as three stamps pasted edge to edge, is sufficient for washing the hands and face. It would seem strange, would it not, children, to go to a little book and tear out a sheet of paper to wash yourself with?

There are said to be about thirty thou-

sand known varieties of soaps in the world to-day, and yet these are practically all made the same way. Some of them are strangely shaped, some are beautifully scented, while some are of most uncommon colours. All soaps, however, consist of fat, an alkali, and water. The fat may be of two kinds, either animal fat or vegetable fat. The animal fats are usually obtained from cattle and sheep, while the

a modern soap factory is the kettle room the kettles—or mixing pans—sometimes being as large as a house. The pans in the illustration hold 350,000 pounds of soap. These pans are made of steel plates rivetted together, and are heated by coils of steam pipes at the bottom.

It is in the "kettle room" that the art of soap-making is seen, for in this room is carried out the most important process



A PAN OF SOAP IN THE MAKING

oils of the cocoanut, olive, linseed, and soya bean are the principal vegetable fats.

The dirt that accumulates on our skin is usually greasy, made up of dust, etc., mixed with the natural oil of the skin. Water will not remove this grease until it is dissolved, and it is the soap which does the dissolving work. But the soap must be made to certain proportions, for if there was too much fat in the soap, it would only make the hands and face more greasy, while if there was too much of the ingredient called alkali, the soap would burn our skin and spoil the clothes that are washed in it.

One of the most interesting features of

of mixing the ingredients according to the correct recipe. When the substances are all mixed, the liquid is boiled many times, after which the liquid is allowed to cool. This cooling takes from seven to twelve days, and the liquid is in the pans for about two weeks altogether.

As the soap cools, the impurities settle down to the bottom of the pan, while the finished product is taken off the top, and pumped into a machine called the crutcher, a mixing apparatus which beats the soap into a smooth cream. From the crutcher the soap drops into boxes on wheels, which are at once rolled into the cooling room. Each box or frame holds about

twelve or fifteen hundred pounds, and when the soap has cooled sufficiently for it to be easily handled, the sides of the box are taken off, leaving a solid block of soap. These blocks are passed through the cutting machines, which turn out the soap in long bars. The separate bars are then placed in further drying rooms, after which they go to large pressers and wrappers, completed cakes being turned out at the rate of sixty thousand a day.

The kettle or mixing room process is the same for both toilet and laundry



CHINESE BRAN SOAP

soaps, except for differences in the quantity of fats used. Toilet soap does not go through the crutcher and frames, but is passed directly from the kettle through a drying machine on aprons. The drying only takes a few minutes, and the soap then passes to a mixer and a mill, where the perfumes and colours are added.

This mill consists of a number of revolving stone rollers set closely together in an iron frame. The soap leaves the mill in the form of thin ribbons. These pass into another machine which compresses them into a solid mass and delivers it in a long roll of any desired thickness. Portions of this roll are removed and cut by wire into bars, pressed into cakes, and wrapped in the many styles of wrappers we see in the shops.

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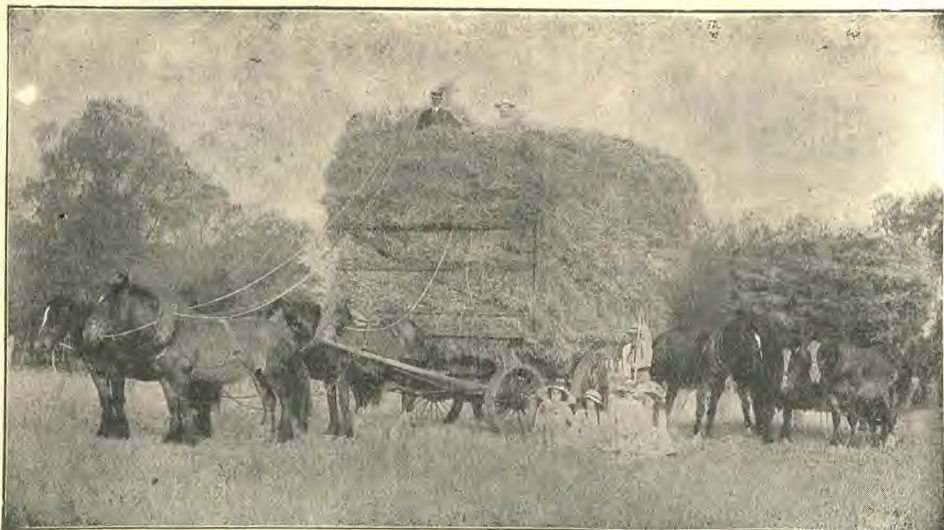
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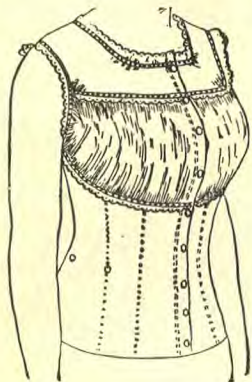
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