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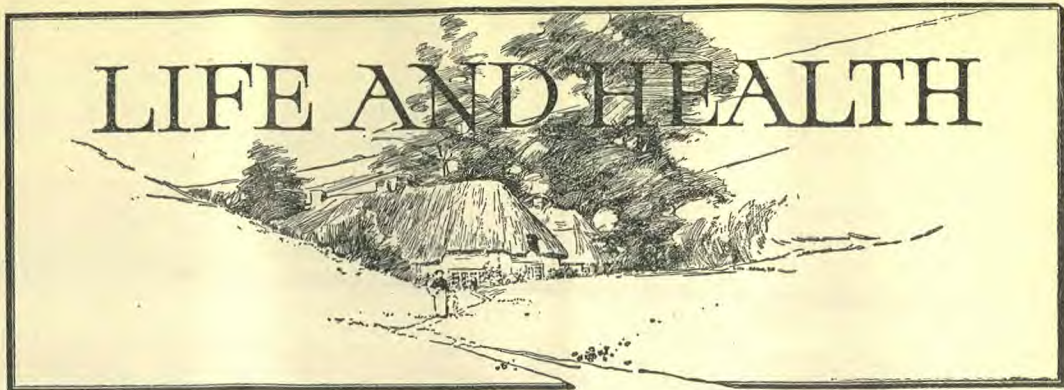


Australia's pride is her wattle flower,
With its hanging balls of gold ;
The symbols of wealth,
And tokens of health,
Which whisper the tale of the bush untold
As we sit 'neath its sweet-scented bowers.

But a greater pride has Australia fair,
The pride of its maidens and boys ;
Sweet pictures of health,
The country's true wealth,
The greatest of assets and brightest of joys
That a home with a nation can share.

—H.G.F.

LIFE AND HEALTH



Vol. 9

November-December, 1919

No. 6

Editor: CHARLES M. SNOW

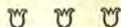
Associate Editors:

{ W. HOWARD JAMES, M.B., B.S.
EULALIA RICHARDS, L.R.C.P. & S., Edin.

VIENNA is alive to the serious danger of a typhus epidemic. The Austrian Red Cross has sent two mobile hospitals to the Ukraine to help in dealing with the threatened epidemic there. Not only does War walk arm-in-arm with Death, but Death's legions troop after in famine and pestilence.



THE Mother Country is turning to the goat as a milk producer, and the goat seems to be responding with an increased yield. While the record daily yield of a goat thirty years ago was only three quarts, it is not uncommon to find them yielding a gallon now, and occasionally as much as five quarts. Children thrive on the milk, which is also good for ordinary culinary purposes.



CANCER is practically non-existent among the people of the far North. So says Mr. V. Stefansson, the Arctic explorer, whose testimony is corroborated by Mr. W. R. Barlow, of Newfoundland; and Mr. Barlow's testimony is further corroborated by the evidence of missionaries long resident among the northern peoples. Evidently the intense cold of these regions makes the existence of the cancer germ impossible.

EARLY in the war the British nation realised the importance of turning over to human consumption a very large portion of the grains and vegetables that had been used for the maintenance of animals such as beef creatures and swine. Previously large quantities of vegetable food, and of foods which might have been utilised by man, were wasted in the mere maintenance of cattle and pigs without any production of food. The war has also demonstrated that more people can be fed upon what a certain acreage will produce than can be fed upon the meat of animals that are raised upon that same acreage.



DR. JOHN FREDERICK BRISCOE, neurologist to a Pension Board at Bournemouth, England, in a letter to the *London Lancet* of June 21, strongly recommends that the treatment of neurasthenic soldiers should be largely dietary, and favours a diet which is very sparing in meat. He suggests also that the treatment of epileptics should be along the same lines. And if this is good for soldiers suffering from these diseases, it is equally good for civilians. The process of digging one's grave with one's teeth is pleasanter to the appetite than it is to the rest of the person; and while vegetarians and health reform-

ers were looked upon for years as harmless faddists or fanatics, scientists are at last finding that there was far more in the "fad" than the "fad" was given credit for.



THE battle against venereal disease is now being actively waged by both Britain and America. There is now in England a national council for combating the disease. The continuous treatment of infected persons is being given consideration. The executive committee is advocating legislation penalising an infected person who fails to continue treatment until he or she is reasonably free from infection. There are now in England one hundred and forty-eight free clinics for treatment of such cases, and further facilities are to be provided by the Ministry of Health. A system of education is being arranged for the young by which it is hoped to lessen the evil practices resulting in this fearful pestilence.



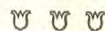
THREE prominent Japanese physicians, who have been giving special clinical study to the cause of influenza, after thorough experimentation, have reached the following conclusions:—

1. The germs of influenza cannot be removed by filtering.
2. The germs can infect through the mucous membrane and also by inoculation.
3. The germs can be found in the sputum and the blood of influenza patients.
4. The known bacilli, such as Pfeiffer's bacillus, pneumococci, and some diplococci, are not the cause of influenza.
5. We observed experimentally that all people who have previously had influenza, or received the sputa emulsion or its filtrate, are immune to the disease.

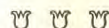


DIFFERENT races of people vary in their susceptibility to disease. "Those which are more immune," says one, "are usually so because of generations of con-

tact with the disease. If the American Indian contracts tuberculosis, he almost surely succumbs. The Jew, on the other hand, living often amid most insanitary surroundings, often has tuberculosis, but seldom dies of it. He is particularly susceptible to diabetes. The negro race seems to suffer comparatively little from pellagra, but is susceptible to tuberculosis, syphilis, and fibroid and keloid tumours."



"NOW that food prices have reached so high a level the principles advocated by Dr. Daniel Sager, in "The Art of Living in Good Health," should gain adherents. He points out that during the zenith of Greek and Roman civilisation it was a rule—though a rule of perfection—that no man should eat until he had leisure to digest—that is, at the end of the day's work. For several hundred years the one-meal plan was universally followed by these nations. Such abstemiousness would now be regarded by most people as semi-starvation; but Dr. Sager holds that for those engaged in sedentary occupations it should be no hardship."



Liquor Control

"MEMORIAL TO HIS MAJESTY'S GOVERNMENT. In view of the great advantage to the efficiency and well being of the nation and to public health and order which have followed the restrictions placed on the sale of intoxicating liquor during the war, the undersigned earnestly request His Majesty's Government to maintain these restrictions until a permanent measure of reform has been enacted." This memorial was passed around at a meeting of physicians in Oxford, England, and every doctor present signed the memorial. No one can doubt the immense importance of liquor control on the future welfare of our nation, and no body of men is in better position to educate the public on this subject than the men of the medical profession.

The Liver and Its Functions

A Much Abused and Much Misunderstood Organ

THE liver is a large secretory gland situated on the right side of the abdomen; its lower border in health corresponds to that of the ribs and its upper border is on a level with the lower end of the breast-bone. When enlarged, the liver projects beyond the ribs. The bile which it secretes is partly secretory, helping in digestion, and partly excretory, ridding the system of poisonous or harmful products.

Our food after digestion is carried by the portal vein to the liver. There some of the absorbed proteids, carbohydrates, and salts are fitted for entrance into the blood for general nutrition, and others undergo such changes as will permit of their harmless elimination. Poisonous substances, whether introduced in the food or formed in the alimentary canal as the result of faulty digestion, and disease-producing germs by the same channel find their way to the liver, and, if not excessive in amount, are destroyed or rendered innocuous.

The liver is a great storehouse for the digested food and permits the digested elements of our food to enter the circulation as required for the efficient working of all the organs and tissues of the body. Thus the blood remains in much the same condition constantly, and is not specially inundated with food after a meal and depleted after abstinence.

Both the sugars and fats of our food are stored up in the liver, the former being first changed into glycogen. When required the glycogen is reconverted into dextrose, a form of sugar which can be utilised by the tissues. When the system cannot absorb all the sugar thus formed, it accumulates in the blood and is excreted in the urine. This disease where this lack of power on the part of the tissues to absorb sugar exists, is well known as diabetes mellitus. Abstinence from carbohydrates or exercise lessen the amount of

glycogen in the liver. Most people take more nitrogenous food than is really required; the liver removes the nitrogenous element and forms urea which is readily excreted by the kidneys. Excess of nitrogenous food thus throws extra work on both these organs.

The experiments of Chittenden and others have conclusively proved that the energies of our being are chiefly the result of oxidation of the non-nitrogenous elements of our food. Proteids are not stored in the system like the sugars and fats. The nitrogenous element quickly finds its way to the kidneys and is excreted as urea, uric acid, and allied products. An examination of the urine will reveal the amount of nitrogenous food taken in the previous twenty-four hours.

Excess of nitrogenous food, especially in the form of flesh, certainly increases the liability to liver and kidney diseases as well as to rheumatism, gout, and many other diseases.

Another important function of the liver is the storing up for future use of the iron which results from the breaking up of the red blood corpuscles that have done their allotted work. The liver is our friend in destroying such poisons as alcohol, pepper, mustard, ptomaines, mineral poisons, and disease producing germs; but excess of work brings congestion; and continued congestion, chronic disease.

Rich foods, especially those rich in fats and nitrogenous elements, are very prone to overwork the liver and produce disease; this is particularly the case where there is deficient exercise and indoor occupations. Hot, damp climates injuriously affect the liver, rendering it liable to congestion and inflammation.

The bile duct enters the small intestine and is liable to extension of catarrhal and inflammatory conditions of that organ, which conditions block the flow of bile,

producing jaundice. The liver is frequently the seat of cancer, either primary, partly from excess of nitrogenous elements and irritants introduced from the alimentary canal; or secondary, from other organs such as the breast, ovaries, or womb.

The Bile

From one to one and one-half pints of bile are daily formed in the liver; some of this is stored up in the gall bladder and some poured into the intestines. It is alkaline and its flow is stimulated by the acid products in the small intestine coming from the stomach. The bile in the gall bladder is much thicker than that flowing along the bile duct, containing eighty-six per cent of water compared to ninety-eight per cent in the latter. Bile is intensely bitter, it varies in colour, being either golden yellow, reddish brown, or green. The green colour is often seen in the stools of children.

The bile emulsifies the fat of our food; i.e., converts it into microscopic globules, and thus prepares it for digestion by the secretion from the pancreas. It also stimulates the action of the bowels; thus a deficiency of bile means pale stools and constipation. Bile is by some said to have an antiseptic action; stools with deficiency of bile are very offensive. It is very doubtful whether any drug has an appreciable effect in increasing the secretion of bile; purgatives produce an extra excretion from the bowels; but this is only temporary, due to the hurrying on of the contents of the bowel, and is followed by a corresponding deficiency in biliary constituents of the fæces. An increased amount of fluid in the food, and especially alkaline waters, such as the Carlsbad Salts, will increase the fluidity of the secretion and aid in its removal from the liver. Exercise has also an important action in this direction. Increased viscosity of fluid is liable to be followed by the formation of gall stones.

Biliousness—Sluggish Liver

We have seen that the excretion of an excess of nitrogen taken in our food and

of poisons absorbed from the alimentary canal is a very important function of the liver. Much of the excess of nitrogen taken in our foods is excreted as bile acids, and the remainder is converted into urea by the liver and excreted in the urine.

When rich foods are taken, especially when they contain much cooked fat, the liver is overworked and much of the waste products are absorbed into the blood. Rich foods also interfere with the digestion, with the result that poisons are really formed in the alimentary canal, and these are also carried to the liver.

The circulation in the blood of poisonous substances that should be excreted in the bile and evacuated by the bowels produces definite symptoms, such as headache, weariness, drowsiness, irritability of temper, "specks" before the eyes, disinclination to work, and sometimes palpitation of the heart. These symptoms are mostly accompanied by dark coloured urine due to excessive urea and colouring matter. In other cases the symptoms are more acute and the alimentary canal is chiefly affected; nausea, vomiting, purging (sometimes constipation), heart burn, loss of appetite, fullness of abdomen, and flatulence result. The former condition may be more or less chronic, and the more acute symptoms due to infection of the alimentary canal pass off much more quickly. In the latter case, abstinence from food is compulsory, and hence the quick recovery; in the former, food is still consumed and the liver toils on sluggishly. In this condition the tongue is constantly coated, especially at the back part, with a yellowish fur.

How to Treat a Bilious Attack

A bilious attack is really an acute catarrh of the stomach. When the attack is severe, bile is eventually vomited. It is not the bile, however, that causes the symptoms; the intense vomiting reverses the action of the small intestine for a short distance below the stomach and the bile, instead of being carried downwards, is brought up into the stomach and vom-

ited. The stomach should have complete rest till the vomiting has completely subsided and the appetite returns. A warm full bath by drawing the blood away from the head will often relieve the intense headache. The action of the bath is helped by cold wet applications to the forehead; they should be frequently repeated. Sometimes alternate hot and cold applications to the head give more

If constipation exists, and this is the rule, a large warm enema should be given to empty the bowels.

Those subject to bilious attacks should be very careful in their diet. The following foods and drinks should be avoided: all foods cooked in or with fat, such as fried dishes, pastry, cakes, etc.; foods containing much sugar; flesh foods; irritating substances such as pepper, mustard,



IN RURAL NEW ZEALAND

J. H. Kinnear

relief. Fomentations to the abdomen will relieve the vomiting and pain. The vomiting does good in ridding the stomach of irritating matter, and large drinks of warm water in the beginning of the attack will hasten recovery.

When the stomach has been emptied and the vomiting continues, it must be checked. One of the best remedies is the application of hot fomentations to the abdomen; in some cases cold wet compresses give more relief. Sips of very hot water or small pieces of ice dissolved in the mouth will help to stop vomiting.

sausages, pickles, and alcohol; hard boiled eggs and cooked milk; coarse vegetables, such as cabbage, parsnips, and carrots; tea, coffee, and cocoa. It must be recognised, however, that general rules cannot be laid down to suit all, for frequently what is food to one man is poison to another.

In Chronic Bilioussness

Many with chronic bilioussness have no attacks of acute vomiting, but they continually complain of constipation, headache, loss of memory, disinclination to read or work, dark coloured urine, and

very often dull heavy aching over the region of the kidneys. The first thing to do in a case of this description is to very much lessen the amount of food taken. It will be found as a rule that these individuals have a good appetite and often complain of no primary symptoms and indigestion, such as nausea, heart burn or flatulence; intestinal flatulence, however, frequently exists to some extent. The evening meal should be dispensed with or limited to a little stewed or fresh fruit and bread and butter.

Flesh foods, fats, and sweets should be as far as possible eliminated from the diet. All foods cooked in or with fat of any kind should be avoided; the fat that is taken should be in the form of fresh butter or unscalded cream. Pastry, new bread, scones, rich cakes, and puddings should be included in the prohibited list. Most cases are better without milk, especially when scalded or boiled; fresh milk is more readily digested and is not constipating. Fruit and vegetables can be taken freely, but not at the same meal. Tea, coffee, and cocoa must be avoided. The following articles of diet are recommended: good wholemeal bread, granose

biscuits, toasted corn flakes, oatmeal gruel in small quantities, stewed fruits, prunes, washed dates. Eggs should be very sparingly taken, never more than one at a meal and that lightly cooked. The meals must not be bulky and the individual should leave the table before he has satisfied his appetite. No food whatever should be taken between meals. A little lemon juice or acid fruit at the close of a meal is very helpful. Sedentary occupation should be avoided and plenty of exercise taken in the open air. A hot bath is recommended twice a week and the body should be sponged every day in order to keep the skin active. The bowels should be kept regular and, if necessary, teaspoonful doses (more or less) of cascara should be taken occasionally at night; or, if a third meal be taken, before the evening meal. The teeth should be kept in good form to ensure thorough mastication; and hurried meals avoided.

In our next issue the subject of the liver and liver troubles will be continued. In that article we will deal with jaundice, congestion of the liver (active and passive), gall stones, hydatid of the liver, and cancer of the liver.

W.H.J.

Alcoholic Livers

VERY definite changes take place in the liver from the continual use of alcohol in any form. They are, however, more marked and of a more serious nature in spirit drinkers. The effects of alcohol are much more marked in some individuals than in others, but no drinker escapes the degenerative changes altogether. The continual moderate drinker undoubtedly suffers much more than the man who gets drunk occasionally, and then in shame has a spell from drinking; the former suffers from changes from which there is practically no real recovery, but the latter by abstemiousness and careful living will throw off the effects to some extent. The effects on most of the tissues of the body, but especially of those of the liver, are

the result of three special characteristic actions of alcohol; first its action as an irritant; secondly, its decided power of lessening oxidation of our food and the liberation of its life-giving energy; and thirdly, its action in producing internal congestions. We will deal separately with these three characteristics.

Irritant. All the tissues of every active organ of the body may be looked on as containing the special cell elements which perform the real work of the organ, and the connective tissue which unites these special cells, keeps them together in unity, and thus form the organ. Alcohol by its irritating action brings more blood to the parts than is required for the functions of the tissues or organ, with the result that

the connective tissue becomes greatly increased in amount. Thus the liver in alcoholics first enlarges, but its power is lessened, for the individual finds he is frequently "out of sorts," he is not "up to scratch," and suffers from biliousness, indigestion, and catarrh of the stomach. Sometimes the congested veins of the stomach will burst, producing the vomiting of blood, or the appearance of very dark stools due to presence of blood. He will notice the increase in size on the right side of the abdomen, and that when resting on the left side of the body there is a decided sense of weight and dragging. His bowels may be either constipated or frequent attacks of diarrhoea will occur. The symptoms of liver trouble vary greatly in different individuals; frequently for years, although disease is decidedly developing in the liver, no symptoms are complained of. This fact very often gives the individual a false feeling of security, but suddenly he is awakened from his dream by the supervention of hæmorrhage from the stomach or decided symptoms of enlarged liver and disturbed digestion.

The connective tissue formed by the irritation and congestion produced by alcohol has a decided tendency to contract and thus squeeze out of existence the active liver cells. The liver, which was primarily larger than normal, thus becomes much smaller and very hard. The normal liver in post mortem examinations is of quite a soft and yielding consistence, but this "cirrlosed" liver is firm and hard and irregular on the surface—"hobnailed." In this condition the abdomen may swell considerably from the collection of fluid (ascites), which may amount to a large bucketful or more. Frequently the patient may have a bucketful removed ten or twenty times before death ensues.

With, or before, the development of ascites, the face becomes thin and drawn, the eyes sunken and watery, the nose and cheeks more or less covered with small injected veins, and the complexion becomes muddy.

Undoubtedly the action of alcohol in producing the above is accelerated by the use of much animal food, pepper, mustard, and other spices. Syphilis also produces similar effects.

Lessening oxidation. When our food has been digested and finally stored up in the tissues it is oxidised, burnt up, for the energies of the body. When the food is only partly oxidised it remains in the tissues as fat. Alcoholic subjects very often grow very obese, the fat permeates every tissue of the body, interfering with the action of every organ; the patient has thus a big weight to carry about and his energies are lessened in every direction. The accumulation of fat, however, is not the worst part of the lessened oxidation produced by alcohol. The tissues of the body are being constantly renewed, whether they be brain, nerve, liver, or muscular. In alcoholism the cells composing the tissues largely degenerate into fat and lose their functions. In old people a pale ring is often seen on the outer margin of the coloured part of the eye (iris); this is due to fat cells, and is an index of the condition of other parts of the body, such as the heart. In alcoholism the liver often has a yellow appearance from the degeneration of cells and the deposition of fat, and is enlarged and extremely friable. In some alcoholics the liver becomes enlarged and fatty; in others, small and cirrhotic (hard). Frequently there is a combination of both results.

Internal congestion. Alcohol increases the liability to internal congestions. In health the nervous system regulates the amount of blood in the skin in accordance with the atmospheric temperature; the skin thus in cold weather contains but little blood and the amount of heat lost is small; in hot weather the skin is full of blood and heat is given off rapidly. Alcohol interferes with this action; much blood becomes exposed to the air, and much heat is lost when it is really required for the warmth of the body. Cooled blood is driven internally and congestion of internal organs is liable to occur. The arteries have a contractile power in health

which keeps the blood circulating; in alcoholism they lose this power, with the result that congestion of internal organs becomes more or less permanent. The effects described as taking place in the liver are also seen in other organs of the body, such as the heart (fatty degener-

ation), disease of arteries (arterio-sclerosis), and diseases of the spine (sclerosis). The alcoholic thus pays dearly for his interference with the laws of his being. The conditions described are incurable, but their progress may be stayed by abstinence and careful living. W.H.J.

What to Wear and How to Wear It

EULALIA S. RICHARDS

WHAT shall I wear? is one of woman's never-ending problems. And certainly, in recent years, it has never been so perplexing a problem as now, when many materials are poor in quality and very high in price.

To dress well,—neatly, becomingly, and economically,—should be the aim of every sensible woman. Some have expressed the wish that all might adopt a standard dress, a sort of uniform, but surely this is not necessary, nor altogether desirable. Individuality is one of the most pleasing features of woman's dress. Think of the great variety of form and colour displayed by Nature in all forms of life. Surely it were not intended that we should all be arrayed in similar attire when our physical characteristics are so various. But there are certain features which should characterise the clothing of all.

Our clothing should afford adequate and equal protection from the weather. In winter it is not sufficient that the chest and body be warmly clad. The extremities require even warmer clothing. The blood stream, as it leaves the heart, abounds in warmth and life, but as it proceeds to the smaller arteries and veins in the extremities, it is likely to become chilled through more direct contact with the cold. Also the force of the stream abates in the smaller vessels so that the circulation in the limbs is less active than in the body. This explains the necessity of clothing the limbs warmly in cold weather.

In order to do this, the demands of Dame Fashion as regards footwear must

be ignored in the majority of cases. Warm stockings and sensible boots should be worn, or, if one prefers to wear shoes, gaiters may also be worn to protect the ankles. Those who suffer particularly from cold feet will find the cork or felt insoles a help to foot comfort. Having the feet warmly clothed means far more than mere bodily comfort. Many chronic inflammatory conditions result from neglect in this matter. We may mention particularly inflammation of the lungs, stomach, bowels, bladder, and other internal organs.

Care must also be taken to avoid over-clothing the body. Some wear such a number of garments that the skin becomes over-heated and moist. This condition frequently leads to serious chills, especially in case of sudden draughts or change of weather. The wearing of furs around the neck, through over-heating and subsequent chilling of the parts, often leads to a troublesome inflammation of the throat and bronchial tubes.

The clothing should be open in texture and as light in weight as is consistent with warmth.

During the summer season particularly the clothing should be characterised by marked simplicity; not only simplicity in the individual garments, but simplicity in the plan of clothing as a whole. Why encumber the body with a great number of garments when careful thought as to design and execution may effect a reduction not only in the number of articles worn but also in the labour and expense of making and laundering?

Thesecond and perhaps the most important requirement is that all clothing should afford comfort of body and perfect freedom of movement. As a matter of fact, the average woman endures for sixteen hours a day such bodily discomfort from unsuitable clothing as her husband or brother would not tolerate for sixteen minutes. The poor woman may not be

are scarcely in a position to judge as to the true meaning of *tight* clothing.

Since an abundant and constant supply of oxygen is absolutely indispensable to bodily health and vigour, any garment which hinders ever so slightly the full and free expansion of the chest in breathing must be considered too tight. This means that one's correct chest and waist



*"Oh swiftly glides the bonnie boat,
Just parted from the shore,
And to the fishers' chorus note,
Soft moves the dripping oar!"—Baillie.*

J. H. Kinnear

conscious of the cause of her discomfort, and greater the pity.

Tight corsets, bodices, waist-bands, and belts are responsible for much suffering and want of vitality in women. "Oh, but tight lacing has gone out of fashion," you say. Yes, tight lacing in the ordinary acceptance of the term, and tiny waists are no longer fashionable. But we maintain, that the majority of women have never experienced the bodily comfort resulting from properly adjusted clothing and hence

measurement is the measurement round these parts when they are fully expanded in the deepest possible breath (there being no constriction from clothing at the moment the measurement is taken). Now to be quite practical, how may a woman know if her clothing is too tight? If in order to fasten her corsets or bodice she is obliged to empty her chest and draw in her abdomen, that garment is too tight, probably by two or three inches. Again, if the woman experiences relief and instinctively

draws in a big comfortable breath on unfastening her clothing, it is too tight.

It is not only the lungs which suffer from tight clothing. The heart, stomach, liver, and other internal organs are all more or less hampered and interfered with in their work. Doctors all recognise that tight clothing is responsible, in most cases, for that condition so common in women, sluggishness of the liver, a condition which frequently ends in the development of gall-stones and perhaps, later on, cancer of the liver. Indigestion, constipation, and various organic inflammations and displacements are also caused by tight clothing. Varicose veins, or to speak more correctly, varicosity of the veins, in the legs is often caused by wearing garters, while corns, bunions, and other foot troubles are caused by unsuitable boots and shoes.

Other requirements of clothing which we should consider are suitability, durability, and, for want of a better word, becomingness. In these days when all are more or less concerned about the high cost of living, it is needful that we study economy in the matter of dress; but surely it is not necessary for us to sacrifice that beauty and suitability which should characterise all of our clothing. There is no advantage in wearing styles and colours which are unbecoming to us personally and which must make our appearance unpleasing to those whom we love and desire most to please. If a person is unduly slender or over-stout she may choose styles which will make these characteristics less noticeable, or she may accentuate them by the choice of unsuitable styles.

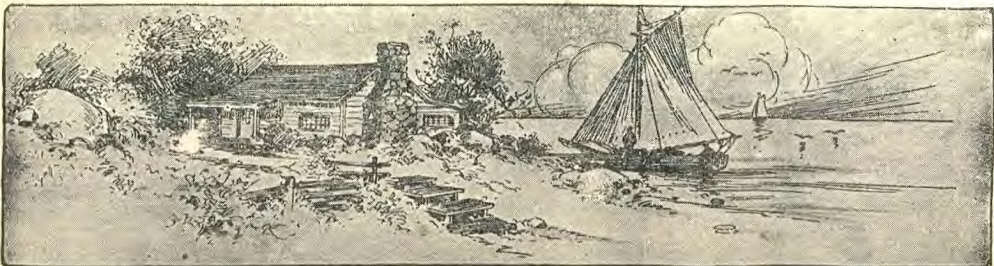
As to colour, it is a pity for a woman

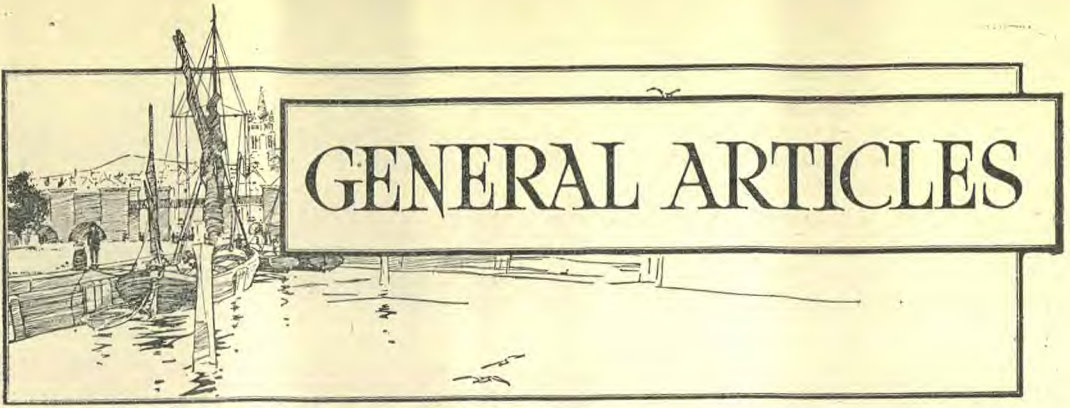
to wear clothes which are unbecoming and which cause her to become a sort of jarring note with the beauty of nature all around. It is just as easy and economical to choose colours which tone with the eyes, the hair, or perhaps the skin. If this is done, the clothing is almost certain to be becoming.

Our clothing should not only be pleasing in appearance, but it should be suitable to time, place, and occupation. The girl who in the early afternoon appears in the street attired in evening dress may expect to attract undue and unpleasant attention to herself. Again, the young woman who goes to business dressed in showy and elaborate clothes lowers herself in the estimation of her employer and fellow-workers. Good, plain, but becoming clothes should always be worn by the business woman.

The housewife should provide herself with simple, washable, one-piece frocks for wear during the morning hours. These frocks are best made with open neck, and short sleeves so that the woman may work comfortably and without the unsightly appearance of rolled-up sleeves. It is far better and more economical to have several such frocks than to wear for morning work dresses of wool or perhaps even silk which have served a better purpose but have grown a bit shabby. It is usually possible by thought and care to remake these more costly frocks either for oneself or the children.

In a subsequent article, further suggestions will be given which may be helpful to those who would dress healthfully and yet becomingly.





GENERAL ARTICLES

The Cigarette and Heredity

DANIEL H. KRESS, M. D.

WHAT sort of an ancestor am I going to make? is a question every young man and every young woman should occasionally ask himself or herself. "No one liveth unto himself." What we do to-day and to-morrow and keep on doing throughout the year helps to make or unmake true manhood and womanhood.

No child, had it a say in the matter, with the knowledge men possess, would by choice be the offspring of a man who is addicted to drink. Neither would it select a drug fiend or a cigarette fiend as a sire.

Each succeeding generation suffers the accumulated results of the wrong habits of those that have gone before, for the sins of the fathers are visited upon the children unto the *third and fourth* generation. Ex. 20 : 5. By the time the fourth generation is reached, the degeneracy becomes so marked that propagation ceases and the family tree dies. Again and again this has been demonstrated in the history of families. Follow the drunkard whose son and son's son was also a drunkard for four generations and you will find the family has about disappeared. The same may be said of the opium fiend or of the cigarette or tobacco fiend. If men alone were the sufferers from their wrong and vicious habits, it would be serious enough, but that the accumulated results are passed on from father to son, generation after generation, makes it a prob-

lem that should certainly receive careful and solemn thought. "What sort of an ancestor am I going to make?" is therefore a question each one should ask of himself repeatedly.

Men cannot afford to lead grasshopper lives. The grasshopper jumps at a venture. It does not know where it will land and feels no concern as to the outcome of the leap it makes. It may land in the smouldering forest fire or in the swift running stream. It is well for man to look before taking a leap, and to make sure where it will land him and his posterity. The cigarette smoking boy is sure to land somewhere. Of one thing he can be assured, he will never land in any place that requires the exercise of great brain power. No cigarette fiend has ever landed there, and no cigarette fiend will ever land there. It is perfectly safe, therefore, for the young man to make the leap and smoke cigarettes if his purpose is to avoid positions of great responsibility, and positions that call for great brain activity.

It will never land him even in the presidential chair of the Ford motor-car factory or the Cadillac motor-car manufactory. In neither of these shops can a cigarette smoker obtain a position in any capacity. Not because there exists a prejudice against the cigarette, but because efficiency and the cigarette do not combine, and they want only employees who are efficient and dependable.

The cigarette smoking boy, nine times out of ten, will land in the billiard room, the hotel, the reform school, or the penitentiary. Only two out of every 100 boys who find their way to the reform schools of America are not smokers; ninety-eight of them are smokers. This picture is not at all overdrawn. It presents facts as they are.

The cigarette injures its user morally as well as physically. Children are frequently born with criminal tendencies,

strong language, but it is the truth, and it is time for the truth to be spoken. The child of the tobacco devotee, and especially of the one whose custom it is to inhale the smoke, comes into the world handicapped in the great battle of life.

Abortions are more common among the wives of the men who smoke than among the wives of non-smokers. The mortality is also greater among infants born to smokers than it is among infants born to non-smokers. Children that survive have



A TOBACCO FACTORY OF HALF A CENTURY AGO AND ITS FOUNDER

and with a craving for the same indulgencies the father possessed. Unfortunately they possess less will-power than the father. They begin their career on the toboggan slide.

Worse Than Losing an Arm

The boys that have returned from the battle front minus a leg or an arm are subjects of pity, but may, if they are in possession of well balanced minds, make a success of life. The injury does not extend beyond themselves. If they marry, their children will in all probability be born with two sound legs and two sound arms. It is not so with the child of the cigarette fiend. It comes into the world a degenerate. I am aware that this is

unstable nervous systems, and are inclined to take up with the use of alcohol, tobacco or drugs. It has been ascertained by careful scientific study that fully seventy-five per cent of England's inebriates are defectives, and have taken to drink because of these hereditary defects. The sins of the children are chargeable to the parents.

It is a disputed question among scientists whether cigarette smoking makes degenerates of boys or whether they smoke because they are degenerates. All are agreed that degeneracy and cigarette smoking are associated. There is no doubt but that boys smoke because they are degenerates, and that many are degenerates because their parents smoke.

Smoking, in other words, makes degenerates, and degenerates, as a rule, take to smoking, and other drug addictions.

A Large Army of Drug Fiends

There are 5,000,000 drug fiends in the United States. New York City alone has 100,000 victims of the drug habit, according to Dr. Copeland, New York City's Health Commissioner. America last year consumed 475,000 pounds of opium, ten times as much as was con-

stimulating than what is found in brook or cistern among horses or other animals—even the monkey, most nearly resembling man in structure, has no craving for anything stronger than the liquid which floats the mighty steamships.

Girls possess the same craving as boys do. The only thing that saves them from smoking cigarettes is public prejudice. Let public prejudice be removed and the millions of nervous women in America will find in the cigarette just what they



ONE OF THREE MODERN FACTORIES THAT HAVE GROWN OUT OF THE ORIGINAL BUSINESS

sumed in any other country of the world, not excluding China. The rule is cigarette, drink, and then drugs, but back of it all is the inherited craving for something that nothing but a narcotic will appease. The reformation of the habits of future generations must begin with the present.

So universal is this craving that Dr. Parkhurst made this sweeping statement a few years ago in defence of the sale of the milder alcoholic beverages, as beer and wine: "The desire for something more stimulating than anything found in brook or cistern is a natural one." I admit it is almost a universal desire, but it is not a natural desire. The desire may be acquired, but is most often inherited. There is no desire for anything more

have been longing for to temporarily allay their nervous symptoms, and they will take to them as naturally as the duckling takes to the water. But woe be to America when her women take up with this habit. Woman has thus far been a conservator of racial vigour in this respect. We all are thankful that our mothers were not smokers. Conditions are bad enough in America as it is, with men and boys smoking, but when women and girls take up with the practice, the nation is doomed.

The Effect on Heathen Races

The North American Indians, among whom smoke inhalation had its origin, are practically eliminated. Women and men smoked. The Maoris of New

Zealand, pronounced by Captain Cook the finest people civilisation had ever encountered, perfect in physique and still young at ninety years, are now a race of degenerates. Out of 120,000, less than 40,000 of them are left. Civilised man introduced to them alcohol and tobacco. They regarded them as gifts from the gods. Men and women, young and old, began to use them. As a result, this noble race has about disappeared.

One hundred and fifty years ago there were, it is estimated, 350,000 Hawaiians. The white man entered their domain and with him the twin evils, alcohol and tobacco. Their women smoke as do the men. They reasoned if tobacco is good for men, it is equally good for women, and so both men and women took up the habit. The latest census report shows that less than 29,000 of them are left. The death of the last full-blooded Hawaiian is not far in the future.

In America, cigarette smoking among women is confined practically to harlots and the so-termed "upper class." Should America's existence depend upon these, she too would meet with the fate of the Hawaiian Island, as smoking women become sterile.

France has been, up to the time of the war, the greatest consumer of alcoholic beverages of any country in the world. It is true, men and women dead drunk are not often seen there. They drink the milder alcoholic beverages which keep them in a continuous state of mild intoxication. This is more injurious to the germ plasm and offspring than occasional sprees. The women of France are given more to cigarette smoking than are American or Australian women.

France is following fast in the trail of Hawaii. Her deaths exceed her births. This was true in pre-war times. The six months preceding the war the number of deaths exceeded the births by over 28,000. In other words, France was being depopulated at the rate of over 50,000 annually. The decline in births has greatly increased, and also the mortality, during the period of war. Among

the civilian population alone the death rate during the year 1917 exceeded the birth rate by three-quarters of a million. The war has been largely responsible for this tremendous falling off among the civilian population. There is no doubt that after-war conditions will show no improvement over pre-war conditions.

The use of cigarettes has greatly increased both among men and women. France may have won in the war with Germany, but she will be defeated by the "little white slaver" and associated evils. America has made some tremendous strides the past few years, and bids fair to be France's close second in race decline. Through the ingenious advertising schemes of tobacco concerns innocent men and women have been enlisted in boosting the tobacco trade. The increase in the sales of cigarettes has been phenomenal. Nothing like it has ever been witnessed on this planet. Almost everybody—that is, among males—now smokes and among women the habit is greatly increasing. The experience of nations and laboratory experiments fully harmonise in revealing that degeneracy follows in the wake of tobacco smoke.

The Pulse In Health and Disease

EVERY person should know how to ascertain the state of the pulse in health; then, by comparing it with what it is when he is ailing, he may have some idea of the urgency of his case. Parents should know the healthy pulse of each child, since now and then a person is born with a peculiarly slow or fast pulse, and the very case in hand may be of such peculiarity. An infant's pulse is 140; a child of seven about 80, and from twenty to sixty years it is seventy beats a minute, declining to sixty at fourscore. At sixty, if the pulse always exceeds 70, there is a disease: the machine is working itself out, there is a fever or inflammation somewhere and the body is feeding on itself, as in consumption when the pulse is quiet.—*Selected.*

A Physically Bankrupt World

GEORGE THOMASON, M.D.

DURING the past four years, the nations of the world have been engaged in seed sowing on a most gigantic scale. Now a perfectly pertinent question is, What will the harvest be? Speaking particularly in a physical sense, the answer to this question involves for the world the most momentous features of its whole history.

Franklin said, "Wars are not paid for in war times; the bill comes later." Could anything like an adequate statement of the physical results of this war be presented to the world, it would utterly paralyze the comprehension. The price paid in the best blood of every nation by the sacrifice of its sons, the fairest and most physically fit, and millions of them, represents a single item of expense, the payment of which must result in inevitable international physical poverty and degeneracy from which the world will never recover.

Wars in the past, all of them most insignificant as compared with the late world war, have, many of them, shaken the foundations of the world physically. Nations giving their physically fit young men in the prime of life, sacrificing them on the altar of war, and leaving behind the physical weaklings and unfit, to breed the following generation, has led over and over again to national disaster. This is the history of the fall of Rome. Dr. Otto Seeck says: "Out of every hundred thousand strong men, eighty thousand were slain. Out of every hundred thousand weaklings, ninety to ninety-five thousand were left to survive."

The pyramids of skulls piled up by the farmers who had ploughed them up in their wheat fields, the skulls of the flower of young Roman manhood,—young men without physical blemish, who fought and perished on the fields of Novara,—these with other relics of Roman battlefields, tell the true story of the fall of the Roman Empire. The history of other

nations is the same. Dr. David Starr Jordan says: "In the evolution of races and of nations, we find at the outset two general laws, the one self-evident, the other not apparent at first sight, but equally demonstrable. The first proposition: 'The blood of a nation determines its history.' The second: 'The history of a nation determines its blood.' Those who are alive to-day are the resultants of the stream of heredity as modified by the vicissitudes through which the nation has passed."

France Physically Bankrupt

For years before the late war, France was a decadent nation. Her death rate exceeded her birth rate by thirty thousand a year. The average stature of her men is lower by two inches than it was a century ago. Legoyt said, "It will take long periods of peace and plenty before France can recover the tall statures mowed down in the wars of the republic and the first empire."

If this was the unfortunate situation in France prior to the recent war, how much more hopeless her physical situation must be now! Her statesmen view it with the gravest alarm. The average birth rate in 1914 in France was one thousand daily. This steadily declined, until during many weeks of the war, the average birth rate for the entire country was as low as fifty babies a day. Eminent French medical authorities state that because of the privation to which the French children were subjected during the war, those of tender years have not developed normally, and there are many atrophied and degenerate types of children.

With millions of her best men slain, wounded, and crippled in battle; with the majority of her newborn children begotten by men who were physically unfit to fight; with nearly all her children of tender years weakened an emaciated and rendered more susceptible to disease by

hunger, exposure, and privation, the future of France from a physical standpoint may well be viewed with gravest concern.

Of England a quite similar story may be told. A great physical decline has been very apparent in England for many years. England has always given her best men in war. Before the world war, there were a hundred and thirty-five thousand insane confined in the asylums in England, also one hundred and twenty-two thousand feeble-minded children, eighty-five thousand of whom were physical as well as mental cripples. The evidently progressive degeneracy, the lowered standard of physical attainment, the great number of rejections for the army because of physical unfitness several years before the recent war, led to a parliamentary enquiry into the causes of this lowered type of manhood. Now England has sacrificed millions more of her very best type of men. Hereditary taints from physically unfit fathers must from now on be more manifest in England. England can never overcome the physical blight of the war.

A Lunatic Asylum Nightmare

The story of conditions in Russia probably will never be fully told. Enough news filters through to give a faint conception of the unspeakable tragedies of that great country; and it would certainly seem that unless Russia can soon be rescued from her awful plight, there will be no future for Russia, nothing but utter physical ruin and disaster. Millions slain in battle; rivers of blood flowing from Bolshevik atrocities; famine, epidemics, and pestilences reaping a terrible harvest from those who still remain—this is but a glimpse at conditions in Russia. Petrograd, normally a city of two million, has been reduced to seven hundred thousand. Moscow, previously having three million inhabitants, has now but one million, the population dying of starvation and of plagues of typhus fever, typhoid, and cholera. The mentality of those who remain alive is fast breaking because of malnutrition, suffering, and the wit-

nessing of the horrible atrocities under the Bolshevik régime, which has been likened to "a nightmare in a lunatic asylum." There is said to be a veritable epidemic of insanity. The asylums are overcrowded. Raving maniacs stalk through the streets. The prisons are full of madmen. According to reports of physicians, ninety per cent of the mothers die following childbirth, and the mortality among the newborn is equally great.

In the territory of Czecho-Slovakia, utter despair prevailed before the allied governments came to their rescue with food supplies. Dr. Alice G. Masáryk, daughter of President Masáryk, and head of the Red Cross in that country, pictures the condition there as terrible. She states that unless help comes quickly, a million children under six years of age are doomed to die, that two million children up to fourteen years of age are weak from underfeeding, and that the mortality among the old and feeble is appalling. The milk supply is only one-thirtieth of the normal amount; and as a result, more than eighty per cent of the babies of Prague are anæmic or consumptive. More than half the patients in the children's hospital had died of consumption. India is in the grip of a famine, and the natives are reported to be dying by the thousand. The actual figures given are astounding. More than three million persons are reported dead of hunger, while there have been five million victims of influenza.

Time and space forbid an attempt to portray similar conditions in other countries involved in the great conflict. It is a dark picture and a most depressing outlook; but much remains yet to be said. The problem of venereal disease before the war was a tremendous factor leading to race suicide and physical degeneracy. But it is far more of a menace now. Before the war, there was said to be no similar record in existence of the sudden establishment of any great disease among the larger part of the world's inhabitants. Professor Neisser has stated that fully seventy-five per cent of the

male population contract gonorrhœa, and fifteen per cent have syphilis. Dr. Prince Morrow said that the number of syphilitics in the United States had been estimated at two million. He further declared that the extermination of social disease would probably mean the elimination of one-half their institutions for defectives.

The Increasing Menace

But these awful diseases of immorality have taken a firmer hold than ever upon humanity, representing one of the great tragedies of the war. The *London Daily Mail* of April 25, 1917, referring to the report of the military authorities to the House of Commons, stated that there had been some two hundred thousand cases of venereal disease in the British army in France alone. Professor Finger, at a meeting of the Medical Society in Vienna early in the war, estimated that over seven hundred thousand, or about ten per cent, of the Austrian troops had contracted venereal disease. In France, during the first six months of the war, venereal disease increased more than fifty per cent. The statement has already been published that a large proportion of the men who returned to Australia from the Egyptian campaign had contracted venereal disease. One commanding medical officer said, "There is enough venereal disease in the military camps to curse Europe for three generations to come." The report of the Royal Commission showed the grave menace of the disease to Great Britain, where twenty per cent of the urban population had been infected. An eminent writer has written a book entitled "The Syphilisation of the World." We say again that one of the debts of the war to be figured upon is the universally firmer hold with which the great red plague has fastened itself upon our civilisation.

Prior to the war, there had been a slight decrease in the number of deaths from tuberculosis. The annual toll from this dread disease was not less than about two million throughout the world. Tubercu-

culosis is a disease that fastens itself upon the exhausted, underfed, anæmic, physically debilitated individual. The increase of tuberculosis in nearly the whole world since the war, if it can be properly estimated, will be utterly appalling. The statistics above quoted in reference to some of the war-stricken countries greatly emphasise this point. The American government, realising this menace from increased tuberculosis, is sending out experts in tuberculosis to lecture and



A GROUP OF PHYSICAL BANKRUPTS

arouse the people of the country to the menace and danger from the increase of this disease.

A Whirlwind of Degeneracy

And so we might go on and on, citing facts and data to prove further that the prospects for the future health and physical stability of the world are most discouraging. We have no desire to appear pessimistic, but we feel a burden to present these facts as they appear to us. Prior to this great war, the actual trend

of the world's physique was decidedly downward toward decay and dissolution.

The tremendous increase before the war in insanity, heart disease, circulatory disturbances, kidney diseases, nervous and many other diseases indicating degenerating tissue changes, gave unmistakable evidence of a general physical and mental deterioration throughout the world. And now superimposed upon this we have the awful physical devastation of four years of unprecedented war, with its enormous potentialities for further rapid physical decay. The world never before has seen such a combination of the killing and maiming of millions of its best men, and the formation, by the millions who remain, of degenerating habits of the most vicious type—a combination that spells for the

world in the very near future absolute physical ruin and disaster.

The nations have sown the wind, and they must reap the whirlwind. The harvest is to be an inferior type of manhood, womanhood, and childhood. More and more important is it now than ever before, that men shall accept physical regeneration through following the divine principles of the pure, clean life. The only element of safety in the world to-day is to grasp the life line of physical as well as spiritual salvation which is being thrown out to succour those who would be rescued from the carnage, wreckage, and disaster which have overtaken the world. "Because thou hast made the Lord . . . thy habitation; there shall no evil befall thee, neither shall any plague come nigh thy dwelling."

Exercise: Its Use and Abuse

LOUIS L. HOFF, M.D.

THE aim of all exercise should be to make the system efficient. If we are to judge from the rules laid down by writers of books on hygiene, we would have to spend nearly all of our time in oiling and cleaning the human machinery. These arbiters of human sanitary and physical needs overlook one vital point in their directions. That is, to abide by their directions one would have to keep his mind full of rules and regulations, also would have to spend all his time to live up to them. As an instance of time-taking advice, I have before me a book which advises those who would have good teeth to brush them carefully after each meal; the crevices cleaned with dental floss; the mouth swabbed with absorbent cotton and then rinsed with an antiseptic wash. The process should be gone through on arising and before retiring.

This attention five times a day, sounds pretty much like the ablutions of a prima donna. But then, all folks have

not the facilities nor the time to perform the functions of cleanliness which may in due time lead to perfection. Better strive for efficiency and leave perfection to those whose duties do not bear too heavily on the mind.

We have radicals in every phase of life, but the conservative man desires his exercises and his hygienic indulgences to be more practical, so none of the essentials may be overlooked or discarded. We want the largest returns with the least expenditure of energy. We do not wish to consume our energy in obtaining something which does not compensate for motive power used in pursuing it.

Exercise for Efficiency

The question at issue is: How much exercise is necessary if the individual wishes to keep at the upper level of efficiency? Results are what count, and not the number of times one shakes up some muscle or other. Moving the vari-

ous parts is not always beneficial exercise, because more energy may be consumed in the operation than the returns make worth while.

It is an indisputable fact that man cannot think or work or act energetically unless his nerves and muscles work in free and easy manner. Muscles that are never used get soft and flabby. When

gymnastics are all very well for a while. Just as long as the novelty charms. But how long before they are put aside? First the enthusiast, with oozing enthusiasm, misses one session with the mental reservation he will make it up the next time. Then he misses some sessions in a row because company comes or something else interferes. In the end he gives it up



TOO VIGOROUS FOR THE MAJORITY OF PEOPLE!

in this condition they are incapable of responding to the demands made upon them. This state of affairs demoralises the nerves which control the muscles, so that both are irresponsible, and cannot be relied upon to perform their functions in harmony. They do not respond to the needs of the person in an intelligent way.

Now, then, a system of training must be one which holds the interest; it must be more than a mere novelty; also it must not savour too strongly of prescription. The dumb-bell idea and the home

entirely until reminded by the doctor he must exercise.

Exercise Which "Hits the Bull's-eye"

Therefore, I do not suggest or recommend an elaborate plan of private gymnastics, because it soon becomes a forced thing, and will not accomplish the full purpose intended. The only exercise which is of benefit is one which stimulates the mind. It reaches beyond the muscles and the digestive organs. A tired man obtains no good from indulging in thirty minutes' work with chest weights.

The sort of exercise from which the greatest benefit is derived is one in which the spirit of play and rivalry enters. This character of exercise hits the "bull's-eye," because a man likes it for its own sake. It is not to be considered merely for its neuro-muscular effect. It reaches the man's very self. Its psychological value is of as much importance as its physio-

exercise part of the process, but, surely, the results would not be the same.

Tennis is a game which nervous, excitable, overworked people like to play. Yet it is the kind of exertion they ought to avoid. It is too fast, works them too hard, and instead of resting them tires them out.

Rowing, paddling, bowls, tramping—



HEALTHFUL PASTIME IN A LADIES' "GYM."

logical effect. The good a man obtains from a horse-back ride in the park is something more than the mere movements which come from the constant jolting of the digestive organs.

The exhilaration which comes from the fresh air, the stimulus to the whole system comes from the combination of qualities which makes the exercise a profitable, enjoyable, and healthy one. It is in truth more than the term exercise which makes the whole process a worth-while one. A man could sit on a mechanical horse and get the shaking up which is purely the

any form of exercise which appeals to a man's interest and enthusiasm, and which combines a variety of physical movements—belong to the A 1 class of exercise.

However, the busy man cannot go riding every day. He needs recreation at intervals, but as a daily habit it is out of the question.

Many people keep well and do their work satisfactorily without taking any form of exercise at all. A man who is careful of the character of his food; eats properly; attends to the requirements of his bowels; keeps his skin in good order;

and provides himself with a fair amount of mental relaxation, goes along a fair amount of time without any special exercises.

But the man whose mode of living is just the opposite, who works in a badly-ventilated place, or who has a tendency to worry, headaches, or constipation, must have some form of exercise to keep going. The average city business man without any physical impediments to fight against can in all probability get along successfully on such an exercise schedule as the following:—

A Sensible Schedule

1.—Five minutes each day of purely muscular exercise—such as one can take easily in one's room, without any special apparatus. Five minutes a day does not put a great tax on the conscience; it is possible the man will keep it up. This is suggested to keep the external muscles in trim.

2.—Short intervals during the day of fresh air. Brisk walking and deep breathing. This can readily be adjusted to the day's work. It should be possible for every man to walk at least thirty minutes a day in the open. This is suggested for head, lungs, and digestion.

3.—The reservation of at least one day a week for rest. It is necessary to get out of doors for good of the body and the mind. A vacation once a week is absolutely necessary for health. The mind cannot concern itself steadily with one line of work, and remain efficient. It requires a break to give it freshness, spontaneity, and initiative.

The man who ties himself down without giving his mind and his body a change as suggested above, is making a machine of himself. He is sacrificing his personality, and all that it may mean for him. Just a little common sense will indicate to those interested where the line is in exercise which separates its use and abuse.

TAKE no interest whatever in the shortcomings of others.

Chronic Constipation

(Continued from page 272)

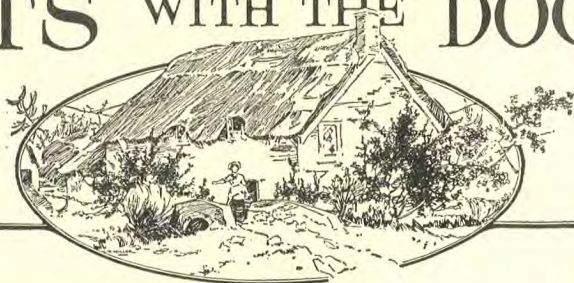
such as apricots. Wash thoroughly and allow to stand in water for twelve hours and use a little of the fluid with the drink. Walking and exercises that bring the abdominal muscles into action are to be recommended. Gardening, wood-chopping, and rowing are good healthy exercises. Avoid white bread and use whole-meal bread and granose biscuits with the meals. Take either fruit or vegetables with every meal. Stewed prunes and raisins are helpful. Many get good from bran cakes. Boiled wheat, a tablespoonful at each meal, is excellent for constipation. Agar Agar is a popular remedy; a tablespoonful of Parke Davis preparation may be taken with each meal. It may be obtained with chocolate flavour and can be taken with porridge or other mushy food. Avoid all rich foods.

Chronic Throat-Ail

ONE of the best remedies for this troublesome ailment is packing the throat over night. On going to bed, apply to the throat a towel wet in cold water and wrung as dry as possible, over which put three or four thicknesses of dry flannel, and cover all with oiled silk or muslin. In the morning, remove the bandage, and bathe the throat with equal parts of vinegar and water, or salt and water, a tablespoonful to the quart. Before breakfast gargle a half pint of water, hot as can be borne. Keep the skin active, and don't take cold.—*Good Health*.

HORSE-BACKRIDING combines more qualities of healthful exercise than almost any other. It secures air, light, exercise, and pleasure. A ride—one ride a day—taken regularly, is both a preventive and a cure for nearly all human maladies. To some, advice must be given to ride slowly; but to others, we may say in the language of the old polypharmaceutists: "When taken, to be well shaken."—*Dr. Frank Hamilton*.

CHATS WITH THE DOCTOR



NOTICE TO SUBSCRIBERS: All questions for this department must be addressed to the EDITOR, "LIFE & HEALTH," WARBURTON, VICTORIA. Subscribers sending questions should invariably give their full name and address, not for publication, but in order that the Editor may reply by personal letter if he so desires. Because of this omission several questions have not been answered. To avoid disappointment subscribers will please refrain from requesting replies to questions by mail.

303. Rash on the Back

"A.B." writes: "I am troubled with a rash, dry, rather like prickly heat, on my back; it is only present in the cool months and has come every winter this four years. It is very itchy and miserable as soon as touched by leaning on a chair or lying on it at night. It is spreading round my body and chest. The more I scratch and rub it the worse it is."

Ans.—This rash is probably brought about by excessive or improper clothing. Thick woollen garments next the skin irritate, the skin and increase perspiration which is retained on the skin and in the garment. A silk or a cellular singlet should be worn next the skin and not a woollen garment. Have a hot bath twice a week and daily wash the parts with a good plain soap and hot water. If the back still gives trouble after this treatment (which is unlikely), sponge the parts after washing with a lotion made with one ounce of calamine, one ounce of oxide of zinc, and a pint of lime water. Keep the lotion in a bottle and shake well before pouring into a saucer.

304. Curvature of the Spine

"Anxious" asks for treatment of above condition and writes: "A few months ago I had a breakdown and am now feeling well, but am very thin and cannot put on

weight. Do you think healthy outdoor work such as light farming would assist? I am working indoors and am often over a fire composed of coke, gas, and molten brass."

Ans.—Yes, outdoor work would be much more beneficial. One or two glasses of fresh milk should be taken with each meal. See that the milk comes from a healthy source. Sponge the body daily with cold water and rub thoroughly dry. Use foods made from the whole grain, such as wholemeal bread and granose biscuits. General massage is helpful in these cases. In some cases an artificial support is necessary, but this is a matter for the physician to decide.

305. Worms

"Adam's (Brisbane)" asks: "What is the best food to shift worms of all kinds? Are pumpkin seeds good?"

Ans.—No food will shift worms, they live on any kind of food.

Tapeworms.—Keep the patient in bed three days on a liquid diet such as milk (a couple pints in the day). Give a dose of one teaspoonful sulphate of soda in water three times a day. On the third night give half an ounce of sulphate of magnesia with one dram of tincture of jalap. Repeat this dose next morning if bowels have not been well opened. At 8 a.m. give the following:—

R̄	Liq. extract of male fern	1 dram
	Mucilage	1 "
	Syrup of ginger	1 "
	Chloroform water	1 ounce

Repeat this dose at 9 a.m. At 11 a.m. give a tablespoonful of castor oil and 1 dram of tincture of jalap. If the bowels are not open within an hour give a soap and water enema. Watch for the head of the tapeworm in the motions. Pelletierin tannate in 8-grain doses may be given instead of the extract of male fern.

Roundworms.—Santonin is the best remedy. Give on an empty stomach. For a child of one year give:—

R̄	Santonini	grs. 2½
	Pulv. Scammonii co.	grs. 2
	Calomel	gr. ½

For a child of 12 years or an adult:—

R̄	Santonini	grs. 5
	Castor oil	half an ounce
	Mucilage	half an ounce
	Acacia Syrup	one teaspoonful
	Peppermint water	2 ounces

Threadworms.—Cut down the starch foods. Give a mild aperient every night. For a child give 1 grain of gray powder and 3 or 4 grains of rhubarb powder. This treatment will cure most cases. For an adult give a couple of ounces compound decoction of aloes before breakfast and a pill of extract of quassia (keratin-coated) at night. Give the same pill 3 times the next day after each meal and the compound decoction of aloes on the third morning. Repeat the pills for a few days if the worms still appear in the motions.

Give also enema of salt and water—one tablespoonful to half a pint of warm water—after the bowels have been opened. An adult would require 1½ pints. An infusion of quassia chips may be used with or without the salt.

306. Varicose Ulcer

"Beryl" states that an ulcer occurred on her leg after the birth of a child. She has now had six children and the ulcer is still very troublesome. She has varicose veins.

Ans.—Where the veins are varicose—enlarged and swollen—the circulation of blood is poor, and consequently the nutrition of the parts is deficient. The first aim should be to relieve the varicose condition of the veins and only rest in bed, or an operation will do this. The large veins can be obliterated altogether by an operation; the nutrition of the parts then improves and the ulcer mostly heals. The best treatment, apart from operation, is rest in bed until the ulcer heals completely. The best application is boiled water. Boil the lint or old linen in the water, apply to the ulcer, cover with a piece of oiled silk to keep from getting dry, and bandage. After the ulcer puts on a healthy appearance, skin grafting hastens the healing very considerably and not only so, but makes it more permanent. Varicose ulcers after healing always have a tendency to break down again, the operation on the veins is the best treatment. The operation could be done in any good country hospital or at home of patient.

307. Running Ear; Talking in Sleep

"E.H." complains of the above, the discharge has a bad smell. "Could a weak or bad stomach have anything to do with it? What is the cause of talking in one's sleep to excess even if eating no tea?"

Ans.—Stomach trouble does not cause discharge from the ear, but healthful foods help recovery. Syringe the ear daily with hydrogen peroxide—one part in four of warm water. Hold the top of the ear upwards and backwards while syringing. Pack the ear lightly at night with a little gauze moistened with solution of perchloride of mercury (1 in 2,000). The general health should be attended to. To prevent talking in sleep omit the evening meal, give up tea and coffee altogether, keep the bowels regular and take a hot general sponge at bedtime. Avoid excitement especially at night.

308. Pain in the Back

"Narrogen" complains of a pain in the lower part of the back which is very severe after she retires to bed. Her doctor told her the tube leading from the ovary to the womb (the Fallopian tube) was blocked up. She wishes to know if medicine will do her any good.

Ans.—As a rule pain in the lower part of the back indicates disease of the womb or the surrounding parts. The only medicines that would do good would be those which improve the general health; there are no special medicines for womb trouble. Tepid sitz baths at night, with injections into vagina of Condy's fluid and water (dessertspoonful to pint) are helpful. Forty grains of permanganate of potash to half a pint of water makes a solution similar to Condy's fluid. The general health must be attended to. Cold daily sponge and outdoor but gentle exercise are good. Some local treatment by a qualified medical man is generally necessary and sometimes an operation is advisable. We would advise a month's sanitarium treatment in this case. There is no special treatment for the too frequent occurrence of menstruation.

309. Irregular Menstruation

"Werrabee" complains of nasty dizzy feelings, headache, and breasts being sore to the touch, while the stomach is swollen at certain times and the thighs ache. She is 43 years of age, has only had the symptoms lately.

Ans.—A medical examination would be advisable in this case. The bowels should be kept regular and tepid hip baths taken at bedtime for a week before the expected symptoms. The frequent menstruation of the daughter (12 years) will probably disappear in a few months; no treatment is necessary.

310. Anaemia

"G.J.D." suffers from severe pains at the heart, giddy feelings, and sometimes is disinclined to work. She feels better

after resting. Her skin is very sallow. Her medical adviser told her she was suffering from anæmia. She has taken iron pills (500) for three months without any beneficial result.

Ans.—This anæmia in young women with a sallow complexion is frequently called "chlorosis." Most medical men give arsenic (liq. arsenicalis—two to three minims after meals) and some combine it with the iron pills. The iron pills can be obtained with arsenic. The most recent idea is that anæmia is due to septic conditions of the mouth, stomach, and bowels. All decayed teeth stumps should be carefully attended to by a competent dentist. The gums should be kept free from inflammation. Tincture of iodine painted on the inflamed gums after they have been dried with a little absorbent wool is excellent. The teeth should be cleansed by some antiseptic tooth paste three times a day. The stomach should be kept healthy by aseptic foods such as granose biscuits, toasted corn flakes, weeties, and puffed wheat. Those foods prepared from the whole grain contain more mineral matters, including iron, than the more finely prepared foods. Fresh milk, unscalded cream, and raw eggs should be freely taken; also fruit. The bowels should be kept regular. Sponge the whole body daily with cold water and dry thoroughly. Sleep in a well ventilated bedroom with the windows open, but avoid draughts. Spend ten hours of the twenty-four in bed and retire early. Gentle exercise in the open air should be taken daily.

311. Pleurodynia

"G.J.D." also speaks of very severe pain on the right side which she had some time ago and which lasted for a week. She could not stand up straight because of the pain, which, however, was relieved by hot fomentations. The doctor called and said it was due to flatulence.

Ans.—It was probably a painful affection of the muscles of the chest and called pleurodynia, a disease akin to rheumatism

and to some extent dependent on the digestion. The flatulence certainly should be treated in these cases. Hot fomentations are the best local treatment.

312. Wetting the Bed at Night

"G.J.D." asks for remedy for child wetting the bed at night.

Ans.—This symptom is the result of many different causes. Often, unfortunately, the underlying cause cannot be discovered. Children should not be treated harshly; they are generally mortified at the failing, and would only be too glad to avoid it. Profound sleep is often a cause; in these cases the children should be wakened when the parents retire. Many recoveries take place at puberty. In many debility or anæmia is the cause. Sea-bathing and athletics will often prove very serviceable. Sometimes pinworms or other irritable condition of the bowel will cause the trouble. Frequently it is due to contracted foreskin, and in this case the child should be circumcised. An irritable, over-acid condition of urine will increase the trouble, consequently it is imperative that the digestive organs should be attended to. See that excess of sugar and nitrogenous foods are avoided. Fresh fruit with meals is helpful. The child should daily have a cold bath and cold douches to the lower part of the spine.

It should be seen that the child makes water directly before going to bed and it is also advisable to wake the child up during the night for the same purpose.

313. Falling out of Hair

"A.L." writes: "Kindly give me a cure for falling out of hair. Every time I comb my hair I get a handful out. It does not matter how much I eat I always feel hungry."

Ans.—The general health, if poor, must be attended to. "A.L." should never eat between meals however hungry she may feel. Once a week wash the head

thoroughly with the following Spirit Soap:—

Thymol grs 40 and 2 ozs each of rectified spirit and *sapo viridis* (green soap). This spirit soap should be prepared by the chemist. If there is any dandruff or roughness of skin of forehead or scalp use the following ointment every night:—

R̄	Resorcin	ʒss (half a dram)
	Sulphur præcipitate	ʒiii (three drams)
	Beta-naphthol	ʒj
	Vaseline	ʒiii

Where there is no dandruff or roughness of skin (*seborrhœa*) the following lotion should be used once daily:—

R̄	Tinc. cantharides	ʒii (2 ozs.)
	Acidi acetici fort.	ʒj
	Glycerini	ʒiv
	Spiritus rosmarini	ʒj
	Aquam rosæ ad	ʒviii

Massage of scalp and the Faradic brush (electrical) are of value in improving the nutrition of the scalp.

314. Hysteria with Dyspepsia

"M.L." writes: "I am suffering from nerve trouble, the least little thing gives me a fright. I scream and after feel very sick and have a sick feeling after meals and sometimes something seems to come in my throat and I have a job to swallow. I get very little rest at night and feel very tired in the morning. The beating of the heart shakes the whole of the bed. I get slight headaches and my eyes get sore at times. Sometimes I get pains in my left and right sides and the lower part of my back. I always get puffed after I have something to eat."

Ans.—In this case, which perhaps some would call neurasthenia, the nervous system is considerably overstrained. A complete change at one of the sanitariums would be the ideal treatment for this case. "M.L." needs sedative nerve treatment. Tea, coffee, and all stimulants must be avoided. It would be better to leave off flesh foods and substitute milk, eggs, and the whole grain cereal foods. She should sleep in a well ventilated bedroom and have daily exercise in the open air. The

body should be sponged daily with cold water. Before bedtime a good hot general sponge, fomentations to the spine, or a prolonged neutral bath (water at 99° F. for half an hour) would help to produce sleep. Avoid fried foods, foods cooked in or with fat (such as pastry and cakes), pickles, sauces, new bread, and hot buttered toast. See that the food is thoroughly masticated and take no food between meals.

315. Post Nasal Catarrh

"M. J. R." writes: "My son is suffering from phlegm dropping at the throat. The trouble started with whooping-cough some years ago. Lately the phlegm has increased in quantity."

Ans.—In all cases of catarrh it is necessary to attend to the digestion. The rules given to "M. L." should be observed. Fat foods, especially when fat is cooked with or in the food, are injurious, the same may be said of all sweets. The bowels should be kept regular by the use of the whole grain foods, such as granose biscuits, weeties, etc. (see Constipation in this issue of "Chats"). Late hours, ill ventilated and crowded rooms, and other unsanitary conditions should be avoided. Sponge the body daily with cold water. Spray nose and the back of throat with Dr. Vilbiss' atomiser No. 16, using the following lotion:—

R̄	Mentholis	grs. v
	Olei Eucalypti	m xx
	Olei Amygdalæ ad	ʒj

It is better first to douche the nose and throat (or sniff up from the palm of the hand) with an alkaline lotion such as:—sodium bicarbonate, borax, common salt (equal parts). One teaspoonful to half a pint of warm water.

316. Pains in Chest and Arm—Unanswered Letters

"Marysville" does not give sufficient data on which we could frame a suitable dietary. He has "pains in his chest and

through his left side up under the arm."

Ans.—This condition frequently results from an irritable heart due to tea drinking, smoking, excessive mental strain or worry, and sexual excess. Tea, coffee, and cocoa should be avoided, drink but very little with meals. Milk is a good food that can be taken with meals, but it does not agree with all. With milk there should not be too great a variety of food, certainly nothing of a sloppy or fluid nature, such as soup, should be taken at the same meal with milk. Milk and eggs together digest well, but form a diet too rich in proteids for many people. A half pint of milk is equal to two eggs. Foods prepared from the whole grain are excellent; in addition to the usual food elements, they contain mineral matter and sufficient residue to keep the bowels regular. Wholemeal bread, granose biscuits, puffed wheat, and similar preparations should be used at each meal. "Marysville" complains that a previous letter has been unanswered; perhaps this accounts for the scanty information given in his last letter. Letters often arrive soon after "Chats" have gone to press; hence a delay of two months. We reply to all letters that reach us.

317. Chronic Constipation

"France" writes: "I have suffered for years with constipation, the cause being inattention to regular evacuations, holding the bowels for hours without giving them attention. . . . I am compelled to take medicine every alternate day and only upon that day can I evacuate. My occupation is sedentary. I smoke 8 ozs. of tobacco per week, drink a glass of ale or stout once a week, and take a cup of weak tea before breakfast, at 11 a.m., and 4 p.m."

Ans.—Tea and tobacco certainly tend to constipation. Drink pure water between meals, at bedtime, and on getting up in the morning. The water may be flavoured with fruit juice. Fruit juice may be prepared from the dried fruits

(Concluded on page 267)



THE HOUSEKEEPER

Macaroni; Its Manufacture, and Recipes for Cooking It

GEORGE E. CORNFORTH

MACARONI is made from a granular meal, called semolina, which is ground from hard, semitranslucent varieties of wheat, rich in gluten, such as durum wheat. In the making of the semolina the bran of the wheat is removed and, by sifting, some of the starchy part of the wheat is eliminated, so that semolina is richer in gluten, the protein part of the wheat, its tissue-building food principle, than flour made from the same wheat. This semolina is mixed to a dough with water. This dough is thoroughly kneaded, then it is put into a strong, steam-jacketed cylinder into one end of which a die is fixed which is pierced with holes about one-fourth inch in diameter when macaroni is to be made, smaller when spaghetti or vermicelli is to be made. In the larger holes a pin is fixed, attached to the side of the hole, so that as the dough passes through the hole it is formed into a hollow tube. The tube is split at one side as it starts through the hole, but comes together before it reaches the end of the hole, and remains so, making a perfect tube. The dough is forced through these holes under hydraulic pressure. The next part of the process is the drying. This is done either by hanging the macaroni on rods or by laying it on trays in heated apartments through which currents of air are driven. The drying process takes from three to six days,

according to the atmospheric conditions, the method used, and the quality the macaroni is to be. The drying must be done as quickly as is consistent with the production of the highest quality. If the macaroni is dried too quickly, it will crack or break.

By the drying process the macaroni is made as dry as the semolina was before it was made into macaroni, therefore the macaroni has the same high food value in protein and carbohydrate that the semolina has, but it is just as "impoverished" a food in cellulose and mineral elements as white flour or white bread or white rice, and, like other wheat products, it is deficient in fat; therefore there is need of combining with it other foods that supply the lacking elements. Milk and eggs furnish some of the elements lacking in macaroni. The tomato sauce so often served with it supplies mineral elements. The cheese with which macaroni is perhaps most often prepared is rather lacking in mineral elements. And macaroni, in all the ways in which it is served, is lacking in bulk or cellulose.

A few years ago the best macaroni was made only in Italy or other parts of Europe. But at the present time the best macaroni in the world is made in the United States, especially when sanitary methods of manufacture are considered. The durum wheat is grown in America

now, and the most scientific and sanitary methods of manufacture are used in turning it into macaroni.

The best macaroni is smooth and elastic, has a creamy colour, and looks somewhat translucent. It breaks with a smooth, glassy fracture, and does not split when broken. The inferior quality

should be as clean when it comes to you as when it is made, and should require no cleaning. The macaroni should be broken into inch-length pieces, or the ready-cut macaroni may be used, which is more convenient and needs no breaking. The macaroni should be put to cook in actively boiling salted water, using two



NATURE DOES HER BIT TO PROVIDE US WITH NUTRITIOUS FOOD

that contains colouring matter is rough, has a floury instead of glassy appearance, and splits on breaking.

Recipes

The method of cooking macaroni is similar to the method of boiling rice. Macaroni should not be washed or soaked. Washing or soaking softens the outside of the macaroni so that it sticks together, making a pasty mass, while well-cooked macaroni is slippery, every piece being whole and separate. If it seems necessary to clean macaroni, it may be whipped with a dry cloth, but, really, macaroni

quarts of water and three teaspoonfuls of salt to each cup of macaroni, and boiled rapidly from twenty minutes to one hour, according to the age and size of the macaroni, stirring it occasionally so that it will not stick to the bottom of the saucepan. When done, the macaroni is soft enough to be easily mashed between the thumb and finger. The whole should then be poured into a colander to drain off the water, and cold water should be run through it to prevent the tubes from sticking to one another.

For those who like it, garlic makes an enjoyable flavouring for macaroni.

While the following recipes call for macaroni, there are a great many different shapes and sizes which have different names. Some of the names are: spaghetti, vermicelli, macaroncelli, rigatoni, ziti, fettuce. The smaller kinds, like vermicelli, and those shaped like seeds, stars, letters, rice, shells, and rings of various small sizes, are best adapted for use in soups. Most of the other kinds could be substituted for the plain macaroni in the recipes.

Macaroni with Cream Sauce.— $\frac{1}{2}$ cup macaroni; 1 quart water; $1\frac{1}{2}$ teaspoonfuls salt.

Cook the macaroni in the boiling salted water according to the general directions given.

Prepare the cream sauce as follows: 2 cups milk, or part cream; 4 tablespoonfuls flour; $\frac{3}{4}$ teaspoonful salt; $\frac{1}{2}$ clove garlic, cut fine if desired.

Put the flour into a small bowl, and with a batter whip stir it smooth with three tablespoonfuls of the milk. Heat the remainder of the milk, to which the garlic has been added, to boiling, in a double boiler, then stir the flour mixture into it. Allow it to cook ten minutes. Add the salt. Then stir the cooked macaroni into the sauce. Allow it to stand over the stove long enough to reheat the macaroni.

Macaroni with Egg Sauce.—Make this like the macaroni with cream sauce, adding one or two hard-boiled eggs, chopped, to the sauce.

Baked Macaroni with Eggs.—Put the cooked macaroni in alternate layers with sliced hard-boiled eggs into a small baking dish, spreading some of the cream sauce over each layer. Sprinkle the top with zwieback crumbs. Bake till it begins to boil up through.

Macaroni au Gratin.— $\frac{3}{4}$ cup macaroni; 1 cup sour cream; $\frac{1}{4}$ clove garlic, cut fine; $\frac{1}{2}$ teaspoonful salt; 1 egg yolk or one whole egg.

Cook the macaroni according to the general directions. Beat together the egg yolk, salt, sour cream, and garlic, and mix it with the macaroni after it is cooked and drained. Put it into a small baking dish. Sprinkle with zwieback crumbs and bake till set.

If a larger quantity is to be made, one egg is sufficient for four times this recipe.

Macaroni au Gratin (with Cottage Cheese).— $\frac{3}{4}$ cup macaroni; $\frac{1}{2}$ cup creamy cottage cheese; 1 cup milk; 1 tablespoonful vegetable oil; $1\frac{1}{2}$ teaspoonfuls salt; 1 egg; $\frac{3}{4}$ clove of garlic.

Cook the macaroni according to the directions. Stir the cottage cheese smooth with the milk. Break the egg into a bowl. Beat the egg with a batter whip, then beat the oil into it drop by drop, so as to make an emulsion of the oil. Then stir into it the milk-and-cheese mixture, the salt, and the garlic. Now mix this with the cooked and drained macaroni. Pour it into a baking dish. Sprinkle with crumbs, and bake till set.

Spaghetti with Tomato Sauce.— $\frac{1}{2}$ cup spaghetti; 1 pint canned tomatoes; 1 small onion, sliced;

2 tablespoonfuls vegetable oil; $2\frac{1}{2}$ tablespoonfuls flour; 1 teaspoonful salt; $\frac{1}{2}$ teaspoonful of thyme; $\frac{1}{2}$ clove garlic; $\frac{1}{2}$ bay leaf.

Cook the macaroni according to directions. Simmer the tomato, onion, garlic, bay leaf, and oil together for half an hour. Stir the flour smooth with a little cold water, and stir it into the boiling sauce. Allow it to boil five minutes. Rub the sauce through a fine strainer. Add the salt and thyme. If the tomato has boiled away enough to make the sauce too thick, add water to make the sauce of the proper consistency. When the macaroni is cooked and drained, stir it into the tomato sauce and heat the macaroni and sauce together.

Saged Macaroni.— $\frac{1}{2}$ cup macaroni; 2 tablespoonfuls nut butter; 2 cups hot water; $2\frac{1}{2}$ tablespoonfuls flour; $\frac{3}{4}$ teaspoonful salt; 1 to $1\frac{1}{2}$ teaspoonfuls sage.

Cook the macaroni according to directions. Put the nut butter into a small saucepan. With a batter whip stir a little of the hot water into it and stir till it is smooth, then stir in a little more hot water and stir till smooth. Continue stirring in water till all the water is stirred in and the whole is perfectly smooth. Put it on the stove and heat to boiling, watching it carefully, because it is very likely to boil over as soon as it begins to boil. Stir the flour smooth with two tablespoonfuls cold water, and stir it into the sauce as soon as it begins to boil. Allow it to cook slowly for five minutes. Add the salt and sage. When the macaroni is cooked and drained, stir it into the sauce and heat together.

Macaroni Baked With Olives.— $\frac{3}{4}$ cup macaroni; $1\frac{1}{2}$ cups water; $\frac{1}{2}$ cup tomatoes; 1 tablespoonful oil; 1 bay leaf; $\frac{1}{4}$ teaspoonful thyme; 1 small onion, cut fine; 1 tablespoonful browned flour; 1 teaspoonful salt; 2 tablespoonfuls white flour; $\frac{1}{2}$ cup sliced olives.

To make the browned flour, sift one pint of flour into a baking pan. Set it into the oven, and stir it frequently until it is of a dark-brown colour, about the shade of the shell of a chestnut. Sift this browned flour, put it into a glass jar, and keep it for use as needed.

Cook the macaroni according to the directions.

Cook together the water, oil, bay leaf, onion, and browned flour for one-half hour. Then stir the white flour smooth with two tablespoonfuls of cold water, and stir it into the sauce. Let it cook five minutes. Then rub the sauce through a strainer fine enough to remove the tomato seeds. Add the salt, thyme, and olives. When the macaroni is cooked and drained, stir it into this sauce. Put all into a baking pan, sprinkle with crumbs, and bake till well heated through.

Macaroni with Nut Tomato Gravy.— $\frac{1}{2}$ cup macaroni; $\frac{1}{4}$ cup strained tomato; $1\frac{3}{4}$ cups water; 2 tablespoonfuls nut butter; 2 tablespoonfuls flour; $\frac{3}{4}$ teaspoonful salt.

Put the nut butter into a saucepan, and with a batter whip stir the water into it, adding the water a little at a time and stirring it smooth as the water is added. Then stir in the strained tomato. Heat it to boiling. Stir the flour smooth with two tablespoonfuls cold water, and stir it into the boiling sauce. Simmer five minutes. Add the salt. Stir the cooked and drained macaroni into the sauce, and reheat.



QUIET TALKS WITH MOTHERS

A Doctor-Mother to Other Mothers

LAURETTA E. KRESS, M.D.

THE care of the child does not begin with the day of its birth. Through the nine months previous, careful consideration ought to be given to the welfare of the mother and of the expected baby.

The mother should have rest at night, good, nourishing food, exercise indoors and outdoors, proper clothing, and pleasant environment, and should be in a happy mental state.

During this waiting period, the little clothes are prepared for baby's welcome; not long, heavily frilled garments, but simple, plain, light-weight garments made only twenty-eight or thirty inches in length, so that baby need not begin at once bearing heavy weights. These should all be made to hang from the shoulders, and thus leave the waist free with the exception of the undershirt and band. Starched dresses, which are stiff about the little neck and arms, never should be used; soft, washable material is much better for this purpose.

If these preparations are made beforehand; and if baby's drawer is well supplied with safety pins of different sizes, talcum powder, and witch-hazel cream, in addition to all necessary clothing; and if napkins, stockings, bootees, blankets, outer wraps, and so forth are in readiness, "Welcome" may be written on a card and placed in the top of the drawer.

A little nest must be prepared for the nestling,—a small baby crib, an extension cot on the side of mother's bed, a swing

cot over the foot of mother's bed, or a bassinet. A simple and comparatively inexpensive bassinet consists of a clothes basket, lined and placed in a frame made of wood, which, prettily draped with dotted Swiss over some colour, makes a cosy bed for baby for three or four months. A large pillow should be placed in the basket, that the child may not be deprived of air by lying too low.

When the little stranger arrives, it must be oiled with warm sweet oil and kept in a warm blanket. At the end of three days it may be washed with water and dressed in its new clothes.

The physician should drop into each of baby's eyes a drop of a silver solution, in order to be sure no infection is carried into the eyes. The mouth and nipple must be washed with boracic acid solution each time the baby nurses. This will prevent its having thrush or parasitic stomatitis.

Feeding time should be observed with regularity,—every two and one-half hours for two months; then every three hours during the third, fourth, and fifth months. This same interval between feedings may have to continue till the child is weaned, although there are many children who can have their feeding changed to every four hours. Naturally the child's capacity increases as it grows, and its energy increases also, so that more food is used and stored.

Breast feeding is the only natural method for taking nourishment; but where this is impossible, modified milk can be used, although there are some cases when this does not agree, and the attending physician is not infrequently puzzled to get the right kind of food for the frail little body.

Warm water should frequently be given baby to drink, either from a spoon or from a nursing bottle. Many babies suffer from thirst because the nurse or mother has forgotten to give them water. The bottle and rubber nipple should be boiled daily in a weak soda solution to keep them clean and wholesome.

Sleep is nature's restorer. The normal infant sleeps nearly all the time during the early months, waking only long enough for food. Very much depends upon habit as to when it shall sleep and how much sleep it shall take. It can be trained to sleep at night, and if it has any wakeful time, it can be trained to lie awake in the late afternoon, instead of in the middle of the night or very early morning.

Baby should be taught to lie down awake and go to sleep without being rocked or held. When the custom is established of holding the child in the arms until it is asleep, the mother or attendant can do nothing else until baby is asleep. And the baby soon demands it as a right, and continues to do so until it is quite a large child. If the mother begins early enough, baby may easily be trained to go to sleep by itself in its own bed without being rocked or held. There should be regularity in sleeping as well as in feeding.

When the weather is pleasant, baby should be outdoors on a verandah to sleep some part of each day. Children trained to plenty of air are much more healthy than those "hothouse plants" that never get outside.

A healthy, normal baby does not vomit

its food; it sleeps nearly all night; it is happy, playful, and full of mischief. It is a veritable sunbeam in any home.

Babies twine their little lives around our hearts, and no home is complete without one or more. We wish it were more fashionable nowadays to have families of five or six children. If properly reared, they will rise up and call their parents blessed.

Some "Don't's" Young Mothers Would Do Well to Observe

Don't eat "everything" when nursing



A MAKESHIFT AROUND WHICH MANY DANGERS LURK

a baby. Good milk is not made of improper food.

Don't get angry or worried, as it affects the milk, causing colic.

Don't get hands and feet cold, or, on the other hand, in hot weather, don't get overheated.

Don't eat foods that produce gas in the stomach and bowels, such as peas, beans, cabbage, onions, radishes, turnips, and rhubarb. A diet of cereals, milk, eggs, and sweet fruits will create less colic for baby. When baby has colic through some error in your diet, canvass carefully your meals and find out what has produced it. Then eat that particular thing no more till baby is older.

Don't use Mrs. Winslow's Soothing Syrup, Baby's Friend, Mother's Friend, Colic Cordial, and other nostrums, to relieve colic. They are all harmful. Give hot water freely and a warm enema; apply heat to the feet and abdomen. There are small rubber bags for babies, which can be

filled half full of water and laid on the stomach. Always see that the feet and hands are warm.

Don't nurse a child after it has had an injury, such as a bump on the head or jamming its finger in the door. Give it warm water instead, and wait until the shock is over before nursing.



"THE END OF A PERFECT DAY"

Don't feed a child after a burn until all symptoms of shock are over. He will be more likely to survive if given water instead of food after such an accident.

Don't pick a child up every time it cries. Often changing its position, re-adjusting its pillow, or smoothing its bed, is sufficient to let it know you are near. On the other hand,—

Don't let a child lie so much that its

head gets flattened and all the hair worn off the back of the head from continuous lying.

Don't allow a child to form habits for which you will be obliged to punish it afterward. You, rather than the child, would deserve punishment.

Don't bundle baby up with so many wraps that it perspires. It should be clothed warm enough, but the custom of bundling is a great error.

Remedy for Sleeplessness

A WARM bath just before going to bed tends to allay the nervous irritability which prevents sleep in children whether caused by temper or work, and it does so probably by dilating the blood vessels on the surface of the body, and so relieving the brain. A warm mustard foot-bath—an excellent remedy for sleeplessness—is also beneficial.—*Selected.*

A Smooth Drink

DURING an attack of tonsillitis, when even the swallowing of water causes agony, a drink which "slips down," and thus avoids the painful effort of swallowing, is a great relief to the patient. Such a drink may be made by

beating the white of an egg to a froth, adding the juice of either half an orange, half a lemon, or an equivalent amount of pineapple juice, and pouring into a tumbler of water. Strain through a fine strainer, and drink as wanted.—*Mrs. David S. Morse.*

THE wisest man in head knowledge may play the fool in taking care of his body.

Care of the Baby in Summer

Fretfulness

BABIES and young children frequently suffer from thirst. They should be offered a drink of water several times a day, particularly in hot weather. If baby cries in the night, a drink may quiet him and send him to sleep.

Irritating clothing is at times responsible for baby's fretfulness. Woollen socks or shirts or stiff cap strings may spoil his comfort, even if he is well, and, in hot weather especially, a superabundance of clothing is frequently responsible for much real suffering.

Dress the baby in light cotton garments and keep him as cool as possible without exposure to draughts. Do not be afraid to let him have nothing on but his diaper and one other thin garment on hot days, but take quick notice of any indication that he is taking cold.

Prickly Heat

One of the troubles from which a baby often suffers in summer is prickly heat. This ailment appears as a fine red rash, usually on the neck and shoulders, and gradually spreads to the head, face, and arms. It is caused by overheating, due either to the hot weather or to the fact that the baby is too warmly dressed. The rash comes and goes with the heat, and causes intense itching.

The remedy for it is to take off all the clothing, and give the baby a sponge bath in tepid water in which common baking soda has been dissolved, one tablespoonful to two quarts of water. Use no soap, and do not rub the skin, but pat it dry with a soft towel. After the skin is thoroughly dry, dust the inflamed surfaces with a plain talcum powder.

This ailment, like all others, is more readily prevented than cured. Frequent cool baths, very little clothing, simple food, and living in cool rooms or in the open air will probably save the baby from much of the annoyance of prickly heat and other more serious ills.

Chafing

Fat babies are liable to suffer from chafing, especially in hot weather. It appears as a redness of the skin on the buttocks or in the armpits, or wherever two skin surfaces persistently rub together.

Much the same treatment is required as in prickly heat. Never use soap on an inflamed skin. Instead use a soda, bran, or starch bath.

Great care should be taken not to let the baby scratch the skin when it is irritated. Sift together two parts powdered cornstarch and one part boric acid, and use it freely on the chafed places. Remove wet or soiled diapers at once. Wash and dry the flesh thoroughly, then dust the powder freely between the legs.

Milk Crust

This is a skin disease affecting the scalp, in which yellowish, scaly patches appear on the baby's head. These patches should be softened by anointing them with olive oil or vaseline at night, and the head should be washed with warm water and Castile soap in the morning.

If the crust does not readily come away, repeat the process until the scalp is clean. Never use a fine comb or the finger nails to remove the crusts, as the slightest irritation of the skin will cause the disease to spread farther. The scales will usually disappear after a few days of careful treatment.

Constipation

If the baby does not have at least one full bowel movement in twenty-four hours or in thirty-six at the outside, he is in need of such care as will bring about this result. Breast-fed babies often respond to an increased supply of laxative food in the mother's diet. If this is not sufficient, a six-months-old baby may have a tablespoonful of strained orange juice between two of his morning feedings.

Bottle-fed babies may have fruit juice in the same way, and thin oatmeal gruel may be substituted for barley water in

making up the feedings, after the baby is four months old.

Perhaps the best preventive of constipation is to teach the baby to move the bowels at the same hour every day. This training should be begun when the baby is three months old, and should be faithfully continued until the habit is firmly established. This practice establishes in the baby from the beginning of his life a custom which will greatly increase his chances for good health, and results in an enormous saving of work to the mother. She no longer finds herself confronted with a pile of soiled diapers to wash, but instead gives fifteen minutes of careful attention to the baby each morning. Do not use enemas for the relief of constipation save in emergencies, and do not resort to purgative medicines except with the doctor's advice.

"If you want the baby to get the croup, let it creep about on the cold floor with bare arms and legs. A sure method."

FOR DYSENTERY.—The pain of dysentery with constant tendency to relieve the bowels, may be greatly relieved by making the patient lie upon his back in bed, with the hips well lifted upon a pillow. Straining of the bladder may often be relieved in the same way.—*Good Health.*

How One Mother Solved a Problem

By A Mother

ONCE a little child asked: "Mamma, did you get me out of a rose-bush? Nurse said you did."

Do you think that mother looked into those clear, trusting eyes and told a falsehood, as her mother before her had done?

She did not, for we are wiser in our generation. Yet in order to gain time the mother asked: "Would you like to have me tell you about the baby roses?"

Then a series of lessons in nature was begun. The mother taught the child about the baby flowers swinging in their little green cradles, and the baby birds in their soft nests, all watched over by the kind Father.

When the question was again asked, the mother felt that the little mind was prepared; so, taking the child into her lap, she looked into the sweet face and confiding eyes and told the wonderful story of the human flower.

The little one listened wonderingly. It was a very beautiful story to him. When it was ended, he looked up with tears, and said: "Dear Mamma, I love you more than ever, 'cause you have done so much for me."

Thus perfect confidence was established.

Do you think that evil can enter into that little heart, so lovingly prepared for God's great truths?

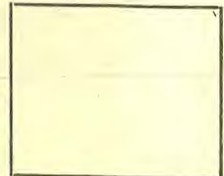
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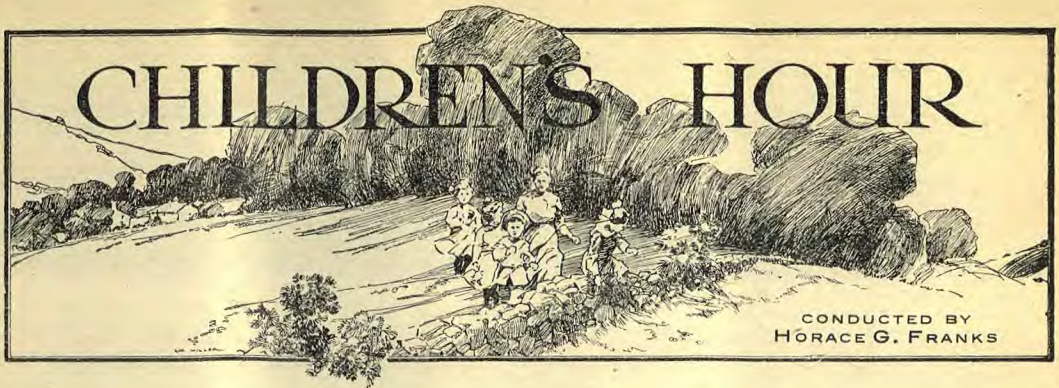
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Interesting Facts About Aeroplanes What They Can Do and What They Cannot Do

ALTHOUGH in Australia aeroplanes are not so common as they are in England, there is, I suppose, scarcely a child who has not seen at least pictures of "flying machines," those trains with two or more engines which take us up to see the sunset above the clouds.

But the well-educated child of to-day must know more about aeroplanes than merely being able to tell the difference between them and elephants; so this article will give in simple fashion just a few of the most important facts concerning these wonderful machines which carry men on the back of the wind and through the clouds at a speed at least twice as fast as an express train.

Let us suppose, therefore, that we are going for a ride in one of these machines. Which one shall we choose? Ah! here is one which is just about large enough to take four of us, with the driver. The machine itself weighs a little under a ton. Of course we could choose a small one, weighing about eight hundredweight, or a very large one weighing about eight tons. That is right, make yourselves comfortable in your cushioned seats, and while we are travelling through space, ask me as many questions as you like.

What is that? How long did it take to make this aeroplane? It took about 4,000 man-hours; that is, 100 men build an average machine in 40 hours, work which makes the cost of a small aeroplane about

£1,500 and that of a large one about £10,000. What is that, Albert? You wish to know how far an aeroplane can travel before it dies of old age, do you? Well, the distance varies very considerably, but the average life in miles is about 120,000. Perhaps you would also like to know just how high it can fly. The record for high flying is continually being broken, but we can safely say that several aviators have flown to a height of 30,000 feet—nearly six miles. The average speed of an aeroplane is between 100 and 120 miles an hour, although of course there are some machines which go even faster than 150 miles an hour. And here is a little girl in the corner wants to know how slow an aeroplane can go. Suppose we ring this bell and ask our pilot over the telephone to go as slow as he can and then let us watch this little instrument. There now! we are going just about half the full speed, and our careful driver says that that is as slow as he dare go. And he tells me that the propeller—that thing like a double oar in front—is going round now about five hundred times every minute, so that when this machine is going at full speed, it will be revolving sixteen times every second.

While we are travelling so smoothly, with the ground spread out like a wonderful picture-book beneath us, let us notice a few more remarkable facts about flying. A pilot often tells the way of the wind by watching the smoke from chimneys and also by the bending of trees, while the many different instruments all around him indicate whether he is flying too

slowly or too high or whether he is flying in an upright position or upside down! Skilful pilots can fly their machines within two inches of one another, although they usually like to keep a little farther away, even if it is lonely up in the great air ocean. A flying-man cannot hear any of the sounds of earth, even when his engine is not working, because the noise of the wings and the wires rushing through the air makes it impossible.

Now let us have a few more questions. That's right, here is the first: How fast can aeroplanes climb? We are told that before the war 500 feet a minute was "good going," but to-day it is a common occurrence for a machine to be 15,000 feet above the ground ten minutes after it started its journey. Here is another good question: Does rain affect flying? Flying in the rain is rather an unpleasant experience, because the face gets stung and the goggles become smeary, thus making travel rather difficult. In addition to this, heavy raindrops dint the propeller, while a violent shower may remove all the varnish and even fray the edges of it. The wings, however, are seldom damaged by the rain. There now! I thought some one would ask me what the wings are made of. Generally they are made of fine linen, which also forms the covering of the body of the machine.

Can men hear each other speak in an aeroplane without shouting in each other's ears, like we are! Oh yes! Some machines are fitted up with suitable telephones, while still others are equipped with an instrument called the audion, which enables the occupants to hear voices above the roar of the engine and the wind. And now for the last question. What happens when a pilot loses his way? Mr. Arthur Mee, in his Catechism of Aviation, says that he will first do his best to identify prominent landmarks with his map. If his compass goes wrong he will try to ascertain his direction by the sun; and as a last resort, will land and ask where he is.

But our machine has stopped, and here we are, home again!

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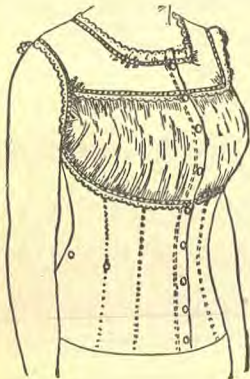
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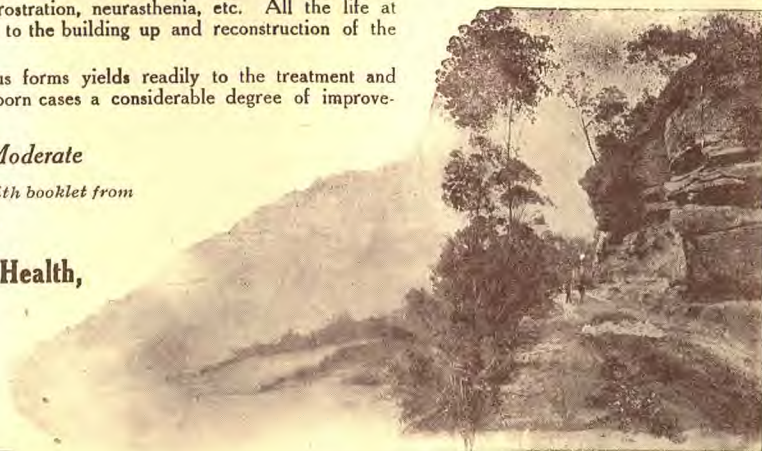
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