

Herald of Health



ELIZAVETHA'S SHRINE, LOS ANGELES.

Vol. VI

JUNE, 1915

No. 6.

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S. A. WELLMAN,
Managing Editor.



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VOL. VI

NO. 6

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PUBLISHER'S NOTES

THE GLADNESS OF NATURE

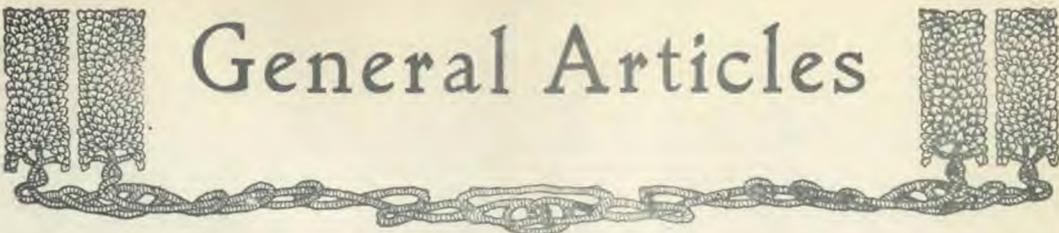
IS this a time to be cloudy and sad
When our mother Nature laughs around ;
When even the deep blue heavens look glad,
And gladness breathes from the blossoming ground ?

The clouds are at play in the azure space
And their shadows at play on the bright-green vale,
And here they stretch to the frolic chase,
And there they roll on the easy gale.

There's a dance of leaves in that aspen bower,
There's a titter of winds in that beechen tree,
There's a smile on the fruit, and a smile on the flower,
And a laugh from the brook that runs to the sea.

And look at the broad-faced sun, how he smiles
On the dewy earth that smiles in his ray,
On the leaping waters and gay young isles;
Ay, look, and he'll smile thy gloom away.

WILLIAM CULLEN BRYANT



General Articles

Flesh Foods

BY W. HOWARD JAMES, M. B., B. S.

IN all animal organisation there is a constant oxidising, burning up, of nitrogenous matter for the production of force. When this burning up process is complete, urea, a soluble compound, is formed, which is easily passed out through the kidneys. There is, however, always a certain amount of the waste products that are not so completely oxidised, and these are known as uric acid, xanthins, hypoxanthis, etc. The latter are liable to remain in the system, producing rheumatism, gout, and allied complaints. They also have a powerful effect on the circulation. Pressure on the back of the hand of a person moderately free from those products will be followed by a transient paleness for perhaps half a minute, while on the hand of one with an excess of these bi-products the paleness may last two or three minutes. The lessened circulation is chiefly confined to the smaller blood vessels and capillaries, and is due to a colloidal state, a thickening of the blood which prevents it from circulating freely. This produces a feeling of fatigue, for it interferes with the nourishment of the muscles and tissues of the body by preventing the assimilated food in the blood from reaching these tissues. It produces headache, coldness of the extremities, and even bilious attacks and indigestion. The body cannot be kept warm or the organs of digestion active when the blood circulation is poor. Dr. Haig estimated from experiments on his own person that he excreted daily 12 grains of uric acid and 349 grains of urea. Dr. Haig is a vegetarian, but a man living on a mixed diet would pro-

bably excrete 18 to 20 grains in the day. If he forms more than this quantity, and takes uric acid into his system in his food, he will not be able to excrete it all, and disease will be the result.

Retention of Uric Acid in the System

"Such a man," says Dr. Haig, "instead of excreting the full 20.25 grains of uric acid which is formed and introduced into his body each day, will only excrete, say, 19.5-20 grains, retaining in his tissues the remaining .2-7 of a grain, which in the course of years will amount to many hundreds of grains, and the higher the acidity the greater the proportionate retention will be. I consider therefore, that every man who eats what is called ordinary diet with butcher's meat twice a day, and also drinks acid wines or beer, will by the time he is thirty-five or forty, and certainly by the time he is fifty, have accumulated 300 to 400 grains of uric acid in his tissues, and possibly much more; and about this time, owing to the large amount of uric acid in his body, he will probably be subject to attacks of some form of gout or chronic rheumatism." "Uric Acid a Cause of Disease." Page 17. Haig further remarks: "It makes absolutely no difference to physiological and pathological results whether a man swallows two grains of hypoxanthin, xanthin, caffeine theobromine, or uric acid itself; all these substances alike produce obstructed capillaries, high blood pressure, headache, mental depression, scanty secretions, and a large excretion of a substance estimated as uric acid in the urine by Haycraft's process." Id., page 8.

Waste Products Temporarily Stimulate.

It may seem strange that the introduction into the system of uric acid or its allied forms as in theine of tea, caffeine of coffee, and theobromine of cocoa, etc., will temporarily clear the blood of these bi-products, and produce a stimulating effect. This result is seen in the taking of beef tea and the various meat soups. It is recognised by all investigators on this subject that these stimulants contain little or no nourishment, that dogs fed on them will starve, while those fed on the tasteless meat from which they have been made will thrive and put on flesh. The stimulation is due to the waste products and not to the real food they contain. An excess of uric acid, etc., introduced into the blood, clears the blood by driving these dangerous bi-products into the muscles, joints and organs of the body, thus the stimulation is not permanent; as soon as the waste products are dissolved again out of these tissues and again circulate in the blood the old symptoms return. The more uric acid and xanthins circulating in the blood the more the individual is prone to chills, rheumatism, pneumonia, and quite a host of other diseases. Flesh foods all contain some uric acid; and the introduction of 4 to 5 grains with a meat dinner is by no means exceptional. Add this to the amount of uric acid naturally produced from our general nitrogenous food, the result will be an amount of insufficiently oxidised waste products that cannot be fully excreted through the kidneys. A chill may lessen the action of the kidneys, and this again will add an additional burden of these poisons to the circulating blood which may precipitate an attack of rheumatism, gout, or pneumonia. Apart from acute diseases an excess of these unoxidised bi-products will make a man miserable, will give him a constant desire for stimulants, such as alcohol, tobacco, tea, coffee, and other hurtful com-

pounds. In our sanitariums, where meat and tea are excluded from the dietary, it is quite a common occurrence for patients to express their astonishment at their loss of appetite for alcohol and tobacco. Dr. Haig writes: "I think the action of meat, as a stimulant and producer of quickly worked off force, has a good deal to say to the fact that, as we



Some Vegetarians, Let Them Live

have eaten more and more meat, we have come to have a larger number of meals in the day; and while the bread, cheese, and vegetable feeder can do well on two, or at most three, meals daily, the flesh feeders often take four, or even five.

"It is perhaps also the reason why an exaggerated and erroneous estimate has been

formed of the power of meat to produce force, that its stimulating effect has been mistaken for power, and the subsequent depression has either been overlooked (which is possible for the time), or later has been counteracted by alcohol, tobacco, or other more harmful stimulants. The man who eats his albumens from a less stimulating source, having no early stimulation, has no subsequent depression, and so probably never feels the want of alcohol at all. Hence it follows that those who take alcohol on a flesh diet generally very soon give it up when flesh foods are relinquished, and smoke very little also, being independent of stimulant. Yet if what most eaters say were true, namely, that meat is much more nourishing and supporting than milk, bread, cheese, fruit, and vegetables, it ought to be exactly the other way, and those who live on the latter foods should be the ones to require alcohol, and be unable to dispense with it."—*Diet and Food*, page 41, 42.

Endurance of Vegetarians

The strongest animals in the world live on vegetarian diet, and these include the gorilla, horse, elephant, antelope, and reindeer. Says Dr. Jeuttner: "The physical effects of diet among the animals is no less characteristic. The plant eaters possess marvellous endurance (birds of passage, camels, horses, elephants, hunting dogs). The meat eaters are vigorous, and can make a wonderful display of strength, but possess little endurance. The lion engages in a terrific battle, and, after it is over, feasts on the mangled carcass of his adversary, and spends his time lazily in his haunts until hunger compels him to seek another bloody encounter. Endurance is the characteristic physical trait of the vegetarian. The winners in athletic contests where it is a question of endurance (swimming, walking, running, etc.) are usually plant eaters. The enduring power of the vegetarian is shown in the work done by the Chinese coolies, who are not giants in strength and stature, but apparently never wear out. Who has not marvelled at the accomplish-

ments of the little brown men of Japan, who are principally rice and fish-eaters? The world has never seen more admirable traits of mind and heart than those recently displayed by the pagans of Nippon. These are facts too well known to require any further demonstration."

Gautier, the French author, speaking of the endurance of vegetarians writes:—

"It would be wrong to maintain that a non-flesh diet will compromise physical energy, although heredity and habit play here an important part."

"According to J. Sinclair, the Hindu messengers who carry dispatches for long distances eat only rice, while covering each day, in running from one village to another, a distance of at least twenty leagues (sixty miles), and do this not for a single day only, but every day consecutively, week after week, "The Russian peasants, who live on vegetables, black bread, milk, and leeks, work from sixteen to eighteen hours a day, and their strength often exceeds that of American sailors."

"The Norwegian peasants scarcely know the taste of animal food. They cover on a continuous run, however, in accompanying the carriage of tourists, a distance of three or four leagues without stopping.

"The modern Egyptian labourers and sailors, a class who, from time immemorial have lived almost exclusively upon melons, onions, beans, lentils, dates, and corn, are remarkable for their muscular strength.

"The miners of South America, very temperate labourers who never eat meat, carry on their shoulders burdens of two hundred pounds, with which they climb, twelve times a day on the average vertical ladders sixty to eighty meters (one hundred and ninety-six to two hundred and sixty-two feet).

"I might add that I have known persons, men and women, very intelligent, who became vegetarians on principle or for hygienic reasons after having previously eaten flesh, as is the general case. They have assured

me that they found themselves admirably sustained in strength and health.

"Under the vegetarian diet, the tendency to uric acid, diathesis, gout, rheumatism, neurasthenia, etc., disappears or diminishes. The disposition softens, the mind seems to be quieted and perhaps rendered more acute."

The flesh eater may hold his own in short contests, but the vegetarian in tests of endurance always comes off victor. Dr. Leads-worth of the Loma Linda Sanitarium, says: "In athletic contests which have represented the vegetarian and the flesh eater, I do not know of one where the vegetarians have not been easy victors."

In the well-known walking match from Dresden to Berlin in 1901, a distance of one hundred and twenty-five miles, all nations took part. There were forty contestants, eight vegetarians and thirty-two flesh eaters. The first six at the goal were vegetarians.

Dr. Leadsworth writes: "The walking record made by Mr. George Allen furnished another emphatic testimony as to the relation between diet and endurance. Mr. Allen walked from Land's End, the southernmost point of England, to John O'Groats, the northernmost point of Scotland, a distance of 909 $\frac{1}{2}$ miles, in sixteen days, twenty one hours, and thirty-three minutes, which beats any previous record by seven and one-quarter days. The average for the last week of the walk was sixty-three miles a day, the last day's walk being seventy-two and a half miles. Mr. Allen is a life-long abstainer, a non-smoker, and for seven years had subsisted upon a strict non-flesh dietary. His first great walking feat was a record walk from Leicester to London, a distance of ninety-seven and three quarter miles, in twenty-four hours, twenty-two minutes, and twenty-five seconds, without a single stoppage. Mr. Allen had retired from the field of endurance tests, but necessity, in the form of a record established by a meat eater, forced him to again enter the list. Dr. Deighton, a well-known athlete, walked from Land's End to

John O'Groats in twenty-four days and four hours, his chief subsistence enroute being a much advertised meat juice. The credit of this performance was largely claimed by the company which ran the affair financially. 'To prove that flesh foods generally and meat juices in particular, are utterly unnecessary for such a feat of endurance,' says Mr. Allen, 'now seemed to be a task it was my duty to perform.' His record walk, in which he covered the distance gone over by Dr. Deighton in seven and a quarter days less time, was the result."

Experiments at Yale University

The *Yale Medical Journal* publishes a report on the experiments of Prof. Irving Fischer, professor of political economy at Yale University, which show conclusively the greater endurance of vegetarians:—

"The present experiment consisted of endurance tests made on forty-nine persons, representing two contrasted types of dietetic habits. These fall into three groups: (1) Athletes accustomed to a high proteid and flesh dietary; (2) Athletes accustomed to a low proteid and non-flesh dietary; (3) Sedentary persons accustomed to a low proteid and non flesh dietary. All of the subjects chosen for the second and third groups, except one, had abstained from flesh foods for periods from four to twenty years, and five of them had never eaten such foods. The exception had abstained for two years only.

"The experiment furnished a severe test of the claims of the flesh abstainers. A preliminary and superficial observation seemed, much to my surprise, to substantiate these claims. Two comparisons were planned, one between flesh-eating athletes and flesh-abstaining athletes, and the other between flesh eating athletes and flesh-abstaining sedentary workers. The first comparison, being between classes similar as to the element of physical exercise, is fair to both sides. The second puts the flesh abstainer at a disadvantage: for other things being equal, sedentary men have much less endurance than men in training. This heavy handicap was placed

upon the abstainers intentionally, in order to give them a more severe and decisive test, in case the first comparison (between picked athletes of both classes) should turn out in their favour. It is recognised in logic, as in racing, that after a preliminary trial the handicap should be placed on the stronger side, if its superiority is to be put beyond peradventure.

"The results of the comparisons given below would indicate that the users of low-proteid and the non-flesh dietaries have far greater endurance than those who are accustomed to the ordinary American diet.

"In the absence of any exact mechanical method of measuring endurance, three simple endurance tests were employed: (1) Holding the arms horizontally as long as possible; (2) deep knee bending; (3) leg raising, with the subject lying on his back. All of these tests were made before witnesses.

"The first comparison (for arm holding) shows a great superiority on the side of the flesh abstainers. Even the maximum record of the flesh eaters was barely more than half the average for the flesh abstainers. Only two of the fifteen flesh eaters succeeded in holding their arms out over a quarter of an hour; whereas twenty two of the thirty-two abstainers surpassed that limit. None of the flesh eaters reached half an hour, but fifteen of the thirty-two abstainers exceeded that limit. Of these, nine exceeded an hour, four exceeded two hours, and one exceeded three hours."

To save space we will give the results of all the tests in tabular form:—

GENERAL COMPARISONS

	NO. PERSONS	ARM HOLDING	NO PERSONS	KNEE BENDING	NO. PERSONS	LEG RAISING
Flesh eating, athletes	15	10 minutes	9	383 times	6	279 times
Flesh abstainers, athletes	19	39 "	16	927 "	6	288 "
Flesh abstainers, sedentary	13	64 "	5	535 "	1	47 "

In every case, with the exception of the solitary sedentary flesh abstainer the superiority of the flesh abstainers is very marked. The *Yale Medical Journal* gives other tests

equally conclusive, but space prevents us quoting any fuller.

Much more could be said in favour of a non flesh dietary, but we believe sufficient has been given to convince any honest investigator. Probably at some future date the subject will be further dealt with.

SHORT TEMPERS

EXCESSIVE monotony in a man's way of living doubtless, says the *Youth's Companion*, tends more than any other circumstance to shorten his temper. To feel that you are going on and on, day after day, and yet that you are not making any real progress—indeed, that instead of getting anywhere you are gradually slipping back,—inclines you to bestow blame freely and fully whenever there is an opening. And in the bosom of your family such an opening is seldom wanting.

Monotony in the ordinary family's way of living is largely attributable, of course, to the slenderness of the ordinary family purse. It bears with greater severity on the woman than on the man. The man has two bases of operation,—his home and his office, or his shop or his farm—but the woman has only one—her home. She does not share in the daily change of scene and fellowship that is her husband's portion. Her work is usually more monotonous and uninteresting than his. It is also of a nature more trying to the nerves. Cooking, sewing, sweeping, cleaning, keeping small children in order, enjoying only intermittent and occasional intercourse with her friends, instead of daily companion-

ship with them, such as is her husband's lot—if the ordinary husband would stop to think about it, he would wonder how his wife manages to keep as serene and sweet-

tempered as she does. Still more would he applaud her success in bringing up the children to have good manners and considerate feelings, instead of harsh voices and quarrelsome dispositions, such as characterise the family next door.

Intelligent appreciation by the husband helps wonderfully to mitigate the monotony of the woman's life and to lengthen out her temper. The man who comes home from his day's work silent, preoccupied or glum; who spends his evening with the newspaper, without even condescending to read the headlines aloud, and who confines his table-talk

to a few perfunctory inquiries or a complaining discussion of ways and means, may think that he appreciates his wife; but he has no right to reproach her if she grows cross and bad-tempered.

If in any way it can be arranged, husband and wife should take a short vacation away from each other once a year. Such a vacation promotes in each a perception and an appreciation of the other's good qualities, and forgiveness or obliviousness of the other's faults. Husband and wife then return to each other with a new contentment and settle down together to new happiness.

Walking the Health Road

MOST sensible folks are more interested nowadays in keeping well than in getting well. But while we may consider ourselves very wise in the matter of preservation of health, as well as in many other matters, wisdom in this particular regard was not born with us. Hear how certain of those who achieved in other generations promoted their own good health, and, as an inevitable result, their success.

In the sixteenth century, says the *Chicago Tribune*, Cornaro wrote a book entitled "How to Regain Health and Live a Hundred Years." As he wrote the third edition of his book in his ninety-fifth year and lived to be over one hundred, his advice is worth listening to.

He lived abstemiously, and carefully avoided all extreme of heat and cold, extraordinary fatigue, interruption in his usual hours of rest, and staying long in bad air. He avoided melancholy, hatred and other evil passions. He laid especial stress upon eating a small quantity of food found to be good for one.

Hippocrates advised good air, baths, friction, and physical exercises. Frederick Harrison at eighty-one years of age gave golden rules of health:—

1. Abstain from tobacco, spirits, made dishes, and all such terrible things.

2. Rise from a meal with an appetite.
3. Walk every day for two hours.
4. Sleep eight hours.
5. Be content with what you have.

Tolstoi taught that the secret of long life is in fresh air day and night, daily exercise, moderation in eating and drinking, a hot bath each week and a cold one every day.

Von Moltke when ninety years old said he maintained his health by great moderation in all things and by regular outdoor exercise in all weathers.

The Prussian historian, Von Ranke, rose at 8 a. m., took a warm drink, worked until 1 p. m., took a long walk in the park, ate a full afternoon dinner of plain food, worked until 7 p. m., took supper with his family, worked or talked with his family until 11 p. m. and then went to bed.

Sir Herman Eeber when over eighty years of age lectured to the Royal College of Surgeons on the means for the prolongation of life. He took a daily walk in all weathers, once a week walking four hours, and once a year he went on a walking holiday. He recommended mental occupation, gardening, intellectual games, and travelling. He took breathing exercises for five to fifteen minutes each day. He slept six to seven hours, and then took a bath, followed by friction of the skin. He especially advocated regular bowel

habits, and simple, plain food. He used no alcohol, stimulants, narcotics, or soothing drugs. He advised the cultivation of mental

tranquillity and hopefulness, the avoidance of grief, and the control of the passions.—*Selected.*

Flea Destruction as a Plague Measure

THE following useful note by Lt.-Col. D. T. Lane, M.D., I.M.S., chief Plague Medical Officer in the Punjab, is herewith published, as it will be useful to workers in other parts of India.

"Numerous experiments carried out in the Malaria Bureau, Lahore, prove beyond doubt that Cresol vapour is extremely poisonous to fleas. The vapour though very fatal to fleas is harmless to man and animals.

Two ounces of Cresol vapourized in a room with closed windows and doors kills the fleas in the room.

There are two methods of using the Cresol* vapour:—*1st method.*—Kindle a small cow-dung fire, made of four or five dry cow-dung cakes, in a wide iron cup or *gumla* till it is well smouldering—not in flame. Place the iron cup or *gumla* containing the smouldering cow-dung fire in a room with the doors and windows closed and pour two ounces of Cresol on it and let it smoulder till completely burned. This takes place in about two hours.

2nd method.—Close the doors and windows of the room, place an *angiti* containing a fire of any material, provided the fire is not in flame, in any convenient part of the room and put a cup containing two ounces of Cresol on the *angiti* and let it vapourize which it does in about an hour.

Either of these methods kills the fleas in the room. One has to be careful that Cresol is vapourized and does not ignite. If Cresol is poured on a flaming fire it ignites and burns with a dense black smoke which is absolutely harmless to fleas. If poured on a smouldering cow-dung fire or put into a cup placed over an *angiti* there is no light but there is a greyish vapour which is extremely poisonous to fleas though not offensive or injurious to man or animals.

The cow-dung fire should be smouldering throughout but not red or in flame. The *angiti* should be burning fairly but not so much as to set fire to the Cresol in the cup. The most convenient way to proceed is to have the doors and windows in the houses closed. Then kindle the cow-dung fires or *angitis* outside the houses, and when they are ready have them taken into

the houses and pour the Cresol on the smouldering cow-dung fires or place the cups containing the Cresol on the *angiti*.

The rooms should be kept closed till the vapour disappears which it does in two or three hours.

You can easily test your work at any time by putting fleas from dogs, rats or any animal into purses made of closely woven mosquito netting or gauze and placing them on the floor and inserting them into crevices in the walls and roofs.

Flea destruction should be used to supplement and not to replace any of our present plague preventive measures. It should be employed in combination with rat destruction (smoking, baiting, trapping) in the infected house and adjoining houses.

It is also most important that fleas should be destroyed in houses which have been evacuated before the people return to them.

Houses which have been evacuated frequently swarm with fleas, and it is very dangerous to enter them if the fleas have not been destroyed.

It is an every-day occurrence for people to contract plague on re-entering houses they have evacuated. You should warn people who have evacuated their houses not to re-enter them till the fleas have been destroyed. Another matter, in connection with the prevention of plague, is that equal parts of kerosine oil and mustard oil smeared on the legs, arms and necks prevent fleas from biting, to a very great extent. The local application of these oils is harmless, they can be obtained in every village and the smell is not really very offensive. You should advise the people in infected villages to smear their legs, arms and necks with equal parts of kerosine and mustard oil three or four times a day. A little oil of citronella added to equal parts of kerosine and mustard oil removes the smell of kerosine oil and imparts to the mixture the smell of citronella oil."—*Indian Medical Gazette.*

*The Cresol used is saponified Cresol issued by the Medical Store Depot at Re 1-8 per gallon.

Facts Concerning Flies

ABSENCE of house flies means perfect sanitation.

Both house flies and stable flies are carriers of disease.

A fly laden with disease germs is more dangerous than a bullet.

The number of flies in a home is a measure of unhygienic conditions.

One female fly can produce 506,250,000 flies in the brief space of one month.

To prevent flies multiplying it is necessary to deal effectively with the breeding-places.

The best time to deal with flies is in their early stages of development, before they are fully formed.

Manure must be carted away at least once a week, and all possible fly breeding-places

must be efficiently cleaned at least once a week.

Remember that flies breed in manure heaps, stables, slaughter-houses, garbage, collections of waste food, dustbins, ashbins, swill cans, middens, and all places where there is a collection of decaying matter and filth.

A mere fly speck may contain the most virulent germs of disease and if deposited on bread or other food and taken into the body may set up a fatal disease.

Flies may carry the disease microbes of typhoid or enteric fever, cholera, tuberculosis, meningitis, diphtheria, swine fever, ophthalmia, various forms of dysentery, some diarrhoeas, infantile enteritis, smallpox, and a considerable number of other diseases.

Rheumatic Fever

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

INFLAMMATORY rheumatism or rheumatic fever is an acute infectious inflammation of the large joints, which has a strong tendency to involve the heart muscle. Comparatively little is yet known with regard to the exact nature of the infection but it is believed that a germ, technically known as the *bacillus rheumaticus*, is the cause of at least a good many cases. There seems reason to believe that the infection may take place through the mouth, especially if there are defective or decayed teeth present. Tonsillitis seems to precede a certain number of cases, and it has been observed that persons who are subject to tonsillitis are also subject to rheumatic troubles.

Symptoms

Rheumatic fever usually begins with a chill, a sore throat, and a general feeling of discomfort and unfitness for work. One or more of the large joints such as the knees, elbows, ankles, shoulders, or wrists are involved and become red, swollen, and very

painful and tender. The inflammation often develops rapidly in a joint and subsides as rapidly only to appear equally suddenly in another joint and then another joint unless the disease is checked. The fever is not high as a rule, the temperature usually running from 100° to 103° Fahr.

Sweating is usually a characteristic symptom and the perspiration has a sour smell and taste. The urine is scanty and almost always contains a brick red deposit of uric acid crystals. There is a bad taste in the mouth, the tongue is furred, and there are the usual symptoms of loss of appetite, indigestion and constipation.

Preventive Measures.

Heredity is generally believed to have something to do with inflammatory rheumatism as well as other rheumatic disorders, and it is a fact that those persons who have what is called a gouty or rheumatic diathesis are most susceptible. The free use of alcoholic beverages, overeating, and other indiscretions

of diet and particularly the large use of flesh foods, as well as of highly seasoned and rich articles of diet are believed to have a distinctly predisposing influence. Besides these constitutional conditions there is no doubt but that careless exposure to inclement weather and to damp are important exciting causes, although, as already intimated, the essential cause is now thought to be the germ of rheumatism.

Both the predisposing and exciting causes must be carefully avoided and it is necessary to give careful attention to the clothing and the bedding. In England where we have a marine climate with a considerable amount of dampness, loosely woven woollen underwear is probably the safest and best material to wear next to the skin. The feet require special protection and while it is not so dangerous to get them wet occasionally while walking it is most important to change the hose and the boots too, if necessary, as soon as one comes indoors. Sitting with damp or wet and cold feet is an excellent way of bringing on an attack of inflammatory rheumatism for those who are already susceptible. Damp beds are to be avoided and it is better to sit up all night in an armchair with a few blankets wrapped around one than to get into a damp bed.

Treatment.

As soon as the patient manifests symptoms of rheumatic fever he should be put to bed at once and isolated in a bright, cheerful, and

well-ventilated room. It is a good practice to put the patient between blankets. A non-stimulating diet consisting chiefly of liquids such as barley water, milk, both fresh and soured, gruels of gluten, oatmeal, or barley, albumen water, plain egg-nogs, fruit juices such as unfermented wine, stewed apples, prunes, or figs, baked apples and similar preparations suit the patients best. The patient is usually thirsty and it is well to take acid drinks such as limeade, and orangeade freely.

Warm or hot water baths, Turkish baths, vapour baths, and especially the electric light bath, as well as the local application of radiant heat are all useful measures in dealing with the inflammation. Where electric light is not available fomentations, hot packs turpentine stupes, mustard fomentations, and the use of various liniments are in order. Tepid and cool sponging as well as neutral baths are useful in controlling the fever, but all cool or cold applications must be given with careful discretion and only on the order of the attending physician.

The bowels should be opened daily with the use of plain or soap enemata if necessary. Medicinal paraffin is also valuable in maintaining a regular action of the bowels and is perfectly safe to take. There is reason to believe that not infrequently chronic constipation may encourage or even cause auto-intoxication or self-poisoning, which would be sufficient to aggravate and prolong the disease.





Editorial



Is Your Drinking Water Contaminated?

(Concluded)

THE spring is another source of drinking water, and its purity depends upon its origin. If the spring emerges directly from the earth, it ought to be free from pollution; but the difficulty here is to be sure that the spring emerges directly from the ground, as many springs having once come near the surface, have again gone under the earth, only to come to the surface again at some other place in its course. This allows plenty of opportunity for pollution as the spot in the course of the spring from which one drinks may be the fifth place that the spring has emerged to the surface, thus having become contaminated by animal life. Again mountain springs are a very tempting thing to the weary, thirsty, mountain climber. Such springs are very liable to become contaminated by villages higher up the mountains, through which the stream or spring may flow.

Water once having been polluted is made fit for consumption by one of several ways; viz., by filtration, chemical process, boiling, and by electricity. The water supplied to our large cities is generally passed through a filtration plant. The filtering plant of some large cities covers acres of ground. Even after water has been passed through a filtering plant it is safer to boil it for reasons mentioned in the preceding article. To depend upon those small filters made for home use, to supply the family with pure drinking water, is nothing more than to set a death trap. Unless one can examine the water each day for bacteria he is never sure that the filter is doing its work. In this way it gives a false security. One of the best filters for home use is the "Pasteur, Chamberlain Filter," but even this filter is open to the objections just made.

The use of chemicals is another method of making water fit for drinking purposes. When infection is supposed to be lurking in the well, the water can be tested with permanganate of potash. Two to four ounces of the chemical, according to the size of the well, is taken and dissolved thoroughly in a bucket of hot water. Solution having taken place, the contents of the bucket is thrown into the well. Alum can be used for the same purpose in the same way, but twice the amount of this chemical will have to be used to make it effective. For small quantities for household consumption, water can be treated with calcium chloride. One teaspoonful of the chemical is used to 800 quarts of water. It is let stand for six or seven hours, after which a half teaspoonful of sodium sulphate is stirred in. The water is then ready for drinking purposes. These are very common chemicals and can be obtained at any chemist's shop. The sterilization of water by means of electricity although used in some places, yet in India would be too much of a curiosity to receive attention.

The safest and most practical method of treating water for domestic purposes is to boil it. Water that has been boiled for a half-hour can have but very little left in it that will be instrumental in spreading disease. To insure success in this method, one must be sure that his water has really been boiled. Anyone who has lived in India knows how hard it is to get the servant to boil the water. The only way to be sure that the water is boiled is for the one who is interested in having pure water look after the process of boiling himself. One plan that works very well is to require the servant

to call you when the water boils. One is never sure that the water has boiled unless he sees it with his own eyes.

The water having been boiled, it is placed in a surahi for aerating and cooling. The care of the surahi is a minor point, yet an important one. It is the minor points over which one generally stumbles. The surahi should be cleaned out several times a week with boiling water to which potassium permanganate has been added in proportions 1 to 1000. The wider mouthed earthen vessels for cooling the water are the best as they are easier to keep clean. Another point in the obtaining of clean water is the method of transport from the well to the house. The receptacle in common use is a half tanned goat skin called a mashk. Nothing appeals to me as more dirty or filthy than the ordinary mashk of the bhists. It is a hot bed of disease germs, and it is a thing that is impossible to clean, even if the user has a mind to do so. Far better is the use of a couple of kerosine tins suspended from the ends of a pole balanced over the shoulder. One needs no convincing that this would be a much more wholesome method of carrying water for human consumption.

The diseases for which we have to be on the watch are the water borne diseases and some varieties of worms. The water-borne diseases are typhoid, cholera and dysentery. These are all infectious, contagious diseases, that is, they are caused by a specific disease germ and are carried from one person to another. These germs are very small, so small that they have to be enlarged some 600 to 1200 times by means of the microscope before they can be seen. Under favourable circumstances they live for a long time even after they have been thrown off from the diseased patient. They have been known to live a number of months, even a number of years in the water, earth, or other favourable mediums. Warmth, moisture and shade are the most favourable conditions. Their growth is checked by extreme cold,

but this will not kill them. They are killed by high temperatures as boiling or steam under pressure, lack of moisture and direct sunlight. If they are deprived of moisture they die at once. They are able to withstand the direct rays of the sun but a short time. Such scavengers as the jackal and the vulture, and the intense heat of the tropical sun are two of the greatest preventative measures against disease that India possesses. Were it not for these preventatives, diseases would be a hard matter to control and where one now dies, many times that number would succumb.

Antiseptics like carbolic acid 1 to 20, potassium permanganate 1 to 1000, chloride of mercury 1 to 1000 will also kill these germs if left in contact with them for thirty minutes. This occurs when they are brought in contact with each other and outside the body. These generally are not used internally as the dose sufficient to kill the germ after it has gained entrance to the body would also kill the patient. However, recently, potassium permanganate in two grain doses in keratin coated pills with other measures is advocated in the treatment of cholera. Of course the antiseptic action of the permanganate is the object in view.

We have already dwelt somewhat on how these germs gain entrance to the drinking water. The most frequent source is the careless handling of the dejecta of the patients suffering with these diseases. If the night soil from one suffering with any one of these diseases is left without burning or disinfecting in some way, it is very liable to gain entrance to the supply of drinking water. Another source is the throwing of dead bodies who have died of one of these diseases into the water.

It is these facts connected with the large religious pilgrimages to this or that holy shrine that keeps India the hot bed of cholera epidemics. There are hundreds of thousands of devotees that take advantage of these special occasions, and thousands of them die of

cholera. The majority of those that assemble in these places do not know the simplest rules of sanitation. All that is necessary is to have one person in one of these melas break out with cholera. The dejecta and the dead body of the one patient acts like a match to tinder. In a short time the ground becomes entirely polluted with dead bodies and infected night soil. A freshet of rain comes and all this filth is swept into the water which is used for bathing purposes. From this the infection also gets into the food. By this time, dozens a day are falling victims to the scourge. As the vicious cycle continues, the appalling conditions increase. And thus goes on the sacrifice of life.

We only have to return to statistics to see what the care of the water supply will accomplish in the present waterborne diseases. In Philadelphia, United States of America, a city of a million and a half people, there occurred 2,500 cases of typhoid in three months. This was before the public water supply was properly cared for. After a new supply of filtered water was given to the city, the typhoid rate immediately fell. During that great epidemic of cholera that swept over Persia, Servia, Germany Austria, France, Belgium Holland and India in the year 1892, Hamburg used unfiltered water from the Elbe, and from a population of 640,000 had 17,000 cases of cholera. While Altona, adjoining Hamburg, a city of 200,000, which was using filtered water from the same source as Hamburg, only had 500 cases, 400 of which were directly traceable to Hamburg. Instances of this kind that show the direct influence of water supply upon the spread of the water-borne diseases can be multiplied many times.

Another illustration to show how a simple, single disregard for the laws of sanitation leads to such disastrous results in loss of human life. At Usernet, a village in the Alps, a detachment of 157 infantry soldiers were quartered in four houses, each house sheltering approximately one fourth of the men. In one house where 37 men were

quartered, there appeared within a few weeks 22 cases of typhoid. At the time of seizure, there were no other cases in the village, nor did any appear in any of the other three houses where the soldiers were quartered. On investigation, it was found that a few days before the arrival of the troops, a child of ten years had been taken ill with the disease in another house situated on higher ground about 400 feet away from the house in question. Where the child lay ill, there was no latrine, and his excreta were thrown upon the ground in a neighbouring field. His soiled clothes were washed in the spring nearby. At the time of the arrival of the troops, a number of heavy rains occurred, by which the surface impurities of the soil in the neighbourhood of the house where the child lived, were washed toward the house occupied by the soldiers. The spring from which they drank was contaminated with this surface water, and caused the outbreak of typhoid among the soldiers.

In the case of typhoid, cholera and dysentery in India, many similar instances can be traced. In many countries to-day an act of carelessness of this kind would be punishable by the government. This is the way that it should be as it amounts to the same as wholesale slaughter. In the illustration just given many lives were sacrificed through the carelessness of one person. In India, ignorance has to be taken into consideration. It is this that checks more stringent laws on sanitation.

The round, pin, guinea, whip, filana and hook worms are also carried from one person to another by means of water. Their spread is brought about in much the same way as we have just outlined for typhoid, cholera and dysentery. There is an additional factor in the spread of worms, however, and that is, the tendency of some varieties of the worms to work their way thorough the skin of the feet and legs of those who go barefoot and go into the mud and water. This is especially true of guinea and hookworm.

(Concluded on Page 188)

: Mother and Child :

Child Training

Mrs. E. G. WHITE

NOT only the habits of the mother, but the training of the child were included in the angel's instruction to the Hebrew parents. It was not enough that Samson, the child who was to deliver Israel, should have a good legacy at his birth. This was to be followed by careful training. From infancy he was to be trained to habits of strict temperance.

Similar instruction was given in regard to John the Baptist. Before the birth of the child, the message sent from heaven to the father was:—

“Thou shalt have joy and gladness, and many shall rejoice at his birth. For he shall be great in the sight of the Lord, and he shall drink no wine nor strong drink; and he shall be filled with the Holy Spirit.”

On heaven's record of noble men the Saviour declared that there stood not one greater than John the Baptist. The work committed to him was one demanding not only physical energy and endurance, but the highest qualities of mind and soul. So important was right physical training as a preparation for this work that the highest angel in heaven was sent with a message of instruction to the parents of the child.

The directions given concerning the Hebrew children teach us that nothing which affects the child's physical well-being is to be neglected. Nothing is unimportant. Every influence that affects the health of the body has its bearing upon mind and character.

Too much importance cannot be placed upon the early training of children. The lessons learned, the habits formed, during the years of infancy and childhood, have more to do with the formation of the character and the direction of the life than have

all the instruction and training of after years.

Parents need to consider this. They should understand the principles that underlie the care and training of children. They should be capable of rearing them in physical, mental, and moral health. Parents should study the laws of nature. They should become acquainted with the organism of the human body. They need to understand the functions of the various organs, and their relation and dependence. They should study the relation of the mental to the physical powers, and the conditions required for the healthy action of each. To assume the responsibilities of parenthood without such preparation is a sin.

Far too little thought is given to the causes underlying the mortality, the disease, and degeneracy, that exist to day even in the most civilised and favoured lands. The human race is deteriorating. Many die in infancy, and of those who reach manhood and womanhood, by far the greater number suffer from disease in some form, while but few reach the limit of human life.

Most of the evils that are bringing misery and ruin to the race might be prevented, and the power to deal with them rests to a great degree with parents. It is not a “mysterious providence” that removes the little children. God does not desire their death. He gives them to the parents to be trained for usefulness here, and for heaven hereafter. Did fathers and mothers do what they might to give their children a good inheritance, and then by right management endeavour to remedy any wrong conditions of their birth, what a change for the better the world might see!

The Care of Infants

The more quiet and simple the life of the child, the more favourable it will be to both physical and mental development. At all times the mother should endeavour to be quiet, calm, and self possessed. Many infants are extremely susceptible to nervous excitement, and the mother's gentle, unhurried manner will have a soothing influence that will be of untold benefit to the child.

Babies require warmth, but a serious error is often committed in keeping them in overheated rooms, deprived to a great degree of fresh air. The practice of covering the infant's face while sleeping is harmful, since it prevents free respiration.

The baby should be kept free from every influence that would tend to weaken or to poison the system. The most scrupulous care should be taken to have everything about it sweet and clean. While it may be necessary to protect the little ones from sudden or too great changes of temperature, care should be taken, that, sleeping or waking, day or night, they breathe a pure, invigorating atmosphere.

The Child's Dress

In the preparation of the baby's wardrobe, convenience, comfort, and health should be sought before fashion or a desire to excite admiration. The mother should not spend time in embroidery and fancywork to make the little garments beautiful, thus taxing herself with unnecessary labour at the expense of her own health and the health of her child. She should not bend over sewing that severely taxes eyes and nerves, at a time when she needs much rest and pleasant exercise. She should realise her obligation to cherish her strength, that she may be able to meet the demands that will be made upon her.

If the dress of the child combines warmth, protection, and comfort, one of the chief causes of irritation and restlessness will be removed. The little one will have better health, and the mother will not find the care

of the child so heavy a tax upon her strength and time.

Tight bands or waists hinder the action of the heart and lungs, and should be avoided. No part of the body should at any time be made uncomfortable by clothing that compresses any organ or restricts its freedom of movement. The clothing of all children should be loose enough to admit of the freest and fullest respiration, and so arranged that the shoulders will support its weight.

Among some people the custom of leaving bare the shoulders and limbs of little children still prevails. This custom cannot be too severely condemned. The limbs being remote from the centre of circulation, demand greater protection than the other parts of the body. The arteries that convey the blood to the extremities are large, providing for a sufficient quantity of blood to afford warmth and nutrition. But when the limbs are left unprotected, or are insufficiently clad the arteries and veins become contracted, the sensitive portions of the body are chilled, and circulation of the blood hindered.

In growing children all the forces of nature need every advantage to enable them to perfect the physical frame. If the limbs are insufficiently protected, children, and especially girls, cannot be out of doors unless the weather is mild. So they are kept in, for fear of the cold. If children are well clothed, it will benefit them to exercise freely in the open air, summer or winter.

Mothers who desire their boys and girls to possess the vigour of health, should dress them properly, and encourage them in all reasonable weather to be much in the open air. It may require effort to break away from the chains of custom, and dress and educate the children with reference to health; but the result will amply repay the effort.

(To Be Concluded)

"EVERY mother who appreciates the dangers to which her boy may be subjected through the saloon, will be ready to do all in her power to crush the liquor traffic."

USE FOR OLIVE OIL

"No home, especially where there are children, should ever be without olive oil. For a weakly or rickety child, or one who is recovering from typhoid fever, olive oil will sometimes work wonders. Rub in the oil over the whole of the child's body, especially about the upper part, taking a few drops at a time into the palm of the hand. The nourishment thus absorbed through the skin will be of immense service in building up the child's strength. When a child is suffering from a severe cold, it is a good plan to rub the back and chest with olive oil. A threatening of croup often will end in a threatening only if oil and camphor be applied to the child's chest. Saturate a piece of flannel with oil, sprinkle it with a little powdered camphor, and apply it the chest and throat as warm as can be borne. Cover with a piece of dry flannel, and change as soon as it gets cold."

THE CARE OF THE HAIR

THERE are two things that the hair must have in order to preserve its health and beauty; perfect cleanliness and a good circulation of the blood in the scalp. Badly treated or neglected hair is not beautiful; it grows dry, and dull, and brittle, and if the bad treatment continues it may gradually disappear entirely.

Most persons do not begin to tremble for their hair soon enough. They wait until a good deal of it has fallen out, and then they think to set matters right by a few appointments at the hairdresser's and a bottle of tonic. But nothing demands and responds to consistent good treatment more than the hair. It is hard to say just how often you ought to have a shampoo, but be sure it is done often enough to keep both hair and scalp in a condition of absolute cleanliness.

If washing seems to make the hair too dry, rub in a few drops of some bland oil after the shampoo. Do not put the oil directly on the hair, where it cannot possibly do any good, but massage it thoroughly into

the scalp with the tips of the fingers. That needs to be done only after a shampo, in order to restore the natural oil that the washing has removed, but it is a good plan to massage the scalp with the tips of the fingers every day, both night and morning. That is perhaps the most important single rule for those who would possess fine hair. The massage should be vigorous, but not rough, for the purpose is to bring the blood to the surface of the skin and to keep the scalp freely movable on the surface of the skull so that the blood can circulate freely. The free circulation of the blood is the whole secret of the strength, the gloss, and the beauty of the human hair. Careful brushing (with a scrupulously clean brush) is also helpful, for it tends to remove dust, to make the hair more glossy, and to make it amenable to its owner's will.—*Selected.*

"MUST" AND "MUS'N'T"

"A FELLOW can't have any fun," growled Tom. "It's just 'must' and 'mus'n't' from morn'ing till night. You *must* do this, you *must* learn that; or you *mus'n't* go there, you *mus'n't* say that, and you *mus'n't* do the other thing. At school you're just tied right up to rules, and at home—well, a shake of mother's head means more than a dozen *mus'n'ts*.' Seems a pity a boy can't have his own way half the time, and do something as he likes."

"Going to the city this morning, Tom?" asked Uncle Fred from the adjoining room.

"Yes, of course," answered Tom, promptly.

"Going across the common?"

"Yes, sir; always do."

"I wish you'd notice those young trees they've been setting out the last year or two. There's something rather queer, it seems to me. Of course the old trees will die sooner or later, and others will be needed, but—well you just observe them rather carefully, so as to describe their appearance, etc."

"What about those trees, Tom?" asked Uncle Fred after tea.

"Why they're all right; look a little cramped, to be sure, snipped short off on top, and tied up to poles, snug as you please, every identical twig of them; but that's as it should be, to make them shipshape, don't you see? They can't grow crooked if they would. They'll make as handsome trees as ever you saw one of these days. Haven't you noticed the trees in Mr. Benson's yard—

tall and scraggy and crooked, just because they were left to grow as they pleased?"

"But I wonder how the trees feel about the *must* and *mus'n't*," remarked Uncle Fred, drily.

Out goes Tom, wishing he had not said quite so much on the subject of trees—and boys—*Selected*.



Healthful Beverages

MRS. S. N. HASKELL

THERE are three varieties of beverages mentioned in the Bible, namely, water, milk, and fruit-juice.

The happiness and health of the human family are quickly affected if they are deprived of water. Ex. 20:5; 15: 23, 24. Throughout eternity the redeemed will drink of the water of the river of life. Rev. 22: 2, 17. While water is necessary to sustain life, yet it could hardly be called a food; but milk is a food. Prov. 26: 27. Milk was given to guests as a refreshing drink. Judges 4: 19. Milk and wine are mentioned among the class of foods that satisfy. Isa. 55: 1, 2.

The clear fruit-juice was ever considered a delicious beverage. It was drunk when first pressed from the fruit before fermentation began. Gen. 40: 11; Deut. 32: 14. The Bible recognizes the medicinal value there is in fruit-juice, or unfermented wine. 1 Tim. 5: 23. God forbade the use of the fermented wine. Prov. 23: 29, 32.

Dietetic Value of Beverages

Few persons know the medicinal value of water. If they did, much more pure water would be drunk. Sir Lander Brunton says, "It is doubtful whether gall-stones would

ever occur if each individual drank from two to four pints of water daily." Stones of the kidneys and many other diseases may largely be prevented by freely drinking pure water.

Drinking a pint of clear water every morning will often relieve the most stubborn cases of constipation. If one pint of water in the morning does not give relief, double the amount by also drinking one pint in the evening.

"Milk is a nitrogenous or flesh-building food. It contains all the elements of a perfect food. It is the only food that a body less than a year old needs."

Many of the fruit-juices are destructive to germ life. An exclusive fruit diet for one or two days is an excellent way to cleanse and disinfect the alimentary canal. Fruit-juices help the kidneys to throw off the poisons from the system; and they are cooling to the blood. The juice of the lime and other fruits is especially helpful in combating malaria fevers. These are far better for the liver than the poisonous drugs so often taken, and leave no poisonous effects to weaken the system.

A free use of water, milk, and fruit-juice,

the beverages of the Bible, will give health and happiness; while the use of alcoholic drinks, tea, coffee, and other stimulating beverages, will give weak nerves, sickness, and sorrow.

In order to keep cool during the hot summer days, beverages like the following will be found to be very refreshing, as well as nourishing.

Fruit Cordial

Crush a pint of raspberries, grapes, currants, or cherries adding the juice of two sour oranges, and a sliced lime; pour over all a quart of cold water. Stir the mixture frequently, and let stand for an hour or two. Strain, and add a sirup made by dissolving white sugar in boiling water, sufficient to sweeten. Cool with ice and serve.

Kala-Lime Nectar

Three fourths cupful of water and one-

half cupful of sugar; boil, and add one-half cupful of lime juice; cool, and then slice thin one large kala into this. Cool with ice and serve.

Egg Limeade

Beat the whole of an egg, add to this limeade, made in the usual way, and stir thoroughly after the egg is put in. Cool and serve.

A Mixed Drink

A very pleasant cooling summer drink is made from the juice of four large limes and six oranges, with sugar to taste. Add to this some pounded ice and a small pineapple, cut very fine. To this add two quarts of ice-water.

Egg Orangeade

Put the white of one egg through a strainer. Add to this three-fourths of a glass of clear orange-juice. Then cool on ice and serve. This is a very nutritious drink as well as tasty.

Some Delicious Ices

WATER Ices, sherbets and frozen fruits without large quantities of sugar are invaluable in cases of fever. They provide nourishment in a form that is most readily assimilated by the system when it is being consumed by the heat of different fevers, and also lower the temperature. They are helpful in keeping the temperature of the healthy body at normal. It is best not to take them after a heavy meal as they cool the contents of the stomach and retard digestion. Neither should very cold foods be taken just after violent exercise, as they cool the system too rapidly, sometimes with very serious results.

Lime Ice

Soak and cook $\frac{1}{2}$ ounce of vegetable gelatine according to directions given at the close of this article, add water to make 1 cup and keep warm. Cook $2\frac{1}{2}$ cups of sugar and three cups of water together for 5 minutes and strain into the gelatine. Take 12 tablespoonfuls of lime juice, using $\frac{1}{2}$ orange juice if desired, and when the gelatine mixture is partially cooled, add the juice gradually, stirring meanwhile. When nearly cool turn into freezer. For water ices, do not turn the crank continuously, but let it stand a minute or so frequently. Be sure

to remove all salt and and ice from the cover before taking out the dasher, and then pack and let it stand to become mellow.

Orange Ice

- 1 pint sugar.
- 1 quart of water.
- 1 pint of orange juice.
- 6 to 8 tablespoonfuls of lime juice.
- $\frac{1}{2}$ ounce vegetable gelatine.

Flavour the juice with thin yellow rind of orange if desired and proceed as with lime ice, omitting gelatine if preferred.

Raspberry Ice

- 1 cup raspberry juice.
- $\frac{3}{4}$ cup of sugar
- 1 pint of water.
- 2 tablespoonfuls lime juice
- $\frac{1}{16}$ ounce of gelatine.

Cook sugar and water together and add to prepared gelatine. When nearly cool, add raspberry juice and stir occasionally until cool, and freeze. The gelatine may be omitted if desired.

Mint Ice

Add fine cut or chopped mint to lime ice mixture just before freezing or to orange ice for orange mint ice.

To Prepare Gelatine:—Agar Agar or vegetable gelatine comes from the rocky coasts of
(Concluded on Page 188)

Diseases and Their Treatment

The Use of the Thermometer

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

ALL mothers should know how to take the temperature and count the pulse and respiration of a patient. For the purpose of taking the temperature a special form of thermometer, known as a clinical thermometer, is used. The best ones register the temperature in thirty seconds, others in two minutes, and still others require five minutes. The clinical thermometer is usually graduated in fifths from 95° to 110° Fabr. and the normal temperature, 98.5° is indicated by an arrow. In some of the best thermometers all the markings above this normal temperature are in red. A good thermometer magnifies the slender thread of mercury so that the temperature is very easily read.

Care of the Thermometer.

The clinical thermometer is a delicate instrument and readily broken, and therefore it is necessary to use it with care and to keep it in a suitable metal or gutta-percha case. Furthermore, it is even of greater importance to keep the instrument absolutely clean and free from contamination. This is only possible by thorough cleaning and disinfecting after using, and the instrument should never be returned to the case until it has been rendered surgically clean. Washing the thermometer with a little water, even with the addition of soap, is not sufficient. A solution of alcohol, or equal parts of alcohol and ether, makes an excellent disinfectant for the thermometer after it has been washed in the ordinary way. Solutions of carbolic acid, Sanitas, Izal, Jeyes Fluid, as well as other efficient disinfectants, will accomplish the same purpose. Finally, the thermometer is dried with a clean towel and returned to its case after first being shaken down so that it will be ready for use.

Taking the Temperature.

Whenever a child or older person has a flushed or hot face, or complains of illness or looks ill, it is a wise precaution to take the temperature, count the pulse, and also count the respirations. The normal pulse is seventy-two per minute and respiration from fourteen to sixteen per minute. In the case of fever or other illness the temperature should be taken at least three times a day morning, midday, and evening, and suitable hours would be seven, one, and seven. Never take the temperature immediately after a meal or after a hot or cold drink, for any of these conditions might influence the temperature so that the results would not be accurate. If convenient it is well to take the temperature before meals. It is customary, as well as most convenient, to take the temperature in the mouth. If taken in the armpit the temperature is usually found to be about one degree lower, while the rectal temperature would be about one degree higher than the mouth temperature. A special make of thermometer is provided for rectal use.

Before introducing the thermometer into the mouth see that the mercury is not higher than 95° or 96° . Then dip it in a glass of clean water and place it deeply under the tongue and instruct the patient to close the lips but not the teeth. From one and a half to two inches should be immersed in the mouth. If the thermometer registers in half a minute it is wise to leave it forty seconds longer, and if in two minutes, leave it three minutes and if in five minutes, leave it six or seven minutes, in order to make certain that the correct temperature is registered. On removing the thermometer examine the reading carefully so as not to make any mistake.

and after having recorded carefully on a sheet of paper with the name of patient, the date, and the hour of the day, have another look at the thermometer to see if any mistake has been made in the record. It is a very simple matter to make a mistake in the reading and especially so for a person who is

neither a doctor nor a nurse, and therefore it is all the more necessary to give careful attention to the reading. Then cleanse the thermometer and disinfect it, shake it down to 95° and return it to the case. Conversation must not be attempted while the temperature is being registered.

Hair Falling Out

MORE inquiries come to *The Healthy Home* asking for a remedy for falling hair than almost any other trouble. No man is bald willingly, much less a woman. Dr. Breck of Springfield Mass., U. S. A. who treats these and hair as a specialty is perfectly frank in saying that neither his treatment nor that of anybody else can bring back hair to bald heads, but in most cases something can be done to prevent baldness coming on. Thorough treatment of the early stages of dry scaliness will often prevent the onset of baldness, otherwise certain to occur some years later. In male patients the scalp should be washed daily; in the female, not so often.

The scalp should be first wet with lukewarm water, then rubbed with a handful of soap spirit, made from equal parts of soap and alcohol, or with the following scented combination:

Tincturæ Lavandulæ compositæ.... 3 drams
 Saponis mollis..... 3 ounces
 Alcoholis 3 ounces
 Mix.

After this the head should be washed in several changes of water and thoroughly dried. Should such frequent use of soap cause the hair to become too dry, the occasional use of the yolk of an egg, beaten up in a glassful of water, will be beneficial.

In addition to the cleansing procedures, prescription of a lotion or pomade is often advisable.

A sulphur lotion is preferred by Brocq:
 Sulphuris præcipitati. 4 drams
 Spiritus camphoræ..... 6 drams
 Glycerini 2 drams
 Aquæ..... 4 ounces

Mix, and make lotion.

Another good lotion, owing its action to resorcinol, is:

Resorcinolis..... 2 drams
 Alcoholis..... 3 drams
 Glycerini..... 4 drams
 Aquæ rosæ 4 ounces

Mix, and make lotion.

In severe cases, especially in male patients, better results may be secured by the use of pomades:

Sulphuris præcipitati ½ dram
 Olei theobromatis..... 1 drams
 Olei ricini 5 drams
 Tincturæ bedzoini compositæ s. m v (0.3 c.c).

Mix, and make ointment.

Resorcinolis..... gr. x (0.6 gram).
 Acidi solicylicæ..... gr. x (0.6 gram).
 Olei cadini 2 drams
 Adipis ianæ hydrosi..... 2 drams
 Petrolati 2 drams

Mix, and make ointment.





The Best Kind of Exercise

THERE is no exercise that can take the place of walking. It is said of Gladstone that he walked four miles every day. If the body is held in the right position, the respiration, deep and strong, and the movements tense and vigorous, great good may be obtained from this exercise. Very little benefit is obtained from a lazy walk.

Carry the head well poised, chin drawn in, for dignity. Think of a spot on the top of the head, about four inches back of the forehead, pull the hair a bit, if necessary to locate the spot in your mind. Hold your head and body so as to lift that as high as possible. If you forget your shoulders and arms, chest, neck, and think only of the elevation of this one spot on the top of your head, every member of your body will naturally fall into an easy and correct position.

Respiration When Walking

Make this walk an occasion for expanding the lungs, and feeding the blood from the fresh, pure air of heaven. Deep breathing is very beneficial exercise. When you are walking, breathe as deeply as you can; stop occasionally and make a business of it. No matter how busy one may be, deep breathing may be practised at all times during the day; it will quicken the circulation, increase the vitality, warm the body, and prevent colds.

Rowing

Naturally, any form of enjoyable exercise which takes one out-of-doors into the pure air and sunshine, and amid the beauties of nature, is beneficial to the health. In addition to the physical benefits to be derived from such exercise, there is also a degree of rest for the mind, and a certain refreshment

and exhilaration of the spirits which are still further conducive to strength and vigour. A close association with nature, also brings with it a calm of feeling, contentment, and rest for wearied, unbalanced nerves.

Rowing, especially, is an exercise and pastime well calculated to give both strength and refreshment. It is a splendid all-round exercise, bringing into action a great variety of muscles, principally those of the back, arms, and chest. Over exertion in racing often cancels these benefits.

Swimming

"The benefits of swimming," says the Ladies Home Journal "are many. Nearly all of the muscles, especially the large ones, are brought into play. The muscles of the back are used to keep the head above water. It naturally follows that swimming is excellent training for a correct, graceful carriage. It also helps to straighten round shoulders. Breathing is greatly influenced, for more air than usual is taken into the lungs, which are expanded to their extreme limit. Circulation is stimulated, and the body as a whole is invigorated. The muscles of both arms and legs are actively exercised, and the chest is broadened.

"All of the muscles of breathing are put to the test. The pressure of the water on the chest is greater than the pressure of air, so this extra effort of resistance must be met. Breathing should correspond to the movements of swimming. When the legs are extended, the breath is expelled; when the legs are drawn in, the air is breathed into the lungs.

"Never hurry when you swim. If you do,

you will expend much effort for little advantage, and will not reach your goal any quicker than if you followed a quiet, even stroke.

"Besides swimming on the chest, one can learn to swim on either side as well as on the back. This last method is not so tiresome as chest swimming, neither is it so rapid. The legs are exercised most when swimming on the side. When you wish to rest, just turn on your back and float. This is the simplest lesson you can learn in the water.

"It is well to observe several cautions;—

"Never swim directly before or after eating. Allow an hour and a half both before and after meals.

"Until you become an expert swimmer, always swim toward the shore, never away from it.

"A short stay in the water is much better than a long one.

"Never try to swim when you are tired.

"Never stay in the water when you feel cold.

"After your bath, take a little run on the beach before you dress."

Heavy Gymnastics

Heavy Gymnastics, unless taken with

considerable care, are not generally recommended by physicians. Light physical exercises are better adapted to a symmetrical building up of all parts of the body. Heavy exercises weary, and strain, and break down the muscles, and are often a positive danger to life and limb.

"Exercises should always be in proportion to the strength of the constitution. If carried beyond that point, you will soon be aware of it. It is then that waste begins to exceed nutrition, and exhaustion takes the place of strength. Avoid the two extremes, over-exercising and lack of exercise. It is better to exercise frequently and at moderate intervals, until the increased action of the nerves and bloodvessels becomes more permanent. Then as soon as nutrition exceeds waste, the various organs used gain in size, strength, and activity; but if the exercise is carried too far, so as to fatigue and exhaust the vital powers, then waste exceeds nutrition. If, however, you refrain altogether from exercise, the vital functions decay for want of the requisite stimulus. Use moderation in all things."—*Home and Health*.

CURRENT

COMMENT



THE SOIL AND ITS RELATION TO DISEASE

By S. Lewis Ziegler, '85 M., Director of Health.

Countless millions of germs flourish in the superficial layers of the soil. The sticky moist sensation which rich soil yields and the odour emitted by it, as after a rainstorm, are due to certain bacteria or germs. Few germs are found in undisturbed soil below a depth of four to six feet. Below this point it is claimed that no germs exist; but this is not strictly true, since a limited number may be found.

Most germs found in the soil are not disease producing, their function being to break up vegetable compounds and furnish nutrition for

the growing grass and flowers, like the nitrification bacteria. Even the soil in a cemetery contains no more germs than the corresponding soil in a neighbouring locality; and the freedom from disease producing germs is, therefore, noticeable.

Certain disease germs (or their spores) are found in the soil and may infect an open wound. The two most important ones are those producing anthrax or wool sorters' disease and tetanus or lockjaw, both of which are deadly in their effect upon the human body. The infection of lockjaw is usually carried into an open wound, as when we step on a rusty nail, which furnishes both the wound and the germ; or, as

in the exposure of the wound of vaccination to the dirt about a stable.

The soil is often spoken of as dirt. In the field this is called "earth," but in the home or on our hands it becomes dirt—that is, matter out of place. Dirt in the ordinary sense becomes a possible source of danger, especially when contaminated by human excretions or soil bacteria.

To the sanitarian dirt includes rubbish, manure and garbage waste of all kinds. It may be the carrier but not the source of infection. It breeds and harbours flies, mosquitoes, fleas, lice, rats, mice and vermin of all sorts, that may act as go between or carriers of infection or disease. While dirt cannot originate typhoid fever or other infections, it favours conditions which encourage the spread of such diseases.

Rubbish in vacant lots, in back yards, in cellars, in alleys, in garrets and other places, may be taken as an index of the failure of the public to appreciate the modern teachings of hygiene and sanitation. The chief duty of the health officer is to insist upon cleanliness of the home and its surroundings, whether in country or city.

THE CAUSE AND CURE OF CROSS EYES

One of the most conspicuous and annoying conditions that may occur in the eyes of a young child is squint, or what is commonly known as "cross-eyes." It occurs chiefly between the ages of 2 and 6 and comes on gradually at first, showing some slight turning inward in one eye, at times, until finally something occurs to precipitate a definite attack and the eye turns in to a greater or less degree and remains so.

Frequently a convulsion or an attack of coughing, especially during whooping-cough or some like irritation to the general nervous system, brings on the attack, and is considered by the child's mother to be the cause. This is incorrect. When the eye is turned it will not look directly at the object at which the other eye is looking, and doubling of the vision is the result. This "doubled vision" is very annoying, as any one may judge for himself by slightly pressing one eye out of position with the fingers. In order to escape this annoyance the child unconsciously stops using the eye that is turned in, and this, in time, leads to changes in the nerve tissues which makes the child's sight defective in that eye.

Formerly many physicians advised parents to wait until the child grew older before having anything done to the eye, feeling that an operation was the only thing to relieve the condition, or that the child might "outgrow it." This, in the light of our present knowledge, is bad advice. By the time the child gets to be eight or ten years old the sight in the eye is defective from disuse, and cannot be restored, and this failure of vision has usually occurred even though the eye had straightened itself spontaneously. It is very important, therefore, not to allow the child to stop using the squinting or turning eye. It is not always necessary to operate. Usually glasses have to be worn to stop the strain, and there are other forms of treatment which are many times effective. If these means fail and the eye continues to turn, an operation may have to be done to keep the eye straight and to save the sight in that eye. But not more than half, perhaps even less, will require operation. Fortunately treatment is much more judiciously given and often is more successful now than it used to be, and the present generation of children will probably not show so frequently the defects caused by neglected "cross eyes."—*Ohio State Bulletin*,

HEALTH RULES

1. Fresh, outdoor air and sunshine are necessary to good health.
2. Night air is as pure as day air, and in cities where there is much dust, is purer. Sleep with your window open, top and bottom.
3. Eat but little fried food, pastry, candy, cake or sugar.
4. Wash your hands before you eat.
5. Brush your teeth after each meal.
6. Never put your fingers in your mouth.
7. Never put pencils, money or pins into your mouth. Never put into your mouth, anything that has been in any other person's mouth; such as gum or candy.
8. Never wet your finger in your mouth when turning the leaves of a book, or counting money.
9. Avoid spitting; it spreads tuberculosis and other diseases.
10. Do not handle strange cats or dogs; they often carry diseases.
11. Never use a drinking cup that is used by others.—*Minneapolis School Bulletin*.

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THE FLY DANGER IN EUROPE

From a sanitary point of view, Europe has already been polluted by the tragedies of the battlefield. The danger of epidemic is very actual, and the precautions which can be taken against outbreaks are necessarily restricted by the exigencies of war. England is more happily situated than the countries of any of the other Allies in this respect, because the chances of infection being borne to this country are immensely diminished by the Channel and the possibility afforded by the Channel of exercising a strict supervision over immigration. But even in England, the fly problem is a serious one, because it has been shown that typhoid fever and infantile diarrhoea can be carried from one place to another by flies, and because there is at least a presumption that these insects may play a part in the propagation of cholera. This happily does not range over a wide area, but typhoid fever, is, of course, always with us in this country and although the more virulent epidemic fevers have so far existed only within circumscribed limits, it is not safe in war time to assume that an extension is possible. Everywhere it is necessary to stamp out flies and kill their eggs, if

an appalling mortality is to be averted.—*Statesman.*

FORMULA FOR FUMIGATING A SCHOOL HOUSE

Potassium Permanganate—4 ounces,
Formaldehyde—16 ounces.

Place small pan in a large pan or on a sheet of tin also place on bricks. Close all windows and doors, close all cracks with cloths as corking, place the pot of permanganate in the smaller dish and pour the liquid on same, and get out at once; allow room to be closed for 12 hours, then open and allow to air. This gas must not be inhaled more than is absolutely necessary.—

H. L. Searle, in Brush and Patl.

TO EXTRACT A CORK

The following has been found helpful:

To extract a cork which has fallen, or been pushed into a bottle while still filled, take a button, thread it on a string, and drop into the bottle. Then pull the cork up to the neck with the aid of a hatpin, pull the string which is attached to the button, and the cork will come out.—*Selected.*

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WHAT AND HOW TO EAT

Eat fruit everyday. Canned fruits are good. Cooked fruit is often better than dubious fresh fruit, but some fresh fruit is essential. Eat fresh green vegetables whenever you can get them. Thoroughly wash all raw foods. Eat some of bulky vegetables of low food value, like carrots, parsnips, spinach, turnip, squash, and cabbage, to stimulate the bowels and give flavour to the diet and prevent over nourishment. Eat slowly and taste your food well, and it will slide down at the proper time. Do not nibble your food timorously; eat it boldly and confidently. A glass or two of water at meals is not harmful if you do not wash your food down with it.—“*A Sensible Diet for the Average Man and Woman*,” Eugene Lyman Fisk, M. D., New York, Director of Hygiene, Life Extension Institute, in *New York Medical Journal*.

LIQUOR AND WAR

THE following quotation from a London letter to the *Medical Record* (New York) indicates how the present war is forcing abstinence on the people of Europe. Incidentally it is a war against rum:—

“The earlier closure of public houses has been carried out. The licensing authority on the 15th. inst., (October), with the support of the government, ventured to order all licensed houses to close at 16 p. m. The temperance party are rejoicing over the victory they have long fought for; but the authorities, though sympathizing, had not the courage to decree. This is a war item. . . . Lord Kitchener has appealed to the public not to treat soldiers with drink (a common practice), but rather to assist them to resist temptations to which they are so much exposed. Where soldiers are stationed, Lord Kitchener suggests committees might be formed to advocate [bold?] public opinion on the importance of our defenders being in the highest state of efficiency, and this of course implies strict temperance.”

UNCLE SAM TRIES TO MAKE FAT WOMEN LEAN

UNCLE SAM has been trying some of the “antifat” cures on his employees in Washington who wanted to lose flesh and yet not lose their health. One of the most widely advertised remedies to reduce fat was given to a department girl. In two weeks it had to be stopped because of the injurious effect on the girl, and, instead of losing flesh, she gained two pounds and three quarters. Two other girls were experimented upon with exactly the same results.

Uncle Sam then looked into some of these antifat cures and in one he found nothing but soap; and he came to the conclusion that the remedies “are absolutely worthless,” in some cases “harmful,” and in all cases “humbugs.” When will women stop being deliberately swindled by these and other quack-nostrums? is the natural query.—*The Ladies Home Journal*, March, 1915.

IS YOUR DRINKING WATER CONTAMINATED?

(Concluded from Page 174)

Some time spent in taking care of the drinking water will be repaid many times in the saving of human life. This has been proved conclusively under every test. Government has been doing all in her power to furnish good wholesome drinking water to the people of India, but a great share of this effort will be fruitless until every one living in India makes pure drinking water a personal responsibility. This much he owes to himself as well as to his neighbour.

SOME DELICIOUS ICES

(Concluded from Page 179)

the East India Islands, and is an entirely vegetable product. It can be obtained in most Indian towns. An ounce of it will solidify from two to four times as much liquid as an ounce of animal gelatine. Pour water that feels quite hot to the finger over the gelatine and let it stand covered in a warm place for an hour or longer. When ready to use, drain and to the hot water drained off, add sufficient boiling water to make 4 cups (1 quart) for each ounce of gelatine. Pour over gelatine and cook, taking care it does not boil over, in covered vessel until clear, which will be in not over 2 or 3 minutes if the gelatine is well soaked.—*The Laurel Cook Book*.

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