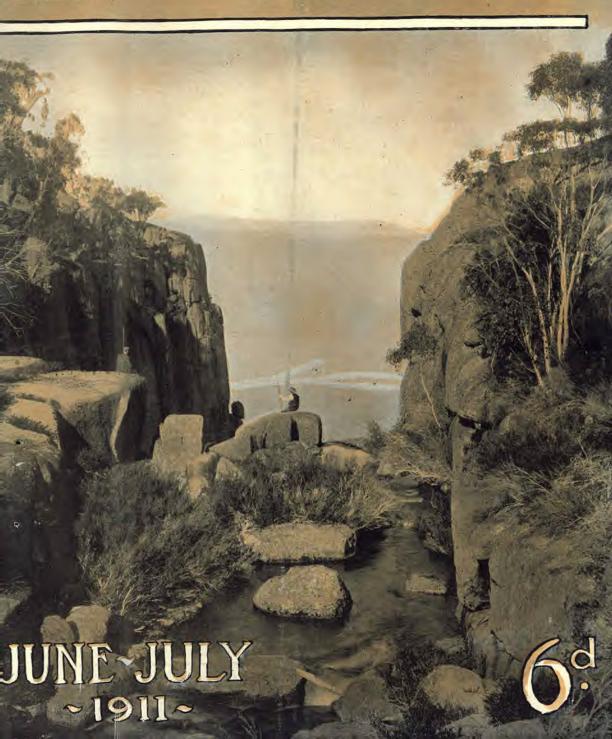
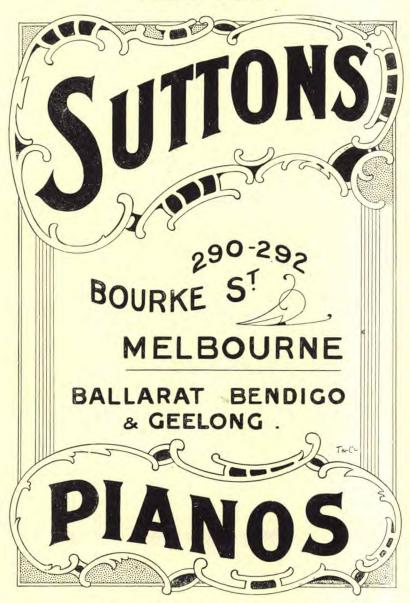
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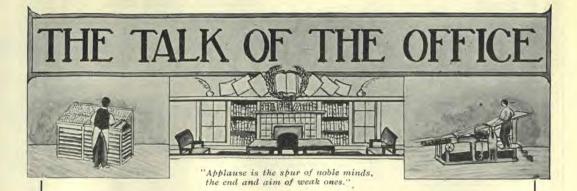
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T was not without some misgivings that the publishers of LIFE AND HEALTH ventured upon the production of this magazine, knowing that it was imperative that a large circulation must be obtained in order that the heavy expenses involved in the production of a high-class, illustrated magazine might be met. It was exceedingly gratifying to us to see the wide-spread appreciation which our first issue called forth from the Australasian press and the people into whose hands the magazine fell. So encouraged were we with the reception given to our first issue, that we determined to print an additional 6,000 copies of the second issue. These extra copies, however, were none too many, for in nine days after the issue was off the press we were unable to fill any further orders.

As this present number, containing as it does so much valuable matter upon winter complaints, will doubtless find as ready a sale as the former issues, we have ventured to print twenty thousand copies. We trust the information which our medical editors have contributed may be the means of enabling our readers to ward off disease, and to enjoy to the full their life and health. This is the mission of LIFE AND HEALTH.

WHAT SOME OF THE REVIEWERS SAY

The Southern Argus

Strathalbyn, S. A. March 9, 1911.

From the Signs of the Times Publishing Office, Warburton, Victoria, we have received a copy of the firm's new bi-monthly journal entitled "Life and Health," a very interesting and useful magazine, full of pertinent information on subjects of health and sanitation, as well as a number of illustrations. The publication is well got up, and is issued at the low price of 3s. 6d. per year, including postage.

Evening Post

Wellington, N.Z., February 11, 1911

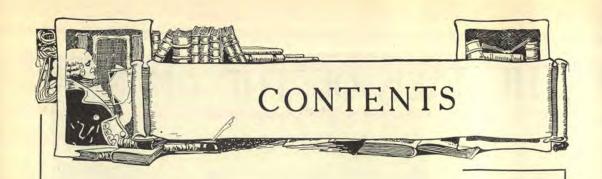
"Life and Health," published by the Signs Publishing Company, Melbourne, has sent us the February-March issue of its magazine. It is a thorough-going advocate of vegetarianism, and advertises so-called health-foods" and clothing designed with a view to health requirements. Those who may disagree with its special propaganda, physical or doctrinal, may none the less profit by many valuable hygienic hints, and an article on a new kind of massage treatment—the friction of the patient with

heated sea-sand—is of interest. This method induces free perspiration, and is continued till the sand cools (about half an hour). It is said to have all the virtues of the Turkish bath, but without the debilitating after-effect which is the drawback of that treatment, and induces sound and invigorating sleep.

The Examiner

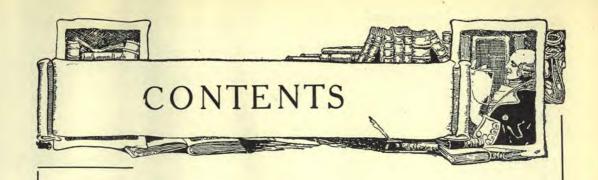
Launceston, Tas., January 28, 1911

"Life and Health" is the title of a new publication issued in Melbourne. Its purpose is to call attention to the importance of preserving life, and maintaining a healthy physique. Some men, it says, shorten their lives by at least fifty per cent. by indulging in questionable pleasures. Almost everybody shortens life to a greater or less degree by practising some evil habit. It begins by roundly condemning the use of tobacco and alcohol. The number contains a variety of useful information upon health matters, and there is certainly room for the circulation of more matter of this sort, so long as it is practical, in type. The new journal has a contributing staff of eight physicians.



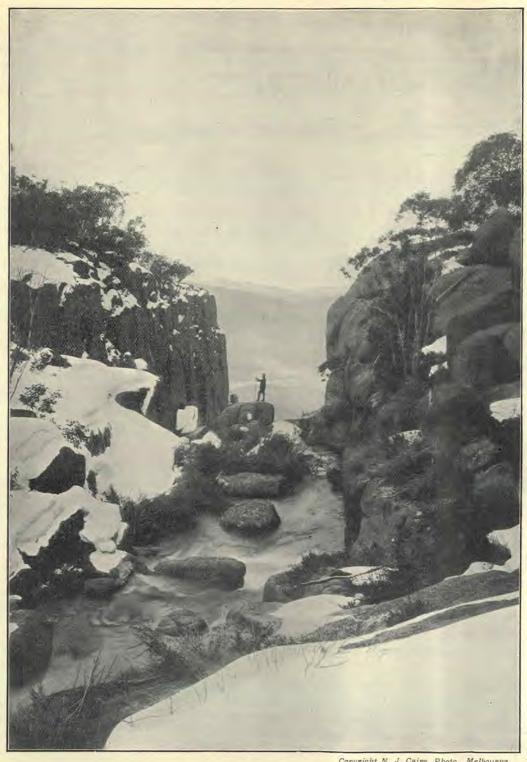
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Melbourne, Victoria, Australia

June-July, 1911

Influenza: Its Symptoms, Prevention, and Treatment

INCE the great pandemic of influenza which occurred in 1889-90 this disease has been almost constantly with us. Local outbreaks annually occur, and as the disease is highly contagious, from one case many others originate. Thus an entire community may be infected. Fortunately, the disease has decreased somewhat in virulence, due no doubt to the fact that we are getting used to it. No age is exempt, though infants and aged persons seem less likely to contract influenza than While robust persons are not others. more susceptible to influenza than are the weaker members of the community, they are the ones most frequently attacked, due no doubt to their more frequent exposure The disease is, of course, a to infection. germ disease, as are practically all infectious fevers. It is caused by the influenza bacillus, and as this microbe multiplies in the upper air passages and is not destroyed by drying, handkerchiefs become a fertile source of infection. A person unaffected by the disease may also become an influenza carrier, the bacilli adhering to

the clothing. So, too, inanimate objects such as papers and books may serve to transmit the infection. The disease is most common in the winter months, probably because the strong sunlight of summer destroys the influenza bacillus. For this same reason most cases of influenza occur where there is least sunlight.

Symptoms

Influenza usually begins suddenly within two or three days after exposure. In some cases it begins within a few hours after exposure, while in others there is a delay of a week or more. An attack of influenza begins with a chill or chilly sensations quickly followed by fever, headache, pains in the back and limbs, and a general feeling of tiredness and weakness. Immediately there appear, in the great majority of cases, the symptoms of an acute cold in the head. There is watering of the nose and eyes, soreness of the throat, sneezing, cough, and any or all of the other accompaniments of acute congestion of the nose and throat. The inflammation may

extend to the bony cavities of the head, so producing distressing frontal headache or facial neuralgia; or to the middle ear, causing earache. The inflammation tends to extend through the bronchial tubes to the lungs, thus broncho-pneumonia is not infrequently caused by the influenza bacillus. Pneumonia following influenza does not usually begin until after the fourth day of illness. Its onset is gradual and is indicated by greater severity of existing symptoms, more or less difficulty in breathing, and increase in expectorated mucous which at times becomes blood-The expectorated matter is often made up of small greenish-yellow masses surrounded by colourless mucous. Unless efficient treatment is employed, the cough and inflammation of the lungs tends to persist and may become chronic. temperature is not usually high, but heart weakness and general prostration are often out of all proportion to the apparent severity of an attack. Influenza may therefore be regarded as a most treacherous

While the respiratory form of influenza constitutes an overwhelming majority of all cases, two other forms should be mentioned: nervous and gastro-intestinal These are types in which either nervous or gastro-intestinal symptoms are marked, and may even dominate respiratory symptoms. Marked nervous symptoms are vertigo, insomnia, delirium, and convulsions. Even meningitis and various forms of paralysis have complicated influenza. In the so-called gastro-intestinal type of influenza the tongue is coated, there is vomiting, distention of the abdomen, constipation, or diarrhœa. Here again serious complications, such as appendicitis and peritonitis, have resulted. Other forms of influenza have been described, including typhoid, circulatory, cutaneous, and arthritic. While these forms are not common, they make it difficult to differentiate certain cases of influenza from enteric, tuberculosis, dengue, acute rheumatic fever, and other fevers which are characterised by skin rashes.

Prevention

Influenza cannot be prevented until its extremely contagious nature becomes more generally understood and recognised. The disease is disseminated chiefly in two ways: through contact with persons suffering from influenza, and by means of dried sputum and nasal secretions. When one member of a family develops influenza, it is therefore wise to keep this patient away from the other members of the household. Especially should the young and aged be protected, and also those who are weak. All expectorated matter should be burned, and in coughing or sneezing the particles of sputum expelled should be caught in a handkerchief or cloth, which is afterwards disinfected Bed and body linen should Table utensils be disinfected by boiling. should be kept separate. Light and air should be freely admitted to the sick-room, which should be finally disinfected with a five per cent. solution of lysol, cyllin, or other coal-tar disinfectant. Books and papers used by the patient should be burned or disinfected with the fumes of formalin. On coming out of a quarantine at the end of about a week after the fever disappears, the patient should be thoroughly bathed with soap and hot water from head to foot, and dressed in fresh clean clothing.

Treatment

At the commencement of an attack of influenza, an attempt should promptly be made to clear the nose and throat of influenza bacilli. This end is best attained by thoroughly washing the nose and throat with warm normal saline solution, which is prepared by dissolving one teaspoonful of salt in a pint of water. This solution dissolves mucous, and mechanically cleanses the parts. Immediately following this cleansing, a mild disinfectant solution should be employed. most effective and least irritating to the upper air passages is a freshly prepared solution of protargol. Ten grains of powdered protargol dissolved in two or

three ounces of the warm salt solution employed for cleansing should be used as a spray, or drawn through the nostrils from any suitable small vessel. It may also be used as a gargle. Menthol is a useful inhalent during this stage of influenza; and it may also be employed in vaseline, in the proportion of six grains to the ounce, for introduction within the nostrils. No weakening treatment should be employed at the outset of an attack of influenza. Eliminative treatment is in order, and a hot enema followed by a warm soap bath are most beneficial. should be drunk freely. Plain hot water and unsweetened hot drinks are beneficial. The common practice of sweetening such drinks with sugar is most pernicious, as this concentrated sweet clogs and burdens the poison-destroying and eliminative organs. Rest in bed is essential to recovery, and should be prolonged until the temperature has been normal for a day or two. Only by complete rest can complications be prevented. For the headache, cold compresses or an icebag should be applied to the head for fifteen or twenty minutes every hour. Heat should be applied to the feet, and fomentations to the back and abdomen. Hot sponging of the body is soothing and aids in reducing the fever. This is especially true if the skin is cold. With a hot flushed skin, cool sponging is more effective in reducing fever and inducing sleep. For heart weakness, apply an icebag over the heart, the duration of this application being ten or fifteen minutes every hour. To prevent extension of the inflammation to the chest, steam inhalations and fomentations to the chest and back, followed by the heating chest pack, are ideal treatments. Until the patient is free from fever, the food should be limited to fruit juices, broths, and other fluids. During convalescence easily-digested, nourishing foods, such as milk and milk gruels, an occasional egg, sweet fruits and cereal preparations, are in order.

Special pains should be taken to completely cure the influenza patient. Treatment should be continued during the convalescence by means of cool tonic baths and massage or friction of the skin with olive oil. Any tendency to chronic cough should be combated with short applications of heat to the chest and back followed by the heating chest compress. This latter application should be left in place not longer than one or two hours. Daily cleansing of the nose and throat with cool salt water is best continued until all discharge ceases. An out-door life and deep breathing complete the cure.

F. C. R.

Nature in Health and Disease

WE have been learning much of late years of the power in the body to overcome disease. Diseases are never dissipated by the actual treatment, but by the manner in which nature reacts to the treatment, and often, it must be said, in spite of treatment. Nature performs the actual work, our part is to aid by the removal of obstructions. The most successful plan is to become acquainted, as far as we are able, with nature's endeavours to combat disease, and then order our treatment accordingly; this is the line of treatment of advanced medicine.

In acute diseases the diseased blood reacts on the nerve centres in such a way that the general temperature is increased. This rise of temperature is the evidence of actual work done, of nature's efforts to get rid of disease. The treatment of these cases but a few years ago was to give antipyretic remedies, drugs which paralysed, more or less, the nerve centres, and thus reduced the temperature for a short time by actually nullifying nature's efforts to eradicate the poisons. cure is to take place, nature must work; the rise of temperature is inevitable. The rise of temperature, however, is sometimes more than the body can stand, the poisons are so severe that nature's efforts are followed by a temperature of body which is in itself inimical to life. guns employed in defending our country by frequent firing may become so heated as to render their further use impossible; then the necessity arises for reducing this excessive heat. It is now the daily experience of the physician that temperature can be reduced by simple hydropathic methods, such as hot or tepid sponging, or by baths, without in any way detracting from nature's efforts to effect a cure.

That nature manufactures her own remedies is strikingly evidenced by the substances known as antitoxins, lately discovered in the blood after recovery from such diseases as diphtheria, smallpox, measles, typhoid fever, etc. Sometimes the special antitoxin remains as a permanent constituent of the blood as after small-pox, measles, and scarlet fever: then the patient is free from any further attacks. Sometimes the antitoxins remain active in the blood but for a short time, as in the case of diphtheria and typhoid fever, and there is liability to further attacks. Directly, however, the germs of disease throw their poison into the blood, nature, if not unduly interfered with, begins to manufacture her remedies, and the problem arises, which will winnature or the disease? In diphtheria the disease is often too powerful for the child, and suffocation or blood poisoning would end the life before sufficient antitoxin could be developed to destroy the poison. The remedy is to get nature in another being to manufacture the remedy, and then transfer it to the child. Diphtheritic poison is introduced into the blood of a horse, and this results in a certain amount of antitoxin being produced, with a corresponding elevation of temperature. As soon as the reaction subsides, which takes place as soon as the antitoxins have been developed in sufficient quantity to destroy the poison, a fresh injection of the poison is injected into the blood, with the result that a further amount of antitoxin is produced. Finally the animal will not react to the poison, for sufficient antitoxin has been produced to kill all infection. antitoxin can be separated from the blood of the horse, and preserved in sealed glass tubes ready for use when required, and the results are most satisfactory. The

production of antitoxins is but one of nature's methods for ridding the human system of disease.

Nature is always on the alert for harmful surroundings; if, for instance, the weather becomes cold the blood vessels of the skin immediately contract, and thus the dissipation of heat is materially lessened; if, on the other hand, the atmospheric temperature be high or the body be in a state of fever, the blood vessels dilate, more blood is exposed to the atmosphere, evaporation, conduction, and radiation take place, and the temperature of the body is reduced, thus preventing the system from becoming overheated and incapacitated for its work. Volumes could be written on the manner in which nature works for the good of the being, and then half would not be told.

A knowledge of some of these facts should give us faith in the powers of our own bodies, when rightly used, to over-We would do well to come disease. remember that nature provides her own tonics, and this fact we would illustrate by glancing for a moment at the digestive functions of the alimentary canal. are responsible for what goes into the mouth, and for the manner in which the food is treated there. If we give nature a fair start, then the whole alimentary canal will maintain its strength and vigour; but if, on the other hand, we misuse that part of the alimentary canal which is under our own special supervision, the digestion generally and the whole being becomes deranged. Physiologists tell us that alkaline fluids will increase the flow of acid secretions, and that acid secretions will similarly aid alkaline secretions; that is, that alkaline and acid substances are tonics according to the part of the alimentary canal with which they are in contact. The secretion from the stomach is acid, and consequently the physician usually gives an alkaline remedy to be taken a short time before meals. But why resort to the artificial remedy when we can produce our own natural alkaline tonic? secretion from the mouth is alkaline, and there is no tonic that can approach it in

its stimulating action on gastric secretion. The alkaline fluid of the mouth acts as a tonic to the stomach, and the acid secretion of the stomach as a tonic to the alkaline secretions of the small intestines; thus if we start the process of digestion correctly we should neither suffer from dyspepsia, constipation, liver or kidney disease; or, in fact, any disease whatever.

Healthy blood keeps the system in good order, and healthy blood depends on healthy digestion. But one asks, How are we to make a proper beginning? How are we to get nature to produce in profusion her first tonic, the alkaline secretion of the salivary glands? Our answer is, Choose the right food, and use well the

teeth with which nature has provided us. Food cannot be swallowed in a dry state, and this fact we learn directly the food is placed in the mouth. We can supply this fluid artificially by drinking tea or water, or by taking food which

contains plenty of moisture; if, however, we do not take the work in our own hands nature will do it for us. The dry food will not yield to the muscles of the throat, it cannot be swallowed; so we chew, chew, and chew, with the result that the natural alkaline salivary fluid is secreted in abundance. It is not, however, the mere saliva that acts as a tonic to the gastric digestion but the food digested by the Consequently, the tonic food should not only be dry but also of a digestible nature. Saliva, most people now know, digests starchy foods; but starch in its raw state is practically unaffected by the saliva, hence we boil our potatoes and thoroughly cook all farinaceous foods. Green fruit often disagrees, but ripe fruit will agree with most digestions; for nature has already so altered the nature of the starch that it can be readily digested in the mouth. Bread, by being cut into slices and baked for a short time in a moderately slow oven, has its digestibility greatly increased; a good deal of its moisture (bread contains about forty per cent. of water) is thus driven off, and the starch becomes partly dextrinised. This doubly baked bread (if not browned too much) acts as a wonderful stimulant to the salivary digestion; it, however, should be crisp and not hard. foods are now prepared for the purpose of producing this quick digestibility in the mouth, such as rusks, unsweetened biscuits, granose flakes or biscuits, toasted cornflakes, puffed rice, and toasted wheat



The Melbourne-Sydney Express.

berries. Once the principle is mastered the intelligent cook can prepare many suitable dishes. W. H. J.

Results of Speeding Up

RECENTLY, while reading an American paper, I noticed that the Philadelphia and Reading Railway are making the trip between Philadelphia and New York in less time than its competitor, the Pennsylvania Railway Company. The officials of the latter company are quite determined to see that on their rails would be running an express that could exceed the speed of the other railway; the public required that it must be done. This spirit of competition, of speeding up, or

the strenuous life, is found the world over

to a greater or less extent.

This over-strenuous life finds expression in that disease which at the present day is very familiar to the laity as nervous prostration. Headache and insomnia are but symptoms of the nerve exhaustion. To the profession this is known as neurasthenia. The prevalence of this form of disease may be due to the fact that not more work is accomplished, but that the expenditure of nerve energy is excessive, or beyond the patient's vital efficiency. The patient may be a physical bankrupt due to wrong ways of living, constant use of stimulation, which calls on the principal or reserves of our nerve supply. Some of the most prominent factors in the causation of the present-day nervous diseases are found to be the occupations characteristic of our present civilisation. Then, also, we must think of the multiplicity of excitations to which our nervous system is subjected in the large cities. The medical training of the present day is directed much more closely to prevention of disease than it has ever been The medical profession find that of a necessity they must take an interest in the occupation and life of their patients.

Pain is often a blessing in disguise, and is associated with nerve exhaustion in the form of headache. This, like a danger signal, shows that there is some necessity for a change in the method of living-the tired-out nervous system is crying out for rest, and often drives the distressed sufferer to seek medical advice. Headache is of perennial interest, inasmuch as it is one of the most common afflictions from which all classes of the community are liable to suffer. There are many varieties of headache, and it can be understood that the treatment must first take into consideration the cause; that which would relieve one variety may be utterly inapplicable or even injurious when applied to relieve

another kind.

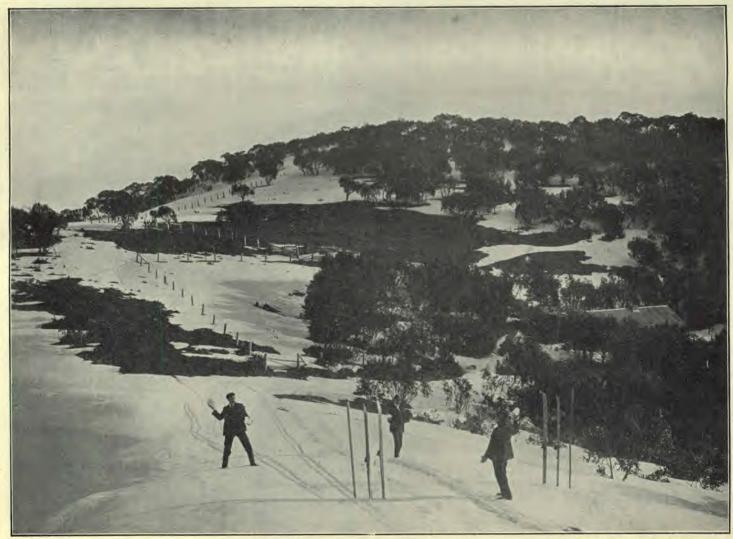
The following may be taken as a characteristic case of nervous exhaustion, accompanied by headache and insomnia:—

Mr. H., aged thirty-five, working in a boot and shoe factory; occupation that of using one of the many machines now required in making a pair of Our present civilisation having done away with the old cobbler, the boot is now required to pass through the hands of twenty or thirty workmen at machinery speed before obtaining the finished article. Mr. H., standing at his machine during the day, is compelled to be always on a high nerve tension to avoid injury to himself and to the leather. He begins by telling me how he feels. We learn that he is nervous and gets easily excited, can no longer work as he did, gets tired before the day is half over; in fact, is often exhausted when he awakes in the morn-There has been such a call on his vital efficiency that he now has become a constant user of the cigarette, and often smokes during his sleepless nights. He awakes in the morning with a headache, occasionally has palpitation of the heart, and finds it necessary to force himself to eat. Food lies heavily on his stomach, and he suffers very much from constipation. Sometimes he becomes very much depressed. patient is of fine physique and yet he complained of very much muscular weakness, particularly in the back and legs, and to him headache was a most distressing symptom. It was evident that this man required rest. With rapid waste and slow repair the result had been an exhaustion of normal activities. In his case it was impossible for him to obtain absolute rest, hence the next best thing must be done which meant that the patient must take relative rest or change of occupation. He had always failed to obtain an outdoor life.

Treatment

Diet is a prominent factor in the treatment; the indication is to raise the vital efficiency to as high a level as possible. With this end in view one must use readily digestible foods, and use them in such a way that the digestive apparatus may have time to see that they are properly assimilated. The diet must be such that will not produce toxic effects and at the same time decrease the constipation; the slow digestive activity and constipation causing an increase of uric acid, and thus the headache. Use good fresh fruit, fruit juices, and cooked fruits in abundance, with a cereal and vegetable dietary such as granola, granose, corn flakes, peas, beans and lentils, asparagus, potatoes, tomatoes, macaroni, etc., milk and eggs. It being necessary in these cases to have a diet rich in fats as well as proteids, the various nut preparations may be used.

The patient living near the sea and it being summer, he was advised to have a sea bath each morning, a good rub to follow, making sure that there was always



Snowballing at "The Hospice," Mt. St. Bernard, Victoria.

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a good reaction. Should the sea bath be impossible, then a cold shower could be taken at home, with good pressure of water, or first a hot spray for thirty seconds followed by a cold spray.

For the headache, apply heat to the feet—as a hot foot-bath or hot bag. Cold compresses, if possible applied from ice water, to the back and vertex of head, with very hot compresses to face and ears.

For the mental depression, sweating baths followed by cold sprays. To relieve the insomnia, neutral baths could be taken, temperature of water about the same or little warmer than body, no shower to follow; patient to go immediately to bed.

The object of the treatment is to get the head cool and feet warm; hot foot or leg baths can be taken. Hot water may be taken at bedtime, and an abdominal compress covered with oil silk may be worn all night.

In the treatment of these cases it is always evident that it is more advisable to build up rather than to whip up with the many tonics. The tonics are like whipping to a tired horse—he gets out of the mud, but is more tired than ever. With the approach of decreased health and efficiency, it is well to think of our occupation and ask the question—"Are we, too, speeding up in the world's competition?"

Alcohol

P. M. K.

ALCOHOLIC liquors contain varying amounts of alcohol in combination with other things. The beers contain from three to eight per cent. of alcohol. Wines contain from five to twenty-two per cent. Spirits, such as whisky, gin, and brandy contain from twenty-five to sixty per cent.

It makes very little difference, however, how much the various liquors contain of alcohol when one comes to consider the effect of this toxic substance upon the human system. It has been proved that the minutest quantities of it are obnoxious. It is a well-known fact that alcohol has a strong affinity for water. When

taken into the mouth and swallowed in the form of whisky, the mucous membrane lining the mouth, gullet, and stomach reacts with a more or less acute inflammation manifested by a burning sensation. It is the abstraction of moisture by the alcohol that causes this sensation. gastric juice of the stomach is stimulated to flow more readily and in larger quantity from its secreting cells. This, at first sight, would appear beneficial, but in reality it is not. Fallacy lies in the fact that while more gastric juice is secreted by the cells of the stomach, the digestive properties of the juice are lessened or Why?-Because the pepsin, destroyed. which is one of the chief constituents of this digestive fluid, is precipitated by the alcohol and rendered inert and quite

When the presence of alcohol is prolonged in the stomach, the flow of the gastric fluid is enhanced to such a degree that injury to its wall is the inevitable result. Hydrochloric acid, which is the other chief constituent, is increased in quantity, leading to no end of distressful ailments. It is recorded that Dr. Bennet, a surgeon of the American army, studied the action of alcohol through a bullet-hole in the stomach wall of a soldier, St. Alexis Martin. The surgeon closely observed that the lining of his stomach showed distinct catarrhal congestion and ulceration.

Gastric catarrh, so common among the habitually intemperate, is caused principally by the over-stimulation of the mucous cells which partly line the stomach wall. Later, with this increase of mucous poured into the stomach, there is a simultaneous decrease of flow of gastric juice. The delicate membrane of the stomach becomes much inflamed, and eroded fermentation due to undigested food takes place, giving rise to much discomfort and distress to the sufferer.

But the results of intemperance do not stop there. The alcohol becomes absorbed by the stomach, and is passed into the general circulation. The liver, through which it passes, becomes, after some time, more or less hardened. Its fibrous framework shrinks, producing irregular projections upon its surface, leading to a condition known as "hobnailed liver." This organ gradually loses its capacity for work also, on account of its cells changing into fat. The liver later becomes smaller and less capable of allowing free circulation of blood through it. Among many symptoms dropsy follows.

As the blood passes through the lungs a certain amount of alcohol is exhaled in the breath, but a great proportion is carried throughout the body. No organ in the body escapes its influence. Even the minutest arteries in the skin are affected. The red and flushed skins of drinkers are falsely interpreted as a good healthy appearance. On the contrary, it denotes paralysis of the little nerves controlling the calibre of the arteries. This causes them to expand and fill with blood, thus producing the so-called "ruddy ap-

pearance."

The "rum blossom" is a well-known example of this condition. This phenomenon has also misled many into the belief that alcohol gives warmth to the body. As a matter of fact it brings about a considerable loss of heat from the body. The expansion of the skin arteries causes a larger amount of heated blood to be brought there from the interior. sation of warmth is thus produced, but this warmth is quickly radiated into the surrounding atmosphere. In this way the continual use of alcohol causes a dissipation of body heat, and later chilling of the skin and consequent inflammatory conditions of the various organs. This is a common cause of inflammation of the lungs and kidneys seen in drinkers who, after a drinking bout, have been exposed to the open air.

Similarly to that of the skin all the organs of the body become engorged with blood. The heart becomes filled to its utmost, and a strain is put upon its muscle to expel at every beat an oversupply of blood. On account of this strain, it ultimately suffers. Under healthy conditions the heart beats about seventy-two times per minute. Under

the influence of alcohol the beats increase by about ten per minute. If this increase were calculated for a whole day it would easily be seen what an enormous amount of increased work is placed upon this most vital organ. Sooner or later it breaks down under the pressure, becomes weak, dilated, and incompetent. wonder that so many heart affections occur in alcoholic subjects. In some cases the valves of the heart, after a time, become hardened and shrivelled at the edges, thus allowing more work to be placed upon the organ with unfavourable consequences. The arteries throughout the body similarly become hardened. Their normal elasticity is lessened, leading to a decrease in the amount of blood passing through them to the various organs.

It has been experimentally proved that alcohol lessens the power of the blood to resist disease. Among the normal constituents of the blood, are red and white corpuscles. The red corpuscles convey oxygen from the lungs to all parts of the body, and in return convey carbonic acid gas to the lungs to be exhaled. When alcohol is present in the blood, this important duty of the red corpuscles is interfered with. They also become adherent to each other, thus hindering their free passage in the blood. The duty of the white blood corpuscles is to combat disease and poisons. Under the influence of alcohol, however, they are more or less overcome, giving the germs access to ravage and still lower the vitality of the system. A. V. H.

DR. GEORGE L. MEYLAND, head of Colombia University gymnasium, says that non-smoking students show a higher average of scholarship than the smokers. The former who entered Colombia last year made an average in scholarship during the year of eighty-nine per cent., with two per cent. of failures. The smokers made an average of sixty-one per cent. in scholarship during the year, with seven per cent. of failures.

Evil Effects of Tobacco on Mind and Body

HILE it has been shown that nicotine acts as a poison in the lower animals, depressing the nervous, circulatory, and respiratory systems, there is considerable diversity of opinion as to the effects of tobacco on human beings, says a writer in one of the magazines. There is, however, a fairly well-established belief that even the moderate use of tobacco is not without possibilities of evil, while excessive use is distinctly harmful. The effects, naturally, are more pronounced in youth and adolescence than in later life.

Some observations made by Dr. George L. Meyland, of Columbia University, are interesting in this connection. In a study of 223 college students from two classes it was found that 115 were smokers and 108 non-smokers. smokers were a little older than the nonsmokers, and they presented only corresponding differences in measurement (weight, height, lung capacity, total strength). On the other hand, the nonsmokers exhibited a distinct advantage in scholarship, but in this connection other considerations must be taken into account. For one thing, the smokers participated in larger proportion than the non-smokers in athletics and in fraternity membership, and the scholarship records of smokers. athletes, and fraternity members alike were lower than those of other students. Besides, there is a leisure-class type of college students, who smoke and go in for athletics and fraternity membership; but who, as a rule, do not attain high grades of scholarship. The non-smoker, on the other hand, is usually ambitious, industrious, and self-dependent, and with less inclination and opportunity for the athletic and social aspects of college life. There will be no serious dissent from the following conclusions: The use of tobacco by adolescents is injurious; there is no scientific evidence that the moderate use

of tobacco by healthy mature men produces any beneficial or injurious physical effects that can be measured; there is an abundance of evidence that tobacco produces injurious effects in (a) certain individuals suffering from various nervous affections; (b) persons with an idiosyncrasy with respect to tobacco; (c) persons who use it excessively. It is generally conceded that the use of tobacco by college students is closely associated with idleness, lack of ambition, lack of application, and low scholarship, though these may not be due entirely to the tobacco.

Rear-Admiral Schroeder of the U.S. navy tells the story of a man who stole a bunch of tobacco leaves from a Havana dock. Secreting them under his clothes next to the skin, he went on with his work. He perspired freely, and suddenly fell unconscious to the floor. Treating him first for sunstroke, his companions soon discovered his plight, but not until he had nearly lost his life.

Ninety per cent. of the rejections in the Spanish American war enlistment were due to the cigarette producing an irregular pulse and a weak heart which would not endure the forced marches.

A general freight manager in the U.S.A. employing two hundred clerks, says eighty-five per cent. of the mistakes are made by thirty-two cigarette smokers. The London taxi-cab companies are also seeing the necessity of employing only non-smokers.

Experience teaches us that he who cannot get through his daily life without calling on his reserves with tobacco and alcoholics is not in health. F. K.

[&]quot;ONE result of the tobacco habit is its psychological effect, noticeable in practically every person addicted to the habit, but not observable by the person himself."



Children participating in a daily distribution of flowers.

The Problem of the Children

By M. E. Olsen, PH.D.



GREAT deal is said of the kind of education children ought to receive. But educators are concerned chiefly with the mental and the moral side of the child. They seem to forget that little boys and girls have bodies

as well as minds, and that a really satisfactory educational system should take this fact fully into account. In the writer's opinion, the child of five needs a playground more than he needs books. This would seem to be especially true of the pale-faced little boys and girls now growing up in our large cities. If half the time spent by these children in brain work were given to physical development, the actual

mental progress would be greater. It is to be feared that our present system keeps the children tired and jaded pretty much the whole year. They are martyrs to examinations, high marks, and exhibitions.

The value of book knowledge is so greatly over-estimated in these days that we are inclined to wish, with Thoreau, that a society might be organised for the diffusion of useful ignorance. Certainly we could take a strong, healthy, country boy of the age of ten, who could neither read nor write, and give him in four or five years an education which would be for all practical purposes far more useful than that which our children now acquire at such a great cost of bodily vigour in twice the time.

It is only fair to admit that the children of the slums often find their school hours, even though, as we think, they are devoted too exclusively to mental tasks, more enjoyable than the hours spent in homes so darkened by poverty and drink as to be such only in name.

But if the home conditions of the poor are so unfavourable, is not this an additional reason why we should endeavour to make provision for adequate training, physical and mental, in our public schools? And the physical defectives are by no means found among the poorer classes only. Medical examination of the school children of large cities reveals the startling



A City Playground.

fact that one child out of three is afflicted with some nervous disorder; while it has been ascertained that two-thirds of the school children of one crowded centre have some physical disability. Is it not, in view of these things, only too evident that there is something radically wrong in our treatment of the children? Has not our view of education been very narrow and one-sided? Have we not been fighting against instead of co-operating with nature?

Is it too much to ask that the object always to be kept in view in any truly national system of education should be the harmonious growth and development of the child, not the attainment merely of an arbitrary standard of proficiency in book knowledge? Ought teacher's work to be judged by the health and all-round efficiency of his pupils, rather than by the marks they attain? Should not the examinations, if such are necessary, be real examinations, giving some fair idea of the physical as well as the mental growth of the child and of its general "fitness"? Ought not the playground to be something more than an overcrowded prison yard? And should not all the children, large and small, have an opportunity to take part in wholesome outdoor recreation? Ought not educa-

tion, in short, to be a reasonably satisfactory training for real life?

The Playgrounds Association of America is doing a most excellent work in agitating for the provision, in all the large cities in that country, of a sufficient number of open squares fitted up with swings and divers fixtures for games and recreations, to allow all the children, rich and poor alike, to indulge their instinct for play. The movement, though in its infancy, is having a rapid growth, and is winning general

recognition among reflecting people as one of the most important and far-reaching of the various agencies which aim to combat the downward tendencies of city life.

It was a saying of Phillips Brooks that he who helped a child helped humanity with a distinctness, with an immediateness, which no other help in any other stage could possibly match. The divine instinct planted in the heart of every little boy and girl calls for a playground; and there is no stronger condemnation of our twentieth century civilisation than the spectacle of little pale-faced urchins trying to make a playground of the streets and alleys in which they are doomed to spend what should be the happiest portion of their lives.

Surely Heaven's choicest blessings will rest upon the men and women who are trying to remedy this great evil, and restore to the child of the cities his natural heritage of sunshine and fresh air, and space in which to run and play safe from horses' hoofs. It is encouraging to see many of the best people aroused to present-day needs, and impressed with the solidarity of the nation's social interests. The idea that we have done our

whole duty by the people of the cities when we have provided them with chapels and Sabbathschools, is fortunately giving way to a broader conception of the meaning and scope of true Christianity. We are coming to understand that there is a practical side to religion; that it has to do with this life as well as with the life to come: and that there are times when a cup of cold water will speak more eloquently for the Saviour than a dozen sermons. We are coming to respect the instinct an all-wise Creator

has put into the child's heart in order to preserve the race. Perhaps some of us can even sympathise with the poor little tenement invalid who protested: "I don't want to get dead and be an angel—I want to play first."

The city playground provides a pleasant meeting place for the care-worn mothers. Here they can gather after the hard work of the day and pass a pleasant social hour, while their boys and girls are playing healthful games. We ought to spend our leisure, as far as possible, in the open. Many a nervous woman owes her breakdown largely to being for so many hours daily confined within walls. Out-of-doors there is sunshine for the

soul as well as for the body, and the pure

air has healing power. What pleasanter sight could we have than groups of parents engaged in genial conversation while the little ones pursue their games? And in many of the playgrounds the parents themselves join in the games and amusements, and smooth out their wrinkles, becoming young again by association with their children.

The playground is also valuable as a means of lessening crime. It is the unanimous testimony of the police that where playgrounds are established, the



City backyards may be beautified by children at a very small cost.

arrests for juvenile crime are lessened. Speaking of this matter in a recent Mansion House meeting, the Lord Chief Justice of England made the significant declaration: "I say without hesitation, after now nearly forty years' work at the bar and a few years upon the bench, that . . . second to drink, and second only to drink, the real cause of crime is the difficulty of finding healthy recreation and innocent amusement for the young among the working classes."

Fortunately the doctrine of total depravity as applied to childhood is no longer believed; and we are coming to see that even the street urchin responds so warmly and so loyally to the efforts made to meet his needs, that harsh

measures are seldom necessary. In fact, by far the larger part of the city boy's waywardness is the outward expression of pent-up physical energy. Give him room to move about and exercise his lungs. Give him, too, grass and trees and flowers, and they will exert a quieting, refining influence on his turbulent spirits. There is a world of truth in Mr. Riis's declaration: "I have seen a



Can you not gladden the heart of some sufferer?

handful of daisies keep the peace of a whole block better than half a dozen policemen's clubs."

The Use of Fruit

FRESH fruit, and particularly apples, always makes an excellent article of diet for children. The apples should be peeled, and the child taught to eat them slowly, masticating them well. The mild, pleasant acids of the apple serve to cleanse and purify the teeth, and biting into the apple substance cleans the teeth, and removes finer particles of food which have gathered around the roots and among the spaces between the teeth. It is a good practice for the child to finish up the meal with an apple, which in every case should be peeled and thoroughly masticated.—Good Health, London.

A Useful Kitchen Chair



THIS chair is a great source of comfort in our kitchen, as it is provided with swing-shelves attached to the arms. Take a comfortable chair, and on each arm hinge a shelf broad enough to hold a

pan or a basin. The advantage of this chair consists in the hinging, which allows the shelves to be easily and quickly let down out of the way when not in use.

—M. R., Alabama.

It is announced from Washington that two thousand American women have pledged themselves never again to wear birds or bird plumage upon their hats.

DR. JOHN HURLEY, of Boston, has announced a new anesthetic which permits operations on the brain, eye, or ear while the patient is conscious. The operation is said to be both bloodless and painless.

FRANCE has recently gained nine minutes by the simple expedient of setting back all the clocks in the country. It is done in accordance with a new law which recognises the many advantages of having the time exactly like that of England, instead of holding, as heretofore, to the astronomical difference of nine minutes between Greenwich and Paris.

AN Ohio physician, who suspected that one of his patients had contracted tuberculosis from a pet cat, examined a hundred cats in the town and found germs of tuberculosis in every one. Thirty of them were seriously ill. It has long been known that cats can carry the contagion of scarlet fever and measles in their fur. If it shall be established that they can communicate tuberculosis to human beings, their popularity will diminish in careful families.

Drugs and Drugging

By D. H Kress, M.D.

THE extent to which drugging may be carried will be seen from an experience related to me by a frail, anæmic woman in her persevering but vain endeavour to secure health. In order to get this remarkable history accurately, I requested her to take time to put it into writing, which she did. The following is a copy of it:—

"I started with medicines prescribed by doctors, and took them as religiously as though they were life-drops. Then I took a case of wine to strengthen me. was followed by a case of porter-four Then followed in succesdozen bottles. sion Mother Seigel's Syrup and Irish Moss. Clement's Tonic was next taken through the advice of a friend. I smoked cigarettes and Nimrods's Powder, on the recommendation of another acquaintance. My husband heard of Webber's Vitadatio; accordingly, I took forty bottles. Next came a course of Viavi treatments, which Then followed in succescost me £25. sion Wood's Pepperment Cure, Sheldon's New Discovery, another case of porter, a bottle of overproof rum, and Warner's Safe Cure. I have tried Pink Pills. Holloway's Pills, and others the names of which I cannot recall. I have also taken internally, kerosene, turpentine, cod-liver oil, and Scott's Emulsion."

While this is the most extraordinary case of drugging that has come under my care, it illustrates to what length men and women are willing to go in order to secure that which will afford relief from the annoying symptoms associated with ill-The one who is in health feels health. well, and therefore has no need of drugs. The general use of drugs is an evidence of general ill-health and degeneracy. The majority of men and women are not well, and consequently do not feel well. It is often the desire on the part of these to feel better than they are, that is responsible for this "extraordinary habit of taking medicines," as it has been termed by Sir Frederick Treves.

Treatments of to-day aim chiefly at the removal of symptoms, and not at the removal of causes. When a headache appears, the information usually desired is not, What is the cause of the headache? but Where can I get something that will stop this pain quickly? It is not difficult to find a remedy for which the claim is made, "The medicine makes you well and keeps you well." highly-advertised preparations containing acetanilide, phenacetine, or antipyrine, are usually resorted to by the ignorant and innocent. By medical men these are classed with the most dangerous drugs known to the profession. They depress the heart, and finally arrest its action altogether. While they remove certain headaches and reduce the temperature in fever, they always leave serious effects. Not a few cases of sudden death have occurred from their use. When a physician gets a patient with blue lips. weak, palpitating heart, and a pale, anæmic face, upon inquiry it is not uncommon to discover the condition to be due to the use of one of these drugs. Caffeine relieves some headaches as effectively as acetanilide does others. the headache is due to anæmia, it applies a spur to the heart, and increases the flow of blood to the anæmic brain. On the other hand, the headache of the coffeedrinker, which is due to a congested brain. may be relieved by acetanilide, for acetanilide, instead of stimulating, depresses the heart action. But the heart continually spurred on by caffeine and then held in check by acetanilide, cannot long stand such abuse. This affords a partial explanation of the many sudden deaths occurring from heart failure in these days.

There is a rational way of relieving headaches. Headache should not be considered a disease. It is a warning signal nature erects, calling upon sensible men and women to inquire into its cause. The trouble may be due to eye-strain. If so, it is useless to take caffeine or acetanilide. It is best to consult a good oculist and have the visual defect corrected. If it is due to auto-intoxication

or the fermentation and decay of foods in the alimentary canal, reforms should be made in eating and drinking and other habits which are contributing causes of indigestion. The general health must be built up. Headache may be caused by a lack of blood in the brain, due to the destruction of the red blood-cells following auto-infection of intestinal region. palliative, hot applications to the head afford temporary relief. If the headache is due to hyperæmia, or too much blood in the brain, resulting from the use of flesh foods, coffee, etc., a warm foot-bath, and cold applications to the head, with the addition of a hot drink, will afford relief for the time. Remember that permanent relief can be secured only by the removal of the causes. A short fast in such cases is also beneficial. The chief aim should ever be the removal of that which produces the headache. Under no condition should headaches be cured by the use of poisonous drugs.

The sooner people discover that health is not put up in bottles or pills and dispensed at so much an ounce or box, the sooner will the "extraordinary habit of taking medicines when sick" be abandoned. Health, when lost, can in most cases be restored by merely correcting wrong habits, and living in harmony with every law of body and mind. Drugs may produce a feeling of comfort, but they cannot counteract the results of disobedience. They often say, Peace when no peace exists.

The Prevention of Colds

By A. P Reed, M.D.

A COLD in the head is second in abomination to one in the heart, yet, withal, is such a grievous menace to the house in which we live that he who successfully antidotes it will perhaps be more gratefully received than he who essays to antidote the cold in the heart.

Such is humanity, and herein I find justification for giving some of that prevention which is better than cure.

Every one may catch cold, but certain people have what may be called an inherent—which may be an inherited—tendency to colds. These people have hypersensitive mucous membranes, with diminished resisting power to invading germs. If such persons could have an equable temperature to live in, they would probably get along with a far less number of colds, while the ones they did have would be less of a menace.

The immediate cause of colds is to-day understood to be an infection from impure air, dust, etc. Owing to their contagious character, colds are found going from one to another of the same family or association, as in schools, stores, offices, and wherever people are massed, this massing of people always being a menace requiring extra care to avoid various deleterious outcomes. Whenever a city neglects to sprinkle its streets, it has been noticed that nasal and throat irritations, leading up to catarrh, acute and chronic, are much

more prevalent.

To keep up a good resisting power by keeping up the health standard goes a long way toward immunity. The circulation of the skin should be kept as good as possible, by baths and frequent massage. It is a good plan to place some salt in the bath water. Avoid indigestion and overwork, loss of sleep, or anything that has a tendency to depreciate the reserve power; and, not least, have the best air possible indoors and out. The sleeping-rooms should have a large volume of air circulating through them all night, avoiding only strong draughts. Places of public assembly should be well ventilated, very much better than is apt to be the case, since the matter is too often entrusted to the care of some one who knows little of ventilation principles, and probably cares less, aiming only to conserve the heat by closing up air entrances, at the expense of the health of the audience.

To those already having a cold I would say, You owe it to others to take every precaution as to the spreading of your cold. To this end you should avoid spraying the atmosphere, by always placing before your nose and mouth a handkerchief when you sneeze or cough; and these handkerchiefs should be washed separately from other clothing.

By the frequent use of antiseptic sprays and gargles, you will be doing considerably more in this direction, and still more by having your own individual towel and drinking-cup, and by sleeping alone.

Rooms occupied by those having colds need to be flooded with pure air frequently. According to some of the best authorities, it is not advisable to take large quantities of water except when sweating is to be promoted.

What Every One Should Know About **Tuberculosis**

1. TUBERCULOSIS is a preventable disease, and also a curable one if taken in time.

2. Tuberculosis is cured by fresh air, rest, and proper food, but cannot be cured by any of the widely-advertised "consumption cures."

3. Tuberculosis is a contagious disease

caused by microscopic germs.

4. These germs grow in the lung or other diseased part of a person, and are

coughed up in great numbers.

5. Therefore sputum or pus from tuberculous sores is a deadly poison which infects whatever it falls upon. It even poisons the air, for it dries and blows about as dust.

6. Every one should guard his own mouth and use his influence to prevent other people from spitting in any place where the sputum can dry and become a source of danger.

7. No one should ever eat food that has been bitten into by another; drink from a glass or cup that has been used, or use a spoon or fork after another person.

The danger in this is not alone from tuberculosis, but from other common contagious diseases such as colds, influenza, pneumonia, diphtheria, etc.

8. Sputum may infect the spitter himself, as well as others, if he spits carelessly; but it is almost sure to infect him if he habitually swallows his sputum.

9. There is but one safe thing to do with sputum. It should be spit into properly-made cups and burned before it dries.

10. By far the most important measure of prevention is to keep the body vigorous and healthy by good food and cleanliness, and by avoiding all kinds of bad habits and dissipations both in work and in play. -Journal of the Outdoor Life.

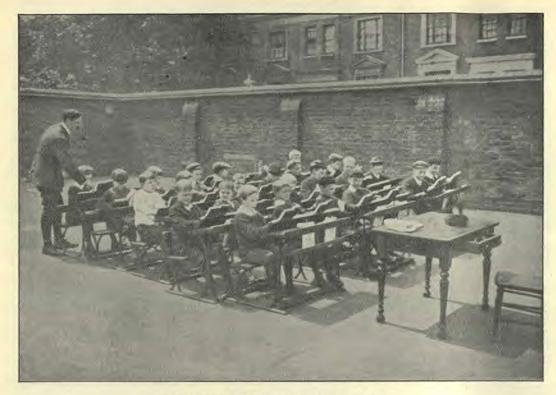
A Practical Suggestion

STRIKING suggestion by the American society for sanitary and moral prophylaxis, says the Springfield Republican, is that the reporting of venereal diseases to boards of health be required by law, as in the case of other infectious diseases. The members of the society, which was founded by some of the leading medical men in New York, are unanimous in thinking that compulsory reporting is the essential first step in any practical programme for reducing the social evil and its accompanying diseases. The medical profession as a whole is thought to be unfriendly to such action, but the profession may be persuaded to adopt a different opinion, it is maintained, if subjected to proper education and moral Another step urged by Prof. Seligman, of Columbia University, as necessary if these diseases are to be checked, is as follows:-

"Require a certificate of good health as a preliminary to issuing a marriage license. This is not illusory, and is being done more and more."

Both suggestions are primarily sound, and both will in time be universally adopted.

EDUCATION comprises more than a knowledge of books. Proper education includes not only mental discipline, but that training which will secure sound morals and correct deportment.-Ellen G. White.



Pure air and clear brains go hand in hand.

Studying, Eating, and Sleeping Out-of-Doors

HE invaluable benefit of fresh air to the growing child, well or ill, is universally recognised, and yet a large portion of the child's daily life is spent within closed walls instead of out in the open.

To ascertain whether or not the public parks may be utilised to remedy this condition, De Witt Clinton Park, New York, says the Washington Post, has been turned into a winter school for crippled children. For them fresh air is even more essential than for the normal child; but if the experiment succeeds, the plan may be gradually extended, so that eventually the schoolhouse will be a thing of the past, and the "young idea" will be taught how to shoot out in the open, with a blue sky for a roof and trees for the walls.

For the accommodation of the little cripples, a board floor was laid over the sod of the park, and a generous board fence was erected, to act as a wind-break. These and a supply of camp-chairs and tables comprise the entire outfit, the idea being that freedom from dangerous drafts, unobstructed sunshine and skies, and a sight of moving clouds, are the most valuable factors in the curative and educational influences of the enterprise.

There are only twenty-four children on the school roll so far, but the number is being gradually increased. The youngsters range from four and one-half to fourteen years of age, and are of all nationalities.

It has been found that the children learn more readily, and retain what they have learned better, than when they are taught in the closed schoolroom. At the same time it has been noted that their minds are more active on cold, clear days than on warm ones.

The most picturesque feature of the school is the garments that have been provided for the youngsters, so that they may be able to stay out in the open, irrespective of the weather. For general use well-made coats of warm material, lined with fur and having a collar and wristlets of lambs' wool, are provided. The wristlets are so arranged that they can be snugly drawn around the wrists or over the hands. Finally, there is a knitted woollen cap that protects the ears and neck if the weather is very nipping.

For sleeping purposes the youngster thus clad slips into an elaborate bag made of canvas and lined with heavy blankets, which are buckled under his arm and around his neck. Thus protected, the child may defy Arctic temperatures, while breathing unpolluted air.

The day, for the youngsters who are fortunate enough to be on the roll of this unique school, commences about nine o'clock in the morning, when the society's carriage calls for them at their squalid homes and transports them to the park. There they don their special garments, and such of them as can stand simple lessons are taken in hand by the teacher. Those who are not in condition for much work of that character, are allowed to amuse themselves.

At about twelve o'clock the children are given a well-prepared meal, and then they jump into their sleeping-bags, and, curling up on the camp-chairs, take a health-giving sleep until the carriage comes to take them home again. Before they leave, however, they partake of another light meal, and have a short lesson.

The children taking the afternoon siesta look for all the world like a lot of little brown bears. Some of them find it hard at first to woo themselves to sleep in broad daylight, but eventually they get used to it. Wrapped up so that only their faces are visible, no one would believe for a moment that they were cripples,

their faces looking so ruddy and healthy.

The methods employed in this institution might, to a large extent, be followed in the home. Wherever there is a roof, there is an opportunity to live the open-air life.



Teaching in the Open Air.

Disinfection of Schoolrooms

In the borough of Poplar, London, the experiment is being made of sprinkling the floors of schoolrooms with an electrolytic disinfecting fluid before they are swept at night. Sawdust, impregnated with the fluid, is distributed over the floor, and more of the fluid, as required, may be sprinkled on the sawdust with ordinary watering-pots. After the sweeping, the floors are carefully dried. Excellent results for the health of the pupils and teachers are anticipated.

[&]quot;SHUT the door to pure air, and you will soon open it to the doctor."

Lumbago: Its Prevention and Hygenic Treatment

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

LUMBAGO may be regarded as a form of muscular rheumatism which attacks the lumbar muscles in the small of the back and loins. It is often akin to neuralgia, and doubtless, some so-called cases of lumbago might be more properly described as neuralgia of the lumbar muscles. The word lumbago is derived from the Latin *lumbus*, loin.

Causes

In a goodly number of cases there seems to be a family history of rheumatic and gouty disorders, so that the question of heredity must be taken into consideration. Briefly, cold and wet, worry and overwork, muscular strain, and wrong habits of drink and diet may be looked upon as the chief causes of lumbago. Men, doubtless on account of being subject to greater exposure and to extremes of weather, suffer far more often than women.

The Symptoms

Lumbago is both a common and a painful disorder. The onset of the disease is usually sudden, and the symptoms are by no means difficult to recognise. The typical stoop when walking, and the peculiar attitude when attempting to rise from the chair, are quite characteristic of The muscles are painfully tender and stiff, and there is marked limitation of movement. There is a dull or sharp aching pain in the region of the loin, which may become very violent at times, and is often worse at night. pain on attempting to move is sometimes so sharp as to cause the patient to cry out. A severe attack of lumbago puts an end to all activity, and renders the patient bedridden for a time. He may be so prostrated and afflicted as to be unable to rise in the chair, or even turn in the bed.

The Treatment

Absolute rest for the affected muscles is essential to a prompt recovery, and this of course means going to bed, or at least keeping the couch. Hot baths, and particularly electric light, Turkish, and vapour baths, are in order. A hot hip pack will often afford almost immediate and complete relief. Hot fomentations across the loins are at least soothing, and often relieve the pain entirely. and porous plasters are also recommended. Galvanic electricity is useful in relieving the pain. In mild cases, a rubber bottle containing very hot water, if applied to the seat of the pain, will greatly ameliorate the symptoms. Various liniments of chloroform, laudanum, and belladonna are often resorted to, and sometimes prove helpful.

If available, massage, gentle at first, is helpful. But this is a more appropriate treatment for the latter stages of the attack.

It is, of course, essential to keep the patient warm, and woollen underclothing and also sleeping between blankets are desirable.

If the patient is constipated, clear out the bowels with a soap enema of two or three pints.

The duration of an attack of lumbago varies greatly, but it is usually transient, and only lasts a day or two, or perhaps a week.

Prevention

In considering the preventive measures that one must take against lumbago, it is necessary to give careful attention to the predisposing causes already mentioned. Warm, porous clothing, and prompt measures to neutralise the effects of any temporary exposure to cold and damp are necessary. Merely sleeping in a damp bed has brought on many an attack of lumbago. Sitting or standing in wet clothing is also a prolific exciting cause.

It is always unwise for a man in middle life to engage in any exercise or labour that involves strain of the muscles and ligaments. Such violent exercises are, we believe, a more frequent cause of lumbago than mere overwork.

On the other hand, a sedentary life is not conducive to freedom from rheumatism.

Moderate exercise taken with regularity daily is essential to the maintenance of all-round good health. Using the muscles keeps them in a supple, healthy state.

Drink and Diet

Rheumatism in any form appears to be a constitutional disorder, and hence we should infer that both diet and drink are

important factors. This is true, and Dr. Haig and other medical men have succeeded in demonstrating the direct causal effect of errors in diet in the production of both rheumatic and gouty diseases. Dr. Haig's work is more concerned with the use of foods containing uric acid or its equivalent. According to him, one should abstain entirely from tea and coffee, and also animal flesh in all

forms if there is the slightest tendency to rheumatic affection.

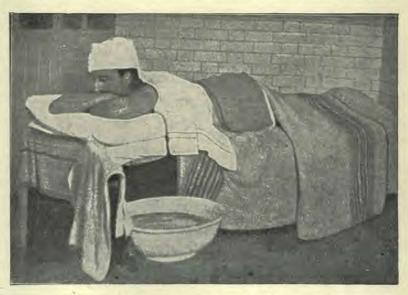
For a much longer time medical men have recognised the evil influence of alcoholic beverages in the case of patients with a gouty or rheumatic diathesis. Total abstinence from such drinks is essential, in our opinion.

Additional Precautions

In addition to the above preventive measures, we would offer two further precautions.

First, as to clothing. There seems good reason to believe that loose, porous, woollen garments are more satisfactory for patients inclined to rheumatism than any other variety. This is particularly true of the winter season, but also applies to cold, damp weather at any time of the

year. It is of vital importance to keep the feet both dry and warm, and if it is necessary to change the hose even two or three times a day to ensure this, it should be done. Boots with thick, waterproof soles should be provided, and even then it is wise to wear goloshes if one is obliged to be out in the wet for any length of time. But they should be removed on coming indoors.



Hot fomentations across the loins often relieve the pain entirely.

Second, as to baths. Persons who have had a touch of rheumatism in one form or another would do well to have an electric light, Turkish, vapour, or hot water bath once or twice a week regularly. The hot bath, ensuring free perspiration, appears to be one of the best preventive measures that we have. It should always be followed by a cold sponge, spray, or mitten friction, and an oil-rub or massage.

THERE are three hundred thousand absolutely dark bedrooms in the tenements of New York.

"SPECIAL care is necessary to ventilate a room where kerosene lamps, gas jets, oil stoves, or charcoal fires are used."

Bad Teeth and Scholarship

DR. GULICK, president of the School Hygiene Association, has estimated that two decayed teeth in the mouth of a child are sufficient to retard the child six months in his study. School inspectors in New York City report that ninety per cent. of school children are in need of professional By the appointment of dental services. dental consultants and special lecturers in oral hygiene, Commissioner Porter, of the New York State Department of Health, who believes that, as a germ disease, tooth decay should receive the attention of the State and local boards of health, is the first State commissioner of health who has taken an active part in the crusade for clean mouths by enlisting the co-operation of the dental profession.

A Misnomer

WE are constantly using the word "beastly" in connection with all sorts of evil conduct; but how utterly inappropriate and slanderous it is we can appreciate from a few examples. The man who gets drunk and flounders in the gutter is called a "beast." Now, who ever heard of an animal, from an ameba to a monkey, poisoning himself purposely, wallowing in the mire, and saying and doing things generally for which he is afterward ashamed? Only man through his social helpfulness, has been able to get ahead of nature, as it were, and commit such breaches of her laws. have the lower animals ever stooped to intemperance in the matter of eating. They eat to fulfil nature's purposes-to supply the needs of the body. not eat for the mere pleasure of eating. What animal ever thought of poking his paw down his throat in order to bring about the ejection of his stomach contents, that he might, like the noble Roman, proceed to fill himself again? He has not learned enough for that sort of thing, -in other words, he has not become so manly or man-like.

What animal—whether of sea, land, or air—was ever caught in the so-called "beastly" act of chewing tobacco, and the beastlier habit of evacuating the microbic contents of his buccal cavity upon the paths his fellows follow? Even the domestic animals which have fallen low enough from nature's stern morality, through the sheltering help of man, have never been caught in such acts. In no jungle of Africa is it necessary for the king of beasts to post the notice, "No spitting permitted." There is no spitting.

The word beastly is often applied to those who are lacking in outer cleanliness. Save for the animals which have become degraded through association with man, there never was a worse misnomer than to call an uncleanly man beastly; for though the beasts have not the best means of getting rid of dirt, and their furry or feathery coverings are far more difficult to keep in order than the clothes of man, they are embodiments of purity beside a large proportion of the human race. What is said of outer purity is even more true of inner cleanliness. Beasts are not characterised by fetid breath or by pimples and boils, which tell of undue internal foulness.

When it comes to sexual matters, the absurd, nay, the libelous, use of the word beastly becomes even more pronounced. It is wholly unnecessary to comment on the subject, and it is sufficient to note that all the lower animals are pure, and that their sexual relations are for the purpose of procreation. If the animal world had a literature, there would be no obscenity. They would not tolerate such classic authors as Sterne and Swift.

In the battle for existence no animals treat their fellows as mankind has done. True, a carnivorous beast will kill another to supply its needed food, but it never kills wholesale for its own advancement or takes from the weaker what it can only hoard and never use.

In the matter of amusements we may well learn from the beasts in many ways. Last summer we had the pleasure of watching a grizzly bear in one of our zoos.

Up to the shoulders in a tank of water as he stood on his hind legs, he kept batting an empty beer keg beneath the water only to see it bob up again and again. He kept up this kind of solitaire as long as we were watching him, and we were told that it was a favourite pastime with him. We could not but mark the healthgiving exercise and genuine sport which this animal was extracting by the hour, day, and week, from this cast-off container, the contents of which a misnamed "beastly" man had used to befuddle his brain, overwork his kidneys, and make a fool of himself generally. Truly, this bear is a model for us in contentment with, and in making the most of, common things .-The Dietetic and Hygienic Gazette.

True Foods and Emergency Foods

By G. B. Starr

TRUE food, that provided by the Creator for His children and for all the animals, birds, and fishes of His vast creation, contains just the elements essential for the supply of energy, waste, and repair; the complete and harmonious building up of all the body processes.

True food does not walk about and so expend energy, but it grows standing still or waving only in the breeze, receiving from sun, and air, and earth, and storing up energy and heat for man and animal to break up and use.

Man and animal and all organised life are dependent upon the products of the earth,—fruits, grains, nuts, vegetables, and grasses,—for nourishment and all energy supply. There is positively no other original supply, all foods must be made from this storehouse.

True food contains no poison. It is impossible to conceive of a loving and benevolent Creator providing for the sustenance of His children and other creatures anything that would harm them in any way, causing either sickness or pain. No true food substances, in their natural and healthy condition, contain anything that would in any way interfere

with the delicate working of the intricate body machinery. Poisons could only be introduced by an enemy.

The flesh of animal or fowl, in the light of science, can only be regarded as emergency food, to be used only when true food is not obtainable. The flesh of animal or fowl contains only the remnant of energy and food elements and nutrition originally obtained from the grains, which the animal has not used up in its own vital functions. This remnant of energy amounts to twenty-eight per cent. of flesh food eaten. In the grains the percentage is eighty-eight, with twelve parts of innocent waste matter; thus it is seen that the animal has used up sixty per cent. of the original energy stored. is exactly as intended by the Creator. The animal was created to be the servant His muscles were made for of man. work, and not for food. When eating flesh we are eating muscle and nerve fibre, mingled with veins and arteries and broken-down tissue and carbonic acid and uric acid. Thus remnants of food elements are mingled with seventy-two parts of waste matter, much of it decidedly poisonous and destructive to life, and positively injurious and obstructive to the nice working of the body machinery. Certainly this is not true food.

It is an error to imagine that by eating the flesh of a strong ox that man may obtain strength. It is true, however, that by eating the same grains that the ox eats that man may obtain strength.

The reason people *feel* stronger after eating flesh is because it is a rapidly burning fuel, and, like oil or pine, produces a quick and flashy fire, from which immediate, but not lasting, effects are obtained. Flesh is also stimulating because of the presence of the large amount of waste and poisonous matter which the body recognises, and to expel which it puts forth energy. This effort on the part of Nature to rid herself of poison is mistaken for real energy. It is this counterfeit energy which results when tea, coffee, cocoa, or alcohol is taken. The body temperature is raised

from 981 to 991 or 100 degrees in ten or fifteen minutes after a meal of flesh.

True food is beautiful to the sight, is pleasant to handle, and inviting to the most delicate person. And when the taste is natural is most agreeable to the taste buds, as seen in the choice of foods selected by children and animals.

Flesh is unpleasant to the unperverted sight; disagreeable to handle, and repulsive to the natural taste or smell.

Nature's storehouse furnishes an abundance for all the human family without the taking of a single life of bird or beast for food.

Too True

"WOMAN is not only barbarous—she is illogical and inconsistent as well," remarked a man of letters. "I was walking in the country one day with a young woman. In a grove we came upon a boy about to climb up a tree. There was a nest in the tree, and from a certain angle it was possible to see in it three eggs.

"'You wicked little boy,' said my companion, 'are you going up there to rob that nest?'

"'I am,' the boy replied.

"'How can you?' she exclaimed. 'Think how the mother will grieve over the loss of her eggs.'

"'Oh, she won't care,' said the boy.

'She's up there in your hat.'"

What Adversity Is For

A SMALL girl who had been promised the privilege of climbing to a neighbouring hilltop where her brother delighted to go, drew back in dismay when she came in sight of the steep and rough ascent.

"Why, there isn't any smooth path up! It's all bumpy and stony," she ex-

claimed.

"How would we ever get up if it wasn't?" demanded the more experienced "The stones and hummocks are what we climb on."-Kind Words.

Lockjaw Can Be Cured

THE popular belief that a wound from treading on a rusty nail is very likely to cause tetanus is quite correct, says a writer in Harper's Monthly. This is not because it is a nail or is rusty, but because by lying on the ground it has become infected with the germs of lockjaw. Moreover, as the punctured wound caused by the nail bleeds but little, and this blood dries up and excludes the air, the most favourable conditions for the development of tetanus exist; for, as Kitasato, the Japanese bacteriologist, proved, the absence of oxygen is most favourable to the growth of this germ.

The germ itself looks very much like a tack; it is so virulent that its toxin, in doses of one two-hundred-thousandth of a teaspoonful, will kill a mouse. been found by experiment that the poison is carried up to the spinal cord, not by the absorbents or the blood-vessels, as are other poisons, but through the motor

nerves.

Fortunately an anti-poison, or antidote, has been developed; but so prompt is the action of the poison, that in an animal two minutes after the injection of a fatal dose of the poison, twice as much of the remedy is required as if it had been administered with the poison; after eight minutes ten times the amount, and after ninety minutes forty times the original amount, is necessary. This antitoxin is entirely harmless.

As a result of antiseptic methods, lockjaw is now almost unknown, except after neglected wounds, instead of being frequent, as it formerly was. In animals, for naturally horses suffer enormously more frequently than man, the same antitoxin is used. In one hundred and sixtythree horses that had operations performed on them, but were protected by the antitoxin, not one developed tetanus; whereas of eight cases unprotected by the antitoxin, five developed tetanus.

"THE greatest coward is he who treats with cruelty a helpless living thing."

Grouchiness

I HAPPENED to sit behind a young couple in a train the other day where I could see their faces. They apparently had not been married long, and I sincerely pitied the bride; for she had evidently married a grouchy man. She smiled upon him, but he never returned an answering She would make a pleasant remark about the scenery or the passengers, and he would answer in monosyllables, never relaxing a muscle of his face. would offer him a choice morsel from her box of candy, and he would take it without a word or a look of thanks, and swallow it as solemnly as if he were taking a pill, and a bitter one at that.

Now I may be doing that unknown fellow-traveller an injustice, and he may have been suffering from some bad news, or remorse of conscience, or a toothache, which would excuse any amount of glumness.

But I think I am right, and that he was simply grouchy, and found it too much trouble to be pleasant to his pretty young wife.

At any rate, there are plenty of people who are suffering from this unpleasant disease. I am not sure that you will find "grouchy" or "grouchiness" in

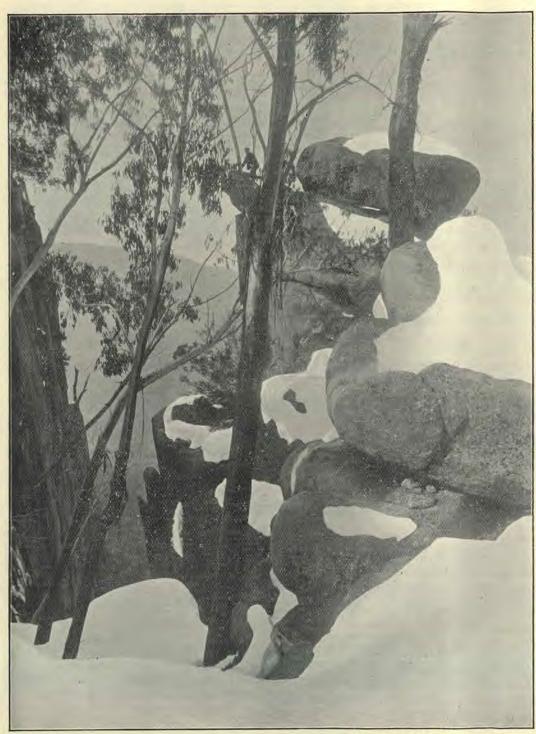
Webster's Dictionary or the Century; but, if not, they ought to be there, for grouch is an onomatopoetic word that carries its own meaning, and the thing itself carries its own misery.

It makes the family hearthstone a miserable fireplace, lighted and warmed with wood or coal, but not with love. It makes the business office a place to be avoided unless necessity compels. It makes the fellow-student or fellow-workman or fellow-traveller a boor and a bore, and is especially disagreeable in the employer or any one in authority, who can be neither reproved nor avoided.—

Christian Endeavour World.

THE meteorological records show that the number of foggy days in London has been reduced, since 1884, by more than half, and the principal cause assigned is the reduction of smoke by the action of municipal authorities and by the adoption of improved methods of lighting and heating. It has been a good investment, for a regular "browner" costs tremendously in time that has a high market value. Traffic is not stalled in London for nothing—even a brief blockade costs a pretty penny.





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Winter.-Pulpit Rock, Buffalo Gorge, Victoria.



The Treatment of Fever



UR last lesson in home-nursing dealt with the correct use of the fever thermometer. We shall now consider the treatment of fever.

A member of the family complains of feeling unwell, the home nurse makes a

prompt and proper use of the fever thermometer and finds that the patient has a rise of several degrees in temperature. What is the significance of this rise in temperature, and what may safely be done to lower it?

As a rule fever denotes an inflammatory process in some part of the body; or it may herald the onset of some infectious disease as scarletina, measles, or typhoid. If the patient be a child it is always advisable to look into the throat, as inflammation of the tonsils is a very common cause of fever in childhood. Inflammation of the stomach and bowels is a frequent cause of fever in infants and young children.

In any case, the fever indicates that the body is struggling to rid itself of some infection or to combat an inflammation in one or more of its parts. This being the case, it is best to put the patient in bed so as to conserve her strength and energy. The nurse must watch carefully for the

development of any symptoms which indicate the exact nature of the ailment.

In the case of a young child who is known to have been exposed to some infectious disease, it is a wise precaution to isolate the little patient at once, so as to protect the other members of the family in case the infectious disease develops.

Whatever the cause of the fever the appetite is likely to be lost, this in itself being a token that the digestive organs are not in a receptive mood. Thus it is usually best to withhold food for a meal or two, and then if the fever continues, only light liquid foods should be given as broths, fruit-juices, or thin gruels.

While it is best to withhold food during the early hours of illness, it is desirable that water should be drunk freely.

Fever always results in an excessive breaking down of body tissue, and this process in turn throws an extra burden upon the kidneys. For this reason, if for no other, water should be freely taken by the patient, as by so doing the kidneys are assisted in their work of eliminating the poisons from the body. That this plan of treatment is correct is indicated by the fact that the appetite is usually lost, while there is an intense thirst for water.

If the bowels are in a state of inactivity, or even if they are not, it is wise at the beginning of a fever to administer to the sick one a cleansing enema. This procedure only evacuates the lower portion of the bowel, and if the patient is at all constipated it is usually best to give a moderate dose of mild carthatic medicine, such as castor oil, cascara, or Epsom salts. This rids the system of harmful waste material, and so assists the body in its fight against disease.

In case the fever is caused by an ordinary cold or by some simple digestive disorder, the treatment as above outlined will probably cause a rapid disappearance of the symptoms. If, however, the fever continues and there are other evidences of illness, it is best to consult a physician if one is within call. It is always a great relief to the home nurse to know what is the true nature of the disease, and that she is carrying out the correct treatment. The adoption of wrong treatment, or the neglect of treatment altogether at the beginning of a serious illness, may result most disastrously to the patient.

There are many simple treatments which the intelligent and skilful home nurse may (under the advise and supervision of the physician) administer for the reduction of fever.

The patient's temperature should be taken and recorded every two or three hours during the day, and also at night if the patient is awake and apparently feverish. Whenever the temperature reaches 102° F. or above, some attempt should be made to lower it.

One of the simplest and most effective means of lowering the temperature is the cool enema. If the bowels have not been previously evacuated, it is necessary first to administer an ordinary cleansing enema. The lower bowel having been emptied, a pint or more of cool water (80° to 70° F. and containing a teaspoonful of salt to the pint of water) is slowly injected, the patient lying upon the back with the hips elevated upon a pillow. If possible the patient should retain the water for fifteen minutes or longer. If necessary the nurse may hold a folded towel firmly over the

rectum to assist in the retention of the the water.

Should the nurse trouble to test the temperature of the water that is passed from the bowel after fifteen or more minutes' retention, she would find that it had increased in temperature by a number of degrees. This means that the cool enema lowers temperature by actually abstracting heat from the body. This simple treatment may be repeated several times daily, as it causes the patient less disturbance than almost any other measure which may be employed in the reduction of fever.

The graduated bath is another useful remedy in the treatment of fever. The patient is immersed in a bath at about 100° F. After a moment or two the bath is gradually lowered by the addition of cold water until it reaches 85° or even 80° F. If the patient complains of feeling chilly the body and limbs should be rubbed vigorously during the bath. The bath should continue from eight to fifteen, or even twenty minutes. Such a treatment if properly given usually lowers the fever one degree and often more.

In case it is not convenient or advisable to put the patient in a bath, the cool sheet pack may be employed instead. Several dry blankets are spread out over a stretcher or narrow bed which is placed beside the patient's bed. Over the blanket is now spread a sheet wrung fairly dry from cold water. The patient's nightdress having been removed, she is now quickly but gently lifted onto the wet sheet. It is then drawn up over the patient, and is well tucked under the shoulders and limbs. If the patient complains of the cold she may be vigorously stroked (over the sheet), or a single blanket may be drawn up over the wet As soon as the sheet becomes warm, through abstraction of heat from the patient's body, it must be again wrung from cold water, or it may be sprinkled lightly with cold water. treatment should be continued for twenty minutes, or a half hour, or until

the patient's temperature is materially lowered.

For patients who seem too weak for the graduated bath or the cool pack, cool sponging may be tried, though this measure is not so effective in lowering fever as the more vigorous procedures.

In addition to these treatments it may be necessary to employ others for the relief of pain or other symptoms, but these will be considered under definite diseases.

E. S. R.

Fresh Air in Pneumonia

In talking of pneumonia to people in general, says an exchange, it is necessary to say and repeat many times that pneumonia is *not* a bad cold run mad, for this conviction appears to be invincibly lodged in the lay mind.

Pneumonia is first, last, and all the time an acute local disease of the lungs, which, according to the gravity of the case, become more or less consolidated or choked up. The more of the lung tissue that is thus choked, the less the lungs are able to breathe. The first consequence of this helplessness on the part of the lungs is that the heart—that gallant organ—labours to get enough blood to keep things going, and this is why we see the distressing rapid and shallow breathing so characteristic of the disease.

With all the heart can do it can only pump blood, it cannot oxygenate it—that is the function of the lungs. Presently, therefore, the blood stream becomes more and more impure, owing to lack of oxygen, and in those cases ending in death one of two things happens—either the heart gives out entirely, unable to stand the strain put upon it, or else the system is overcome by toxins, that is to say, by the impurity induced by the lack of oxygenation.

It has long been recognised that what pneumonia patients need is oxygen, and we are now sure that this is best supplied by a direct current of fresh air from outside, and that this fresh air should be the basis of all treatment from the very beginning.

Too often has life been lost by a failure to recognise this truth, or by a belief that rushing in canned oxygen at the last moment would effect a cure. There is less pneumonia among country dwellers than among city people. There is less pneumonia among people who ventilate well than among the stuffy. And there is less pneumonia in the summer than in the winter, because in the summer there is a free circulation of air through all our houses. The ideal treatment of pneumonia is to carry the patient into the open air and keep him there with proper precautions against wind and weather. But as this cannot always be done, the patient can at least be placed in the largest, sunniest, and best ventilated room in the house. If possible, a room with windows on two sides is much to be preferred to one which can be opened only to one point of the compass. By a system of screening, it can always be managed that a direct current of very cold air shall not blow right on the bed, but the air of the room should be constantly renewed and always cool.

Of all "cranks" the "fresh-air crank" is the sanest, and his reward in the pneumonia sick-room is a rich one.

Mumps

Mumps, or parotitis, as the doctors call it, because the parotid gland is the one to be affected, is an extremely contagious, and a disagreeable but not at all dangerous disease. When it attacks children the symptoms are likely to be mild, the child playing round and making few complaints of discomfort. When an adult is the victim, the symptoms are likely to be much more severe.

It is most frequently seen between the ages of four and fourteen years. Its great contagiousness is seen in the fact that the infection may be conveyed by a third person, the patient having had no personal contact with the sufferer from mumps. Cold, damp weather is favourable to an

epidemic, especially among people who live in badly ventilated houses and sleep in stuffy bedrooms. Those unfortunate people, mouth-breathers, who seem to pay the price for their physical wrong-doing in so many ways, are said to be more likely to suffer from mumps than are those who breathe properly with closed lips, and this is very probably the fact.

Although it is known that mumps must be caused by a germ, the particular germ

has not yet been discovered.

The word parotid is derived from the Greek, and means "near the ear." This gland begins near the front of the ear and runs down the lower jaw. When a person is "in for mumps" the first symptom may be a swelling in this gland, although in many cases there are preliminary symptoms, such as a slight rise in temperature, with headache and a feeling of general discomfort and illness. In this stage the diagnosis will be in doubt, but the doubt will soon be dissolved by pain and stiffness localising in the angle of the jaw below the ear, accompanied by a swelling of the entire gland.

In many cases the left side is the first to be affected, the right side following in from twenty-four to thirty-six hours. By this time the sufferer is not only in a state of considerable discomfort, but is also rather comically disfigured by the tremendous swelling of the lower part of the face. He also has a good deal of pain radiating toward the ear, cannot open his mouth more than half an inch, cannot chew, and can hardly swallow or speak. Presently the gland first affected begins to go back to its normal size, and in a week or ten days the attack is over.

There is not much to do in the way of treatment. As long as there is fever the patient should be kept in bed, and in the house until the swelling has quite disappeared. The diet should be fluid, because it causes so much pain to open the jaws; and if there is much pain otherwise, hot fomentations will often give relief.—Selected.

THE fashionable size for a woman's waist, which was thirteen inches in Catherine de Medici's time, and eighteen inches not very many years ago, has now been fixed at twenty-six inches by the modistes of Paris. The Venus of Milo is about to be justified after all these years.





The Health of the Expectant Mother

THE true woman who expects one day to be a mother liveth not unto herself. A new inspiration, a new motive power has come into her She plans, she prays, she lives for her unborn child. Her greatest ambition is to bestow upon her little one a sound mind and a healthy body. She realises that her child is to be bone of her bone, and flesh of her flesh; that its future life will depend largely upon its early moulding. Accordingly the would-be mother determines to so live during her period of waiting that she may not deprive her child of its rightful heritage of health and strength.

So intimate a relation exists between the mother and her unborn babe that it is dependent upon her for life and breath and all things. Its supply of food and oxygen is drawn from the stream which flows from her loving heart. Any practice which lessens the mother's vitality or renders her blood impure exerts an unfavourable effect upon the babe. necessary, then, that the mother should faithfully guard her own health, keeping her blood stream pure and active, so that it may minister life and health to her

The expectant mother, more than any other, needs fresh air and sunshine. She should, as far as possible, live in God's great out-of-doors where she may revel in nature's gifts. People, like plants, wither and fade if deprived of pure air

developing child.

and sunlight. If she be a busy woman with a multitude of cares which almost compel her to remain indoors, she must at least open wide her doors and windows so that the indoor atmosphere shall as nearly as possible approximate that which is without. Then, too, the busy woman can do many things out of doors which she has been accustomed to do in the house. The preparing of fruit and vegetables, mending and sewing, can all be done on the verandah. One sensible woman keeps her sewing machine on a sheltered verandah, and so spends many restful hours in the fresh air which would otherwise need to be passed in a close, ill-lighted room.

The expectant mother also needs wholesome food, in order that she may nourish not only her own body but also that of her unborn babe. Clean, wholesome food which will make pure blood should be chosen rather than flesh meats and greasy, highly-seasoned foods, which tax the digestive organs and fill the blood with waste products. While elaborate and over-seasoned dishes should be avoided, the food should be palatably prepared and artistically served so that it will appeal to the appetite. spective mother often feels weak, and accordingly resorts to tea, coffee, or alcoholic drinks. But this is a mistake, for these beverages impart no true strength to the body. They serve merely as a whip to a tired horse, stimulating the

nerves for a time to greater activity. Wholesome foods stimulate the body by the impartation of true strength and

energy.

The expectant mother is more liable than others to kidney trouble, as during the period of pregnancy her kidneys are obliged to do double duty. For this reason she should partake freely of pure lightened. The skin may be kept active by means of frequent bathing. A cool shower or rub-down each morning and a warm bath at bed-time two or three times a week will ensure skin activity, and minister greatly to the bodily comfort.

Another matter of great importance to the would-be mother is that of the proper regulation of exercise and rest. Some



Many hours may be profitably spent in the open air.

water, also unfermented fruit juices and fresh, ripe fruits. The free use of water and fruits not only stimulates the kidneys directly, but by relieving constipation it assists the kidneys secondarily.

The work of the kidneys may also be lessened by increasing the activity of the skin. A sort of partnership relation exists between the kidneys and the skin. If the skin is sluggish and inactive, the kidneys have extra work to perform, but if the skin is maintained in a vigorous, active state the burden of the kidneys is

busy women have far too much work and too little rest, while others have too little work and too much rest. The woman who is overworked becomes fatigued and suffers from nerve exhaustion, while she who leads an inactive life becomes weak and unfitted to meet her time of trial. The ideal plan for the woman of average strength is to perform a moderate amount of light housework, and to enjoy some out-of-door exercise each day. This exercise should be interspersed with short periods of rest. The sensible woman

does not work to the point of exhaustion, but lies down for five or ten minutes several times a day, and so maintains her strength and energy. Eight or nine hours' sleep each night should be the rule for the prospective mother. During the latter weeks of pregnancy when the sleep is so often disturbed by various physical discomforts, a warm or tepid hip bath may, with great advantage, be enjoyed each night before retiring.

The clothing of the expectant mother is so important a matter that it will form the subject of a future article.

E. S. R.

Essentials of Health

In spite of our complicated modern notions on the matter, the essential conditions to life and health are few and plain. Through all the ages they have been food, air, sunshine, and exercise. Upon the supply of these, in proper kind and amount, depends the health of everything that lives.—Clinic.

The Indispensable Item

How strange is woman! In her brain She has one penchant, firm and clear, And though no other point she gain To this one thought she will adhere.

Gloves may be old and shoes basse, Her frock be shabby—all of that— But on her head, big, towering, gay, Though skies may fall, she'll have a hat. —Chicago Record.

The Use of the Corset

NATIONS whose women are addicted to the use of the corset are waking up to a sense of the dangers arising from that pernicious custom. Russia has forbidden girls to wear corsets, and the Minister of Education in Saxony (a kingdom of Germany, containing nearly 3,000,000 in population) has decreed that girls attending public schools shall not use stays. The physical well-being of the future generation depends upon the mothers, and women cannot be efficient mothers if they possess deformed bodies. Parents should take warning in time, and let no foolish fashion prevent their daughters from developing their robust and symmetrical women.—The Family Doctor.





Rheumatism—Some Dietetic Suggestions

If a man sows corn he will reap corn.
The same law applies in regard to health. If we sow for health we shall reap health. If we sow for rheumatism we shall reap rheumatism.

The average Australian is sowing for rheumatism every day, and he is reaping it now, or will do so in the future. He may be doing this ignorantly. It is to this person these lines are written. The sufferer, with his many aches and pains, will try to account for his trouble in many ways; blaming the weather for this attack, sitting in the draught for the other attack, over-straining for another seizure, when in reality these conditions were only secondary causes. The principal cause is due to errors in dietetics, and it is to these we desire to direct our attention.

There are certain individuals who are predisposed to rheumatism, and these are the persons who should take particular care as to their diet. They must not expect to be relieved or cured in a day. If the sowing for rheumatism has been going on for a long time, then the reaping for health must be given time.

If we relate a few facts in regard to the state of the blood in rheumatism, it may enable the reader to deal more intelligently with his condition. Some patients will tell their doctor that they are troubled with "uric acid," or they will remark, "My blood is very acid." If they should be asked what is uric acid? and what does acid blood indicate? the majority could not answer the questions. We shall endeayour to explain.

Naturally the blood is alkaline. this we mean it is exactly opposite to acid, just as baking soda (alkaline) is opposite to vinegar (acid). To be in health the blood must be of a certain standard of alkalinity. In rheumatism the blood is in a state of lessened alkalinity, because certain acids are retained in the blood instead of being eliminated. There are many acids, but the most important is uric acid. The inquiring mind will ask, From whence does the uric acid come? The human body is continually building up and breaking down, and in the latter process there are waste substances which the body throws off in the

excreta. These waste products are called purin bodies, and one of these is uric acid. It comes from the breaking up of nitrogenous or proteid element. By proteid element is meant the main constituent of flesh. White of egg is pure proteid.

We eliminate by the urine four and a half to seven and a half grains of uric acid per day, but with an entirely meat diet the weight may increase up to sixty In this case the body has to excrete the uric acid from the breaking down of its own tissue besides that of the animal food taken in. It follows that the destruction of meat in the system tends to acidify the blood by the organic acids which originate from its decomposition. The acidity, or lessened alkalinity, of the blood can be regulated to a great degree by a proper diet. This should consist of an abundance of fruits, vegetables, and cereals, as they contain certain valuable salts which, when taken into the blood, break up some of the compounds of waste substances which have been formed, and thus they are readily eliminated.

Many persons suffering from uric acid abstain from certain acid fruits as lemons, thinking they make the blood more acid. This is a mistake. There are chemical changes which take place in the digestive process, resulting in the very opposite.

Our system requires salts of lime, soda, phosphates, chlorides, sulphur, iron, and vegetable acids, and these are admirably supplied by fruits and vegetables. Their value is ably summed up by Professor Gilman Thompson of America. Of vegetable constituents he says:—

- 1. They adjust the specific gravity of the blood and other fluids of the body.
- 2. They enable the blood to dissolve and carry certain substances which it could not otherwise do.
- 3. They maintain the blood and other fluids of the body in their proper chemical condition.
- 4. They control the amount of absorption necessary in the system.
- 5. They preserve the tissues of the body from change and decay.

- 6. They are indispensable in the building up of various substances, such as the bones, the teeth, etc.
- 7. They are vitally necessary for various special purposes, for instance, the formation of gastric juice, etc.

The uses of the various fruits have been comprehensively summarised as follows:—

- 1. They furnish nutriment to all the tissues of the body.
- 2. They convey water to the system and relieve thirst.
- 3. They introduce various salts and organic acids, which improve the quality of the blood and react favourably upon the secretions.
- 4. They are efficacious as anti-scorbutics (something which will prevent scurvy) to prevent the blood from deteriorating.
- 5. They act as diuretics (stimulants to the kidneys), and lessen the acidity of the secretions.
- 6. They are simply invaluable for their laxative and aperient action.
- 7. They stimulate the appetite, improve digestion, and give variety to the diet.
- 8. They serve as "cures" for diseases not amenable to other treatment; as for example, the grape cure, the strawberry cure, etc.

The diet of the average Australian is highly nitrogenous, consisting chiefly of meat, fish, and eggs. These foods are never wholly consumed in the body. There are always solid matters left like clinkers in a stove, which the kidneys and liver have to labour to dispose of, and if they fail to do so serious results follow.

The individual predisposed to rheumatism would do well to adopt a low proteid dietary, as his system lacks the ability to throw off the excess of waste products, and they accumulate, causing lessened alkalinity of the blood.

* An interesting experiment was performed by Professor Russell Chittenden, of Yale University. He was desirous of ascertaining the lowest possible amount of proteid necessary for the daily requirement of the body, and undertook the experiment on himself with the result

that within a few months a severe case of muscular rheumatism, with which he had been troubled for years, disappeared, also a recurrent bilious headache, and these have never returned. This has been the testimony of many persons who have adopted a similar plan.

It may be of benefit to those who are

for rheumatism. It may be used cooked as well as raw. (See recipe, p. 173).

Very ripe fruits are excellent, fresh or cooked. Cherries, grapes, plums, oranges, pears, lemons, apricots, nectarines, peaches, strawberries.

It is well known that eating lemons increases the activity of the liver. Lemon



Whangaroa Harbour, New Zealand.

troubled with uric acid to give the following suggestions a trial:—

Foods Allowed

All green vegetables except spinach, rhubarb, French beans.

Tomatoes may be used when they can be well digested by the stomach. These have been wrongly forbidden.

Cooked, and especially raw, onion is very suitable.

Čelery has an established reputation

juice is an old and established remedy in acute rheumatism. Those who are fond of lemons may use several a day with beneficial results. It is best to take the juice unsweetened if many are used.

Milk is excellent. It does not increase uric acid, and it supplies the deficiency of meat.

Drink an abundance of pure water.

Purees of peas, beans, and lentils made by thoroughly cooking the legumes and putting through a sieve to remove the

These should be used in modhulls. eration.

Foods Forbidden

Meat in moderation, and then finally discarded. If eaten it is best to have it boiled.

Avoid veal, chicken, smoked meats, jellies, foods too rich in fat and highly

Eggs are unsuitable for some, although not absolutely forbidden.

Bread should be used very moderately. It should be replaced by stewed potatoes, as they alkalinize the blood.

Cocoa and chocolate should especially be avoided, also generous wines, strong beer and brandy.

Other Suggestions

Avoid a sedentary life. Take exercise daily, but not to fatigue. Get plenty of fresh air. Bathe frequently to keep the skin in good condition.

Cultivate cheerfulness. Don't worry.

E. M. H.

Dangers of Hustling Digestion

You may hustle in business, or in pleasure, if you like. You may overwork your clerks, or harry your maid by your ceaseless change of attire; you may travel at eighty miles an hour. You may do all these things, and perchance escape evil results; but you cannot hustle your digestive organs without incurring the effects of their revenge, which very often shows itself in one form or another of illtemper.

The modern eagerness for haste in everything has invaded our mealtimes. The quick lunch, a twentieth century innovation, is an engine capable of working much mischief.

It is said to be one of the causes of appendicitis, which we now know to be one of the matured fruits of indigestion. It will certainly also prove a temper-destroyer, for good temper and bad digestion are like youth and crabbed age-"they will not dwell together."

It is no saving of time to hurry and hustle over meals, as if they were things to be got over in the briefest possible space of time. An attack of appendicitis will take a great deal more time than many meals leisurely eaten. - Australian Farm & Home.

Disclosures of the Microscope

"So horrifying," says Dr. Leedsworth in speaking of Upton Sinclair's disclosures concerning the Chicago Stock-yard conditions, "were these disclosures that almost half the country swore to forego forever the use of flesh, with its possibility of disease, and filth, and infection. time has erased these things from the memory of a large majority of people. They have come to look upon the stories as perhaps overdrawn. They have imagined that a meatless diet would not furnish sufficient nourishment for their

arduous occupation."

Visitors to the large packing houses in Chicago will be interested when they are shown the room where hundreds of girls. sit in front of microscopes through which they are carefully looking with trained eyes for any evidence of trichinæ and other common flesh diseases. Surely under such precautions, it will be safe to make use of such meat, but inquiry reveals that this inspection is compulsory for only exported Where the test prevents its passing muster, it is kept for home consumption. It has been found that Americans are less scrupulous about what goes intotheir stomachs than are some of the European nations.

Such incidents would seem conclusive proof that the learned scientist referred to below is not the only person to whom has been served diseased meat. It is said that this scientist went to his butcher and asked him if he ever got any measly

"Sometimes," the butcher cautiously answered, "but I always throw it away."
"Well," said the professor, "the next

time you have any, I wish you'd send me-

up some," meaning, of course, to his laboratory.

The butcher, though somewhat taken

aback, said that he would.

Three weeks passed when the professor, growing impatient, again visited the store.

"Haven't you found any measly pork

yet?"

"Why, yes," said the butcher, "I sent up two pounds a week ago."

A sickly grin broke over the professor's

face. "Where did you send it?"

"Why, to your house, of course," said the butcher.

Preaching and Practice

In the Rev. Dr. W. E. Hatcher's recent book of reminiscences entitled, "Along the Trail of the Friendly Years," Mr. Spurgeon is described as "a vegetarian who talked." That is, he felt free to proclaim himself a vegetarian, which made Doctor Hatcher feel free to play a little prank upon him. One day, at a dinner in London, there was roast pheasant. During the progress of the meal Doctor Hatcher's vagrant eye caught sight of quite a formidable slice of of the pheasant's breast on Spurgeon's plate, and, what was more, noticed that the eminent preacher was vigorous beyond his wont in his attack upon the delicate viand.

"I heaved an untimely sigh," writes Doctor Hatcher, "and expressed dolefully enough my regret that I had to return to America.

"Spurgeon took the matter quite to heart, and owned to grave surprise that I spoke so slightingly of my country.

"I just freed myself by saying that the Americans were so benighted, and that I would have such a grievous task bringing them out of darkness into the true English light.

"'You shock me,' Spurgeon said.
'What is the matter with your country?'

"'The matter?' I repeated. 'Matter enough indeed. Why, they do not know in America—they have never found out that a pheasant is a vegetable!'

"Spurgeon broke into good-natured laughter. 'Blame me not,' he said. 'The woman, she gave it to me.'

"'Yes' said the lady, 'and you did not fail to observe that the man, he did eat."

—Youth's Companion.

Cookery as a Science

COOKERY has now gained its true position as a science. It is an art, too; but this has been recognised for many years, whereas it is only recently that the laity have come to learn that the true cook has to judge not only the tastiness and digestibility of his creations, but also the ratio of the various nutritive elements.—Food and Cookery.

Disease Among Animals

DR. J. R. LEADSWORTH, physician to Loma Linda Sanitarium, in his excellent pamphlet on "Diet and Endurance," relates an interesting experience:—

"Some years ago, while crossing the continent, we were compelled to stop for a day in the city of St. Paul. Inquiry was made for a vegetarian eating-house, and the best place obtainable was that of the Workingmen's Home, the resort where homeless and friendless men were served with vegetable soup and other fleshless products for a penny or two a Sitting at one of the tables, we noticed a well-dressed, intelligent-looking gentleman, and engaged him in conversation. Evidently we showed some surprise that he should be dining in so uninviting a place, but we were fully satisfied as to the reason when he informed us of his occupation. He said he was a government inspector in the stock-yards in St. Paul, and the thought of having some of the carcases served up to him which were daily passed as being insufficiently diseased to be condemned, was enough to preclude his dining in some of the more inviting flesh-serving resorts."

Tea-Drinking among Arabs

In his interesting book "Across the Sahara," Mr. Hanns Vischer, M.A., F.R. G.S., speaks of the effect of tea-drinking upon the Arab tribes of the desert. He says: "At the present day the consumption of tea is enormous throughout Africa, and with some of the Bedouin tribes it has degenerated into a regular mania. The tea is usually of the green China variety, extremely strong, and unpalatable to our tastes. The Arabs add sugar to it until the concotion resembles some black syrup or treacle. Naturally the effect is detrimental to their general health, and to their nerves in particular. I have seen my camel-boys spend their last coppers on tea and sugar. The consequence of this excess is a high irritability." Of the Magarha, an Arab tribe, Mr. Vischer says that their nerves seem to have been utterly ruined through excessive tea drinking.

The Kitchen Sink

An eminent physician once said: "If I am called in to a case of diphtheria, the first thing I look at is the kitchen sink." The dangers arising from a badly-kept sink cannot be exaggerated, nor can any degree of care in avoiding them be considered extreme. The waste-pipe from a kitchen sink should have boiling water and ammonia, or washing soda, poured down it each day. At least once a week it should be treated to a dose of some good disinfectant, such as chloride of lime.

This old stand-by is very inexpensive, and quite as good as many of the modern high-priced articles. Put a large teacupful of chloride of lime into two quarts of water, and use as required for cleansing the sink.—Food and Cookery.

IF one half the efforts were put forth in the prevention of disease that is expended in the cure of ailments, the world would be both richer and happier.

Healthful Cookery

[Recipes contributed by Dr. Ethel Heynemann, Nurse Christina Manson, and Nurse Laura Ulrich.]

Lentils Baked with Tomato.—Cook two cups of brown (German) lentils in salted water until tender, about two hours. Have three onions cut up fine and fried brown, add these to the lentils. Also add one tin of tomato puree, made by putting a tin of tomatoes through a colander or sieve. Put all into a baking dish and bake until nicely browned on top. This is a delicious savoury.

Japanese Roast.—One cup of cooked rice, one cupof split-pea pulp, one-half cup of zwieback crumbs, one tablespoonful of cream, the juice of one onion, salt to taste. Mix all together, then press into a buttered dish and bake for about one-half hour. Serve in slices with parsley sauce.

Macaroni Fondu.—Break one cup of macaroni into inch lengths, and boil for three-quarters of an hour in salted water. Drain, and place in a pie-dish. Pour over it a custard made with three cups of milk, three eggs, and salt to taste. Sprinkle a little chopped parsley over, and bake until custard is set.

Vegetarian Sausage.—One cup of cooked rice, one cup of lentil pulp, German lentils cooked until tender and rubbed through a sieve. Add salt to taste, also a little thyme and grated onion. Add just enough breadcrumbs or zwieback crumbs to make it of a consistency to form into sausages, very little will be needed. Fry the sausages and serve with brown gravy.

Vegetable Sausage Rolls.—Take the sausages made as above, roll each in pastry and bake. These are very nice hot or cold.

Parsnip Balls.—Boil parsnips until tender in salted water and rub through a sieve to remove any lumps. Mix in a spoonful of butter or cream. This mixture should be quite dry. Form into tiny balls. May be fried in a little oil or baked.

Creamed Celery.—Cut tender sticks of celery into small pieces and boil until quite soft. Have ready a nice milk sauce. Strain the celery, add to the milk sauce, and boil for a few minutes. Salt totaste.

Haricot Souffle.—Steep half a pound of haricot beans over night in cold water. Place in a saucepan with a small chopped onion. Cook for two or three hours. Mash them well, and add six ounces of bread crumbs, two eggs, a little parsley finely chopped, and salt to taste. Mix well, and bake in a buttered dish.

Barley and Raisins.—One cup of barley, one cup of raisins, one quart of water, the juice and grated rind of one lemon. Wash barley, and cook until quite tender and thick, then add the raisins and lemon and a little sugar. Pour into a pie dish and bake three hours, frequently adding a little water to keep moist. The longer cooked the better. Serve hot or cold with cream.

Rice Snow.—One cup of rice, three cups of boiling water, a pinch of salt, three eggs, (whites only) two tablespoonfuls of sugar, apple jelly. Cook rice, whip whites of eggs to a stiff froth, add the sugar, essence for flavouring may be added. Place a spoonful of rice in a glass dish, cover with custard sauce, and add a little white egg foam with a spoonful of jelly on top.

Fig Charlotte.—One-half loaf of white bread with the crust removed, two eggs, one and one-half pints of milk, one pound of figs, washed and put through a mincer and softened with a little warm water, three tablespoonfuls of sugar. Cut the bread into slices one quarter of an inch thick. Add milk and sugar to beaten eggs, stirring until the sugar is dissolved. Dip the bread into the mixture, and place a layer in the bottom of the pie dish. Spread over a layer of minced figs. Alternate in this way until dish is full, leaving a layer of bread on top. Pour over the whole the remainder of the eggs and milk, and place in the oven for one hour. Cut in squares and serve with a custard sauce.

Gipsy Pudding.—Four granose biscuits, one quart of milk, three eggs, two tablespoonfuls of cornflour, three tablespoonfuls of sugar, jam or jelly, one quarter teaspoonful of essence of vanilla. Cut the granose in halves, place in a glass dish and soak with a little warm milk. Put the other half on top and cut again. Make a custard sauce and pour over the whole. Let set until cool. Whisk the whites of eggs to a stiff froth, add a little sugar and colouring matter, and drop on top of the pudding as a garnish.

Granola Fruit Pudding.—One half cup of granola, three eggs, two tablespoonfuls of sugar, one quart o milk, essence of lemon, one-half cup of raisins. Soak the granola with one-half cup of boiling water. Place in a pie dish and beat the eggs well. Add the milk, sugar, essence, and raisins. Stir all wel together, and bake until the custard has set.

Gluten Custard.—Four eggs, one quart of milk, two tablespoonfuls of sugar, vanilla essence, two tablespoonfuls of gluten, one cup of water. Boil the water and shake in the gluten. Cook until thick. Add the milk, sugar, and essence, then the eggs well beaten. Pour into a pie dish and place in the oven until the custard is set.

Haricot Bean Salad.—Boil some haricot beans till very tender. Drain off all the water, and keep them whole. Then make No. 1 Dressing, but have the dressing very thick. To do this add less lemon and water. Mix with the haricots and serve on a lettuce leaf. Green peas can be used in the same way.

Spanish Eggs.—To six eggs add three-eighths of a cup of strained tomato, one tablespoonful of lemon juice, two dozen ripe olives (cut in rings), one small onion grated, one teaspoonful of salt, one teaspoonful of celery salt. Cook in a double boiler, stir constantly until slightly thickened. This may be served on buttered toast. The celery salt may be omitted if it is not obtainable, but a little more common salt must be added.





A Very Fine "System"—The Macdonald Smith Full Contraction Exercise

E believe that the majority of people do not seek to emulate the muscular development of weight-lifters or wrestlers, but to exercise for health and fitness, both mental and physical. To acquire a system of exercises which will healthfully develop the muscles, accelerate breathing and the circulation of the blood, and so assist in the everyday duties of life, is their aim.

Physiological

We know that the blood is the source of life and healthy functioning of the human machine. To get that blood flowing steadily and constantly throughout the body, without being sluggish in one part, congested in another, or otherwise abnormal, is the true object of physiological exercise. In the definite and complete contraction of a muscle, followed by as complete and definite relaxation, we have a healthy functioning of that part of the human economy. Such exercise acts as a sort of peripheral pump, causing the blood to circulate through the parts directly used, relieving congestion in other areas, and to some extent assisting the the heart in its work as a central pump. To enable a muscle to be fully and completely contracted, due consideration of its anatomical connection with the bones it is to move when contracted, is of the utmost importance.

If, for instance, we wish to exercise the biceps of the arm, according to the "Full Contraction" system, we must see that the palm of the hand be turned fully to the front. The hand must not hold anything, nor even be closed. Nor should the fingers be too rigidly extended, as the muscles controlling the fingers will thus be caused to interfere with the full contracting of those which draw or flex the forearm up towards the upper arm.

Another point, claimed to be of equal importance by Mr. Smith, is that a muscle, after a full contraction, should have just as full and complete relaxation. This is accomplished in the exercise we have taken as an illustration, by simply allowing the forearm to drop to full extension immediately after the flexion. To accomplish this, see that the palm of the hand be turned forward and quickly flex or bend the arm at the elbow, by contracting the biceps in the upper arm, which draws the lower arm upwards towards the shoulder; then relax the same muscle, allowing the arm to drop to full extension. exercising the arm in this position, viz., extended downwards from the shoulder, palm of hand forward, it will be at once seen that there is definite contraction and relaxation of one specific muscle only, viz., the biceps. The triceps, which are usually brought into activity in extending the arm, are not here called upon, the

weight of the forearm, on relaxation of the biceps being sufficient to extend the arm without calling the triceps muscleinto play.

The Blood Flow Accelerated by the "Full Contraction" System

The author of this system claims that by regulating the number of contractions of the muscle, the "pulse" or blood-flow can be increased and the muscles streng-



Fig. 1.

thened, as well as the more distant blood-pump. the heart. assisted in its work of distributing the lifestream to all parts of the body, though of course more specially to the part immediately concerned. His conten-

tion is, and to this professors of physiology in high standing in England have agreed, that when a muscle is contracted more or less blood is forced out of it. The more complete the contraction, the more fully is the blood forced out of the muscle. Immediately following the contraction should come the full relaxation, the muscle again completely refilling with blood.

A Cure for "That Over-Tired Feeling" Following a Hard Day's Work or Exercise in the Athletic Field

In our ordinary occupations, and even in our field games or gymnastic exercises, only partial contractions of most of the muscles take place. What we term "fatigue" is a condition produced in the tissues by a deposit of the wastes resulting from muscular action. Where there is only contraction, the deposit of waste is greater, and fatigue more quickly follows. This can be demonstrated by exercising the biceps first in the way

usually advised by physical culturists, noting the approach of fatigue, and then after the manner advised by Mr. Smith.



Fig. 2.

At the end of the day, before retiring, ten or fifteen minutes' exercise on "Full Contraction" principles will carry away the waste-laden blood, and replace it by a fresh supply, thereby banishing fatigue and leaving a quiet, restful feeling conducive to sleep.

Sleeplessness Relieved by "Full Contraction" Exercises

By going through exercises of the full contraction type before going to bed, the



Fig. 3.

*Exercises Explained.

Most of the exercises are very simple. It is, how-

ever, of utmost importance to be careful to put the body in such a position

body can be relieved of waste products, which produce "fidgets." The freer circulation of the blood will also tend todraw congested blood from the brain, and, in both conditions, sleep will be likely tofollow. This has been the personal experience of the writer, as well asof others who have followed the system.

as will admit of a definite and full contraction of the specific muscle exer-



Fig. 4.

cised, and easy relaxation of that same muscle immediately after the contraction. Herewith we are giving illustrations of exercises for the head, arms, and legs, as these can be easily understood.

Head Exercises. (Fig. 1.) Sit on a chair, trunk leaning well forward, arms resting on knees, no collar or tight band on neck, bend head upwards and backwards smartly and fully, immediately relax the muscles

and allow it to drop heavily forward.

(Fig. 2.) Lie flat on the back, preferably on a stiff mattress or couch, or if on



Fig. 5.

the floor a thick carpet should come between the body and the floor. Bend the head upwards and inwards upon the chest; relax the muscles, allowing it to fall back to the floor.

Arm Exercises. (Fig. 3.) This is fully described in the text. In the illustration the one arm is extended while the other



Fig. 6.

is flexed. It is best to alternately flex and extend each arm.

(Fig. 4.) To enable the triceps to be first fully contracted and then as fully relaxed, the body is bent over to the side, so that the elbow may be pointed straight upwards. The forearm is then extended, by contraction of the triceps. Relax this muscle and the arm bends at the elbow and the lower arm drops to position indicated in illustration.

Exercises for Legs. (Fig. 5.) Hands grasping the back of a chair, one foot placed forward, knee slightly bent, the other leg extended behind, toes resting lightly on the ground. Quickly bend the extended leg at the knee, bringing the heel up to the hip; relax and allow the leg to straighten until the toe again reaches the ground.

(Fig. 6.) Recline on back, knees drawn up, as illustrated. Alternately extend and bend (by relaxing the extension muscles only) each leg.

All these six exercises are to be repeated smartly twelve or more times, pains being taken, first, to assume the right position; second, to secure a full contraction of the muscles used to bend or extend the head, arms, or legs, as the case may be; third, to secure a full relaxation of the same muscles.—W. M. Scott.

Decline in Physical Vigour

GOVERNMENT statistics given out by various European countries at the close of last year point unmistakably to a decline in the general physical vigour of the people. Out of 500,000 examined for military duty by the Italian Government during the year, 122,321 were rejected as unfit. Germany rejected 257,000 out of a total of 527,000, or 49 per cent. France rejected 48 per cent. The per cent, is smaller in England, but even there it is out of all reasonable proportion to the progress of the nation along other lines. Three general reasons have been advanced in explanation of this distressing condition. Some economists think it due to the very large number of people now employed in indoor work. It is held that outdoor life is absolutely necessary to physical vigour. Another class of investigators holds the decline is due to generations of inter-marriage among the people. It is claimed that no matter how large the nation, in time the people all become remotely related, and deterioration follows. A third group of investigators asserts the decline is due to the loosening of moral and religious ties among the people. These hold that the passing of certain moral, political, and social ideals produces a corresponding derangement in the physical life.

MR. ISAAC C. JOHNSON, J.P., of Gravesend, the inventor of Portland cement, has celebrated his hundredth birthday. The King sent him a congratulatory letter. Mr. Johnson's only occupation in his retirement is translating the Gospels from the Greek. He learned to ride a bicycle when he was eighty-eight, and used it up to a year ago.

Physical Culture in France

DR. LACHAUD, an enthusiast in the art of physical culture, recently pointed out that while £380,000 was spent annually in France in improving the breed of horses, only £7,000 was spent by the government during the same period on the physical culture of men. The government has now decided to open six military gymnasia, and to create advanced courses for the instruction of civilians in physical culture.

PERHAPS a good many husbands will find food for thought in the report that a "German magistrate has applied for a divorce on the ground that his wife has seriously impaired her health by the strenuous treatment she has undergone in order to reduce her figure to the proportions necessary for the advantageous wearing of a hobble skirt. 'She ruined,' he maintained, 'her complexion, her digestion, and her temper.'"

Hints About Eating

THE majority of people never stop to think that the stomach is anything more than a receptacle for things that have been chewed. They get hold of something that tastes good, and swallow it into the stomach to get it out of the way, so there will be room for something more. That might be all right if the stomach were a garbage box that could be carried off and emptied; but Nature intends the stomach for another purpose. We are constructed of what we eat. We should stop to think of that. We should be careful what we swallow, for it becomes our brain, heart, limbs, blood; and if we are to have good blood, clear brains, sound minds, sturdy legs and strong arms, we must eat food that is capable of making that sort of tissue.-The Family Doctor.

THE CHILDREN'S HOUR



Copyright N. J. Caire, Photo, Melbourne Tobogganing on the Buffalo Ranges, Victoria.

THE WEATHER PROPHET

The old man cocks his weather-eye
And takes a squint at the cloudless sky,
And says, as he samples a whiff of the breeze,

- "'It looks to me like it's goin' to freeze."

 Oh, then you should hear the children shout!

 And before you can wink their skates are out!

 They oil the straps, and they polish the rust,

 And the old man files them because he must.

 "We're going to have skating!" they shout
 with glee.
- And then they rush to the pond to see.
 Such joy can be found in words like these:
 "It looks to me like it's goin' to freeze."

When the old man comes from his work at night,

He opens the door and blinks in the light, Pulls off his mitts, and says, "I dunno, But it looks to me like it's goin' to snow." Then the children shout and rush to the shed, And soon they are back with the battered sled. The runners are warped and are all askew,

But the old man works till he gets them true, And soon with their joy the rooftree shakes When down through the night come the first big flakes.

Such joy there is in the words "I dunno, But it looks to me like it's goin' to snow."

The old man stands by the open door,
And takes a squint at the sky once more,
And then he says, and his words are law,
"It looks to me like it's goin' to thaw."
Oh, then what sport there is in sight!
The snowman, the fort, and the snowball fight.

And the old man whittles a little boat— Not much to look at, but still it will float. The children will shout and the dog will bark When there's water to float the clumsy ark, And by noon they know that his words were law:

"It looks to me like it's goin' to thaw."

—Peter McArthur.

Autobiography of Mike Robe (Microbe).

ROM my infancy I have lived in a small cave in one of Mary Jones's back teeth. My parents preferred this location, on account of its retirement from the outer world, its freedom from sunlight, and the absence of circulating fresh air. Its general adaptability to the growth and development of their children was favourable, and food, because of its abundance, was much easier to obtain in this neighbourhood than elsewhere.

Little Mary's tooth-brush, of which we were all mightily afraid, seldom reached this retired locality. For that matter, we had little to fear from brushes in any location, for Mary thought she had no time to waste on her teeth.

It is true, we were often threatened with extermination from floods made up of hygienic mouth washes; but as Mary seldom used these unless compelled to do so by her mother, our chances of annihilation were comparatively few.

I well remember the day that Mary, supplied with a piece of floss silk, began a general cleansing of the crevices of her teeth. My mother always laid the blame of this to her half-sister, my Auntie Sepsis (antisepsis), who had always been an enemy to all the germs of disease. She had never cared much for our branch of the family.

Our watchman, standing in his sentrybox at the top of Mary's middle upper tooth, saw the coming danger and gave the alarm. A messenger carried the news from place to place, and in a short time we had hurried from the harvesting of the remains of Mary's last meal to the innermost crevices of our caves. To my great disappointment, the last pickings of a chocolate bud had to be left as forage for the enemy. I hope it choked Auntie Sepsis.

Many of our friends and relatives were killed or injured. My great-uncle was caught in a loop of silk and was hung until dead. My playmate, in jumping from one tooth to another, lost his balance, falling upon Mary's tongue. In the confusion he was swallowed before help could reach him. I shall never forget his call for help as he rapidly disappeared into the "Down and Out."

By great good luck this attack was not followed up by other cleanings. The "rented room" sign soon disappeared, and we were again crowded for space.

One morning Mary thought to rid herself of us by using a pin and a toothpick, but while my father lost an eye by the performance, the rest of us were not hurt. Our neighbours, however, in upper left tooth No. 4, gained an addition to their cave, and a new and up-to-date hotel, named the Decay House, was opened next to us.

When I was two months old a stranger from a foreign land came to live with us. This is how it happened. Mary had been playing with Johnny Jones next door, who was just getting well from a sore throat. Mary, without thinking, took a bite from an apple from which he had been eating, and along with the bite came a germ from Johnny's sore throat.

The germ barely had time to squeeze itself between two teeth before the apple was swallowed. Hard times then followed for us all. The stranger set up a poison factory in the back of Mary's throat, giving work to other foreigners like himself. They ate up all our food, and made Mary horribly sick.

Auntie Sepsis was again called in, and such floods as we did have! Our entire population was reduced one-half, for many of our folks could not swim, and life-preservers were scarce.

Mary finally recovered from her sore throat, but her doctor had discovered our homes in the cavities of Mary's teeth. Then she was sent to a dentist, who squirted big streams of water at us, and dug us out with shovels, hoes, and rakes.

Some of our people who always had a stubborn disposition, and who controlled the politics of our district, crawled into the teeth as far as possible and had to be drilled and blasted out, just as the Panama Canal is being made. This treatment was not enjoyed by Mary, who wriggled, squirmed, and cried until I felt seasick.

Among all the germs, I alone remain to tell you this tale. I escaped by crawling into a tiny crack which the dentist, being near-sighted, did not see.

Mary has learned by this severe lesson the value of keeping her teeth clean, and now uses her toothbrush regularly.

My life is in constant danger. My friends are all dead, and all their houses filled with metal. What little food I get must be swallowed on the spot, and cannot be stored away; for the tooth we formerly used as a

storehouse has been pulled down and a new one has been made to take its place.

I have nearly been swallowed several times, and never feel safe without a staff or parachute. I am merely a shadow of my old self, and have entirely lost my nerve. Besides, the new mouth wash Mary is using has nearly ruined my stomach.

There are now no good openings in Mary's teeth for a young microbe, and I have to start life in a new country. Yesterday I received word that Mary's finger

nails have a growing population. Auntie Sepsis has not been heard from by them for a long time. I shall try to reach this fertile country if an opportunity offers.— Caroll H. Francis, M.D.

One Thing She Held Fast

A NOTED music teacher was giving a lesson to a talented but careless pupil,

and was rapidly becoming impatient
with her. Finally,
at a most complicated part of a
difficult piece, the
pupil lifted her
hands from the
piano and made a
wild dash for her
handkerchief to
stop a threatened
sneeze. It was the
last straw.

"Oh," exclaimed the teacher, thrusting her own hand-kerchief at her, "was there ever such a girl! You lose your position, you lose your fingering, you lose your handkerchief—you lose everything!"

"Oh, no," responded the pupil, with a twinkle,

I haven't lost my



"not everything. temper."—Selected.

Two very nice little girls had a quarrel one day.

"Anyhow," said one to the other, who was an adopted child, "your parents are not real."

Whereupon the other little girl retorted: "I don't care, my papa and mamma picked me out. Yours had to take you just as you came."



The Nest

JACK and his sister Mary were playing out in front of their house in Grantville one afternoon, when they saw two squirrels come out of the grass and sit on a fence near by. For a moment the little creatures were still, and they began to chatter vigorously in squirrel language.

"I know what they are saying, Jack," said Mary, after listening a little while. She was a very imaginative little girl, and was always telling her brother and her boy and girl friends what the birds and animals were saying to each other.

"Well, what is it, Mary?" he asked.

"Why, they are looking for a home where they can live and bring up some dear little squirrels. That one says, 'Come up in this tree, and we will find a nice place;' and the other answers, 'No, I don't want to. I would rather live in a hole in the ground.'"

Just then a robin flew on a branch right above their heads and began to sing.

Mary began to dance about, and cried, "Iack, that's our dear robin we watched

build his nest in the cherry tree! You know we saw the little birds fly away yesterday, and the nest is empty. I do believe he is telling the squirrels that they may have his nest. See there! I told you so." For actually, those dear little squirrels scrambled down from the fence, ran to the cherry tree, and climbed up to where the robin's nest was.

The next few days they were very busy getting their new home in order. As the nest was quite close to the nursery window, the children could see the homebuilding operations, which they watched with the greatest interest. The squirrels added considerably to the nest, and it did seem as if the robin helped them, for every now and then he brought little straws in his beak, and soft feathery things for lining.

"I wish we could help them," said Mary to Jack, "but we can't, 'cause we can't climb up there."

"I'll tell you what we can do," said Jack, who was a practical little fellow. "We can put some crumbs and nuts down at the foot of the tree every morning, and then they won't have to hunt round for their breakfast."

"That's first-rate, Jack, and we'll do it."

It was a dear little home the squirrels made for themselves, and by and by, when little baby squirrels came, the mother stayed by them all the time, and the father did the climbing and running. He got so used to the children putting the crumbs for him at the foot of the tree that sometimes, when he did not

find any, he would wait round till they came out with their hands full, and then his little squirrel heart leaped for joy. When the little ones had grown up, and the nest was left empty again, Mary and Jack's father climbed up the tree and carefully took the nest down. The squirrels had made it a good deal larger and lined it with some soft stuff, which made it a lovely little home. It looked so pretty that he took it to the Natural History Society in Boston, and they put it in their exhibition hall, where it may still be seen, for this is a true story.—

James M. Hubbard.

What Imagination Will Do

DR. CHARLES K. MILLS, of Philadelphia, told at a dinner an amusing story of the influence of the imagination on the health.

"A young bank clerk," he said, "feeling fagged from the excessive heat of a trying summer, consulted a physician. The physician questioned him, sounded his lungs, and then gravely said:—

"'I will write you to-morrow."

"The next day the bank clerk received a letter from the medical man telling him that his right lung was gone, and his heart seriously deranged, and advising him to lose no time in putting his affairs in order.

"'Of course,' the doctor said, 'you may live for weeks; but you would do well to leave nothing important unsettled.'

"Naturally the young bank clerk was very much depressed by this sad letter, nothing less than a death warrant. He did not, of course, go to work that morning, and before noon he was having trouble with his respiration, while severe pains shot rapidly through his heart. He did not get up all day, and on towards midnight he had a sinking spell that caused his people to send post-haste for the doctor.

"The doctor on his arrival was astounded.

"'Why,' he cried, 'there were no symptoms of this sort yesterday! What on

earth have you been doing to yourself?

"The patient's face screwed up with pain, he pressed his hand to his breast, and said, feebly:—

"'It's the heart? I suppose, doctor.'

"'The heart?' said the doctor; 'there was nothing the matter with it yesterday.'

"'What ails you?' the doctor cried.
"You don't seem to have been drinking."

"'Your letter, doctor-you told me I

had only a few weeks to live.'

"'Nonsense! Are you crazy? I told you to take a month's vacation at the seaside, and you'd be as good as new again.'

"The patient drew the fateful letter

from a drawer beside his bed.

"'Well,' said the doctor, glancing at it, 'this is a pretty mess. This letter was intended for another man. My secretary must have mixed up the envelopes.'

"The patient laughed. He sat up in bed. His recovery was rapid. That

night, in fact, he was well again.

"'And what,' ended Mr. Mills—' what of the dying consumptive who had got this young man's letter? The consumptive, delighted with the prediction that a month at the seaside would make a sound man of him, packed his trunk and took the first train for New England. That was ten years ago, and to-day he is in fair health.'"—Selected.

A Country Appetite

THE effect on the appetite of country air is suggested by a writer in the London Opinion. A resident of the rural districts went to London on a visit. On entering the hotel dining-room on the morning of his arrival, he inquired of the waiter:

"Well, what have you for breakfast?"

"Porridge, soles, kidney and bacon, grilled ham, sausages, chops, steak and tomatoes," said the waiter.

"Right!" answered the farmer. "I'll have what you mention, and some eggs and muffins."



The Doctor's Story



I.

Good folks ever will have their way—
Good folks ever for it must pay.
But we who are here and everywhere,
The burden of their faults must bear.
We must shoulder others' shame—
Fight their follies, and take their blame.
Purge the body, and humour the mind:
Doctor the eyes when the soul is blind;
Build the columns of health erect
On the quicksands of neglect,
Always shouldering others' shame—
Bearing their fault and taking the blame!

II.

Deacon Rogers, he came to me;
"Wife is a-goin' to die," said he.

"Doctors great, and doctors small,
Haven't improved her any at all,
Physic and blisters, powder and pills,
And nothing sure but the doctors' bills!
Twenty women with remedies new,
Bother my wife the whole day through.
Sweet as honey, or bitter as gall—
Poor old woman, she takes 'em all.
Sour or sweet, whatever they choose,
Poor old woman, she daren't refuse.
So she pleases who'er may call,
An' Death is suited the best of all.
Physic and blister, powder an' pill—
Bound to conquer, and sure to kill!"

Ш.

Mrs. Rogers lay in her bed,
Bandaged and blistered from foot to head.
Blistered and bandaged from head to toe,
Mrs. Rogers was very low.
Bottle and saucer, spoon and cup
On the table stood bravely up;
Physics of high and low degree;
Calomel, catnip, and boneset tea—
Everything a body could bear
Excepting light and water and air.

IV.

I opened the blinds; the day was bright; And God gave Mrs. Rogers some light: I opened the window; the day was fair, And God gave Mrs. Rogers some air. Bottles and blisters, powders and pills, Catnip, boneset, syrups, and squills, Drugs and medicines, high and low, I threw them as far as I could throw.

- "What are you doing?" my patient cried;
- "Frightening death," I coolly replied.
- "You are crazy!" a visitor said.
 I flung a bottle at her head.

V.

Deacon Rogers he came to me;

- "Wife is a-gettin' her health," said he,
- "I really think she will worry through;
 She scolds me just as she used to do.
 All the people have poohed and slurred—
 All the neighbours have had their word;
 - 'Twas better to perish, some of 'em say, Than be cured in such an irregular way.''

VI

"Your wife," said I, "had God's good care, And His remedies, light, and water, and air,

All of the doctors, beyond a doubt, Couldn't have cured Mrs. Rogers without."

VII.

The deacon smiled and bowed his head;

- "Then your bill is nothing," he said.
- "God's be the glory, as you say!
 God bless you, doctor! good-day! good-day!"

If ever I doctor that woman again,
I'll give her medicines made by men.

-Will Carleton.

Chats with the Doctor

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

17. Chronic Rheumatism or Fibrositis.

—" In your next issue of LIFE AND HEALTH will you kindly give the cause and treatment of chronic rheumatism?"

Ans.—A brief description of the nature of chronic rheumatism may be of interest to our readers. This disease essentially consists in thickenings and inflammation of the fibrous sheaths of muscles, tendons, ligaments and nerves. Chronic inflammation of these structures is generally due to imperfectly oxidised nitrogenous Haigh calls those nitrosubstances. genous wastes uric acid; Hall calls them purin bodies. They are also known to chemists by such names as xanthin, hypozanthin, urea, urates, etc. The important fact regarding these products is that while they are taken into the body chiefly in flesh foods, they may also be formed in the body from any highproteid food such as beans, peas, lentils, nuts, and eggs. When flesh and other foods rich in proteids are too freely eaten, nitrogenous wastes accumulate and are fibrous structures deposited in the enumerated above. Here they set up irritation, which results in an inflammatory overgrowth of connective tissue. Thus the muscle sheaths and other connective tissue structures become covered with fibrous thickenings or nodules, which vary in size from a split pea to an almond or larger. Nerves are generally caught in these fibrous nodules which, when exposed to cold, wet, and after muscular exertion or indigestion, swell and press on the nerves, thus giving rise to the pain, stiffness, and soreness of rheumatism, and often also to neuralgic pains. fibrous nodules may occur in any part, but are most often found in the back. thighs, legs, neck, shoulders, and about the joints. According to their location, lumbago, sciatica, and other forms of rheumatism result.

With this explanation of the nature of rheumatic affections, one is better prepared to formulate and intelligently carry out rational treatment. Evidently there should be a decrease in the quantity of nitrogenous wastes introduced into the body with food. In other words, little or no meat or dried legumes should be eaten, and other forms of high proteid food such as eggs should also be sparingly used. As exercise increases the oxidation of nitrogenous wastes, active out-door forms such as walking should be freely taken. Oxidation is further increased by deep breathing. It should also be evident that the burdened tissues require to be flushed with fluids; hence the need for water-drinking and fruit-eating.

But after all this has been done, the sufferer from chronic rheumatism will not be free from stiffness and soreness until the fibrous lumps have been dispersed by means of rubbing or massage. This is by far the most important procedure so far as local treatment is concerned. General massage as ordinarily employed does little good. The rubbing and movements must be specially directed to the lumps and thickenings which can be felt, and to the parts which are painful when pressed or moved. amount of pain which should be endured during treatment necessarily varies with different patients, as some feel pain more than others; but in no case should it be hard to bear. A hot bath, or fomentations to the tender parts, preceding the massage acts beneficially in lessening the pain and securing a degree of relaxation of the muscles and their fibrous coverings which makes treatment much As some tenderness usually remains after the application of heat. massage must be begun with gentle stroking, the pressure being gradually increased until deep kneading and other heavy movements can be applied. carrying out the massage, relaxation of

muscles should be secured as far as possible, and some suitable lubricant employed. If too heavy treatment is given at the outset, it is apt to cause irritation of the lumps, followed by aching and stiffness. Under massage the lumps gradually reduce in size and become harder. Considerable pressure may then be applied, even the knuckles being used. The treatment may be carried out daily, about fifteen minutes being devoted to each part treated. By this method recent soft thickenings may be caused to disappear in a few weeks: while in old-standing cases six months or longer may be required. Combined with massage, appropriate exercises should be These have as their object employed. the stretching of the fibrous sheaths of muscles and nerves and the increase of joint movement.

18. Hot Water Drinking for Acidity; Monotonous Diet; Subalimentation.—

"Do you approve of hot water drinking before breakfast and on retiring? I have persevered with it for years to relieve acidity of the stomach, and while it appears to have benefited me at times, I am now subject to pains in the stomach from two to three hours after having taken a meal. My daily proceedure is as One or two cups of hot water follows: at 7 a.m. followed by massaging the stomach, and deep breathing for twenty minutes in the open air. Invariably I take the juice of one orange at 8 a.m. and breakfast at 8.30 a.m. consisting of one poached egg, toast, or bread and butter, and sometimes a glass of milk. dinner at 1.30 p.m. I have bread or biscuits with butter and honey, and sometimes a milk pudding. Teaat 6.30 p.m., one poached egg, bread and butter, and one glass of milk. I never take meat, tea, or vegetables. I often take a fruit breakfast of orange juice and peaches."

Ans.—As you have persevered with the hot water drinking for years without deriving marked benefit, I would suggest that you try cold water drinking. Begin by taking a half-glass an hour before meals. Hot water and other hot drinks weaken and relax the stomach when habitually taken; while cold drinks in moderate amounts at proper times strengthen the stomach and contract it. It is not at all uncommon to find marked dilatation or stretching of the stomach due to the prevelant practice of partaking freely of tea and other hot beverages. Indeed, it is the rare exception to find a habitual drinker of hot beverages with good digestion and a strong stomach. Sooner or later the practice invariably weakens and injures the organs of digestion. A more rational method of

Table 1. DAILY DIET

	Proteins	Fats	Carbo- hydrates
1 Orange	5	-	70
2 Eggs	50	75	-
6 ozs. Bread	55	20	375
1 oz. Butter		250	-
15 ozs. Milk	60	150	90
1 oz. Honey			100
Present Diet	170	495	635
Should be	210	630	1260
Deficit	40	135	625

Table 2.

3 Peaches	7	2	91
2 Granose Biscuits	30		170
8 Ripe Olives	2	91	7
21 ozs. Melsitos	-	-	200
6 ozs. Stewed Fruit	2	6	142
	41	99	610

relieving acidity is to take foods which do not turn sour. It may take a little experimentation in a given case to find just what foods agree best. Soft starchy foods do not agree in any case of marked acidity, nor do manufactured cane and beet sugars and sweets made from these. Coarse vegetable foods and acid fruits must also be avoided in most cases. This leaves the finer vegetables, sweet fruits, thoroughly baked and well toasted cereal foods, and dairy products to select from. The chief fault with our inquirer's dietary is monotony. Such sameness of food day after day results in poorness of appetite and subalimentation. This will

be seen from the figures given in table 1, which show in heat units or calories the value of our correspondent's diet.

It will be seen from these figures that the caloric value of the present diet is: proteins 170, fats 495, carbohydrates 635. The minimum diet for a moderately active man of ten stone weight should show in calories, proteins 210, fats 630, carbohydrates 1,260. The difference shows a deficit in calories of proteins 40, fats 135, carbohydrates 625. Thus, on the supposition that our correspondent weighs ten stone, there is a shortage of this amount. The second table shows one of the many ways in which this deficiency may be made up. By the addition of a little more butter the 99 calories of fats shown in the second table could easily be increased to 135, which is the deficit in fats shown in the first table. So, too, the 610 calories of carbohydrates shown in the second table could easily be increased to 625, the deficit shown in the first table, by a slight increase of melsitos or honey. While we do not advocate the weighing and measuring of food as a routine practice, scientific methods of precision have proved of the highest value in helping bewildered men and women to find the diet of maximum efficiency and health. It may further be added that not only is the above diet too monotonous, but the entire programme is too restrictive. A live man cannot and ought not to be treated like a mechanical There should be greater contrivance. variety in exercise and general habits as well as in the daily diet. Instead of the massage and deep breathing, a brisk walk in the open air would prove more exhilarating, and the deep breathing would naturally result.

19. Weight-Reducing Regimen.—"I want to take a diet that will reduce my weight from twelve stone to about ten and one half stone. For my height I weigh about a stone and a half too much. This, I think, is caused by my being unable to take much exercise. I have to be very long hours in my business, with a lot of sitting. Will you please advise me

what foods to take, also what to avoid? I have never taken medicines to reduce my weight."

Ans.—In order to reduce you should combine exercise and bathing with diet. If you are not accustomed to active exercise, begin gradually by walking two or three miles once or twice daily. You are long hours in business, but even so you should be able to find a half-hour or more for exercise morning and evening. early morning walk is perhaps most beneficial. Both before and after the morning walk you would do well to drink cold water freely. Then begin the day with a very light breakfast consisting of fresh fruit only. Not long since a patient under my care lived on fresh fruit for three weeks. He walked rather more than ten miles a day, and lost one and one-half stone in weight. For lunch you could take fruit again, or a salad with a small amount of protose or nut cheese, and brown bread or granose biscuits. you prefer a hot lunch, you may take vegetables such as French beans, spinach, and marrow. With these the protose, bread, and biscuits would combine quite as well as with the fruit. You should avoid drinking with meals. Take no tea, coffee, or similar beverages, and use no sugar or foods containing sugar. should avoid cream, butter, and other fats and oils, or foods containing these. Dinner may consist of lactosa and wheatmeal or granose biscuits, or gluten sticks. If you prefer a salad instead of the lactosa. you may take this with the cereal foods. Use no vinegar, but plenty of lemon juice over the salad. After a time, if the fruit breakfast does not satisfy you, prepare a porridge from gluten meal or from granola. using with this a little milk, or preferably stewed fruit. In cooking the fruit, use little or no sugar. In the way of a sweet, melsitos is better than jams, jellies, and similar sweets; but even this should be but sparingly eaten if you desire to lose flesh. In addition to diet and exercise, cold baths decrease the weight. may take a cold sponge bath or shower once or twice daily, also a warm soap bath on retiring. The bowels should be kept regular by means of diet, exercise, and abdominal massage if required.

20. Uncooked or "Unfired" Foods.—
"Do you advise the taking of foods straight from the hand of Nature or unfired foods?"

Ans.—The taking of uncooked foods is certainly to be recommended, provided suitable foods are selected; that is, foods which have been fully prepared for digestion by the action of sunlight, oxygen, and other natural agencies. It may be said of fruits, for example, that they are cooked in the sun, as in the process of ripening their starch is all converted into Ripe fruits are therefore ideal uncooked foods. Many vegetables may also be eaten in their natural, uncooked state. When we come to the question of starchy vegetables and cereals, however, we find that Nature has left these in a suitable condition for storage. which is present in unripe grains is stored in the ripe grain in the form of starch. This form of carbohydrate will keep until the grain falls into the earth again, or is otherwise brought into contact with moisture when the starch granules swell, and in the case of the sprouting grain become converted into sugar by the action of a ferment which is in the grain. In order to be utilised to the best advantage by the body, such starchy foods require cooking. By the combined processes of cooking and baking, starch may be converted into dextrine. Dextrine in comparison with raw starch is partially digested, having passed through the first three of the seven stages which mark the conversion of raw starch into sugar. From this explanation the advantage of cooking starchy foods should be apparent. Our correspondent sends with his question some recipes for "unfired dishes," which call for raw carrots, turnips, oatmeal, rye flour, flaked barley, wheat, and various green vegetables and herbs. The habitual eating of such uncooked mixed dishes as are described would certainly be productive of obstinate forms of indigestion.

21. Deafness due to Chronic Catarrh.

"I have been advised to write to you

re my case of chronic catarrh. I have been suffering with this trouble for thirteen years on and off, and have become deaf in the last eighteen months. I am only thirty years of age, and apparently a strong man otherwise. But this deafness has played on my mind, as I fear I shall be permanently deaf. Could you tell me whether it is curable? I am trying electricity just at present; but as I have tried so many things without success I feel afraid I shall be troubled with it all my life. Do you think I shall be unable to treat it myself, or would it be advisable to go to a sanitarium for a while? If so, do you think the Adelaide Sanitarium would be able to treat this case?"

Ans.—You are evidently suffering from chronic catarrh of the nose, throat, and middle ear. As to the treatment you are undergoing with electricity, I fear it is of no use whatever. In the way of home treatment, you should derive most benefit from thorough cleansing of the nose once or twice daily with cool normal saline solution prepared by dissolving a teaspoonful of salt in a pint of water. The use of the atomizer advertised in this journal should also prove beneficial, as by its aid you could introduce medicated solutions into the nose and throat. Vapours and sprays do not reach the middle ear, however, though they do indirectly tend to bring about an improvement in the deafness. If you have been in the habit of blowing your nose violently while holding it with the handkerchief, you have probably stretched and loosened the ear drums. An eminent London ear specialist is obtaining good results from tightening the drums. This is a somewhat long and tedious process which requires skill, care, and perseverance on the part of the medical attendant. time required for a cure is at least three months. The method is being employed at the Sydney Sanitarium. As to the advisability of going to the Adelaide Sanitarium, no doubt you would derive benefit from treatment there so far as your general health is concerned, and indirectly the catarrh and deafness should also improve.

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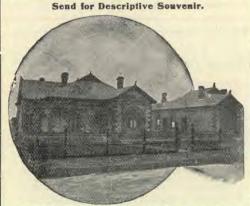
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