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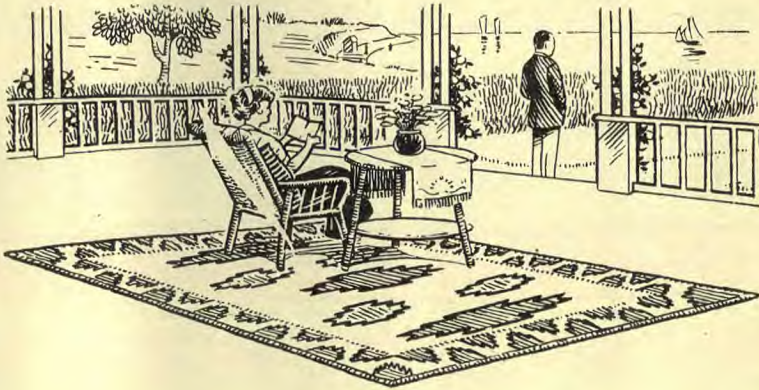
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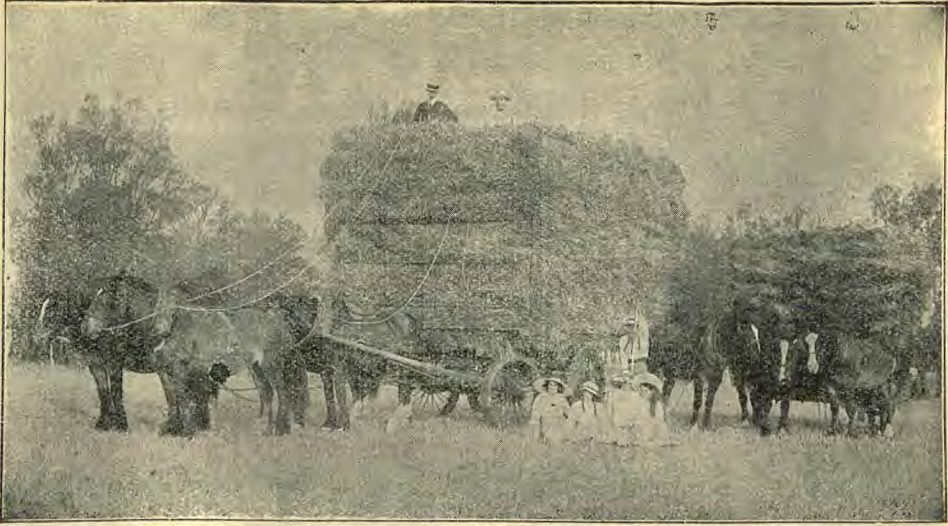
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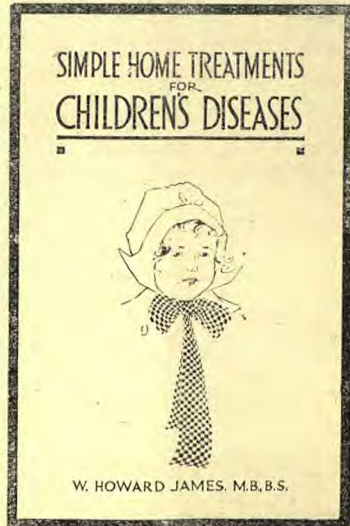
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ON SUMMER SEAS

J. H. Kinnear, Photo., Auckland

LIFE AND HEALTH

Vol. 8

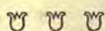
January-February, 1918

No. 1

Editor: CHARLES M. SNOW

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TO live harmoniously and successfully in this world, one must educate his taste to conform itself to his salary. Many of the failures and disappointments in this life are due to the effort of individuals to make a £100 salary cover a £1,000 taste. Such efforts are always ruinous; they can end only in failure and disappointment.

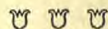


TRUE economy in the home is to be measured not by pounds and shillings, but by the product of the home—healthy, happy men and women and children. When the heads of the household make that kind of economy their chief aim, we shall hear less grumbling about the high cost of living. That kind of living will be worth what it costs, whatever that may be in money.



WALKING is splendid exercise if properly done; but a walk taken in a listless, foot-dragging manner is of little benefit. Put vim and energy into it, and then rest if necessary. A short walk taken in that way is much better than a long one taken in a half-hearted, aimless, energyless fashion. Walk briskly, if only for a few minutes. You will soon find that those few minutes can be lengthened, and you will be conscious of growing vigour and energy.

IF you are a drinker of tea and coffee and you find that your physical system is in need of repair, that your digestion is out of order, and your nerves are on edge, it isn't necessary to spend a guinea to find out what is wrong. You may be able to find out right in your own home and save money also in doing it. Drop the tea or the coffee, and if you feel that you must have some drink at meals, let it be a drink that contains no caffeine or theine. But don't expect a complete metamorphosis of your system in a day or a week. You have been years in getting into that condition; therefore give yourself a few months to get out of it. The ragged nerves will cry out for the drug for a time; but let them cry while you live on to laugh.



IT is a wrong course to pursue, if you wish to be in the best of health, to lie down for a short nap just after eating. This retards digestion for the reason that when we are asleep the heart eases up in its work, and it necessarily follows that the secretion of the digestive fluids is lessened; and the heat of the stomach has a tendency to ferment the contents instead of digesting them. From such a sleep one does not rise refreshed, and the body is more weary than it would have been without the sleep because the stomach's

contents are not in proper condition for ready assimilation into the system. Rest is good; but like other good things it should be taken at proper times. A good thing abused becomes an evil.

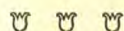


THE one who finds more pleasure in his club than in his home will begrudge every pound spent on his home. With many thousands the club has become the most successful rival of the home—a condition which cannot be too deeply deplored. It drives a wedge between husband and wife and between parents and children, and renders all the inmates of such a home doubly susceptible to the temptations of the evil one. It really throws down the bulwarks and walls, and entices the enemy to enter. Make the home an attractive place for each and all its inmates, a place where they would rather be than anywhere else in the world. Such a home will bind parents and children together, and will be a restraining and uplifting influence through the entire life of the children who have the good fortune to be reared in it.



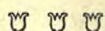
THEY tell us that while nine British soldiers died on service every hour in 1915, twelve babies died every hour at home. This wastage of life and of future possibilities is tremendous and very much of it is unnecessary. The lowest and most guarded estimate is that 100,000 babies die in Britain every year, and it is claimed that of these 50,000 perfect babies could be saved. A few years ago New Zealand was losing infants at the rate of 110 per 1,000; but as a result of an educational campaign, that rate has been reduced to 50 per 1,000. This is accomplished through better housing, improved sanitation, and enlightened ignorance. However, it is claimed that only one baby in every ten is getting proper care. The other nine must take their chance, and against too many of these little folks the odds are too great. They do not pull through.

MOTHERS and fathers, and grown-ups generally, do you realise that children are imitating you every day; and that what they see you do they plan to do and attempt to do? That is one of the chief reasons why there are so many tobacco-users in the world to-day. Boys see men using tobacco, and naturally conclude it is manly to use it. Others hear vulgar language, slang, and profanity, and proceed to imitate that, so that they may demonstrate to their playmates their acquirement of these "manly" accomplishments. Let this be a guiding rule of life: Never do anything you would not like to see a child imitating. For remember what the child does as a child he will most likely continue to do as a man.



IN the warfares of this world nations seek to keep food from other nations, their enemies, that they may starve them into submission; but in the warfare of life many a household is starved for air day and night—through ignorance, of course—but the result is none the less disastrous to the inmates of the household. There are many even in the rural communities who seldom think of opening a window to give a free circulation of fresh air through the room in which they sleep. Such starvation of human systems is responsible to a very large extent for the ease with which tuberculosis fastens itself upon them. The writer knew a well-to-do farmer who was in ill health through this cause, but who could not be induced to open the window of his sleeping apartment more than one inch, although there was no other opening in the room that would permit air circulation. To open that one window one inch seemed to him very risky. Ill health is the natural and inevitable fruitage of such conditions. Put on plenty of covers, use a night-cap if the hair is thin, open the windows to a generous width, and let the system have a continual oxygen bath. This is nature's antidote for many of the ills from which humanity suffers.

TEACH the child to love the flowers, the birds, the animals. You can hardly do this unless you love them yourself. If you do not love them, then study them. It is an unfailling remedy for lack of love. The child who goes through this world without his love for these things having been awakened is being deprived of one of the most joy-giving assets of human existence. The love for flowers can be awakened and stimulated by giving the child a little flower garden and helping him to plant and care for *his* flowers. Study them with him; it will do you both good. And children are naturally interested in birds, even though they may be tempted to throw stones at them. The more they study the birds, however, the less stones they will throw. And the boy who has a cat and a dog of his own is not nearly so likely to abuse those belonging to others.



HERE are a few rules that will greatly help those whose digestion has become impaired, and will also help to forestall the impairment of digestion in those whose digestion is now seemingly satisfactory: Masticate your food thoroughly, especially starchy food, and do not eat too freely of soft, starchy foods. Have your meals at regular hours, and let there be at least four or five hours between them, and don't lunch between meals. Do not eat a heavy meal at night. The last meal of the day should be eaten at least three hours before retiring. You will have less trouble if you do not have vegetables and fruits at the same meal. Grains and fruits go well together. If you take starchy foods and fruits at the same meal, the fruits should be taken last, so that their acids will not interfere with the action of the saliva upon the starch. Cane sugar and milk taken together are likely to cause fermentation. That is why so many find trouble in eating cake when the cake has been made with milk and cane sugar. Use cane sugar and jelly sparingly, as they are likely to cause catarrh.

Ventilate the Pram

SAYS Lady Plunket, herself an expert in child rearing and child culture: "The great majority of pram hoods I see are not healthful. Put your head under one of them on a warm afternoon when the sun is beating in. Baby is shut in a poisonous and boiling atmosphere. It is the nurse that is getting the air, not the baby." This is a matter that ought to have the attention of every mother. See that your pram is ventilated, and make sure also that the rays of the sun do not fall into the child's eyes.

Baby Week

THE tremendous decline in the birth rate in those countries most affected by the great war is bound to rivet the attention of the world more upon the great importance of conserving infant life. Baby weeks will become of more absorbing interest. They will become matters of serious importance, rather than of entertainment or amusement. Muriel Viscountess Helmsley, a daughter of the nineteenth Earl of Shrewsbury and mother of the second Earl of Feversham, is one of the most enthusiastic supporters of Baby Week. The founder and president of the woman's branch of the L.M.S., she displays the keenest interest in day nurseries, and has travelled all over England addressing meetings, raising money, and generally stimulating the public conscience to listen to the cry of the children. She belongs to numerous philanthropic and other societies, her gracious personality and persuasive eloquence are extremely popular, and her services are ever freely rendered in this most important cause. For many years governments have assisted the people in caring for domestic animals, but child welfare has been left very largely to persons of a philanthropic turn of mind. We are glad there are so many individuals thus inclined. Like Abu Ben Adam, may their tribe increase.

Food for a Walking-Tour

W. Howard James, M.B., B.S.

YOUNG men during the holidays band themselves together for long walking tours. A walk to be pleasant must not be encumbered with over much luggage; the carrying of parcels is not healthy exercise, and it is certainly not recreation; the kind of food to take and the quantity are, consequently, matters of considerable consequence. If food can be procured on the journey, the food question is not so difficult, but generally the walks are in mountainous districts where replenishment of the daily needs is impossible. Three young men, for instance, have written us concerning a trip from Warburton to Walhalla. We are not acquainted with the district travelled, but believe that no food is procurable along the route—a distance of about sixty miles. A pack horse would be a luxury for such a trip, especially if the horse could obtain some grass on the way. Certainly food for the return journey need not be taken, as a parcel could be readily sent to Walhalla before leaving Melbourne and much of the necessary supplies could be obtained at the township itself.

The days foretold by Lord Lytton in his interesting book, "The Coming Race," have not arrived; in fact they seem quite as far off as when the book was given to the public. Food in the compact tablet form, such as a man could carry in his waistcoat pocket, could never sustain life as man is at present constituted; bulk is absolutely essential for the successful performance of the functions of the body. Professor Metchnikoff, the able successor of the eminent Pasteur, maintains that the adoption of the flesh diet is an evidence of man's advancement in his upward evolutionary process, but that man's alimentary canal has failed to accommodate itself to his development along the line of the concentrated flesh dietary, and suggests that the progress be hurried on by the elimination of the colon by a surgical operation! We, however,

prefer to exercise patience and keep to the natural non-flesh dietary until nature effects a transformation in the organs which are decidedly constructed for the more bulky diet. If the tablet idea were practicable, man would need little more than a stomach; the intestines could be allowed to disappear through non-use; but would the man survive the ordeal? There are many very concentrated foods on the market, which are largely made up from the proteids of dried milk, but we very much doubt their utility, and much prefer the untampered articles themselves—fresh milk and newly-laid eggs.

Bread is rightly spoken of as "the staff of life"; it supplies the necessary bulk as well as the essential energy and heat imparting elements, and must consequently be included in the hamper of the walking tourist. Wholemeal bread is preferable to the white bread, even though its calorific value may be slightly lower; it contains more of the salts that are essential to a healthy condition of the blood, and also ensures a healthy action of the bowels. Wholemeal bread, however, quickly gets dry and unappetising; consequently, for a four-day journey we would suggest that half the supply, that for the latter part of the journey, should consist of white bread. All authorities are agreed that a man doing a moderate amount of muscular work requires food that would produce 3,500 calories of heat or energy, and this means the consumption of about three pounds of ordinary food per day. We would recommend that about one and a half pounds of bread be taken for each man for each day; this would produce 1,920 calories of energy, leaving 1,580 calories to be made up from other foods. Eggs do not carry easily, but if boiled previously no difficulty would be experienced. Two eggs would represent 135 calories. In preparing the eggs, put them in boiling water, remove the dish from the fire and allow to stand for ten

minutes. Prepared in this way they are more digestible. A man needs about three ounces of fat per day. Three ounces of butter produces 680 calories, but butter does not carry well. About double this quantity of nut cheese would form an agreeable substitute. Nuts and dried fruit form excellent foods. Dates, figs, prunes, and raisins weight for weight contain more nourishment than bread. About one and a half pounds of either of

of proteids (the nitrogenous element of our food). Again, with a fair amount of nuts no other fatty food would be required, as about half their weight consists of fat. Walnuts contain sixty-two per cent, the sweet almond fifty-four per cent, and the peanut forty-two per cent of fat. "No man," it has been said, "need starve on a journey who can fill his waistcoat pocket with almonds." Four ounces of almonds would yield about 700 calories.



IN RURAL NEW ZEALAND

J. H. Kinnear, Photo., Auckland

these foods yield four-fifths of the total amount of non-nitrogenous (carbohydrates) ingredients of our food required daily. Vegetables or fruit are necessary to keep the blood in good order, and consequently, as their bulk is small, some dried fruits should be included in the tourist's preparations. A quarter of a pound of either of these foods would yield from 300 to 400 calories. The proteids lacking in these foods can be supplied by the addition of nuts. Nuts contain from fifteen to twenty per cent

We will now sum up the value in calories of food recommended for the tourist's journey:—

Food per day	Calories
1½ lb. bread	1920
2 eggs	135
6 ozs. nut cheese	about 680
4 ozs. dates, figs, prunes, or raisins	350
4 ozs. almonds or walnuts	700
	Total 3785

This amount of food would thus daily supply over two hundred calories more than is absolutely necessary for the upkeep

of a man weighing eleven stone, and doing a moderate amount of muscular work. Nuts, it should be remembered, must be thoroughly masticated in order to ensure digestion. "The nutritive value of nuts," says Hutchison, "is no doubt extremely high, and when suitably prepared they may form substitutes for meat to a considerable extent, for they resemble the latter in containing much proteid and fat in a small bulk. They are an even more concentrated food than cheese, and should rather be used as part of the ordinary diet than as a supplement to an otherwise large meal. Thirty large walnuts would contain as much fat as two and three-quarter pounds of moderately lean beef, but two and three-fifths ounces of such beef would be equal to them in proteid. It would be necessary to consume about seven hundred walnuts in order to obtain

the necessary amount of proteid required by the body every day."—"Food and the Principles of Dietetics," page 261. The same authority, in speaking of the high value of malted nuts, gives its composition as follows:—

Water	4.5 per cent	Maltose	49.3 per cent
Proteid	23.6 " "	Fat	20.4 " "
	Mineral Matter		2.2 per cent

Nut meat and protose contain a large amount of proteid, and form a really compact and digestible substitute for flesh foods. Three ounces of either of these foods would be ample for a meal. These preparations can be obtained in half pound and one pound tins. One meal a day should include one of these substitutes for flesh foods. The amount of bread could be reduced to one pound a day per man if the amount of nuts and dried fruits was increased correspondingly.

Constipation

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

CONSTIPATION is not a disease in itself, but a symptom of imperfect digestion; it by no means exists in all dyspepsias and frequently exists where the sufferer believes his digestion is perfect. The writer has met many ignorant people who have unwittingly called the symptom by its right name, "indigestion," and it has been the only symptom of indigestion which they have experienced. Perhaps the best definition of this most common symptom would be "an insufficient emptying of the bowels." The bowels may be open daily and yet the individual may really suffer from constipation, or they may not be open for two, three, or four days without constipation existing. The essential feature is adequacy and not frequency; frequency is a matter of habit rather than necessity. Many suffer from symptoms which point to an insufficiency in the opening of the bowels who have the bowels open perhaps two or three times a day, while others go for days

without suffering from any apparent inconvenience.

Constipation is the result of an insufficient fluid secretion in the bowels, or deficient muscular action, or both combined. Defecation is the resultant of three separate muscular efforts: a contraction of the muscles of the intestines (peristalsis), a contraction of the abdominal muscles, and a relaxation of the muscle of the lower end of the bowel (the sphincter ani). All these movements are under the control of the nervous system. That which produces the stimulation for the act of defecation is found in the character and bulk of the contents of the bowel—solid, liquid, and gaseous. As far as percentage of water is concerned, the evacuation should be about the same as that of the body generally—seventy-five per cent of water and twenty-five per cent of solids. If the water is in excess, there is diarrhoea, but if deficient, there is constipation. An ordinary evacuation

weighs about five or six ounces. The solid constituents of the *fæces* are made up of indigestible fibres and husks of grains, fruits and vegetables. Eggs, milk, rice, and flesh foods leave but little residue, and hence, when not mingled with other foods, there is generally a tendency to constipation, but these foods in themselves do not constipate. Some of the salts of vegetables and fruits are laxative in their action. The normal secretions of the alimentary canal, such as the bile, pancreatic juice, etc., undoubtedly increase the peristaltic action of the bowels. Very definite constipation, however, may exist with a normal out-flow of bile.

Constipation frequently exists in many definite diseases which interfere with the muscular action of the bowels themselves. Any inflammatory process, as peritonitis, appendicitis, enteritis, lessens the muscular power of the bowels, and constipation is the result. Anæmia (poorness of the blood) and general debility lessen both the muscular powers and the secretions of the bowels, and may consequently be accompanied by constipation.

In diseases of the heart and liver, the walls of the bowels become engorged with venous blood, and the result may be either constipation or diarrhœa, or the two conditions may alternate. Many nervous diseases are accompanied by irregularity of the bowels. The constant use of some drugs, such as opium in cough or other mixtures, and tannic acid in tea and coffee, causes constipation. Enormous quantities of tannic acid are daily consumed by the tea drinker, and the result is not only poor digestion, but often inveterate constipation. The constant taking of purgatives and the use of the hot enema certainly increase the tendency to constipation. Constant neglect to obey the call of

nature through lack of time often results in constipation. Sometimes this neglect is due to the existence of fissure of the anus, piles, or other rectal trouble which make the act painful. Women perhaps more than men suffer from this cause. Want of exercise, sedentary habits, and, in women, tight lacing, are causes of constipation. Insufficiency of food, especially of those foods which contain a large amount of material which is not digested and absorbed, is a frequent cause of inaction of the bowels. A diet con-



A PRUNE ORCHARD IN BLOOM

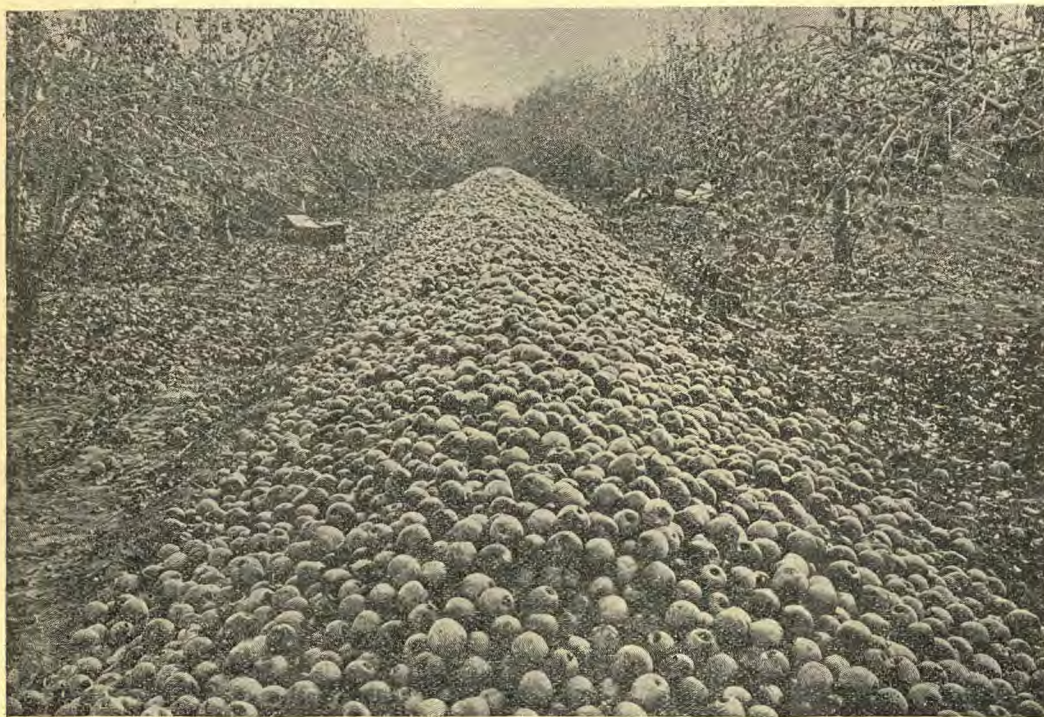
sisting of milk, meat, white bread, and rice would certainly tend to constipation. If the proportion of water in the intestinal contents falls from the normal (75 per cent) to 30 per cent, the bowels will be absolutely constipated; even with a percentage of 50 there will be constipation. Failure to take a sufficient quantity of fluid is a frequent cause of constipation. Many suffer but little from a confined state of the bowels, while in others the missing of one day will produce uncomfortable symptoms. The more prominent symptoms of constipation are coated tongue, headache, giddiness, foul breath, dry skin, yellow tint of skin, depression, irritability, and mental dullness. Many become hypochondriacal if the bowels are

not absolutely regular, and they watch their symptoms with the greatest anxiety, and thereby only increase the trouble.

Treatment

We meet many who complain, It matters not what I eat or drink, the bowels still remain costive. Coarse food for a time with many will give some action of the bowels, but the system gradually gets accustomed to these irri-

secretes the necessary fluid for the proper expulsion of the alimentary waste matter. Attention to the general health will not only increase the intestinal secretions, but give also tone to the muscles of the intestines and abdomen. Many take too much rich food, and others clog the system with impurities which interfere not only with muscular and secretory power, but with every function of the body. A considerable lessening of the



A REFRESHING AND HEALTH-GIVING FOOD

tants, and the bowels again become confined. We must remember that constipation is due to: (1) insufficient secretion of fluid in the intestine, and (2) sluggish muscular movements. Both of these conditions depend to a large extent on the general health. The drinking of pure water one would judge would increase the fluid in the intestine, but frequently the water is simply absorbed into the blood and got rid of through the kidneys or the skin. With proper attention to the rules of healthy digestion, nature

amount of food in these cases will improve digestion, and with it the natural intestinal movements. Others take too little food or live on food that is not sufficiently nutritive; with these more nourishing food is required; if there be anæmia (poorness of the blood in iron) some iron tonic is necessary as, for instance, citrate of iron and ammonia (as much as will go on a sixpence) after meals. Iron preparations need to be continued for some time in order to produce good results. The skin must be kept active by a

warm bath twice a week and cold sponge daily. The normal functions of the body cannot be carried on satisfactorily with a sluggish action of the skin. The daily cold sponge or cold shower is a wonderful tonic to most people. Open air exercise and work that will improve the respiratory movements are essential. The ascent and descent of the diaphragm in respiration keeps the intestines in regular and gentle movement. That exercise is best which gives the abdominal muscles an opportunity to develop, such as rowing and gardening. Special abdominal exercises morning and night are decidedly beneficial. These may be carried out by lying on a flat surface, as the floor; first raise each leg alternately to the vertical position with the knees straight several times and then both legs together; then, with the legs straight, raise the body to the vertical position several times. A quarter of an hour of these exercises morning and night will greatly increase the power of the abdominal muscles and to some extent those of the intestines.

The drinking of plenty of pure water during the day and especially on going to bed and on rising is decidedly beneficial. The tannin in tea and coffee more than counterbalances the water taken with the tea. Many cases of constipation are kept up by the continual and free use of these harmful beverages. Cocoa acts injuriously by upsetting the digestion. Milk, with many, especially when boiled, is found to be constipating. Some, however, find that large quantities of fresh milk, taken with the exclusion of other foods at breakfast time, digest well and increase

the action of the bowels. Aerated drinks frequently upset the digestion, and consequently can produce no good effect on the bowels. Alcoholic drinks and the use of tobacco are decidedly harmful.

No food whatever should be taken



A GOOD EXERCISE FOR THE MORNING

between meals; an apple on going to bed and an orange in the morning will often be found helpful. Fruit juices, as those of grape, apricot or orange, can with advantage be added to the drinking water. The dried apricot, for instance, after being washed, can be soaked in water for twelve or more hours and the juice resulting can be added to the plain water; this makes to many the drinking of so much water

less tedious. Oatmeal water with many persons is effectual. A tablespoonful of oatmeal should be added to a pint of cold water and in an hour or more strained through muslin.

Fruit, matured fresh, or stewed, has a good action on the bowels when it agrees with the digestion; it should be taken at the close of the meal, but avoided when vegetables have formed a part of the meal. Foods that are too concentrated, such as eggs, milk, and flesh foods, unless mixed with more bulky foods, tend to constipation. Eggs and milk and all foods of which they form a part should be cooked at a low temperature. In creamed rice and similar dishes these ingredients should be added after the chief part of the cooking has been done, and then maintained at a temperature below boiling point. Granose biscuits, puffed wheat and wholemeal bread should largely take the place of white bread. Oatmeal or wheatmeal porridge helps the action of the bowels; but should, however, be taken with cold fresh milk with a little salt, but no sugar.

Prunes, dates, figs, and stewed fruits generally make favourable additions to the morning and evening meal. The dates greatly improve the flavour of granola, and thus cooked make a good breakfast food. All fried and rich foods should be avoided. Plain living is essential in the overcoming of constipation.

Treatment as above must be persevered with, for good results cannot be expected

at once; in the meantime, some laxative is generally found necessary. The warm-water enema may be used once or twice a week; or if that is not effectual, a little brown soap may be dissolved in the water. All hot enemas tend to relax the muscles of the bowels and should be followed (after the bowels have opened) by half a pint of cold water, which should be retained.

Cascara sagrada, either in the tablet or liquid form, is a good laxative, and not so liable to be followed by constipation as most purgative medicines. The liquid cascara is more powerful. A small dose morning and night is better than one large dose. Cascara evacuant, manufactured by Parke Davis & Co., is very pleasant to take; the dose, however, should be rather larger than that of the ordinary cascara. With some a teaspoonful dose of Epsom salts in hot water on waking operates the bowels satisfactorily. When small doses are effectual, there can be no objection to the use of Epsom salts occasionally; but large doses, such as half an ounce or more, are certainly harmful. Liquid paraffinum is now being used extensively for constipation; it has the advantage of being a non-irritant and acts simply by softening the fæces; it is not to any extent absorbed into the system, and is perfectly harmless. A tablespoonful or more may be taken two or three times a day, and, if persevered with, often produces good results.



JUST A FEW DOGS

J. H. Kinnear, Photo., Auckland



GENERAL ARTICLES

Keep Cool

D. H. KRESS, M.D.

THE warm weather is here. Many will consider it necessary to go somewhere in order to keep cool. Much money is spent unnecessarily each year by those who cannot well afford it. It is possible to keep comfortable at home, providing you know how.

The human body possesses the power of adapting itself to changes in temperature. On a hot day the stones and the earth warm up. The human body adapts itself to external conditions in such a way that the temperature internally always remains practically the same.

This steady and equable internal temperature is maintained chiefly through means of the circulatory system. The temperature of the liver and some of the deeper muscles in which oxidation takes place probably ranges from 103 to 105 degrees, while the mucous membrane of the mouth has a temperature of only 98.6 degrees, and the skin a still lower temperature.

The heated blood from the internal organs and muscles is brought to the surface for the purpose of cooling. The cooled blood is then carried internally to cool off the internal organs; in this way an equable temperature is maintained. When the weather is cold, impressions are made upon the sensory nerves of the skin to that effect, and these impressions are conveyed to the blood regulating centres and less blood is permitted to be brought to the surface. This accounts

for the white skin or goose flesh appearance noticeable on a cold day. This is nature's way of protecting the body.

Alcohol produces a feeling of warmth in cold weather. Those who are under its influence experience a sensation of warmth when the body temperature is actually lower than normal. It does this by paralyzing the vaso-constrictor nerves and causing dilatation of the small blood vessels of the skin, thus permitting a greater flow of blood to the periphery. Thus the warm blood brought to the periphery produces a sensation of warmth to the nerves of sensation located in the skin. But while there exists a sensation of warmth, the blood is being cooled off too rapidly by being brought to the surface. Should the internal temperature be taken, we should probably discover a sub-normal temperature. Drunkards exposed to the cold may freeze to death and yet feel no discomfort from cold.

In warm weather, the peripheral or surface blood vessels and capillaries dilate. This accounts for the red flushed faces on warm days and the red swollen hands. More blood is brought to the surface to be cooled. The cooling of the blood is brought about by evaporation of moisture from the surface. A normal adult may on a hot day give off from two to four pints of moisture every twenty-four hours and yet give no evidence of perspiration. This is what is known as insensible perspiration. If the weather becomes very

hot, more moisture oozes out through the pores of the skin. People who perspire freely do not suffer so much from heat as those who have a dry, hard skin. The moisture on the skin answers the same purpose as the moist cloth surrounding a pitcher of water on a warm day, it keeps the body cool.

In hot countries drinking water is usually kept in cloth bags and hung up so

communicated to the heat regulating centres in the brain, consequently a greater amount of fuel is automatically fed to the body furnace, and a corresponding amount of heat is produced. In cold weather more food is demanded, and foods which are more concentrated.

In warm weather it is not uncommon for people to eat the same food and the same quantity they do in cold weather.



"KEEPING COOL"

J. H. Kinnear. Photo., Auckland

that the breeze can get at it. The breeze will cool the contents of the bag. Men and women who work and as a result perspire freely, suffer less from heat than do those who sit quiet and try to keep cool.

Diet is an important factor in keeping cool on a warm day. In cold weather we feed our furnaces to keep our houses warm. In warm weather less fuel is required. The human body is a house. It has within it a furnace and an automatic stoker or fireman. When impressions of cold are made upon the skin, it is

The system cannot utilise it. Should it be digested, it would not be consumed but would be piled up as adipose tissue or tissue wastes, and clog the living machinery. The lack of energy experienced in warm weather is frequently due to over-eating or clogging of the living machinery with an excess of fuel, and not, as is supposed, to too little food.

In warm weather the digestive organs cannot digest the same quantity or quality of food that they are capable of digesting in cold weather. Wisely, therefore, nature

takes away the desire for solid foods on a warm day. Dogs fed on the same amount of meat in warm weather as in cold weather become ill. The cat has fits if no change is made in her food in warm weather. She cannot eat the same number of mice or rats. Much of the sickness among men in hot weather is due to the absorption of poisons, resulting from the decay of cold weather foods in the alimentary canal. Summer diarrhoea is frequently caused by this. Meat is not only unsuitable, but is a dangerous food in hot weather. Butter and other animal fats which retard digestion and readily ferment should be used very sparingly in warm weather. Nearly all would do better to supply their place with ripe olives, nuts, or olive oil in moderation.

Fruits are of all foods the best during the summer months. The food elements in fruit are served in a form to require very little effort on the part of the digestive organs to prepare for absorption, while the acids are aids in the digestion of the proteid food that it may be necessary to eat in addition to the fruit. They also contain liquid in the purest form obtainable to supply the needs of the body. Super-cooked vegetables ferment readily and should be used sparingly in warm weather. Raw cabbage, lettuce, celery, mild radishes, cucumbers, and carrots are beneficial.

In warm weather I would recommend that the diet be composed almost exclusively of cereals and fruits with some additional harmless relish, if craved. Salads made of lettuce, celery, and tomatoes with the addition of a little lemon juice and olive oil will be found appetising and healthful. If the diet here outlined should be followed during the hot summer weather there would be less summer sickness, and sun-stroke would be practically unheard of. Overeating and auto-intoxication are responsible for heat strokes and not the heat as is generally held.

The Clothing

The same amount of clothing should not be worn in summer. Linen or cotton

underwear is preferable to other fabric. Light, thin, and loosely woven inner and outer garments allow the access of air to the skin, and the free evaporation of moisture from the skin, which tends to keep the body cool and comfortable.

Self-control is an important aid in keeping cool in warm weather. The work of the day if planned beforehand can be performed in a quiet manner without worry or excitement. Periods of complete relaxation should be taken for a few minutes before taking meals, if possible. This will be found very beneficial when there is more or less hurry. It is best not to complain of the warmth. Allowing the mind to dwell upon the weather makes it more difficult to endure.

TOASTS

Ernest A. Robinson

HERE'S to the child who learns to find each day
The gladness and the sunshine by the way,
And chooses what is good and shuns the vile;
Who takes with thankful heart his "daily bread;"
Who loves the poor, respects the hoary head,
And hears a firm refusal with a smile.

Here's to the maiden fair whose radiant eyes
Dispel domestic mists as they arise,
With whom her friends their joys and sorrows share;
Who finds instruction in her virgin days,
Not learning fashion's, but fair Nature's, ways,
Where ev'ry page shows God's protecting care.

Here's to the youth who, forced to toil for bread
Mid scheming and deception, looks ahead
To no success that might his conscience sear;
Who aids his slower brothers in the race;
To women bears himself with manly grace,
And holds his parents with his honour dear.

Here's to the matron deaf to scandal's tale,
Alert at sorrow's cry or hunger's wail,
With fittest remedies the case to treat;
Her ready needle well the naked know,
With cheer and sympathy her features glow,
Her children's love her dearest incense sweet.

Here's to the man inflexible of will,
Who in a time of stress is tranquil still,
And walks where Wisdom's torch has gone before;
The friend of Truth and Peace and Equity,
Who seeks the good of all humanity,
His children's friend, his wife his counsellor.

To these we will in "aqua pura" drink
As fitting those brave hearts who never link
Their names with what may stain the human race.
By men unnoticed, oft they go their way;
They seek not wealth, but only that they may
At last meet their Creator face to face.

Save Your Teeth

HORACE G. FRANKS

VISITORS to Australia are strikingly impressed with two characteristics of her inhabitants. The first is the happy, care-free, independent air of the typical Australian, and the second is the sad condition of the teeth of the people. In far too many cases the features of the face and the appearance of that merry Australian smile are greatly marred either by a ragged set of teeth full of gaps or by a set of false teeth elaborately adorned with many dabs of gold. To many minds this gold embellishment seems to add to the appearance; but this is not the impression usually forced upon the visitor.

It is the general opinion the world over that a sound set of pure white teeth is a person's most valuable possession, for not only does it greatly enhance the beauty and the appearance, even making a plain face lose its plainness, but it is also an invaluable aid to the health of its owner. It makes good health and it preserves good health—if it, in its turn is kept in perfect order and cleanliness. With good teeth to commence the work of keeping the body supplied with its fuel, the food becomes properly assimilated, nourishment follows, and healthy flesh and rich blood are the result.

An Extensive Subject

This subject can only be lightly touched on here, and reference made to but a few of the very many essential points. We will first notice a few startling facts concerning

Teeth and Military Efficiency

It is a remarkable, yet deplorable, fact that a large number of patriotic volunteers in the earliest part of the great European war had teeth so defective that it was impossible for the soldiers to chew the army rations; hence they were compelled to return to their homes. It was not so with Germany. For more than sixteen years she has recognised the necessity there is for a clean mouth and perfect

teeth for army life, and so part of her vast preparations for war included the provision of dental clinics for the school-children. That her plan was successful is shown by the fact that dentists and doctors declare that no small proportion of her wonderful military efficiency is due to the fact that she has made the care of the teeth compulsory.

The other nations have already commenced to look at health along the same lines, and in 1913 English education authorities in the large cities adopted the school dental clinic. In America a campaign has been started to save the children's teeth, including tooth-brush drill in all the schools in New York and hundreds of other cities.

And the move has not been made too soon. One authority asserts that 95,000, 000 persons in the United States have one or more decayed teeth. In fact, one doctor even goes so far as to declare that decayed teeth are causing more harm to the human race than alcohol.

Cause of Decay

Decayed teeth are caused by the action on the teeth of the many organic and inorganic acids in our food, followed by the rapid working of micro-organisms, which flourish in their millions in the remains of food which find a resting-place in the teeth cavities and the spaces between the teeth. In many cases, slight discomfort is felt by the intruding fragments, and in a very short time we are poking away with a pin or a match in painful and, for a long time, fruitless efforts to remove the particle of food. At last we are successful, but at what cost? We have comfort, it is true, but in our efforts to obtain it we have enlarged that cavity, made it wider and wider with our poking, until the nerve becomes uncovered, as we soon find out to our sorrow. The other causes of bad teeth will be dealt with when we come to out-

line preventive and precautionary methods.

Take Care of the Teeth

Is there any need to tell our readers how? If the teeth are defective, pay a visit to the dentist. Do not be afraid. Tell yourself that if the dentist does not attend to you NOW, one day, you know not when, the doctor will be in attendance—dosing and treating you for some debilitating disease. A filling in time saves many an hour of pain. Therefore, do not delay!

When your teeth are in order, it is your business to keep them so. And the chief rule to obey is simple but insistent. Clean, CLEAN, CLEAN! Use the brush

after every meal, if possible; if not, as soon as possible. The teeth should be brushed at least twice daily, and the mouth well rinsed after every meal. In brushing the teeth, remember that it is not muscle that counts,—but skill. You are not cleaning your boots, so

exercise care and intelligence. Brush the top row downwards, and the bottom row upwards, thus assisting the bristles of your brush to penetrate the spaces between the teeth. And, of course, do not forget that your teeth have a back surface as well as a front, and that this requires diligent cleaning also.

We suggest that the use of tooth powder or paste be limited to once a day; and that powdered charcoal and the like be barred all entrance into the mouth. Many dentists do not even advise the use of the old-fashioned precipitated chalk and carbohc powder, but these are better than nothing!

Take Care of the Brush!

There has been much controversy over the advocacy of using a brush for the teeth, but it is now generally agreed that, until something *really* better is invented, we should continue the use of the good

old bristle brush. But do not use a brush which is too hard. On the other hand, however, let the bristles be firm. In cleansing the teeth as already suggested, do not neglect the gums. Vigorous rubbing draws the blood to them and, if any germs should have penetrated some tiny cavity, the rush of pure blood will soon make short work of the intruders; and, at the same time, brushing removes all deposits around the gums. If the gums are particularly tender and bleed profusely on application of the cleaner, try dipping the brush in warm water before using; this will soften the bristles somewhat for the first touch.

And when you have cleansed your teeth,



TOOTH-BRUSH DRILL BY AMERICAN SCHOOLBOYS

what are you going to do with the brush? Just leave it about in the bathroom or in your bedroom exposed to all the many germs of the air? That is what is generally done! Even if you have used an antiseptic powder or paste, the brush is usually washed after use, and is, therefore, likely to catch many a wandering germ. If you cannot make use of the following sterilising suggestions, try hanging the brush in the sun for a short time, and do not forget to purchase a new brush at decent intervals. We give below two methods of sterilising your tooth-brush, so that you need not grow grey worrying over "virulent bacteria."

Number 1.

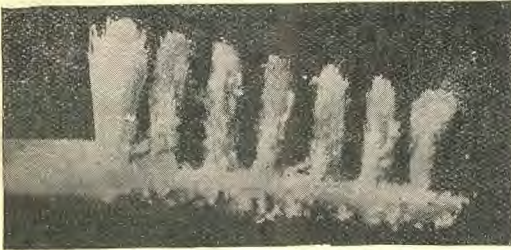
Make a lysol solution of one in twenty-five. Into this dip the brush for a few seconds, and no germs will live. If a weaker solution is used, leave the brush in for a longer period.

Number 2.

Keep a tooth-brush and a salt-cellar as your hygienic equipment. After use, drop half a teaspoonful of salt into a glass of warm water and use as a

mouth wash. After cleansing the brush under running water, sprinkle salt upon it. The salt is dissolved on the wet brush, and penetrates right to the centre of the tufts of the bristles. Now hang the brush in a clean place, and before long you will notice that the water has evaporated, leaving a deposit of salt crystals in and around every bristle. In such salty circumstances, no germs can live; and, at the same time, this procedure toughens the bristles. When needed for use again, knock off the excess salt and use as it is, applying, if you wish, your favourite tooth preparation on the salty brush. This method also provides very efficient antiseptic for promoting mouth-hygiene.

Another suggestion whose practice has been followed by good results is to use



A WELL-STERILISED TOOTH-BRUSH

occasionally a normal solution of hydrogen peroxide instead of the usual paste or powder.

Precautionary Measures

Our remaining space we will utilise in giving a few suggestions which, if acted upon, will prevent a great deal of the present tooth trouble. Prevention is always better than cure, but never more so than in connection with those grinders which prepare our food for digestion. It is the easiest matter in the world for the teeth to decay, chip, and get out of order, but it is also a very easy matter to prevent this catastrophe. Here are a few "don'ts":—

1. Don't eat too many sugary things.
2. Don't forget to chew your food.
3. Don't partake of patent medicines.
4. Don't use any medicines too freely, especially those containing iron and the like.
5. Don't use the teeth as nut crackers.
6. Don't bite hard materials, such as toffee.
7. Don't use your teeth as a general cutting machine for string or cotton.

8. Don't pull out pins, etc., with your teeth.

9. Don't pick the teeth with a pin—use a proper tooth-pick—but better still, a tooth-brush.

10. Don't smoke or chew tobacco.

And now for a few "do's":—

1. Clean, clean, clean—both the teeth and the brush.

2. Visit the dentist regularly.

3. Eat plenty of vegetables; also partake freely of nuts and grains.

4. Drink plenty of Nature's purest drink—water.

5. Eat crusts; if they do not "make your hair curl," they will certainly improve the teeth and the gums.

6. If you have not already done so, try these suggestions.

7. Keep the mouth of your children well attended to.

8. Make them promise to continue the good which you have started.

A Campaign

We ask all readers of this article not only to put its principles into action, but to impress upon others, both old and young, the necessity of these things. In America and England special lectures and talks and drills are being given to the children, and it would be well if such a movement could be made permanent in our own country among our school-children. It is time our legislators saw this thing in its true light, and a campaign urging action to be taken would undoubtedly receive the assistance of the medical and dental professions and greatly increase the efficiency of Australia's growing men and women.

DRINK freely of water in order to cleanse out all impurities that may have gathered through a liberal diet during the winter. No other fluid can take the place of water in the body economy. The products of the soda-fountains, or those worse places, you will let alone, if you have regard for your health.

Curtailing Extravagant Expenditures

D. H. KRESS, M.D.

TRUE, loyal, patriotic Australians must begin to think about cutting down their extravagant expenditures. In time of war this becomes a necessity. You are living in a country of plenty, yet the amount you spend unnecessarily for food, above your actual needs, would alone be sufficient to support well another nation like yours.

There is no intelligent man living who does not admit that we can get on very well without alcoholic beverages entirely. Many are doing it. Those who do not drink are our best citizens.

The degenerating influence of alcoholic drinks is established beyond a doubt. Even in small daily doses it tends to bring about degeneracy of the heart and blood vessels and such important glands as the kidney and liver, which have to deal with it. The brain, nerves, and other tissue with which it is brought in contact also suffer. Even in small doses, alcohol removes the restraint from the lower nature and causes immorality and vice to flourish.

All now admit that whisky and rum are *bad*, but there are those who still believe beer and wine to be foods of value. Possibly this is because the beer drinker feels stronger under its influence and puts on weight. While the beer drinker puts on weight, his tissue is inferior in quality. He may *appear* well, but he is not so in fact. He may be *physically* strong but he is *vitality* weak. He is to-day considered a poor risk by life insurance companies, and a bad subject for the surgical room. Should he be stricken down with pneumonia, the chances for recovery would be tremendously against him.

Animals exposed to the mere fumes of alcohol suffer. Although the adult animals thus exposed put on weight and *appear* well, their offspring, it has been found, are degenerate. Many of them are born dead, and but few of those living, only seventeen per cent, survive. The

offspring seem to suffer to a greater extent than do the parents.

If beer were a food, surely England would encourage its manufacture and would see that her men in the trenches were daily supplied with it. But England has decreed that the manufacture of beer must be cut down because she needs the grain that is destroyed in its production. Six hundred million bushels of grain could be saved by closing up the breweries and distilleries of America alone, enough to feed twelve million people; and it is expected that this will be done in the very near future in order to supply food for America and her Allies.*

Whether taken in large or small doses, alcohol is a mocker. It claims to be what it is not, and it claims to do what it does not do. It is a deceiver. It makes the weak man *feel* strong, for the same reason that it makes the poor man feel rich. It narcotises the brain, and makes the consumer unconscious of his actual need and condition.

Not merely is it a dangerous and harmful beverage, but as a medicine it is now considered unreliable and unsafe. It no longer finds a place in the American Pharmacopœia among the list of medicines.

Millions of pounds are paid out each year on proprietary medicines containing alcohol. They are purchased because of the alcohol they contain, and their supposed beneficial effect is due to its presence. Remove the alcohol from them, and their sale dwindles to nothing. To dispense with beverages containing alcohol would mean a saving of £440,000,000 annually.

Much of the money paid out on railroad travel is spent for mere pleasure; but we will say nothing of what might have been saved by merely being a little less extrava-

* Since this article was written we see that America has taken steps in this direction.—Ed.

gant in this respect. However, more is spent for tobacco in the aggregate than for railroad travel. Immense sums go up in smoke. Surely the people can get on without this luxury. It is not one of life's necessities. Our women manage to get on without it, and the children who are taking up its use more and more would be far better off without it. It is now recognised as a poison too dangerous to employ as a medicine.

Since the present war began, we have become accustomed to talk in billions instead of thousands or millions as we did a few years ago. It is difficult to grasp such sums. The question now is as to how the great sums named in our war budgets are to be met. They cannot be met by taxation without bringing a hardship upon the poor. But it is possible to meet them without causing anyone to suffer. Should all those who used liquor and tobacco last year put into the treasuries of their respective countries this year the same amount they then paid out, we would be able to finance the war without bringing a hardship upon anyone. More than that, it would also prove a great blessing to the consumer. This would be a practical way of showing our patriotism as men.

Women may have a part in this. The amount of coffee consumed in one country alone in one year if loaded on railroad cars would reach a distance of over one hundred miles. The beverage is con-

sidered with many a household necessity, and yet our forefathers knew nothing of this drink. For many years the coffee drug (caffeine) was dispensed by druggists as a medicine. From three to five grains of caffeine is considered a dose when prescribed by a physician. Each cup of coffee contains about that amount of this drug. Caffeine is also dispensed at soda fountains in over one hundred soft drinks. There are many who are addicted to the use of kola and other like beverages who are caffeine fiends. A sum of money sufficient to construct another Panama Canal is paid out annually in America alone for beverages containing caffeine. Women are the worst addicts to this drug, which has much to do with the extreme nervousness exhibited by its users. All would be better off without these beverages.

Women now have an opportunity to show their patriotism in a practical way by dropping all such beverages entirely. Sound nerves and clean bodies are needed. This coffee drinkers do not have.

The amount spent on patent and proprietary medicines and beverages containing caffeine would place still other millions of pounds in the treasuries of the Allies with which to meet unlooked-for expenditures that may become necessary before the war is finished. The time has come for Australians to show their patriotism in just such practical ways as this, and they will be far better off physically for doing so.



READY FOR RED-CROSS DRILL

J. H. Kinnear, Photo., Auckland

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.

107. Fall of Womb

"Subscriber (Waikato)"

Ans.—From the symptoms given in your letter, you are probably suffering from fall of the womb. We would advise a medical examination. The glycerine rubber pessaries are usually advised in these cases; they give much relief. Much walking, standing, and constipation must be avoided. When relief cannot be gained by the use of an instrument, an operation is recommended; the results of operations are very satisfactory.

108. Frequent Urination

"Warrnambool" complains of losing control of his water and frequent urination. He is 66 years of age, fairly strong and vigorous, and very active.

Ans.—This trouble is probably due to enlargement of the prostata gland which surrounds the neck of the bladder, and is a very common complaint in advancing years in men. An operation is sometimes found necessary. In order to lessen the irritability of the urine, keep the bowels regular, omit flesh foods from the diet, and restrict the use of sweets, pastry, and everything difficult to digest. Bathe the lower part of back and private parts frequently with cold water; keep the skin active by a couple of hot baths weekly; avoid tea, coffee, spices, hot sauces, and condiments generally. Frequently the washing out of the bladder

with boracic acid and water is helpful. Fruit or vegetables with each meal will be beneficial. Apart from an operation, there is no cure, but we do not advise this operation except where the symptoms are really troublesome.

109. Floating Kidney

"Warwick" writes: "My sister has complained for the past two years of pain in her right side; the doctor a week ago said it was a movable kidney. She suffers from indigestion, has a very poor appetite, works in a shop behind the counter, and has a lot of standing. The doctor advised her to wear a pad to support the kidney."

Ans.—Floating kidney usually causes a good deal of pain, often of a sickly nature. There is frequently also discomfort from indigestion. Possibly a well-fitting pad would give some comfort. A reliable surgical instrument maker should be consulted. An operation is frequently performed in these cases to fix the kidney, and is usually successful. The rules for good digestion should, of course, be attended to, as constipation or flatulence would increase the trouble.

110. List of Towns Suitable for Pulmonary Trouble

"J.T." asks for the above.

Ans.—Most of the towns above the Dividing Range would be suitable. A

good elevation above sea level and a locality free from dust and much moisture should be selected. The country would be preferable to the town, as the air is purer and contains less dust and fever germs of disease. The towns in the central part of South Australia are well adapted for consumptives. A locality that is favourable in winter is frequently too hot in summer. The districts around Bendigo (but not in Bendigo) are good for the whole year. The Wimmera district is excellent in winter; also the elevated parts of Queensland.

111. Dislocated Knee-Cap

"Quorn" writes: "My knee-cap is continually slipping off. It gives me never ending pain. Some nights I cannot sleep for the pain. I am wearing an elastic cap at the present, which seems to relieve it a trifle. Would you advise an operation?"

Ans.—The elastic cap is not sufficient. A clamp is necessary, and one of such a nature as will allow free movement of the joint and yet make a dislocation impossible. In the joint are cartilages; these get loose or displaced, and render dislocation very easy to produce. If the knee can be kept in a right position for six or twelve months, a cure is most likely to occur. The clamp made by Messrs. Spratt and Brooke, of New Bond Street, is excellent. It consists of three steel bands which half encircle the thigh above, the leg below, and also the back part of the knee. These bands are kept in position by leather straps. They can be procured from any first-class surgical instrument maker. Operations are sometimes necessary either to fix the cartilages or to remove them; in either case free movement of the joint results and there is freedom from future dislocations.

112. Neuritis

"Farmer" writes: "My leg from the knee down pains and starts to get cold in ball of the heel and works up to the knee.

It eases for a short time when rubbed, gets rest from this in bed, but the hip starts at night. I feel well otherwise. I smoke, drink tea, eat meat, and salt heavily, age about sixty years."

Ans.—Tobacco, tea, and excessive use of salt will certainly hinder recovery. This is a case of neuritis and needs rest, with fomentations, galvanic battery, and electric massage. "Farmer" could foment the leg well at night and then apply galvanic battery for ten or fifteen minutes. The full treatment at a sanitarium is advisable.

113. Growth in the Nose and Sciatica

"Thora" writes: "Will you please tell me if a growth in the nose can be removed by any other way than by operation? Also will you inform me if sciatica can be cured? I had a fall three years ago, and now I cannot keep my feet warm. I can hardly stand on account of a pain, as if a knife were cutting up my leg. I always wear woollen underclothing and never take meat or tea."

Ans.—The growth in the nose will not disappear except by operation. The fall probably accounts for the sciatica. Sciatica requires very vigorous treatment. You do well in giving up tea and meat and wearing woollen undergarments. A very hot hip and leg bath at night is excellent, it is better with sea salt (7 lb. to 30 gallons of water). The water should cover the hips and legs and be kept very hot during the full time of the bath—about half an hour. Paint the painful parts with liniment of iodine. Galvanic bath and galvanism are also very useful. Relief is often obtained by the use of blisters along the course of the pain—they should on no account be larger than a shilling, as they then heal rapidly. Three or four can be put on at a time along the course of the pain; when these heal, apply others at different spots.

114. Disseminated Sclerosis of Spinal Cord

"J.J." writes: "I want you to recommend to me something that will make my

nerves steady. The past few weeks they have got very shaky as you can see by my handwriting. I am suffering from a disease called disseminated sclerosis of the spinal cord. . . . I am a strict vegetarian, never drink tea, coffee, or cocoa, have nothing to do with stimulants, have never smoked or drunk alcohol. My drinks are milk and barley water."

Ans.—Disseminated sclerosis is a disease where the essential elements in irregular tracts of the spinal cord are contracted out of existence by over development of the connective tissue. It would be difficult to give the cause in this case without a full examination. "J.J." states that he has taken arsenic, strychnine, mercury, and electricity, but has had no relief. Unfortunately the disease does not lend itself to treatment. Massage and electricity in the form of galvanism would help to some extent. The vegetarian diet is certainly the best for this patient.

115. Dyspepsia in Child

"J.P.W." writes: "Our little daughter, aged two years and two months, has rather restless nights and seems to be in a stupor and crying. Her diet consists mainly of Nestle's Food for breakfast with toast or bread and butter. She has her bath at 11 a.m., then Robinson's Barley, and at about 12 o'clock she has a sound and peaceful sleep for at least two hours. On awakening she gets beef tea thickened with sago, and bread. At 4 o'clock she has more barley, and for tea Nestle's Food. . . . At present she is breaking out in a rash, red patches with lumps."

Ans.—The beef tea is absolutely useless and can do harm only—it contains all the poisons of the flesh food without its nourishment. Milk should form a large part of the dietary. We would recommend the following foods: Stale bread and milk; granose biscuit and milk; oatmeal or wheatmeal porridge and milk; bread and butter or jam; orange juice and ripe fruit. Do not give so much of the sloppy foods; the child has teeth and they should be used. The foods men-

tioned are good with the exception of the beef tea, but a greater variety is necessary. Keep the child from flesh foods, tea, coffee, and cocoa. But a little vegetable, as potatoes, cauliflower, marrow and green peas, would be beneficial once a day.

116. Diet for a Walking Tour

"T. & B." will find all their enquiries answered in the Editorial columns.

117. Indigestion

"Graftonian" writes: "I find that all the acid fruits do not agree as well as some vegetables. I have not eaten potatoes or taken tea, cocoa, or coffee for years now, and have taken very little meat. . . . I have at times a very tender feeling under the centre of the rib and at times a kind of fullness and bearing down feeling. Am tender when I press against the counter (I am a grocer). I suffer no pain; but do not sleep well. . . . Is soda water good for me? I do not take cordials or ice cream."

Ans.—"Graftonian" asks for a dietary. Not more than three meals should be taken in the twenty-four hours, and the last meal of the day should be a light one; this will help sleep. A little soda water can do no harm between meals. A selection for his dietary may be taken from the following:—

BREAKFAST.—Toasted corn flakes or granose biscuits with fresh milk (not heated). Granola cooked without any stirring: add to a measured part of granola exactly double the quantity of boiling water with a little salt and allow to stand five minutes in a warm place. Cut-up dates add to the flavour and nutriment of the granola. One egg poached or cooked in shell below boiling point of water so as not to harden the albumen. Bread and butter. Stewed or ripe non-acid fruits. Cup fresh milk.

DINNER.—If soup (non-flesh) be taken, it should be only in small quantities. Recipes for the vegetarian entrée dishes can be obtained from the vegetarian cook-

ery books. The following vegetables may be taken: green peas, French beans, cauliflower, or any of the pumpkin foods. All puddings are better avoided. The appetite can be satisfied with bread and butter and granose biscuits. No fruit should be taken at this meal. No objection can be taken to a glass of fresh milk.

TEA.—A little granose biscuit or bread and butter with stewed fruit, prunes or non-acid fruit. Creamed rice pudding may be taken at this meal if desired. Glass of fresh milk.

118. Pruritus and Prurigo

"T.M." asks: "Is rheumatic pruritus a form of prurigo, and, if not, what form does it take?"

Ans.—Pruritus and prurigo are two different affections. Pruritus is itching without any visible cause to account for it, and is a nervous disorder. The itching is usually increased by errors of diet, warmth of bed, and by mental excitement. Sometimes it is confined to local parts of the body, but at other times, as in that of old age, it is all over the body. The causes are gout, rheumatism, jaundice, diseases of liver and kidneys, dyspepsia, uterine disease, and pregnancy. In prurigo there is an eruption of very slightly raised pimples, first of the same colour as the skin, and afterwards, when subject to scratching, reddened and increased in size. There is often a little scab on top of the pimples, especially on the outside surface of the limbs, but they also occur on the chest (back and front), the lower part of the abdomen, and the buttocks. The itching is intense. Prurigo generally begins in the first year of life. The appearance of the skin becomes considerably altered from scratching. The affection, unless treated early, generally lasts the whole of the patient's life. It is also a nerve disease.

119. Asthma

"J.P." states: "I am 47; I have a bad attack just now. I get wheezy if I exert myself; breathing out is most diffi-

cult. It affects me most after tea. It is very uncomfortable when lying down. Night and morning I cough up a lot of thick phlegm. I had this before, but it did not stay so long. I have had it a fortnight now. Between the attacks I am strong and do all heavy farm work."

Ans.—The trouble is probably asthma with some catarrhal condition of the bronchial tubes. A change of climate is often the only cure. The digestion must be attended to. The attack can generally be shortened by the following mixture:—

Rx Potassium Iodid. grs. 80
Tinc. Stramonii ʒiii (3 drams)
Tinc. Camph. Co. ʒj (one ounce)
Vini Antimonialis ʒiv (4 drams)
Ex. Glycyrrhizæ Liq. ʒvi (6 ")
Aquam (water) ad ʒviii (up to 8 ozs.)

S Tablespoonful in water three times a day.

120. Nervous Breakdown

"B.D." complains of the above. Has great weakness at times. "Three years ago," he writes, "I scalded my throat and stomach badly through swallowing by mistake some very hot tea; this caused me a lot of uneasiness. I find that tea in almost any degree of dilution causes a very bad upset, also tobacco, and have given them up. I have found relief from taking a dessertspoonful of olive oil before each meal. The pain is as though the inside of my throat and stomach had been scraped roughly with something hard. This is still present. I have managed to get rid of it once or twice. The last outbreak was caused by thinking I was cured and indulging in a ten minutes' smoke of tobacco. After tiring work, such as ploughing, I sometimes cannot sleep. . . . There is also an aching feeling right at the base of the spinal column and sometimes down the back of the leg."

Ans.—From details of a very long letter, "B.D's." mind is evidently too much on his troubles. When one is constantly worrying about one's health, its recovery is retarded considerably. We think the cold sponge night and morning

quite sufficient without the sitz bath. Probably the hot climate of Queensland is against "B.D." Lightly cooked eggs and fresh milk would probably be found more beneficial than so much of the legumes. The hours of work from 5.30 a.m. to 8 p.m. are too long; eight hours' work a day is ample. The food we would recommend in addition to eggs and milk would be granola, dates, prunes, grape juice, rice, macaroni, corn flakes, and granose biscuits. The legumes should only be taken in moderation. "B.D." should sleep in a well-ventilated bedroom, and the evening meal should be light to ensure a good night's sleep.

121. Weak Throat

"Trust" writes: "I have a weak throat, the effects of diphtheria contracted some years ago. When I get a cold I have a dry, hacking cough. The weakness seems to be between the nose and the throat."

Ans.—The trouble evidently is pharyngitis. In this case the digestion must be attended to. Avoid especially much fat (butter, etc.) and sweets. Foods cooked with fat of any kind are better omitted from the dietary. Bathe the neck twice daily with cold water. Gargle the throat twice daily with salt and water—half a teaspoonful to half a pint of water. Breathe through the nose always, and if this is difficult, see a specialist in regard to the condition of the nose. Throat breathing keeps up this condition. The bowels should be kept regular by the drinking of water and the free use of fruit and vegetables. Paint the throat three times a week with tannic acid and water—a teaspoonful of the acid to 3 ozs. of water (6 tablespoonfuls).

122. Birth Mark on Head

"Nine Mile" writes that her baby has a birth mark on the head which is increasing in size, and asks if an operation is advisable.

Ans.—The child is too young for an operation. We have found local appli-

cations very effectual, but these can only be applied by a medical man. Probably the nævus will not grow much larger, if at all; and an operation at about the age of two years could be performed.

123. Nasal Catarrh, Dry Face, Tender Feet

"Violet" had injury to her nose about twelve years ago and now suffers with catarrh. "A herbalist said there might be some after effects as cancer if not attended to. . . . My face is very dry; what can I rub it with? I rub my body all over twice weekly with olive oil. What can I do for tender feet?"

Ans.—We have never known an injury to the nose to cause cancer and do not think "Violet" need have slightest fear on that account. Follow directions given to "Weak Throat," washing the nose out daily with the salt solution. Consult a qualified medical man and not a herbalist. Anoint the face at night with glycerine and water (one part of the former to ten of the latter). Lanoline in collapsible tubes is a good application. For tender feet dust the feet with the following powder:—

R	Zinc Oxide	ʒiiss	(1½ ounces)
	Acidi Boric	ʒj	(1 ")
	Acidi Salicylic	ʒj	(1 dram)

Wash the feet daily and dry thoroughly.

124. Working Without a Hat, Ingrowing Toe-nails

"R.P." writes: "I have been going about in the sun without a hat during the winter and spring months. If I continue to do so during the summer months when the temperature rises to 105° F. in the shade, is there any danger of my being sunstruck? What treatment would you advise for ingrowing toe-nails?"

Ans.—Close confined atmosphere is the most likely to cause sunstroke. We would certainly advise a light, well-ventilated hat in hot weather. Wear boots that are not pinched at the toes. Frequently taking a v-piece out of the centre of the toe-nail relieves the trouble. Often half the nail has to be removed.



QUIET TALKS WITH MOTHERS

Misunderstood Childhood

Elizabeth Harrison

IT happened in broad daylight, in a city park, with scores of people passing to and fro—yet only the one little child and I knew what took place. There were three women in the group and about ten or twelve children. The latter varied in age from two boys of twelve or thirteen on down, through several girls of nine and ten and boys of six and eight, to one wee four-year-old girl. Their baskets and boxes and glass jars filled with potato salad, milk, cold drinks and like delectables told the casual observer that they were out for a picnic tea in the park, while the sympathetic observer knew that here were three mothers wise enough to plan for and share in their children's holiday larks. One knew from the joy on the children's faces that there had been elaborate planning of the day, and much glee in packing the baskets and distributing the parcels and deciding who was careful enough to be trusted with the jar of milk and who should carry the tin drinking cup (the choicest and most honourable part of the outfit, as could easily be seen from the air of importance of the boy who triumphantly swung it along). There would be ravenous appetites by six o'clock, so there was a goodly supply of baskets, pails, boxes, etc. They had seated themselves on the steps of the Museum to rest a bit when the child tragedy I am about to describe took place.

It was the little four-year-old girl who was the heroine of this every-day drama of misunderstood childhood. Her older brother had seated himself on the steps above the rest of the group. He was the one hero in all the world to her, most to be admired and imitated. She was seated next to her mother, but her eyes travelled longingly up to the more exalted seat occupied by her big brother. Her mother's attention was obscured by some conversation with one of the other women. The child looked longingly up to where her brother was exultingly tossing his arms to and fro in the mad ecstasy of freedom. Then she looked at her mother and began: "Mamma, mamma, mamma, I'm going up to where brother is."

The mother paid no attention to the utterance of aspiration on the part of her daughter, although each time that the word "mamma" was drawled out it was accompanied by a pulling of the mother's dress. There was a pause on the part of the child, indicating, if I read her face aright, a few moments of indecision. Should she obey the law, or should she assert her freedom?

Then the brother from the vantage ground above began kicking his legs out into the air in added token of the delights of superior freedom. This was too much; the four-year-old prisoner began pulling again at the invisible ball and chain that

held her to her mother's side, and again came the drawling protest, now a little fretful: "Mamma, mamma, mamma, I'm going up where brother is."

This time the mother turned her head long enough to say: "No, sit still," and then she turned again to the interesting conversation with her neighbours.

The child sat still for a minute or two, and then there slowly crept over her face a look of determination. The battle between liberty and authority had been fought and personal freedom had won. No matter what the risk might be, she had made up her mind that she was going to find out how it felt to sit away high up, above all the people, and to toss out her arms and kick out her legs just as brother was doing. She knew it was wrong, dreadfully wrong. Her look of fear as she glanced up toward her mother's face showed that. But an exultant shout from brother above banished all doubt as to the desirability of the deed she was contemplating. The one remaining question was, how to do it.

She began slowly and softly edging away from her mother, while her face flushed guiltily. Her eyes never once left their furtive watch of her mother, and it was well for the success of her plans that she was on her guard, for she had not slipped more than three inches away before the mother's hand reached out to her and caught hold of her dress, while the mother's voice said: "Sit still, Mary!" though she did not turn her head toward the child. She was talking with her friend, and did not wish to be interrupted, but the autocratic manner in which she reached out her hand and physically restrained the restless little one, as well as the mechanical way in which she said: "Sit still, Mary," spoke volumes to me of past restraints and disregard of childish longings. It told me that a hundred times before she had said: "No, sit still, Mary," and little Mary's conduct proved that she understood the situation, and had many a time before won her own way by strategy when she could not win it by fair play.

She sat motionless until her mother's hand relaxed its hold on her dress. But no cat ever watched more intently the hole in the floor from which the rat was expected to emerge than Mary watched for the relaxing of the mother's hold. It came in a few minutes, as the child knew it would come. Then she quietly slipped the folds of her skirt from the forgetting fingers and edged another inch away. The guilty look on her face showed that she had now consciously begun her downward career of disobedience to authority. She did not now look at brother—her whole mind was absorbed in escaping from her mother, or, to put it a little more comprehensively, escaping from an intolerable condition of bondage. She paused, then came another inch of space between her and her mother, and an equal widening of the breach of that inner world which cannot be measured by inches; for an expression of defiance now began to show itself. She had dared to resist authority; now she was losing her respect for it. The space soon widened into a foot or more. Still she unconsciously held on to the edge of the step. The child waited a few seconds, then silently and slyly placed her hands on the step above and lifted her body up to it without actually rising to her feet. A flash of triumph on her face showed that she had discovered the right method of escape. She looked quickly around to the right and left to be sure that nobody was watching her. Then by the same subtle movement she lifted herself to the next step. All this was done silently, with many furtive glances at the mother, yet with an air of exultant, almost revengeful, triumph which told the student of child life that her conscience was crying out: "It's wrong, it's wrong, it's wrong," while every other atom of her being was answering: "I don't care; I'm going to do it." She soon reached the longed for place of exaltation. She was now on the same step with her brother, but about ten feet away from where he sat. He was looking the other way. The mother was still unconscious of her daughter's

rebellion and escape. The other children were occupied in various ways. She had not been missed by any of them.

The loneliness of her new position suddenly overcame her (as it has many older sisters of her race who have defied the family authority and insisted in climbing as high as their brothers had climbed). The daring was gone now. The gleam of defiance faded out of her

then rose in his manly dignity and appealed to the only court of law that either of them knew anything about. He shouted out: "Mamma, Mary has come up here!"

The child's lip trembled, and her eyes filled with tears. She had so hoped he would appreciate her hard-won battle and take her in as sharer of his freedom. It was a moment of despair.



AN IDEAL PARK FOR AN OUTING

face. She coyly slid along until she was near enough to her brother to nestle down close beside him. Then her whole attitude changed; she at once became distinctly feminine, the old-fashioned feminine at that. She caressingly put her little hand coaxingly against her brother's cheek. No word could have said more plainly: "I am cold and lonely. Brother, dear, open your arms and give me shelter." But what did the brother do? He instantly joined the vast army of misunderstanders and rudely pushed her away. He

Then the shout was repeated: "Mamma, Mary has come up here!"

This time it had an indignant ring in it, and the mother turned her head. "Mary," she called, "come here this minute."

Mary rose, turned her back and rapidly mounted to the topmost step. The fight was on now, and she might as well go as far as possible. She was a fugitive fleeing from justice. The mother rose angrily and started up the steps. The child gave one look back over her shoulder and fled

through the open door of the Museum, into the arms of a big, gruff-voiced man in blue uniform and brass buttons. She was altogether too much excited to detect the kindly humour under his loud words: "Here! here! You little runaway! What are you doing in here!" He grabbed her up and brought her back to her mother, who had now reached the top step, panting and out of breath.

The child's face was pale with fright. No words escaped her lips, but she looked pleadingly, helplessly up into her mother's face. The hour of repentance and reconciliation had come. The awful escape from that dark room and the terrible giant had quenched the last flickering flame of independence. It seemed to me that a heart of stone would have felt the child's anguish. But the mother was angry. Besides, the neighbours had witnessed it all. What could be harder to bear? She saw not the white face turned mutely towards her, nor did she notice the trembling of the little body, terrified with fright. She seized the child by one arm, and, giving her a hard shaking, she dragged her down the stone steps, adding to the humiliation of the scene by saying loud enough for whoever would to hear: "You are a bad naughty girl! I wish I had left you at home! You shall not come with us to the park any more." Yet she was apparently a good woman, with a kindly expression of face in general—but how could she stand having her neighbours see her four-year-old child defy her?

In the meantime the scene had focussed upon the culprit the eyes of the entire world (the people on the steps were the entire world to the child just at that moment). Then, to add to the torture of the moment, her brother, whom five minutes before she had fondly tried to caress, now openly jeered at her, and the other children tittered! The sensitive face hardened. If she were denounced by her own family as a criminal she would be a criminal. By the time they had reached the picnic group at the foot of the steps she was sullen and silent. So when her mother picked her up and set her down,

somewhat emphatically, in the very spot from which she had made her escape, not a muscle in her face moved. She might have been made of wood or stone, so devoid was she of any trace of emotion.

"There, now you sit there!" commanded the mother, as she smoothed down her dress—a gesture which I have observed when women are smoothing down their tempers. Then, turning to her neighbours, she took up again the interesting conversation which had been interrupted.

The child sat motionless for a short time. Then she deliberately rose, her small body involuntarily straightened itself to its full height, her lips pressed together, and her hands doubled into small, defiant fists. She no longer looked at her mother or, for that matter, at any one else. She had been publicly disgraced, what cared she for public opinion now? Carrying her body as a daughter of the Pharaohs might have borne herself, she deliberately ascended the steps to the very top without once looking around. Reaching once more the topmost step, she relaxed somewhat and stood there as if expecting some awful doom.

The mother was seemingly unconscious of her absence, but the lynx-eyed brother bawled out: "Mamma, Mary has gone up to the top again." The mother gave no heed, but the child at the top of the steps did. Casting one look of scorn upon the tale-bearer, she walked across the broad landing and out on to the high parapet which rose perpendicularly twelve feet above the ground. At this the brother fairly shrieked to his mother: "Mamma, mamma, look at Mary!"

All eyes turned once more upon the child, who stood boldly outlined against the blue sky. When she saw that she had gained the attention of her scornful public she deliberately stood on one leg and hopped up and down, coming nearer and nearer to the edge of the parapet. She was openly defying that public in reckless disregard of what the consequence might be to her. Ah! how many outcast sisters had done the same before. The mother, with a cry of real alarm, sprang up the

steps and rushed out on to the parapet. There was no mute appeal on the child's face now. She had shown her disregard of both public and family condemnation, and was willing to take the consequences. She stood calmly awaiting arrest, her eyes twinkling with satisfaction over the disturbance she had created. So when her mother again shook her and called her a troublesome, naughty girl she merely laughed a hard little laugh, and let herself be once more dragged down the steps. At this juncture one of

the women proposed that the party should move on. Baskets and boxes, hats and wraps were gathered up and the group passed out of sight, the first mother holding the four-year-old firmly by the hand.

But the child's face did not change its look of defiant amusement.

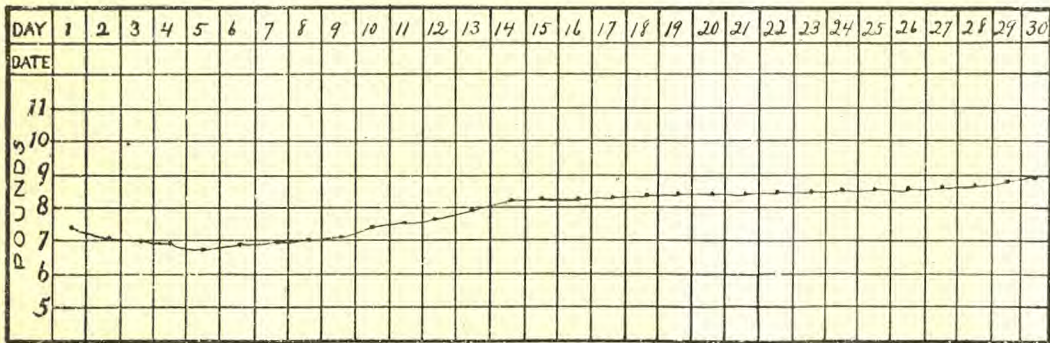
And so we go on, making and marring the "God-image" in the young children entrusted to our care.—*Misunderstood Children. National Kindergarten College, Chicago, Ill.*

Baby's Photographs

BABYHOOD! How often we talk of it in after years. How often we look at our baby photos and accept or question

a "photograph" or faithful record of your baby's weight from birth to its first or second year? This will not only prove

BABY BORN 19..... BIRTH WEIGHT LB. OZS.



BOY Average weight at birth 7 Lb. 8 Ozs. WEIGHT CHART FOR FIRST MONTH AT TEN DAYS THE WEIGHT IS EQUAL TO THE BIRTH WEIGHT GIRL Average weight at birth 6 Lb. 8 Ozs.

our parents' fond declaration that we were the most wonderful and the best behaved babies in the world. A mother's ambition is to have a photograph of baby at its best—in its best clothes, with its best behaviour on, with its best smile, and at its best form. These photographs are treasured for years by the mother, and for further years by the baby grown up.

But have you ever thought that appearance is not everything? Why not keep

interesting to you, but it will also enable you to see at a glance the progress your child is making. In future years you will be able to compare your baby's weight with the weights of other babies in whom you are interested.

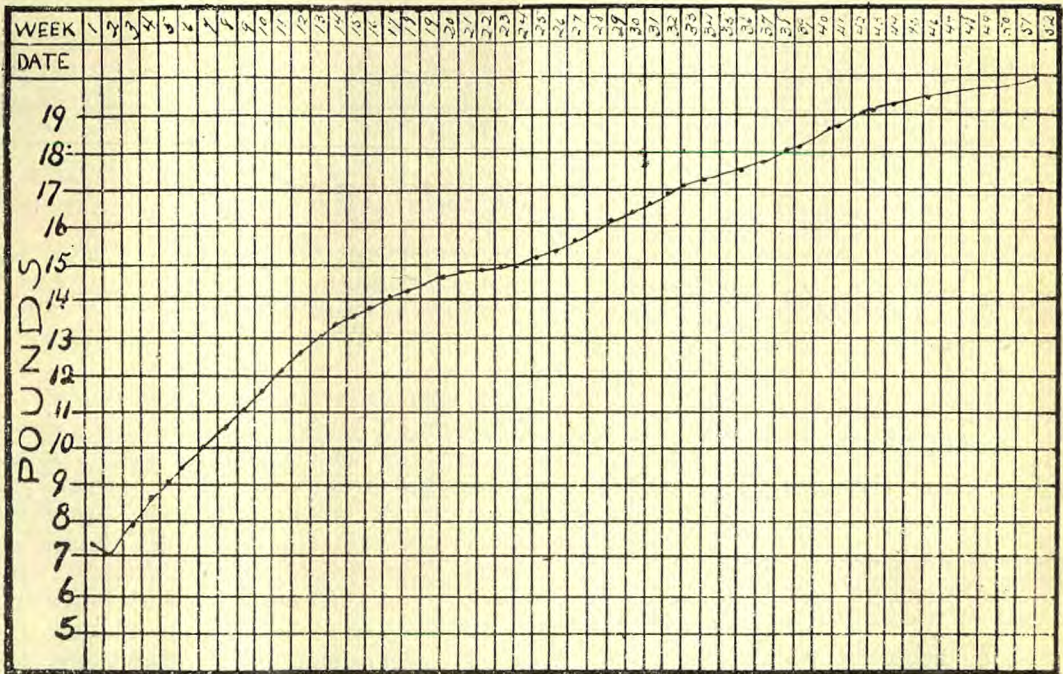
We give two charts prepared by Dr. Joseph Cooke, found in a recent issue of *American Motherhood*. These two charts record the normal weight of the baby from birth to the end of the first year,

and if you put your particulars down in red ink, an accurate comparison can be obtained instantaneously.

Try this plan and recommend it to your neighbours and friends, and you will then find that there will be an enthusiastic baby competition and show in your

govern time. Therefore she is lacking that essential which creates orderly routine. Children of such a mother naturally miss the serenity and repose which counts for so much toward happiness in the home.

If meals are never ready at the given hour, why expect the child to be punctual



WEIGHT CHART FOR FIRST YEAR

AT SIX MONTHS THE WEIGHT IS DOUBLE THE BIRTH WEIGHT

district—a *nature* baby show and not a *fashion* baby show. In fact to be a fashionable baby in your district will mean to be a well-developed baby.—H.G.F.

Teaching Children the Value of Time

Mrs. J. T. Tuomy

CHILDREN should be taught punctuality at the earliest age possible, and mothers should train and develop this trait with the greatest care and thought. There is no trait that will have more influence. But no mother can impress the value of time upon a child unless she is punctual herself. A hurried and fussed mother is not obedient to the rules that

at meals? A child taught the value of time by a punctual mother will not waste time either at work or play. "I forgot," is a common saying among children. Careful training is sure to change it to "I remember." The training should not be spasmodic but part of every day's order of events. All children who have the habit of punctuality acquire ease and assurance through the feeling of well-doing. They acquire orderliness of habits that last through life and are well equipped to reach a high standard in any work they undertake. Mothers should teach value of time with the idea in mind that they are giving a valuable asset to their children.



THE HOUSEKEEPER

Hot Weather Dietary

SUMMER catering is somewhat more difficult than providing fare in winter. Appetites are more capricious and less hearty, and if forced, the digestive organs are likely to be overtaxed. In hot weather the food should be lighter and less heating than in cold weather. Eggs and milk are good, and vegetables, fruits, and salads should be used freely.

Meals should be simple. Taking too many kinds of food at a time is a common fault which often causes disease of the digestive organs.

Care should be taken that foods are properly combined. Many foods which are digested easily when taken alone or in harmonious combinations cause much disturbance when eaten at the same meal with several different articles of food, or with some particular article with which they are especially incompatible. For instance, vegetables contain a great amount of coarse, woody structures which are retained in the stomach a long time before they are sufficiently broken up. Fruits, on the other hand, remain but a short time in the stomach. The large amount of saccharine matter which fruits contain makes them likely to set up fermentation in the stomach if retained too long. Therefore when fruits and vegetables are taken together, the fruit being retained too long in the stomach tends to set up a fermenting process in the whole mass and cause flatulence. Acid fruits are also

likely to delay starch digestion. This is another reason for their interference with vegetables, the starch of which is usually more difficult of digestion than that of grains.

Milk and vegetables are likely to disagree for the reason that milk when taken by itself is retained by the stomach but a short time, its digestion being carried on chiefly in the small intestine. Milk and meat are a bad combination for the same reason. Meat requires long digestion in the stomach. When taken with meat or vegetables, milk, being long retained in the stomach, undergoes fermentation, resulting in sour stomach, biliousness, and various other unpleasant symptoms.

This table showing the length of time required to digest some commonly used articles of diet may be useful.

	Hr. mn.
Rice, boiled	1
Sago,	1 45
Tapioca,	2
Barley,	2
Milk,	2
Milk, raw	2 15
Eggs, hard boiled	3 30
Eggs, soft	3
Eggs, fried	3 30
Eggs, raw	2
Eggs, whipped	1 30
Custard, baked	2 45
Beef, roasted	3 30
Pork, roasted	5 15
Mutton, roasted	3 15
Mutton, boiled	3
Veal,	4
Fowl, boiled	4
Cheese,	3 30
Parsnips, boiled	2

Carrots, boiled	...	...	...	3	15
Beet, "	...	...	...	3	45
Potatoes, "	...	...	...	3	30
Potatoes, baked	...	...	...	2	30
Turnips, boiled	...	...	...	3	30
Cabbage, "	...	...	...	4	30
Apples, sour and hard, raw	...	...	...	2	50
Apples, sour and mellow, raw	...	...	...	2	
Apples, sweet and mellow, raw	...	...	...	1	30
Apple dumpling, boiled	...	...	...	3	

It must be evident that those foods agree best together which take about the same length of time to digest in the stomach.

GOOD COMBINATIONS

- Grains and fruits.
- Grains and eggs.
- Grains and milk.
- Grains and vegetables.

FAIR COMBINATIONS

- Grains, sweet fruits, and milk.
- Meat and vegetables.

BAD COMBINATIONS

- Fruits and vegetables.
- Milk and vegetables.
- Milk and meat.

FRUIT

One of the nicest ways of serving fruit is in the form of fruit salad. Almost all kinds of fruit can be used together. They should be sliced and mixed and covered with syrup at least one hour before serving so that the flavours may be well blended.

Fruit Salad.— $\frac{1}{2}$ pineapple, 4 oranges, 4 bananas, rind of 2 lemons, juice of 1 small one, crystallised cherries, almonds or roasted pea nuts, grated cocoanut.

Cut up all the fruit into small dice, add the rind and juice of lemon and chopped almonds or pea nuts, allow to stand for an hour or more. Before serving, sprinkle over it the cocoanut and garnish with cherries.

Pineapple always improves a fruit salad, and a delightful addition is Plasmon Cream made as follows:—

3 heaped teaspoonfuls Plasmon Powder, $\frac{1}{2}$ pint tepid water.

Put the Plasmon powder into a saucepan, add four tablespoonfuls of tepid water and rub into a paste, then add slowly the remainder of the tepid water. Stir thoroughly, then bring to the boil, stirring all the time. Remove immediately, pour into a bowl, and put into a cool place, and it will form into a thin jelly. When cold, whisk this jelly thoroughly for a few minutes, and a beautiful firm snow cream will result.

Savoury salads may be made with various other ingredients than raw lettuce and cucumber. Cold cooked vegetables, as potatoes, cauliflower, French or haricot beans, and green peas make good salads. These may be mixed or served separately, and salads of this kind can very well form the main course of a summer time meal, beside being a very economical way of using up cold food. A nice salad dressing is made from oil and lemon juice in the proportion of two spoonfuls of oil to one of juice, with a little salt and a little sugar.

Summer Drinks

Oatmeal Drink—Mix 4 ozs. of finely ground oatmeal with sufficient cold water to make a thin paste, then add to this 6 ozs. of sugar, the thinly cut rind of a lemon, and its juice strained. Pour over whilst stirring a gallon of boiling water and allow it to get cold. The drink should be strained before serving.

Barley Water—Wash 2 ozs. pearl barley, put into a saucepan with 1 quart of cold water and cook gently for about an hour. Strain and when cold add the juice of a lemon and sugar to taste. Some strips of lemon can be boiled with the barley if liked.

Rhubarb or Apple Drink—Cut 6 sticks of rhubarb into small pieces. Put into a jug 4 ozs. of loaf sugar and 2 slices of lemon with the rind left on. Pour 2 quarts of absolutely boiling water over, and let it stand twelve hours before using. Sour apples can be used instead of rhubarb. (National Food Economy League.)

—Present Truth.

Fruit Sago Mould

Boil 1 breakfast cup of sago in 5 cups of water until quite clear, add 4 tablespoonfuls of raspberry or black currant jam (other jams are not so nice, as they have not a rich enough flavour), and 1 oz. moist sugar. Pour into a wet mould or basin. Turn out when cold and serve with a cold custard sauce. Instead of jam, the juice of one lemon and six tablespoonfuls of golden syrup or treacle can be used.

A Dish of Haricot Beans

Put the haricots to soak for six hours in cold water. Boil them in water with one carrot, one onion, salt, two cloves, and a good bunch of dried herbs. Turn off the liquor from the beans. Chop up a shallot, and fry it in butter. Add your haricots with salt and tomato purée. Stir well, and serve with minced parsley scattered at the top.

Belgian Carrots

Clean the carrots well, cut them in dice, and wash well. Put them on the fire with enough water to cover them. Add a bit of butter, an onion well minced, salt to taste, and a desertspoonful of powdered sugar. Place the dish in an oven for at least one hour; and when served, sprinkle over the carrots some minced celery.

Cooking Vegetables

Making Them Digestible and Palatable

H. S. Anderson

THE object sought in cooking, generally speaking, is twofold: first, to make the food more digestible; secondly, to develop its flavours, making it more palatable and inviting.

Making them Digestible

To illustrate the first point, take the cooking of starch. This is the most abundant of all foods; but before man can appropriate it, it must be subjected to dry or moist heat, in order that the woody envelope which encloses the starch granule may be broken. Raw starch is not digested by saliva, and only in small quantities is it digested by the intestinal fluids.

Boiling, or moist heat, simply makes starch soluble, leaving it subject to fermentation. Dry heat, or baking, takes it into the dextrine stage; after which, through the process of digestion, it is carried to the maltose stage, where it is unfermentable.

In cooking vegetables, the object is to soften the cellulose, as well as to swell and burst the starch grains; and this is best accomplished by keeping the water at the boiling point. By the proper cooking of starchy foods, their digestibility is greatly increased.

Developing the Flavours

The second principle, the development of the flavours, may be illustrated in the cooking of various kinds of food. For instance, to cook vegetables in boiling salted water and throw the water away is not the best thing, except in a few cases. With this method, much of the valuable mineral matter and flavouring substances is lost in the water. With such strong-flavoured vegetables as cabbage, old beets, old onions, and old potatoes boiled with the skins on, this method is permissible.

Various cooking processes have much to do with the development of food flavours, and rank in value as they do or do

not retain the mineral or flavouring matters.

Baking is the best method for potato, squash, dried beans, etc.; and by this method no nutritive material is lost.

Steaming—cooking in a steamer—is a good method for nearly all vegetables. No nutritive material is lost thus, but the vegetables will have less flavour than when baked.

Stewing implies cooking in a pan or a kettle, with so little water that it is almost boiled out at the end of the process, and the remaining liquid is served with the food.

For all stews, or vegetables where a sauce or a gravy is desired on the vegetable, the last method is the best; also for cooking young and tender spinach, which can be cooked with no additional water beyond that remaining on the leaves after washing. As the greens age, they absorb bitter flavours, and must then be cooked in deep boiling water.

At this point, it may be well to consider the use of free fat in cooking, and the question as to what part, if any, the use of free fat plays in reaching the standard of providing food that is wholesome, palatable, and nourishing. This subject is one that deserves careful study and thoughtful consideration, in as much as any extreme course in this matter, in either direction, is fraught with consequences that are detrimental to health. Nearly all plants are deficient in the element of fat; and man, instinctively, it would seem, puts cream or butter on his bread. Green vegetables, while they have their delicate and characteristic flavours, taste "flat" without the addition of a little cream or free fat of some kind.

Fats are divided into two forms, free fat and emulsified fat. Examples of free fat are butter and oils, both animal and vegetable. Examples of emulsified fats are found in nearly all vegetables, es-

pecially in olives, and in milk and cream. Emulsified fats are in proper form to take into the body as food. The gastric juice contains an enzyme called *lipase*, which has the power of acting on emulsified fats, such as cream or yolk of egg. Free fat is not affected by the secretions of the mouth, nor to any great extent by those of the stomach.

The digestion of free fat takes place mainly in the small intestines. The pancreatic juice contains an enzyme called *steapsin*, which has the power of emulsifying fats, and also of splitting them into fatty acids and glycerine. The bile is an important factor in the digestion of fat. It greatly increases the activity of the pancreatic lipase, and holds in solution the fatty acids formed by its action, so that they are more perfectly absorbed.

Fats are more digestible cold than hot, because hot fat tends to coat and intimately penetrate the food with which it is cooked. This is especially true of fried foods, where part of the food is surrounded by a layer of fat, keeping the digestive juices from acting on the other food elements.

Moderation in use of Fats

Heating fat to a high temperature also changes its chemical nature, often producing irritating substances, which interfere with digestion. True moderation in the use of free fats, avoiding any extreme in either direction, is a safe course to follow. "Vegetables should be made palatable with a little milk or cream, or something equivalent."

In the following recipes, illustration is given of methods by which the free fat itself is not mixed with the starchy food, but made into a gravy or sauce, and mixed with the food. Thus the fat is not liberated to coat the starch granule, as is the case when free fat is mixed with the food and baked.

Baked Dressing.—Without eggs: Two cups of soaked stale bread, one half of milk, one tablespoonful of vegetable butter, two tablespoonfuls of chopped onion, two tablespoonfuls of browned

flour, sage and marjoram, and salt to taste. Have the bread soaked in cold water until soft all the way through, then press out the water. Put the butter, the onion, and the savoury into a small pan, and simmer for a few moments, to soften the onion, but do not brown. Add the brown flour, and stir. Then add the milk, and stir smooth. Salt to taste, add the soaked bread, mix with a fork, and bake in an oiled pan. This dressing may be put into the pan with browned potatoes when they are about half browned. Finish baking together, and serve with a thin gravy. (The addition of one cup of brown beans, noodles, peas, or almost any cooked and left-over vegetable, mashed with a spoon, and mixed with the above dressing, makes a good "vegetable loaf.")

Savoury Hash.—Two cups of cold boiled potatoes cut in small dice, one cup of the above baked dressing cold and diced, two teaspoonfuls of vegetable butter, one tablespoonful of chopped onion, one tablespoonful of browned flour, one half cup of milk, a sprinkle of sage and marjoram, and salt to taste. Put the onion, the butter, and the savoury into a small pan, and simmer for a few moments. Add the brown flour and a little of the cold milk, and stir smooth. Then add the balance of the milk, and boil up. Salt to taste, and add the diced food. Sprinkle the potato lightly with salt, add the gravy mixture, and mix with a fork. Put into an oiled pan, brush over with a little cream or vegetable butter, and brown in a quick oven.

Household Helps

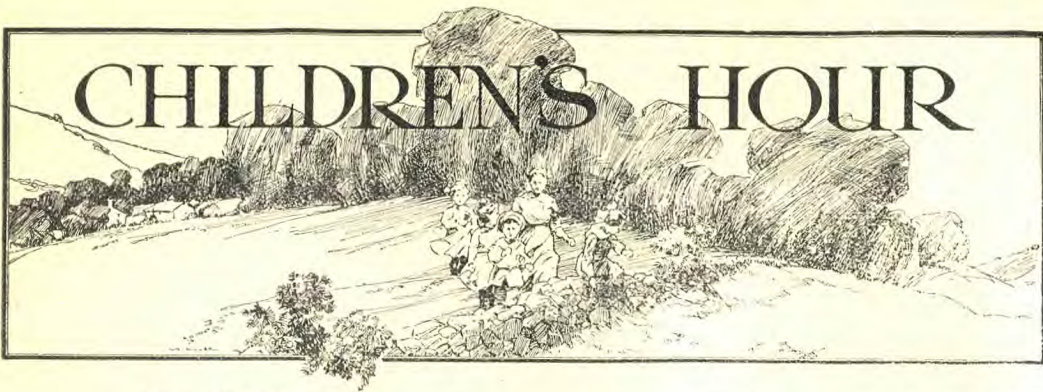
Worth Knowing

Articles of food that are damp or juicy should never be left in ordinary paper. Paper is made of wood pulp, rags, glue, lime, and similar substances, with acids and chemicals intermixed, and when damp is unfit to touch things that are to be eaten.

Floury Potatoes

Make potatoes look white and floury by boiling in as little water as possible, strain, and take at once to an open door. Give the potatoes a vigorous shake in the saucepan, and let it remain uncovered at the side of the stove for five minutes before serving.

CHILDREN'S HOUR



The Procession

Elizabeth Price

THEY did not know they were having a procession. They thought they were simply on their way to school, each a nice-looking, well-dressed boy, with a pile of books strapped together and hanging over his shoulder. They were about a square apart—Peter in the lead, making no noise of any kind, wearing rubber soles on his shoes; Paul bringing up the rear, making noise enough for both.

They were not acquainted with each other, for Peter was a newcomer.

It was a bright spring morning when the procession took place, and everybody liked the side of the street where the sun shone warmest, coaxing the baby leaves overhead farther and faster out of their winter cradles. Quiet Maple Street was turned into a regular playground, for groups of little people were having lovely times all along its wide pavement.

Two little girls, strolling side by side, had their doll go-carts out, giving their large and varied families an outing. In Dot's there were probably half a dozen dolls, and in Daisy's four or five.

Then Peter passed, and although the pavement was very wide, and Dot and Daisy were not using half of it, somehow both go-carts turned quite over, scattering their contents far and wide. By the time Paul arrived on the scene, both little mothers were tearfully sorting out their own children from the general mix-up, hunting for broken limbs and cracked noses with pitiful anxiety, while Dot

wailed over and over, "It is just like boys!"

Paul did not stop but a moment, but when he passed on, the go-carts were righted, their pillows as smooth as if they had never been disturbed, and the smiling faces of the two doll families, peeping above the neatly spread covers, only reflected the joy of their small mothers. They watched him whistling on his way; then Dot, ignoring her last remark, said heartily, "I like some boys—nice ones."

A little farther on some wee urchins were playing marbles in a ring chalked on the pavement. They had not known much about marbles till lately, but they were learning beautifully, and the game was reaching a most exciting climax when Peter passed. How one pair of rubber soles could have touched so many marbles at once not a boy understood—especially as they rubbed out a big piece of the chalk-line at the same time, and there was not a bit of chalk left in a single trouser pocket. Everything was spoiled. Nobody could ever know whether Harold really would have beaten, or Lawrence have made good on that next play. Paul stopped a bit longer here, because some of the nicest marbles had rolled themselves quite out of sight.

But in about one minute their ring was mended, bigger and plainer than ever,—Paul had a long stick of chalk with him, and gave them what was left for next time,—and every marble was in its owner's hands.

It was a game of jacks next, and then

a spirited horse-race that needed Paul's consolations; and a little further down an upset tea-party, attended by a chubby baby girl and a fat poodle.

There is not time to tell any more, only this: When Paul met Peter on the school grounds a little later, he faced the insolent stare of the new boy, saying steadily, "When you want to vent your meanness on something that can't hit back, I'd advise you to take the punching-bag in the gymnasium instead of a street full of babies." And he said much more that Peter never forgot.

We all start on a procession every morning. Now tell me, which are we, Peter or Paul?

Queer Water Folk

The Archer Fish

H. B. Dummer.

DID you ever hear of a fish that captures the insects it feeds on by shooting them, just as a hunter brings down his game with a gun? There is one, called the archer fish. Its mouth is made like a blowpipe, and a few drops of water take the place of the pea or the bean that you blow through a pea shooter. Other fish have to wait until an insect alights on the water, or falls into it, but the archer fish has a better way. He swims along until he sees an insect resting on a blade of grass near the water. When he is just below the insect, he raises his head out of the water and shoots a few drops of water at it, and usually knocks it into the water, when he snaps it up. The archer fish then swims round until he finds another careless insect. He is so good a shot that he always hits the mark.

The Japanese find it so interesting to watch this little fish at his hunting that

many of them keep an archer fish as a pet in a large glass bowl. They amuse themselves by placing a fly on the end of a slender stick and watching the little hunter knock the fly into the water.

The Right Kind of Brother

E. Wheeler

NELLIE awoke early on the morning of her birthday, but she did not expect any presents, for mother and Tommy were too poor to buy them. But it was nice to have a birthday all the same. Nellie could not run about like other little girls, but had always to lie on a couch.

She was seven years old to-day. Tommy, her brother, was a little bit older, and he was very kind to her and used to come in after school to play with her. Lately, though, he had not been home till very late, and Nellie had felt a little hurt about it.

Soon mother came and dressed her, and carried her downstairs;

then Tommy came and kissed her. He had both his hands hidden behind him.

"A happy birthday, Nell," he said.

"Now what would you like more than anything else?"

"You know I want a dolly more than anything, Tommy," said Nellie.

Then Tommy drew from behind his back a long box, and when Nellie opened it, there lay a doll, already dressed. Nellie nearly cried for joy.

"I ran errands every evening after school," said Tommy, "and I got enough money to buy the doll and give you this as well," and he put into her hand a bright new sixpence.



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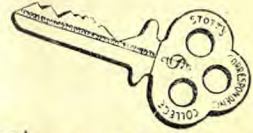
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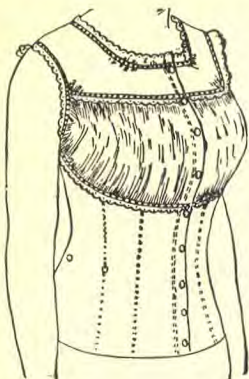
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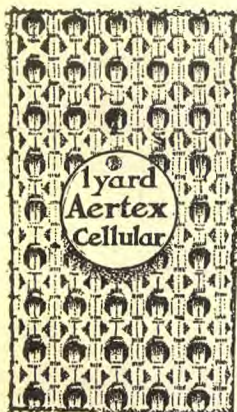
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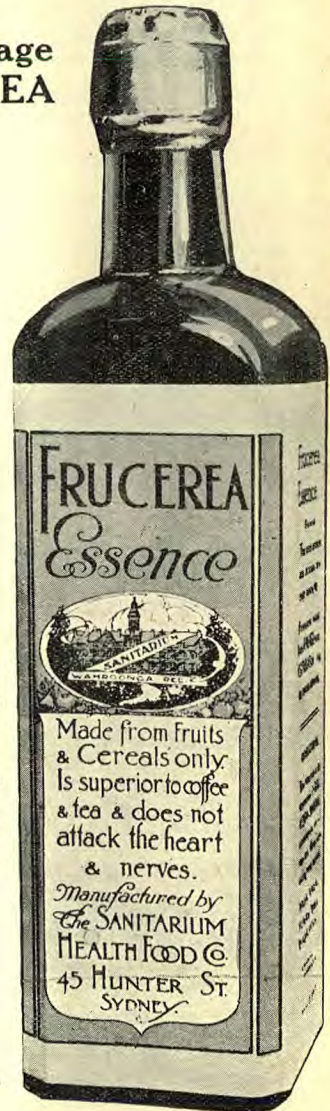
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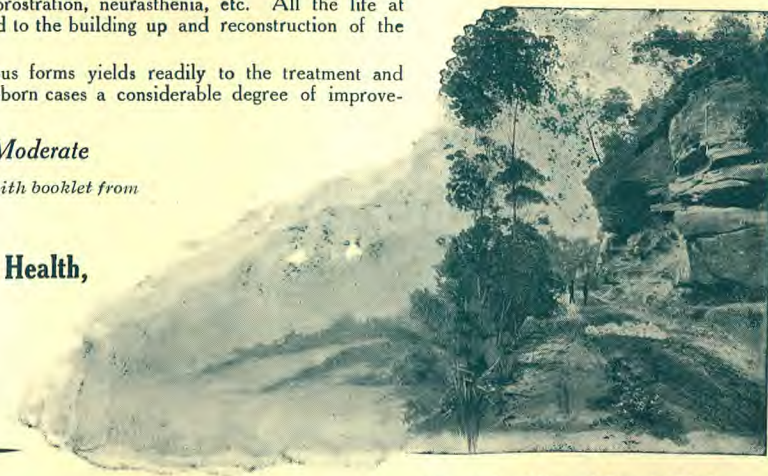
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