

Herald of Health

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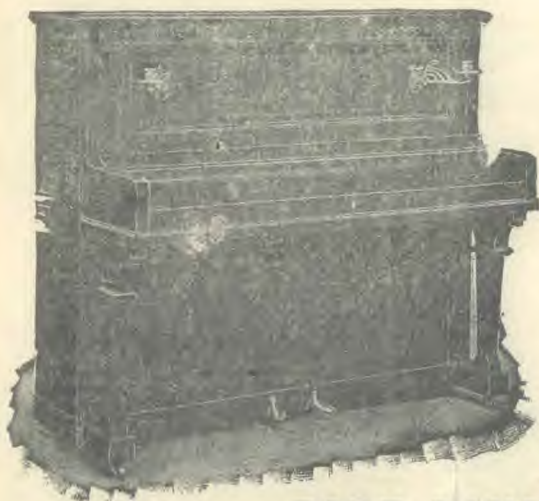
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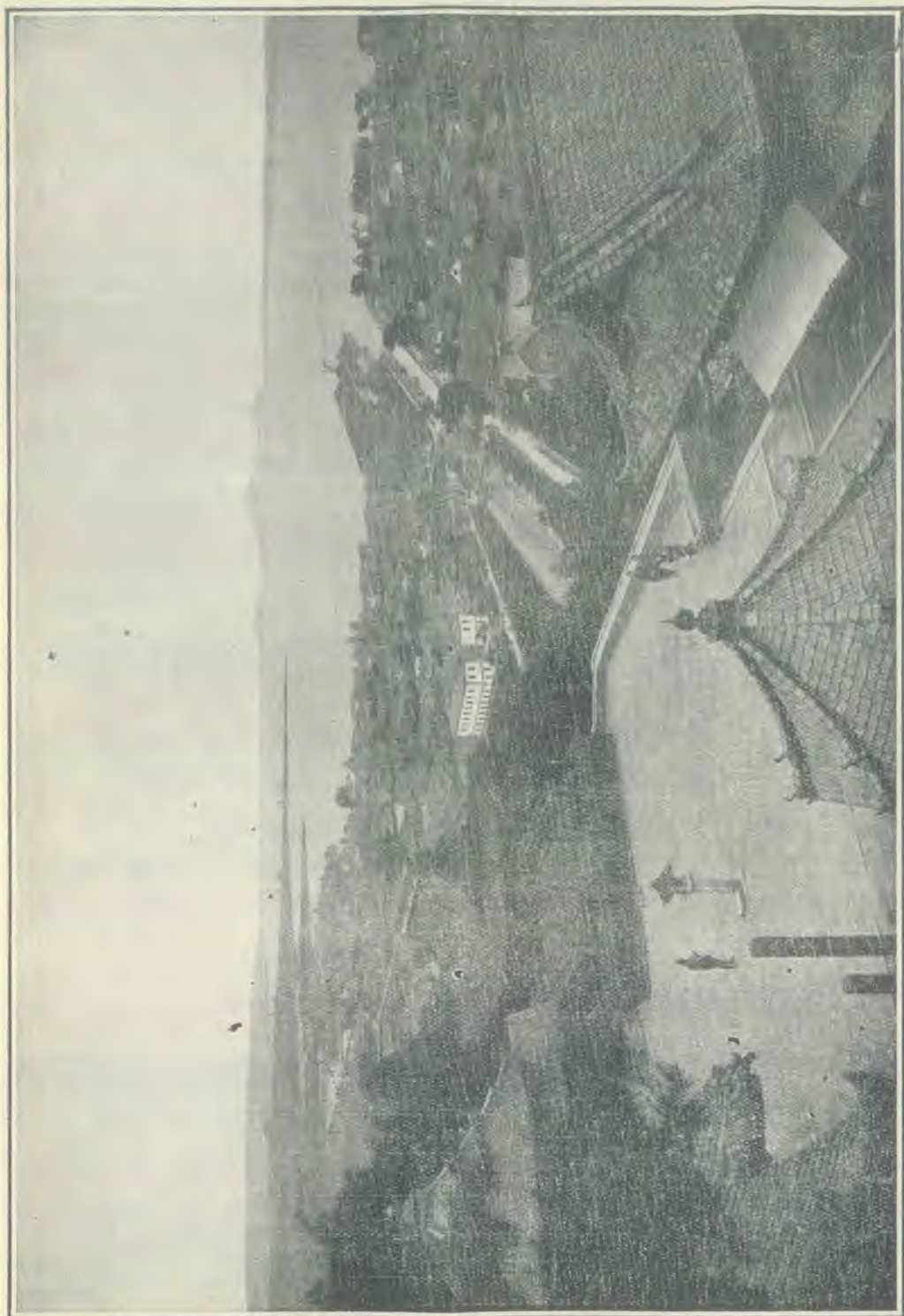
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HERALD OF HEALTH

The Indian Health Magazine.

V. L. Mann, M. D., Editor

S. A. Wellman, Asso. Editor.

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General Articles

Drugs Versus Nature's Remedies

BY DAVID PAULSON, M. D.

JUST as the clock-maker sends along a key with the clock wherewith to wind it up whenever it runs down, so likewise God has furnished in the remedies of nature the means that He intends to be applied to the human machine when it is run down.

We now know that the *same* principles are at work in sickness as in health. We no longer believe that the symptoms of disease are something that has come in and taken possession of the individual, and which can be driven out of the man just as you might drive a squalling cat out of a room. And hence the doctor no longer gives horrible tasting medicines to "drive out" the disease.

A Simple Illustration

You swallow a mouthful of wholesome food, and the healthy stomach responds by pouring out normal digestive juice. That is a condition of health. But if instead one should eat some poisonous substance then the stomach, instead of sweating out gastric juice, contracts violently, and the substance is expelled by vomiting. Anyone looking on would truthfully say such a person was sick. Yet those very disagreeable symptoms were nature's *efforts* to save the life of the man; and instead of

paralysing this effort of nature by administering some stupefying drug, the modern physician *co-operates* by washing out the stomach, thus *removing* the cause instead of smothering the symptoms.

The Curative Purpose of Fever

An abnormal rise of temperature, or fever, as we call it, is another common illustration of the same principle. The human body ordinarily succeeds admirably at 98.6 degrees temperature in burning up and destroying the various poisons that are constantly being manufactured within.

But suppose one sleeps night after night during the winter in a bedroom that is almost as poorly ventilated as a cave, eats freely of juicy beefsteaks, drinks strong tea and coffee, and otherwise attempts to subsist upon an unwholesome dietary, and perhaps at the same time lives a more or less sedentary life; then the normal poisons will accumulate in the body, and various disease germs will find it a favourable opportunity to establish themselves within, and produce additional virulent poisons.

God in His wisdom has arranged for the body to fire up more vigorously to enable it more effectively to destroy these

toxins, and then the patient has a "spring fever." The purpose of this rise of temperature is just as curative under such conditions as the vomiting was under the other. But the old-fashioned doctor, not appreciating this fact, used to give anti-pyrine and other coal-tar remedies which simply depressed the body, including the heart, to such an extent that it simply *ceased* its struggles to cure itself. Hence the temperature went down, and the patient was frequently so overwhelmed by the introduction of this second poison that nature simply gave up its struggles, and the patient was "cured to death."

The modern doctor deals with the fever just as he does with the vomiting: he endeavours as speedily as possible to *remove the cause*. He immediately suspects that a large portion of this poison is being absorbed from the alimentary canal hence he gives the patient one or two through colon flushings a day, and perhaps in addition a liberal dose of castor oil or some other harmless but efficient laxative. He persuades the patient to drink a glass of water every hour so as to encourage the kidneys to carry off more than their usual share of poisons. If possible he moves the sick bed out on the verandah, knowing that abundance of air is just as essential for oxidation within the body as a good draught is for the kitchen stove.

Human Intelligence Superior to Bodily Reactions

But some will ask, Is not a temperature of 103, 104, or 105° extremely dangerous, for the body? Yes, for exactly the same reason that too vigorous vomiting might burst a blood vessel in the brain. So although the higher the temperature the more vigorous the destruction of poisons in the body, yet we now know that the liver, the kidneys, and even the heart cannot endure to be bathed for any great length of time in blood at such a high temperature without starting degenerative changes. But the modern doctor, instead of smothering

this human excessive fire by coal-tar remedies, draws off the *excessive* heat by cool baths, cool sponging, cool enemas or by encouraging gentle perspiration, which accomplishes the same thing by evaporation.

We may represent these healing reactions in the human body by a team of horses, and let the doctor or nurse be represented by the driver. The intelligent driver in troublesome driving does not kill his horses; he simply guides, restrains, or urges them forward, as in his judgment the case may demand. It is an inspiring thought that God has put more intelligence into the brain of a truth loving intelligent physician than He has into even the instinctive healing reaction within the body.

An Example of Nature's Oversight

In diphtheria the germs generally establish their headquarters in the throat. They then begin to make a deadly poison, one part of which can destroy ten million parts of human flesh. Nature immediately begins to make a false membrane or a patch as it is commonly called. The purpose of this is to *prevent* the absorption of this poison. As the germs continue to make poison, nature often continues to increase the thickness of the patch. It is a curative process just as the vomiting was. But nature seems to forget that there is only a limited space in the child's throat, and it may continue to increase this false membrane until the child is actually smothered. Here is where God has left room for the intelligence that He has put in the physician's brain, and it is his duty to *restrain* this reaction, not to destroy it; just as the driver would hold in the frisky horses not kill them.

I again call attention to the fact that the old-fashioned doctor made it his business to scrape off that membrane, thus permitting the system to be speedily overwhelmed with toxins, so the child frequently

died; and the only satisfaction the parents had was that the doctor "had done everything he could." While the modern doctor does not interfere with the membrane until it threatens to choke the child, he of course does another thing which modern science has perfected; he administers antitoxin from the horse to supplement the antitoxin which is already being made in the child's blood; just as a mother resorts to cow's milk when she has not herself sufficient nourishment for her own babe.

Healing within the Man Rather than in a Bottle

From what has already been written it must be evident to the thoughtful reader that God has put the healing reactions all within the man. All we can expect to do with our various remedies, real or unreal, natural or artificial, is simply to arouse, to guide, or to restrain these healing reactions. Hence the doctor and nurse may do any one of three things: First, they may *co-operate* with nature's healing agencies; second, they may work directly *against* the efforts of the body to heal itself; or, third, they may do absolutely *nothing*.

God's remedies in a pre-eminent sense are the simple agencies of nature, such as wholesome diet, fresh air, hydrotherapy, curative exercises, including massage and medical gymnastics, electricity, and Christian psychotherapy, which in the last analysis is simply a firm and childlike trust in the great Healer who Himself gave us these remedies.

There are many drugs that also arouse healing reactions, but unfortunately they generally charge an enormous toll for the good they do. It is like borrowing money at forty per cent interest; and we are gradually learning better and better that much of their supposed benefits are really delusive. For instance, the exhilaration caused by a dose of alcohol is followed by a corresponding depression. Hence it is a stubborn truth, which most of our great-

est physicians now recognise, that many of the so-called powerful drug remedies instead of belonging to the first class, and co-operating with nature's forces, actually belong to the second class, and work directly *against* nature's curative efforts. So when the patient recovers while taking these remedies, it is in spite of the drug rather than because of any beneficial help it affords the patient. Fortunately, many of the commonly used drugs have little or no effect upon the human system. They are about as harmless to the patient as stroking the cat's back would be to the cat. The agitated patient feels that he must have something done for him. The physician administers a harmless drug, and the patient, feeling that he is having something done for him, is at rest, and *nature* heals him; but the drug gets the credit.

Again there is another class of drug remedies that protect either the skin or the mucous membrane of the alimentary canal from various irritations or germs, thus helping the body by crippling its enemies. But their number at best is very limited, and it is undoubtedly as true to-day as it was a generation ago, when a great physician said in substance that if all the drugs in the world were thrown into the sea, it would be good for the world and bad for the fishes.

The era of physiological remedies has arrived and every mother should prepare herself so she can treat intelligently the simple, common, every-day ailments of her child without the necessity of calling in a doctor, for the same reason that she should be able to administer to his spiritual wants and necessities without sending for a preacher. She should endeavour to acquaint herself with the pain-relieving possibilities that are hidden away in a hot fomentation, so that she should never be tempted to dope the child with soothing syrups, or similar remedies which only stop the pain by poisoning the child.

A Treatment Chest instead of a Medicine Shelf

It is more important for the health and future happiness of a growing family to have a treatment closet in the home than to have a medicine shelf in the pantry. I would suggest that such a treatment chest be stocked with:—

Two fomentation cloths; a rubber

spine bag; a combination hot water bag (which can be purchased at any drug store, and may not only be used as a hot water bottle, but when desired can also take the place of an enema can); a rubber ice bag; a foot-bath tub; a clinical thermometer; a water thermometer; three Turkish towels; a fomentation pail; a friction mitt.

How to Feed the Sick

WM. W. WORSTER, A. M., M. D.

That proportion of dietetics which pertains to the feeding of the sick should receive a most thorough and careful consideration. Even for a person whose appetite and will powers are both active, it is not always easy to select a diet; and when these are temporarily absent or greatly diminished, the situation is more difficult. In the sick-room there are many complicating conditions to meet. What food to give, how to prepare and administer it, and when to give it, are problems constantly recurring. The attending physician sometimes prescribes the amount and kinds of food. Usually, however, not only these but the preparation and administration as well, are left to the discretion of the nurse or other attendant; many times, and far too often, to an inexperienced cook.

In the feeding of the sick, there are many things to be taken into consideration other than those which directly pertain to the food. The condition of the surroundings, the position of the patient, the appearance of the tray, the conduct of the nurse, and the like, are factors of great importance.

Before the tray is brought in, see that the patient is made as comfortable as possible. Be careful not to throw his head too far forward. Wash his hands and face before each meal. Rinse his mouth before and after eating. Be sure to pro-

tect all clothing. Do not permit crumbs to fall into the bed; they are very disagreeable. When he is able to sit up a half-hour a day, arrange the daily routine so that one of his meals will be served during that time. Keep the patient's mind, if possible, continually upon some pleasant subject. Be sure to consult, as far as orders and health will permit, the known tastes and desires of the patient, but do not annoy him each meal by asking. Learn by careful daily observations his likes and dislikes. Surprises are very gratifying and more appetizing than meals planned for with the help of the patient.

Never overburden the digestive organs of the patient. This is frequently done in an overanxious endeavour to help the patient. Remember it is not the quantity of food swallowed that helps, but, the amount actually digested and assimilated. Many times a small, appetizing meal is much better than a large one. If the patient is sleeping, it is not always advisable to awaken him for meals. Many times the sleep will do as much good as the meal, if not more. The meal can be postponed, but the sleep in many instances can not be resumed.

It is always advisable to keep the patient in a room with pleasant surroundings and abundance of fresh air. The room should always be isolated from the

noise of the kitchen and the odour of cooking food. If the patient is unable to sit up, such articles as a bedside table, drinking-tubes, and feeding-cups are always of great convenience.

The nurse or attendant should be very careful not to spoil the patient's appetite. This many times is done by serving foods in medicine utensils. Irregularity in serving meals may produce the same effect. The patient's appetite may fail completely if the meal is much delayed. If the nurse feeds the patient, she should do so slowly and usually in small amounts. She should never think of eating in the patient's room. Very near friends or relatives may under certain conditions be permitted to do so, especially if the patient is convalescing to such an extent as to enjoy their company. In many cases it is necessary for the nurse to tax her ingenuity and judgment to the utmost to stimulate any desire at all for food on the part of the patient.

It is very essential that the nurse should know for herself about foods, their composition, preparation; and under no circumstances should she leave this, perhaps the most important part of her work, to inexperienced hands. The preparation of the food should receive the utmost care. It is one thing to cook for the well, but it is quite a different thing to cook for the sick. How many times have I heard such expressions as the following: "O, I just don't know what to get for my patient to-day!" It is a perplexing problem many times, and requires much thought and training.

Possible no one thing is of greater significance than to have the tray both attractive and inviting. It should be scrupulously clean, with the best kind of well-cooked foods. A poor appetite may be wholly due to the non-tempting nature of the food or a poorly set tray. Food should never be prepared in the patient's

presence. It should always be tested before taken to him. Such foods as milk, eggs, and butter should invariably be fresh. Highly seasoned foods are objectionable. Great care should be taken to see that such foods as are to be served hot are not only hot, but also served in hot or warm dishes. The same is conversely true for cold foods.

Avoid having too many things on the tray, but on the other hand, never neglect the essentials, such as knives, forks, spoons, sugar, and salt. Have the tray large enough to prevent crowding. Make every thing as neat as possible. Clean napkins, spotless china, shining silver, combined with order in arrangement, make the tray very inviting. Do not fill dishes containing liquids too full, as they are likely to spill. Glasses should never be over two thirds full.

Garnishes, flowers, and quotations from the Bible or standard authors, while not imperative, may very appropriately be placed on the tray. It may be said in many instances that the patient is too sick to notice all these details. This is seldom, if ever the case. He may nevertheless be too ill to mention them. The very fact that he may not give verbal expression to his feelings is no sign of his non-appreciation. Proper care in the preparation and administration of foods to the sick is as essential as the proper administration of medicine or treatments of any kind.

As soon as the meal is completed, remove the tray at once. It should never be left in the room with the expectation that it will stimulate an appetite. It is a good plan always to disinfect or sterilize all dishes that come from the sickroom. This is not always essential; but if made a routine practise, it will never be neglected in cases of infection, where great dangers exist not only to the nurse, but to the family, if the disinfection is not properly executed.

Consumption Is Not a Hereditary Disease; It Is a Curable Disease

D. H. KRESS, M. D.

IN civilized countries no other disease has a death-rate equal to tuberculosis. It carries off young men and young women just as they are blooming into life or entering upon years of usefulness and responsibility. One third of the deaths that occur between the ages of fifteen and forty-five in civilized communities are said to be due to this disease. In Germany, where a careful study of the disease has been found that nearly one half of the deaths between the ages of twenty-one and twenty-five are caused by it.

Dr. Nageli, a noted authority on tuberculosis, as a result of very extensive investigations conducted by him, concludes from the tubercular scars found in the lungs of post-mortem cases that practically *every adult* has at some time had tuberculosis. Another European authority says ninety-eight per cent of his post-mortems presented either active tubercular disease or scars indicating the previous presence of the disease. It is seldom, if ever, found in the new-born, and is therefore contracted after birth.

Consumption is to be dreaded perhaps even more than plague or smallpox, and the same precautions should be taken to prevent its spread that we take in preventing the spread of other germ diseases. If an outbreak of smallpox should occur, the whole community would be aroused. Decided and effectual efforts would be put forth to prevent its spread and lessen its prevalence. Yet little anxiety has in the past been felt concerning consumption.

The probable reason why this apathy has existed is the fact that other epidemic or germ diseases carry off their victims in a few days, while consumption steals in quietly and fastens upon one member of

the family, and in the course of a few months he dies. Then it is found that another member is failing in health and losing in weight; in a short time he, too, dies of the disease; and so it goes on weeding out one after another, until often entire families are in time wiped out. But it does its work so slowly and stealthily that little alarm is created. Friends of the bereaved stand by and say, "It is too bad, but it runs in the family; it is a hereditary disease." This consolation and resignation is felt by all, and so matters are allowed to continue, and this monster is left undisturbed in its work of destruction. The feeling exists that no one is to blame for a death due to consumption. This feeling is responsible for the existence and prevalence of this disease. The fact is that any adult person who dies of consumption has himself and not his parents or his heredity to blame for it.

It has been fully demonstrated that consumption is not inherited. It is possible to inherit certain predisposing weaknesses, but it is also possible within certain limits to develop and strengthen these weak points, and make them become strong points. The gardener takes the weak plant and by cultivation makes of it a thrifty plant.

The difficulty is that children inherit not only the weakened constitutions of their tuberculous parents, but in addition they fall into the wrong habits of the parents. These habits, more than the weakened constitution, are responsible for tuberculosis.

Let no one therefore settle down in apathy, and say, "There is no hope for me; I have inherited this weakness." Determine to strengthen the weak points.

If the chest is narrow and contracted, take suitable exercises to develop it. Sit erect; stand erect; walk erect. Send a current of energy into every muscle of the body. Practise deep breathing; keep in the open air; dispense with every harmful practise; eat clean and wholesome foods, combining them well, and masticate thoroughly all you eat, and you need never fall a victim to this disease.

Consumption is a curable disease if it

is taken in time. But if it is not treated in time, it soon reaches the incurable stage. As a rule, its progress is rapid. The disease process begins at a small point, and rapidly spreads. It is therefore of the utmost importance that curative measures be adopted at the very outset. Life in the open air is above all treatments the best; nourishing food is next in importance. Agreeable surroundings and light, cheerful occupation must also be encouraged.

The Drugging of Children

At Home, and More Particularly at the Soda Fountain

An abstract of address delivered by Dr. Harvey W. Wiley before the National Education Association in Chicago

It is a lamentable fact that in many of our city schools, children are at a disadvantage by reason of improper clothing and the necessity of doing without nourishing food, especially at the luncheon hour. In some cities attempts have been made to remedy some of these deficiencies, especially those relating to poor luncheons.

In the city of Washington, the school authorities established a number of tables where simple but nutritious lunch could be bought for a penny by some of those who were unable to bring proper food from home. Where this experiment has been tried it has been the universal consensus of opinion that the scholarship and deportment of those who received these simple benefactions have been improved. To show the hold that mercenary interests have on the country I may say that, when these attempts were made in Washington to supply wholesome and nutritious luncheons to the poor children, protests were made by dealers in candies, etc., in the vicinity of the school, against the practice, on the ground that serving the luncheon in the school room prevented the children from coming into their stores and buying their goods. Happily this commercial objection did not succeed in breaking down the plan adopted by the school authorities.

A still more important problem is that condition of school children which, for lack of a better term, is called nervousness. What is it that has ruined the children's nerves? In my opinion it does not as a rule come from over-study, though occasionally that might have been the case. The trouble with the children of this country is that after the manner of their parents they are subjected to exhilaration by stimulants of various kinds, which have no food value and can work only injury. I refer especially to coffee and tea at home, the acquisition by the young boys of the tobacco habit, and the indulgence by the boys and girls in the so-called soft drinks which contain cocaine or caffeine. Fortunately the effectiveness of the campaign against cocaine has driven most of the beverages containing it from the soda fountains, but this is not true of those containing caffeine.

The Drug Division of the Department of Agriculture secured the names of over one hundred so-called soft drinks sold at soda fountains which contained either caffeine or cocaine or both. As a rule no soda fountain sells over two or three of these soft drinks, but they are offered in the large numbers which I have mentioned in the various parts of the country.

Inasmuch as every authority has agreed that cocaine is a substance to be kept out of foods, I shall confine my remarks solely to those products containing caffeine.

The health officers of Washington issued a letter of caution to parents in which it was urged that they should not allow their children to use tea or coffee at home. Nothing was said in this circular, however, about patronizing soda fountains where beverages containing caffeine were sold. In point of fact, it is commonly admitted by experts that caffeine-bearing beverages taken upon an empty stomach are more injurious than the same amount of caffeine would be, consumed with meals. Now the consumption of tea and coffee at home with meals is less harmful than the drinking of caffeinated beverages at the soda fountains. The name of one of these beverages most frequently found is Coca Cola. Indeed, it is somewhat rare at the present time to find a soda fountain that does not sell this beverage. A glass of Coca Cola contains about the same amount of caffeine as a cup of tea or coffee, and children in drinking this are doing the very thing their parents would not have them do if they knew it. The authorities should be as careful to caution against the use of Coca Cola as against coffee and tea. It is bad enough for grown people to drink these beverages without offering them to children.

But there is another reason why the children suffer with that indescribable condition called nervousness. While we may not inherit infectious diseases and nervousness itself, we may come into the world with an inheritance which is favourable to the breaking down of the nervous system. Why, may I ask, is this the case? The answer is obvious. We are the most bedrugged nation of the earth. Men and women are victims of morphine, codein, cocaine, chloroform, and cannabis indica. They are saturated with tobacco and alcohol, and this added to the everlast-

ing drugging is entirely sufficient to account for the destruction of our nerves. They cannot resist the bombardment.

How often do I hear the phrase, "I can drink a strong cup of coffee with no ill effect." The same excuse is urged for the use of alcoholic beverages. "I drink a glass of beer, or wine, or whisky, without feeling any ill effect," says the one who is addicted to the drug habit; "I never become intoxicated." But it is not the fourth or fifth drink of whisky which intoxicates; it is the sum of the first, second and third drinks. If there is no foundation there is no structure. Because the injury is not measured by any ordinary rule of dimensions, is no proof that it does not exist. The result is that not only are our children subject to all kinds of nervous defects but the grown people are more so.

It is often said that these stimulants are useful for mental effect. Learned men have written treatises at the instigation of the Coca Cola Company to show that caffeine is positively beneficial. A story ran through one of the magazines showing that the brilliant playwright could not produce a striking success except under the influence of alcohol. All such stuff as this is merely illusionary. Neither coffee, nor tea, nor tobacco, nor alcohol, nor opium, nor cocaine, nor hasheesh, ever produced a brilliant thought. They sometimes cut loose the sense of responsibility and make one feel as if he were a genius; but they do nothing but harm. The inhabitants of the Grecian peninsula owed nothing of their genius to any of the dopes mentioned. The world would be better to-day if coffee, tea, tobacco, alcohol, morphine, opium and its derivatives, cannabis, acetanilid, and all their progeny, relations, and assymptotes were blotted from the face of the earth.

But it is not for me to describe what men and women of mature age shall eat, drink and smoke. My duty is to save, if possible, the children. If we can save the

children, all right. We need not have much fear for the men and women that come after: they will be strong, self-reliant, and capable of taking care of themselves. My plea, therefore, to the teachers of the nation is to join in the great work to banish from the menu of the child every

single substance which hits the nerves, excites undue activity, or produces unnatural stimulation, and to substitute in its place a wholesome, nutritious, plain, simple diet, which may enable the child to grow and become a healthy and valuable citizen.

Food in Relation to Health---Dairy Products

BY T. C. O'DONNELL

MILK and milk products are perhaps the most universally used of all foods. In one-half the world rice occupies the position which wheat maintains in the other half. But in Orient and Occident alike, milk is used as a staple by all classes of people. It is also one of the oldest of foods, occupying a prominent place in the earliest historical narratives.

During the past century pure milk has been the object of a campaign second in extent and achievements only to the anti-alcoholism campaign. So long ago as 1849 an agitation arose in New York City against the feeding of distillery slops to dairy herds. The agitation resulted in a reform of this abuse, but a few years later the existence of germs was discovered, and with improved methods of bacteriological examination the state of the public milk supply began to be looked into. The investigations have proved from time to time what had long been suspected, that milk is one of the most prolific sources of disease. "The filthy food," indeed, it has not inaptly been called. "Tuberculous herd" is a term which has passed into our everyday language, to denote dairy herds one or all of whose cows have tuberculosis in a more or less virulent form, which is easily transmitted to man. And it is the conviction of most men who have investigated the subject that there are very few if any herds which are not tuberculous. Typhoid is another disease which owes much of its prevalence to milk.

Dr. Sims Woodhead, the eminent physician of Cambridge, England, has said, "Every tuberculous cow is either an actual or a potential centre of infection. We cannot get rid of the great white plague until we take bacilli of bovine origin into consideration."

Dr. Schroeder, of the U. S. Department of Agriculture, states in his bulletin on "Milk as a Carrier of Tuberculosis Infection," that "it is a fact, a plain, experimentally demonstrated fact, that no one who uses raw milk extensively can reasonably hope to escape introducing many tubercle bacilli into his body. They are inevitably consumed in large quantities."

It is as a source of infantile disorders, however, that milk is most fatal. "Herod," says a well-known writer, "was a novice in the slaughter of helpless infants compared with the poison which is sold as milk, although it would cost far less to have pure milk than to bury our babies. Here is one of the greatest food problems now before the American people, for not only will bad milk cause the death of hundreds of thousands of infants, but diseases may be engendered in the years of the child's formative state, when the energies of the body should be used for growth, and not for resisting disorders carried to it by milk. A few gallons of bad milk will scatter disease and death enough to put a whole community in mourning. One-half of America's babies die before they are five years old. Many of these tiny bundles of humanity never

reach their second birthday. Boston and Washington lose over two hundred and fifty, and New York over two hundred and seventy-five children from every thousand born. 'Cholera infantum,' 'convulsions,' 'gastritis,' 'acute intestinal inflammation'—these are a few of the terms for infantile suffering which fall glibly from the doctor's lips when he is asked the cause of this fearful death roll—this list of slain in these piping times of peace, which exceeds that of nearly every great battle in the history of the world. But the doctor knows full well that the real destroyer of our youngest citizens is unclean milk."

Women's clubs, civic organizations, municipal bodies, philanthropic individuals and scientific societies have been the chief factors in the "clean-up crusade," and results have long since begun to appear. In most of the larger cities of America depots have been established where "pasteurized," "certified," or, in the cause of Boston especially, "modified" milk may be obtained.

Pasteurized or sterilized milk is milk which has been subjected to a temperature of 157° F. for ten minutes or longer for the purpose of destroying the germs. Pasteurization has a tendency to coagulate the albumin of the milk and so make it difficult to digest. On this account the certified milk is preferable, as here the attempt is made by establishing cleanly conditions to keep the germs out, rather than to destroy them after they have once gained access. Inspectors make periodical visits to the dairies, see that the stables, the cows, dairy houses, the bottles, and the attendants are kept in a condition of the utmost cleanliness possible.

Cow's milk in its raw state is not adapted to the digestive apparatus of the human being. On entering the stomach it forms into large, tough cheese-like curds that require a long time for digestion. To make it approximate mother's milk, and thus suit it to infant feeding, it is

diluted with lime water, and a solution of sugar is added. This is known as *modified*, or *percentage milk*, and where used it has been successful in reducing the mortality rate for infants.

The chief constituents of the kinds of milk in most common use are shown by the following table:

Source of Milk	Water	Protein	Carbohy- drates	Fats	Calories per lb.
Human	87.4	2.3	6.2	2.8	319
Cow	87.2	3.5	4.9	3.7	313
Goat	85.7	4.3	4.4	4.8	365
Ass	89.6	1.3	6.9	1.6	222

It will be seen from the above table that ass's milk more closely resembles mother's milk than does cow's milk, except in its total food value, but because of the absence of a general supply its use can be resorted to only in rare cases of sickroom treatment, when the stomach will tolerate no other food.

The nutritive quality of milk varies with herds, individuals, cows, feed, etc., and it is advisable, therefore, to use milk regularly from a single cow or herd, so far as possible.

Condensed milk, unsweetened, has, when diluted, about the same food value as fresh milk. Sweetened, it is of double the food value, due to the sugar which is added in the evaporating process.

Cream.

After milk has stood for some time the fat, on account of its lighter weight, rises to the top as cream, the nutritive value of which is as follows: protein, 2.7 per cent; fat, 26.7 per cent; carbohydrate elements, 2.8 per cent; and various salts, 1.8 per cent. The remainder is made up of water.

Cream, by virtue of the large percentage of fat which it contains, is essentially a producer of energy, but its cost renders it rather an expensive source of fat. It is one of the most easily digested fats, is readily assimilated by the system, and where it can be procured in sufficient

quantity, serves as a valuable food in tuberculosis.

In cream, as in milk, the utmost care should be taken to get cream that has been produced under the most cleanly conditions possible. Investigations made by the Oklahoma Agricultural Department show germs to be present in cream in dangerously large quantities. Tests were made during the months of December, January, and February which showed the presence of 134,800,000 germs per cubic centimeter.

Skim Milk

Skim milk, the milk which remains after the removal of the cream, has a food value of 170 calories per pound, chiefly proteins and carbohydrates, the fats having been removed in the form of cream. In bread making it may be substituted for the whole milk which many people use. As compared with bread made from water, skim milk bread contains 2,710 calories per pound as opposed to 2,694 calories. Also in the preparation of soups, such as potato, celery, tomato, green pea, and green corn soups; fish, lobster, clam, and oyster chowders, bisques, and stews, skim milk will replace whole milk. All kinds of quick biscuit, griddle cakes, etc., can also be made with skim milk as well as with whole milk. In most kinds of cake skim milk will be found a perfect substitute for whole milk.

Butter.

Butter contains 85 per cent fat, no carbohydrates, and one per cent of protein substance. It is, therefore, distinctly an energy-producing food, but because of its lack of protein could not alone support life for any considerable length of time. Butter is one of the most digestible of foods, and is easily assimilated by the system, 98 per cent of the total fat being absorbed into the body tissues.

As purchased in the open market butter is frequently adulterated. Stale butter is melted, washed, salted, and reworked, re-

sulting in what is known as "renovated" butter. Chemical preservatives are often added to butter which is on the verge of decay, while colouring materials are sometimes injurious in character.

The following is a simple test which will be found effective in testing butter for adulterants: a lump of butter two or three times the size of a pea is placed in a large spoon and heated over an alcohol or gas flame, or when more convenient, above the chimney of an ordinary house lamp. If the sample in question is fresh and pure it will boil quietly without the evolution of numerous small bubbles and foam. Oleomargarine and process butter, however, will sputter and crackle and froth up to a considerable extent.

The substitutes for butter in most common use, oleomargarine and butterine, are made by mixing vegetable with animal fats. Coloured stearin, cottonseed oil, and lard are the materials from which oleomargarine is usually made. It has much the same digestibility and food value as butter. When sold under its true name and not as butter, and when made under cleanly conditions and of wholesome material, there is no objection, as it is a valuable food and supplies heat and energy at less cost than butter.

For cooking purposes cottonseed oil and other vegetable fat found on the market are superior to lard and similar animal fats.

The value of buttermilk as a foodstuff is rather out of proportion to its energy-producing value of 165 calories per pound. The extreme ease with which it is digested renders it of special value in the case of persons with weak digestion. It is also valuable in cases of catarrh of the stomach, and possesses valuable diuretic properties. Buttermilk, however, contains lactic acid, to which its sour taste is due, developed during the "ripening" of the cream preparatory to the churning. This

lactic acid possesses powerful germ-destroying properties, and buttermilk, consequently, is valuable in freeing the intestinal canal of the putrefactive germs which thrive there, and which are the chief factors in producing intestinal auto-intoxication, with its headaches, biliousness and constipation.

Cottage Cheese.

Experiments have shown that cottage cheese prepared with cream, compares favourably in respect to food value and digestibility with beef and other meats. One hundred pounds of skim milk and four pounds of cream, containing twenty per cent fat, makes from fifteen to sixteen pounds or more of moist cottage cheese. At two cents per quart for skim milk and thirty-five cents per quart for cream, cottage cheese would cost about eleven cents a pound, and compares favourably with a cut of meat at the same price, so far as food value is concerned. The addition of cream to cottage cheese favourably influences both its nutritive value and its palatability without increasing the cost materially.

In addition, cottage cheese contains large numbers of the lactic acid bacilli which in the case of buttermilk we have observed as tending to destroy the putrefactive germs which thrive in the alimentary canal and produce auto-intoxication.

A pleasing salad may be made from cottage cheese, as follows: Drain one cup of cheese until dry. Add one-third cup of celery cut fine. Add the salt and sweet cream and serve with mayonnaise dressing.

Kumiss and Kefir.

These are sour milk preparations in which alcoholic fermentation has been begun by the use of yeast. Both have a higher food value than buttermilk, and contain considerably higher proportions of lactic acid, and so have a pronounced medicinal value in disorders of the intestinal canal, such as intestinal auto-intoxication, which is caused by decay of im-

partially digested remnants of food in the intestinal canal, etc.

Various sour milk preparations, such as yogurt and lactobacilline, are now on the market in which lactic acid has been produced by various species of what are called "lactic acid bacilli," or germs. The advantages of most of these are twofold: first, they contain less alcohol than kumiss and kefir, and second, their germ-destroying properties are more powerful and more lasting.

IMPORTANCE OF DIETETICS

IT is only comparatively recently that dietetics has had a due share of attention from physicians, and naturally so, for the schools have taught practically nothing about dietetics. The ordinary physician, when he was graduated, knew as much about dietetics as a child does about algebra. He was taught disease, and he was taught drugs and all that, but no hygiene and dietetics. It is true the colleges are doing a little better now. But those who are authorities on dietetics obtained their knowledge outside a medical college.

Here is a statement from the *Journal of the American Medical Association* by Dr. Boardman Reid, who has given considerable attention to dietetics. I happen to know that practically all he knows of the subject he obtained after graduation:—

"The diet in most chronic affections is a factor of the greatest consequence. A more thorough study of dietetics would immensely improve the therapeutics of the average practitioner of whatever school or system.

"The modern exact methods in the diagnosis and treatment of gastro-enteric affections should receive more attention in our medical colleges. If every practitioner were required to master them, or not having done so, would seek help from specialists in that line, not only his frankly stubborn abdominal cases, but also in countless other obscure affections, he would very often be helped sooner to find the key that would solve the difficulty and obviate a harmful prolonged dependence on hypnotics or other inappropriate drugs."

The House We Live In

General View of the Digestive Process

THE digestive process begins the moment a morsel of food enters the mouth, and continues throughout the entire length of the alimentary canal, or until the digestible portions of the food have been completely digested.

The first act in the digestive process is mastication, or chewing the food, the purpose of which is to crush the food and divide it into small particles, so that the various digestive fluids may easily and promptly come into contact with every part of it.

The saliva softens the food, and thus prepares it for the action of other digestive fluids. It also acts upon the starch, converting a portion of it into sugar.

In the act of swallowing, the food does not drop down through an open tube, but is seized by the muscles at the back of the mouth, and is carried down into the stomach by the oesophagus.

After receiving the food, the stomach soon begins to pour out the gastric juice, which first makes its appearance in little drops, like beads of sweat upon the face when the perspiration starts. As the quantity increases, the drops run together, trickle down the side of the stomach, and mingle with the food. The muscular walls of the stomach contract upon the food, moving it about with a sort of churning action, thoroughly mixing the gastric juice with the foods. During this process both the openings of the stomach are tightly closed. The gastric juice softens the food, digests albumen, and coagulates milk. The saliva continues its action upon starch for some time after the food reaches the stomach.

After the food has remained in the

stomach from one to three hours, or even longer, if the digestion is slow or indigestible foods have been eaten, the contraction of the stomach becomes so vigorous that the more fluid portions of the food are squeezed out through the pylorus, thus escaping into the intestine. The pylorus does not exercise a species of intelligence in the selection of the food, as was once supposed. The increasing acidity of the contents of the stomach causes its muscular walls to contract with increasing vigour, until finally those portions of the food which may be less perfectly broken up but which the stomach has been unable to digest, are forced through the pylorus.

As it leaves the stomach, the partially digested mass of food is intensely acid, from the large quantity of gastric juice which it contains. Intestinal digestion cannot begin until the food becomes alkaline. The alkaline bile neutralizes the gastric juice and renders the digesting mass slightly alkaline. The bile also acts upon the fats of the food, converting them into an emulsion. The pancreatic juice converts the starch into sugar, digesting both raw and cooked starch. It also digests fats and albumen. The intestinal juice continues the work begun by the other digestive fluids, and digests cane-sugar.

In addition to the uses of which we have already learned, several of the digestive fluids possess other interesting properties. The saliva aids the stomach, by stimulating its glands to make gastric juice. The gastric juice and the bile are excellent antiseptics, by which the food is preserved from fermentation while undergoing digestion. The bile also stim-

ulates the movements of the intestines by which the food is moved along, and aids absorption. It is a remarkable and interesting fact that a fluid so useful as the bile should be at the same time largely composed of waste matters which are being removed from the body. This is an illustration of the wonderful economy shown by Nature in her Operations.

The food is moved along the alimentary canal, from the stomach downward, by successive contractions of the muscular walls of the intestines, known as peristaltic movements, which occur with great regularity during digestion.

The absorption of the food begins as soon as any portion has been digested. Even in the mouth and the oesophagus a small amount is absorbed. The entire mucous membrane lining the digestive canal is furnished with a rich supply of blood vessels, by which the greater part of the digested food is absorbed. Absorption is greatly aided by a rhythmical contraction of the villi, which is in effect a sort of pumping action, alternately filling and emptying the lacteal and venous absorbents. The action of the diaphragm in normal breathing also aids absorption by emptying the blood vessels of the stomach and intestines. During absorption, the digested food is changed into blood.

The walls of the intestines contain certain small vessels called lacteals, on account of their white appearance after a meal. This appearance is due to the digested fat which they contain, and which it is their special duty to absorb. The small lacteal vessels unite to form larger ones, all joining at last in one large one about the size of a crow's quill, called the thoracic duct, which passes upward and connects with the large veins that return the blood from the left arm.

The veins of the stomach, intestines, pancreas, and spleen all unite to form one large vein, called the portal vein. Instead

of emptying, as do other veins, into the large vein which goes to the heart, the portal vein conveys its blood to the liver, through which it is distributed by a special set of vessels. Afterwards it is gathered up by another large vein, and carried to the heart. Thus it appears that all of the food absorbed by the blood-vessels at the stomach and intestines, constituting the greater part of what is digested, is carried to the liver before entering the general circulation.

The liver not only secretes a digestive fluid, the bile, but it acts upon the food brought to it by the portal vein, and regulates the supply of digested food to the general system. It converts a large share of the grape sugar and partially digested starch brought to it into liver-starch, commonly termed glycogen, which it stores up in its tissues. During the interval between the meals, the liver gradually re-digests the glycogen, reconverting it into sugar, and thus supplying it to the blood in small quantities, instead of allowing the entire amount formed in digestion to enter the circulation at once. If too large an amount of sugar entered the blood at once the system would be unable to use it all, and would be compelled to get rid of a considerable portion through the kidneys.

The remarkable function by which the liver stores up starch within its tissues is usefully employed as a means of protecting the body from various poisons. When arsenic, mercury, lead, or any other metallic poison is taken into the stomach, any portion absorbed is carried to the liver, which absorbs and retains as much as possible of the poison, and thus protects the rest of the body. The liver treats the alcohol and other narcotics in the same manner; and it is doubtless for this reason that the liver suffers so great damage from the use of alcoholic drinks, tobacco, and other narcotic substances. Vegetable poisons and undigested food substances are also destroyed by the liver.—*J. H. Kellogg.*

Bread over 1,800 Years Old

THERE is in the museum at Naples some bread which, so history tells us, was baked in August, A. D. 79, in one of the curious ovens still to be seen at Pompeii. More than eighteen centuries, therefore, have elapsed since it was drawn "all hot" and indigestible from the oven. So it may claim to be the stalest bread in the world. You may see it in a glass case on the upper floor of the museum. In shape and size the loaves resemble the small cottage loaves of England, but not in appearance, for they are as black as charcoal, which, in fact, they closely resemble. This was not their original colour, but they have become carbonized. When new, they may have weighed about a couple of pounds each, and in all probability were raised with leaven, as is most of the bread in Oriental countries at the present time. The popular idea that Pompeii was destroyed by lava is a fallacious one. If a lava stream had descended upon the city; the bread and everything

else in the place would have been utterly destroyed. Pompeii was really buried under ashes and fine cinders, called by the Italian *lapilli*. On that dreadful day in August, when the great eruption of Vesuvius took place, showers of fine ashes and fine cinders fell first upon the doomed city, then showers of *lapilli*, then more ashes and more *lapilli*, until Pompeii was covered over to a depth in places of fifteen and even twenty feet. Other comestibles besides bread were preserved, and may now be seen in this museum. There are various kinds of grain, fruit, vegetables, and even pieces of meat. Most interesting is a dish of walnuts, some cracked ready for eating, others whole. There are figs, too, and pears, the former rather shrivelled, as one would expect after all these years, the latter certainly no longer "juicy." But perhaps the most interesting relic in the room is a honeycomb, every cell of which can be distinctly made out.—*Food and Cookery.*

The White Curtain Fetish

IF the national campaign against tuberculosis is going to be a success, it cannot be too strongly impressed that, like charity, preventive measures must begin at home. Fresh air must be obtained by each occupant of every room in the house. This can never be accomplished until the housewives of our land realize that the body is of more value than raiment, and an abundant supply of pure air of more importance to life than the maintenance of the traditional snow whiteness of a pair of window-curtains. The fear of soiling white curtains and also of admitting dust and dirt into the rooms where it can settle on furniture and ornaments is quite as much, if not more responsible for the closed window habit as is the dislike of draughts. It is hard to overcome prejudice, and harder

still to root out an old-established custom, but, nevertheless, these elementary facts of hygiene should be taught plainly and simply to elder girls in school so that wiser habits of house management may be inculcated. To abolish curtains altogether from the windows of private dwellings would be, perhaps, too much to expect of the present generation, but if this ideal cannot yet be attained, they might be made of some less expensive or more readily renewable material. For the sake of appearances human lives must not be allowed to suffer.—*The Medical Press and Circular.*

"AIM high."

"BE diligent."

"IN everything give thanks."



Soups

George E. Cornforth

SOUPS are sometimes considered to be rather a relish than a food. If they are properly made, however, they are not only nutritious, but they contain elements that are likely to be lacking in the ordinary dietary. Vegetables are rich in certain mineral salts that are needed in the metabolism of the body; but because of their large contents of woody fibre, they are to many persons objectionable, and possibly indigestible. In the form of soups, the most valuable mineral constituents of the vegetables may be obtained without the indigestible residue.

The February issue contained recipes for a number of excellent cream soups and bran-stock soups. The soups in the present article have all proved their value in the dining-room.

Cream Vegetable Soup

- ¼ small turnip, chopped
- 1 small onion, chopped
- 1 small potato, chopped
- ⅓ cup cabbage, shredded
- ¼ cup corn

Stew all together till tender in sufficient water to cook the vegetables. Add milk to make three-fourths quart soup. Reheat, and thicken with two teaspoonfuls flour stirred smooth with a little cold water. Add one-half teaspoonful salt and one tablespoonful butter.

Cream Chestnut Soup

To shell the chestnuts, wash them, and cut a slit in the side of each one, then boil them for a few minutes. Drain off the water and pour cold water over them. The shell and tough skins that cover the kernel can then be easily peeled off.

Boil the peeled chestnuts till thoroughly tender in a small quantity of water. Rub them through a colander. For one cup of

the puree, use,—

- 1 cup of the water in which the chestnuts were boiled
- 1 pint milk
- 2 tablespoonfuls butter
- 2 teaspoonfuls flour
- ¾ teaspoonful salt

Heat milk in a double boiler. Thicken with the flour stirred smooth with a little cold water. Add remaining ingredients. Reheat.

This and the cream of almond soup are most delicious soups. The cream chestnut soup has a meaty flavour.

Cream of Almond Soup

- 2 ounces shelled almonds
- 1½ cups hot water
- 1½ cups hot milk
- ½ teaspoonful salt

Blanch and thoroughly dry the almonds, and grind them through a food chopper, using the nut-butter cutter. Rub this almond butter smooth with the water. Cook in a double boiler twenty minutes or till the nut butter has thickened the water somewhat. Add the hot milk and salt, and heat together a few minutes.

Cream Pumpkin Soup

Perhaps not many of our readers have thought of such a soup as this. The French name for the soup is *creme de poturon*, and people pronounce it delicious, not knowing that it is prepared from such a plebeian vegetable as pumpkin.

- ⅓ cup pumpkin which has been stewed or steamed and rubbed through a colander
- ¼ teaspoonful sugar
- ½ teaspoonful salt
- 1 pint milk

Simply heat the ingredients together in a double boiler.

I said that part water might be used in some of these soups. Part cream might

be used also, which would make richer and more delicious soups. This is especially true of cream pumpkin soup.

Instead of the chopped parsley which is generally used in cream potato soup, try just a little chopped fresh spearmint or a little of the powdered dry mint.

Try a little mint also in cream pea soup.

Clear Tomato Soup

- 1 pint tomatoes
- 1 cup water
- $\frac{1}{2}$ onion, sliced
- A bit of bay-leaf
- A few grains of summer savory
- A few grains of thyme
- 1 teaspoonful sugar
- $\frac{1}{2}$ teaspoonful salt.

Cook all together twenty minutes. Rub through a fine colander. Reheat. Thicken with two teaspoonfuls flour rubbed smooth with a little cold water. Add two teaspoonfuls butter.

Barley and Tomato Soup

- $1\frac{1}{2}$ cups tomatoes
- $1\frac{1}{2}$ cups water
- 1 small onion, sliced
- 1 tablespoonful pearl barley
- $\frac{1}{2}$ tablespoonful butter
- $\frac{1}{2}$ teaspoonful salt

Cook together all the ingredients except the barley for twenty minutes. Rub through a fine colander. Add water if necessary to make three-fourths quart. Put into a double boiler. Add the barley and cook four or five hours.

Rice might be used instead of barley in this soup, and then only about an hour would be necessary for cooking.

Tomato Macaroni or Vermicelli Soup

- 1 cup strained tomato
- 2 cups water
- 2 teaspoonfuls peanut butter
- $1\frac{1}{2}$ tablespoonfuls fine macaroni or vermicelli
- $\frac{1}{2}$ teaspoonful salt

Rub the nut butter smooth with the water. Add the tomato and salt, and heat in a double boiler. Add the macaroni and cook for from thirty to forty minutes.

To make tomato rice soup use rice instead of macaroni.

Tomato Bisque

- 1 cup strained tomato
- 2 cups water
- $\frac{1}{4}$ cup peanut butter
- $\frac{1}{2}$ teaspoonful salt

Rub the nut butter smooth with the water. Add strained tomato and salt, and cook in a double boiler fifteen minutes.

Split Pea Soup

- 1 cup split peas
- $\frac{1}{4}$ cup peanut butter
- 1 potato about the size of a butternut
- 1 onion about the size of a walnut
- $\frac{3}{4}$ teaspoonful salt

Wash the peas, and soak them overnight. In the morning put them to cook in cold water with the peanut butter, the onion, and the potato, which has been scrubbed and sliced without peeling. Cook slowly four or five hours till the peas are thoroughly softened. The creamy, rich consistency of this soup, as well as of bean and lentil soups, is obtained by long cooking. If the peas or beans or lentils are not sufficiently cooked, they will be mealy and will settle to the bottom of the soup. Rub the whole through a colander. Add salt, and enough water to make of the proper consistency, and reheat. This should make about one quart of soup. The peanut butter, potato, and onion may be omitted, and the soup seasoned with cream or milk or with one-eighth to one-fourth cup of butter.

Bean soup can be made by the same recipe, using any kind of dried beans in place of the peas.

In making cream tomato soup, it is not necessary, as is usually supposed, to use soda in order to keep it from curdling. It may be made in two ways,—first by using cream, second by using milk and taking sufficient care in making the soup.

Cream Tomato Soup, No. 1

- 2 cups strained tomato
- 1 cup water
- 1 cup cream
- 1 tablespoonful flour
- $\frac{3}{4}$ teaspoonful salt
- Grated yellow rind of $\frac{1}{2}$ orange

Heat tomato and water to boiling. Stir the flour smooth with the cream, and whip it into the boiling liquid. Add salt and the orange rind, and serve at once. There

(Concluded on Page 184)

: Mother and Child :

Your Child Has Its Own Personality

Spare the Rod and Try the Golden Rule: Don't Force, Develop Character

BY VIRGINIA T. VAN DE WATER

FOR a child to take undue thought for the morrow is unnatural. With the parents rests the serious and important task of training the little one to think. It is a mistake to shield our children from the consequences of their forgetfulness. Experience is a hard teacher, but a thorough one, and you and I have no right to prevent our boys and girls learning the lessons that she, and she only can teach. If the little girl who expects company forgets, in spite of warning, to wear her apron when playing in her best frock, let her bear the mortification of seeing that frock soiled when the other children are wearing their clean, fresh dresses. Of course this is as great a punishment to the mother as to the child, but perhaps this knowledge will make the little girl more careful another time. It is a harsh rule, but one that is almost invariable, that no one can bear alone the penalty of one's mistakes.

Last summer, small Jack, aged eleven, wanted an air-rifle. He had saved his money to that end, and consulted his father with regard to the purchase, asking advice, as do most of us, for the purpose of being justified in an already formed determination. In this case the *pater familias* advised against the rifle, but issued no positive commands in the matter. He reminded the boy that he was prone to heedlessness, that breakable windows were plentiful, that neighbours' cats were tempting targets, and neighbours' chickens of value to the owners. "Still," he added, "I do not forbid your getting the rifle.

The money is yours. Only, my son, you must take the consequences."

Of course the boy was willing to take them; a near-by barn-window was soon minus one pane, and a chicken, too young to be cooked, gave up its brief life, a sacrifice to small Jack's inability to aim straight. The next mishap was shooting a passing man in the leg with a bullet that was intended for a target across the road. Jack went down into the depths of his knickerbockers for money to repair the pane, bore the still warm chicken and his confession to the forgiving owner of the bird, asked the pardon (which was refused) of the irate possessor of the leg, and then brought the rifle up to his mother's room.

"Here, mother, is that rifle father advised me not to get. I guess he was right. I'm too careless; it costs too much for me to keep. You can give it away to somebody—I don't want it."

"But, dear," said the pitying parent, "just think of the money you saved for it!"

A Lesson for Your Own Child

"And think how quick it went, and what a fool I was," was the rejoinder. "Another time, I will be sure I know how to run a thing before I buy it. I guess I just got what was coming to me, mother dear!"

It was a hard-learned lesson, but the mother resisted the impulse to reimburse the boy for his loss. It would have been so much easier for her to give him what the

rifle had cost; it would have soothed her pitying heart, and would have been so much worse for her boy! But she had already learned that one of the pains of motherhood is the fact that we can not bear the penalties of our children's mistakes for them, and that we are cheating them when we attempt to do it. When a child has done his part, he may be helped, but he must do and suffer his portion for himself.

For this reason it is well to make a child give an equivalent in the way of work for what he gets. If your little girl wants a bead necklace, and wishes to save money to buy it, let her do it, subject to your selection and approval. Do not hand her the money and have her purchase the necklace as if it were hers by right. There are many little tasks she can do, errands which she can do for you, for which you can pay her an anna or two and make her feel that she is earning her beads.

You would find it easier to buy them yourself, or to give her the money? Certainly you would, but it would be unfair to the woman the girl is to become.

Duties But Not Burdens

On the other hand, do not burden the children with cares that do not belong to them. You have no right to darken their young lives with the clouds of perplexity that shadow yours. The paying of the rent, the size of the butchers' bills, the financial crisis, and the condition of your spiritual health are no affairs of theirs. But little burdens that are a part,

and duty of their young lives you should not spare them.

One mother keeps for her boys' room a cheap quality of towels, as she says her laundress has to wash holes in the fine ones in her attempts to get them clean. "The children *will not* wash their hands thoroughly before wiping them!" she declares.

Now, "a bird that can sing and won't sing must be made to sing." And the child that will not get himself clean must be made clean. This is not always an easy task. Yet the boy who goes on the

street or about the house with dirty neck, grimy ears and grubby hands should be coerced into washing properly. Right here I would comfort the sighing mother with the assurance that personal observation has led me to think that a self-respecting child will, by the time he is fifteen years of age, take enough pride in his appearance to bathe properly.

Some children

are, perhaps, naturally tidy. I have heard of such, but few of them have come under my personal observation. Even vain little girls feel that it is a waste of time to clean the finger-nails before each meal—unless there is to be company—and, as to the toe-nails, why who sees them? What's the use?

If a child will not keep clean for love of his mother, or for the sake of his own body, it is the mother's place to drill him into the habit of doing so, in spite of protests and sulks. Right here, allow me to say that the child who sulks and protests



has been improperly managed, and the parent would do well to make a stand for obedience over the tub or washbowl. Since cleanliness and godliness are closely allied, take a moral view of the matter.

Of course your son will get dirty while playing—one would not respect a boy who did not get just as grimy and dusty as his play would allow. But it is the dirt that stays that hurts. If the youngster starts out clean in the morning, and goes to bed clean at night, taking time to wash face and hands before each meal, he is a thoroughly *clean* boy.

There are many little flattering ways of promoting the love of the bath. One boy was presented with a set of large Turkish towels, "just like father's," and they made the son of a tidy father emulate him in his habits. Another youngster was kept supplied with a favourite brand of scented soap so long as he used it to advantage. The appeal to vanity accomplished what a plea for decency could not do.

Strive to stimulate the child's desire for dainty wash-stand accessories, such as the "latest thing" in nail-brushes, tooth-powder, toilet-powder, impressing the fact upon the owner that it is a pleasure to get such things for the boy or girl who is clean and dainty.

Give Prizes for Merit

Even when a boy or girl means to be neat, there are certain things that the mother must supervise occasionally. She

must see that the soap is properly washed from the hair after a shampoo, that the nails are kept in good condition, that proper attention is given to what one plump bit of humanity calls the "neck creases where the dirt *sticks*."

A child may have plain or cheap raiment, he may have to wear one suit until it shines like a polished mirror, he may tear his clothing—and the parent not be to blame. But when a child, having a mother, is not "skin-clean," it is that mother's fault.

"Easy come, easy go" is a proverb that applies to young people the world over. That for which they have to work will be valued; that which can be had for the asking, they neglect.

For even if you are wealthy and can be sure of having riches your child must learn to be a real man or a real woman, learn that everything has its price, and that the dearest possessions are those purchased by self-denial.

But the burdens that are fitted to your shoulders are as unsuitable for the young creatures as would be your clothing and work; you have philosophy and experience to help you with what has come to be your own life and its own responsibilities. This is a grave duty that faces parents, for in teaching the child not to be careless, they may make him that most pitiable of objects—a child burdened beyond its years.—*The Designer, May, 1913.*



A GRATEFUL PATIENT

THANKS to the American woman physician, Dr. A.! Following the birth of a child, my wife had a very diseased breast, which broke and left several openings. She went to Dr. B., and was treated for over a month without receiving the slightest help. Fortunately, a friend told me that in Bao Shing Road, Shanghai, there was a Helping Hand Dispensary, and the woman physician, Dr. A., was very skilled and had cured many cases of diseased breast. In the seventh moon I took my wife to this dispensary. Dr. A. used the lancet with care, and opened the abscess, afterward daily washing the diseased part; moreover, her sympathy for the sick one was most heartfelt. In ten days the sore was healed, and my wife's general health much improved; in fact, she improved from day to day, and in about ten days was completely cured. When I think that she was under the doctor's care for less than a month and yet fully healed, I can not but thank the doctor, and insert this in the paper, that others suffering with this disease may be informed.

"(Signed) DJU I NENG."

The above is a translation of a card of thanks that has appeared in several issues of one of the leading Chinese dailies of Shanghai. It was inserted by the husband of a woman who has been helped here in our Shanghai dispensary. The circumstances connected with the case are as follows: About two months ago a poor, neglected woman came into the dispensary. She had not received proper care after the birth of her child, and as a result had an infected breast, which broke, leaving seven large openings that constantly discharged milk and pus. We learned that her husband was a man in comfortable circumstances, but his people looked upon this woman as an undesirable daughter-in-law; the result was that she had no money to pay for the dressings

The Arc Light



In the treatment of local conditions by the application of dry heat, one of the most beneficial appliances is the electric arc light as shown in the accompanying illustration. This form of treatment is in constant use in both the Mussoorie and Calcutta Treatment Rooms. It is one among numerous successful forms of rational treatment used in similar institutions throughout the world. For particulars as to treatments given and rates please apply to

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Sanitarium Treatment Rooms,
Kirkville, Mussoorie, or
75, Park Street, Calcutta.

needed in the treatment, although it did not amount to more than ten annas a day. However, she was treated with every care, and in a little over two weeks the seven openings in her breast were almost healed. She was a refractory and unthankful patient, and before she was entirely well, left for her home in Hangchow, one hundred fifty miles from Shanghai.

Not many days after this woman left, another patient arrived. She had come from Hangchow and had brought with her her husband's father, her own father, and several servants. We were surprised to learn that she had come all the way from Hangchow just to be treated in our dispensary, for there are several large hospitals in her home city. We learned that she had searched all day in Shanghai to find our little dispensary, having called at several of the large hospitals during the search. She rented a room near the dispensary and settled down to stay until cured. The family was a wealthy one, and several servants came with the woman every time she came to the dispensary. During the time of her stay she became very much interested in the gospel (she was not a Christian), attended meetings in our chapel, and read several of our tracts.

BERTHA SELMON, M. D.

"A GERMAN physician reports the treatment of four cases of diarrhoea in infants from three to five months old, who were losing weight. He substituted buttermilk for two of the regular feedings each day, and had almost immediate improvement of the stools, and later a gain in weight and health. He attributes the virtue of the buttermilk to the small quantity of fat and the large proportionate quantity of lime and albumin.

WORK is no disgrace but idleness is.—*Hesiod.*

Stop Catching Cold!

A cold is the most common of diseases, yet how few people know just what it is, how it starts, and just how to cure it. Colds are dangerous. They destroy vitality, and prepare the way for worse conditions—sometimes for fatal diseases. The editor of LIFE AND HEALTH, Dr. G. H. Heald, has prepared a little book telling all about

"Colds," Their Cause, Prevention, and Cure

Only 62 pages of large print to read, but it tells the whole story lucidly and completely. What it contains is worth a fortune to those that have the "habit of catching cold." The book is a Life Preserver, and should be in every home. Neatly bound in white leatherette. Only 14 as. Post Extra.

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Rational Hydrotherapy

IRRIGATION OF THE COLON—THE ENEMA.

THIS very useful procedure consists of the introduction of a quantity of water into the colon. The author employs the enema in three forms, first, the simple enema, the method of using which is well known, second the graduated enema, a method devised by him a few years ago for the purpose of enabling persons who had become accustomed to the daily use of the enema to dispense with this very inconvenient procedure; third the colocolyter, termed by the French "enterocolyter," which consists of an enema taken in the right sim's position or the knee chest position, a long rectal tube being employed.

In the simple enema the water is commonly employed at about the temperature of the body or 90°. Better results are obtained by employing water at 70° F. The water is introduced by the aid of a syringe of some sort.

The temperature must also be adapted to the use for which the measure is employed. If for mere mechanical effects, a temperature near that of the body is proper. It is generally better to introduce the water gradually, so that the bowels may not be stimulated to contraction, causing the fluid introduced to be discharged before a sufficient quantity has been received.

While the water is being introduced, the patient lies upon his back with his hips slightly raised. If a strong desire is experienced to expel prematurely the liquid introduced, the difficulty may be overcome by asking the patient to resist the impulse strongly, if necessary by compressing the anus with a napkin for a short time, until the peristaltic movement has ceased.

In the employment of the enema only such an amount of water as is necessary should be used. Many persons have been damaged by distending the colon so as to compel it to receive three or four quarts of water at once. The colon may be stretched and dilated to such an extent that it can never return to its normal condition, although considerable progress can be made in overcoming the obstinate intestinal inactivity caused by the habitual mechanical emptying of the colon.

A VEGETARIAN COOK BOOK

THERE are enough valuable and practical suggestions of new and tasty dishes to be found in

"THE VEGETARIAN COOK BOOK"

By E. G. Fulton

to keep you busy for many months testing them and gaining the benefit of the new ideas suggested.

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The work contains 420 pages, is well bound in cloth, and the price is Rs. 3-8. Postage extra.

International Tract Society,

17, Abbott Road, 60, Lower Kemmendale Rd.,
Lucknow. Rangoon.

In the application of the enema great care must be taken to avoid the introduction of air into the bowels, as this may be a source of severe colic pain. It is also important that the quantity of water employed should be only sufficient to accomplish the purpose sought.

The enema may be usefully employed in the cases of feeble patients as a preparation for surgical operations. In such a case, the bowels should be first washed out, then two or three pints of water at 100° should be slowly introduced into the rectum, the purpose being to increase the volume of the blood by absorption.

The warm enema (98° to 100°) may be usefully employed as a means of introducing water into the system in cases in which for any reason the patient cannot swallow liquids without injury, as after operations upon the stomach, in cases of persistent vomiting requiring complete gastric rest, in hemorrhage from the stomach, in typhoid fever with gastric dilation, and similar cases. Absorption takes place from the intestine very rapidly, while there is almost no absorption from the stomach, so that the necessary supply of water may be easily introduced by this means.—*Kellogg in Rational Hydrotherapy.*

NEWS NOTES

DRUGS BY POST-CARD.

Accidentally it was recently discovered that heavily embossed post-cards frequently sent by friends to prisoners in Sing Sing prison, contained cocaine. The interesting discovery explained how it is that some of the prisoners have been obtaining secret supplies of this and other drugs. The discovery may for a time put a stop to the evil.

RAILROAD ABSTAINERS.

The Pennsylvania Railroad is adopting total abstinence as a requirement for its employees. It allows no drinking, either on or off duty, and, moreover, it has plain-clothes men whose business it is to learn whether any of the employees are on the quiet living a convivial life. The officers of the railroad are convinced that the way to prevent disastrous accidents is to do away with the use of alcohol by their employees.

Do You Know?

that many physicians recommend their patients to drop the use of Tea and Coffee because of the harmful effects of the drug elements in both these beverages? Both drinks are stimulants which are habit forming, and therefore to be avoided.

To find a substitute write the undersigned for a sample of

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Sanitarium Health Food Co.,

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Calcutta.

**WATER-CURE FOR THE BOSTON
INSANE.**

The Massachusetts hospitals for the insane have adopted the most modern of treatments for the violent patients; namely, the water-cure, or in other words hydrotherapy. By this means patients who under former methods were necessarily confined in strait-jackets or bound hand and foot, are now given quieting treatments, and often are thus enabled to do sufficient work to support themselves and perhaps help in the support of others.

BUTCHERLESS MEAT

THE London *Daily Graphic* of October 24, has an article entitled "Synthetic Dainties," which describes the cowless milk and the butcherless meat now being made by synthetic process from substances of vegetable origin. Not only are milk and cream made that are said to be more digestible, more uniform, and more cleanly than the real article, at a lower price, but they make a butcherless meat and a sealess sardine, or at least a paste containing the nutritive equivalent and the flavour of sardines without the objectionable features, and it is said that this sardine paste can be used in the preparation of very excellent so-called sardine sandwiches.

**ALCOHOL AND THE UNITED
STATES ARMY.**

At the Association of military Surgeons, recently held in Baltimore, Md., Col. L. M. Maus, Medical Corps of the U. S. A., chief surgeon of the Eastern Division, said that practically all inefficiency in the army, even venereal disease and insanity, can be traced to the use of alcohol, and that if alcohol were banished from the army, navy, and marine corps, the efficiency would be increased fifty per cent and the sickness would be decreased fifty per cent. When a company like the Pennsylvania Railroad can find it practicable, and does find it practicable, and moreover, finds it necessary to have sober employees, it seems strange that Uncle Sam finds it inexpedient to do so, and that, as some argue, if he does not have the canteen the soldiers will get their liquors elsewhere. The fact is when the officers of the army are as determined to have as efficient force there as some of our railroad officials are, it will not take very long to settle the question of drinking in the army and navy.

To Herald Subscribers

—:O:—

You are interested in the principles advocated in the columns of this journal. Your neighbours and friends would be equally interested and benefitted, if they read it regularly. We want your help in putting before them the good things we are giving. At the same time we want you to be remunerated for the effort. For these reasons we are prepared to offer—

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....., 1913.

**To International Tract Society,
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—:O:—

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GORGAS TO GO TO ECUADOR

PERMISSION has been granted to Colonel Gorgas, who did such splendid work in the Canal Zone, to enter the service of Ecuador in order to clean up Guayaquil.

UNVACCINATED CHILDREN BARRED

Because they failed to observe the order for vaccination, 2,400 pupils were recently barred from the schools in Berkeley, California and 500 in Evansville, Indiana. It seems hard, but not so hard as a smallpox epidemic.

SOUPS

(Concluded from Page 175)

Is so little casein in the cream that the soup is not likely to curdle when made this way.

Cream Tomato Soup, No. 2

- 1 pint strained tomato
- 1 pint milk
- 2 tablespoonfuls flour
- 1 teaspoonful salt

Heat the tomato to boiling, and thicken it with one tablespoonful of the flour stirred smooth with a little cold water. Heat the milk in a double boiler, and thicken it with one tablespoonful of flour. Add the salt to the tomato. Slowly add the thickened tomato to the thickened milk, whipping the milk as the tomato is poured in. Remove from the fire and serve at once. This must not be allowed to heat again after the tomato and milk are mixed, because it will curdle if they are heated together.

Tomato Cream Soup

- ¾ quart milk
- 1½ tablespoonfuls flour
- ¾ to 1 teaspoonful salt
- Tomato-juice

Heat milk in a double boiler. Thicken with the flour rubbed smooth with a little cold milk. Whip in sufficient hot tomato-juice to give the soup a pretty pink colour. Add salt and serve at once.

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