

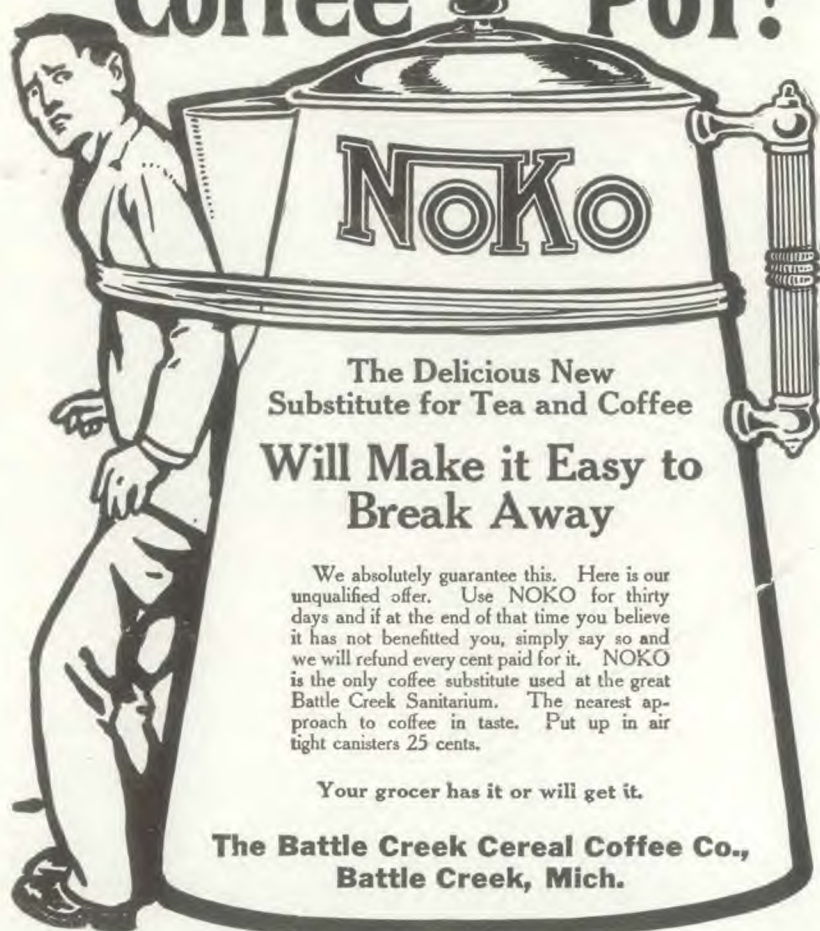
# GOOD HEALTH

♦ EDITED BY J. H. KELLOGG M.D. ♦



THE MOTHERS' NUMBER

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The Delicious New  
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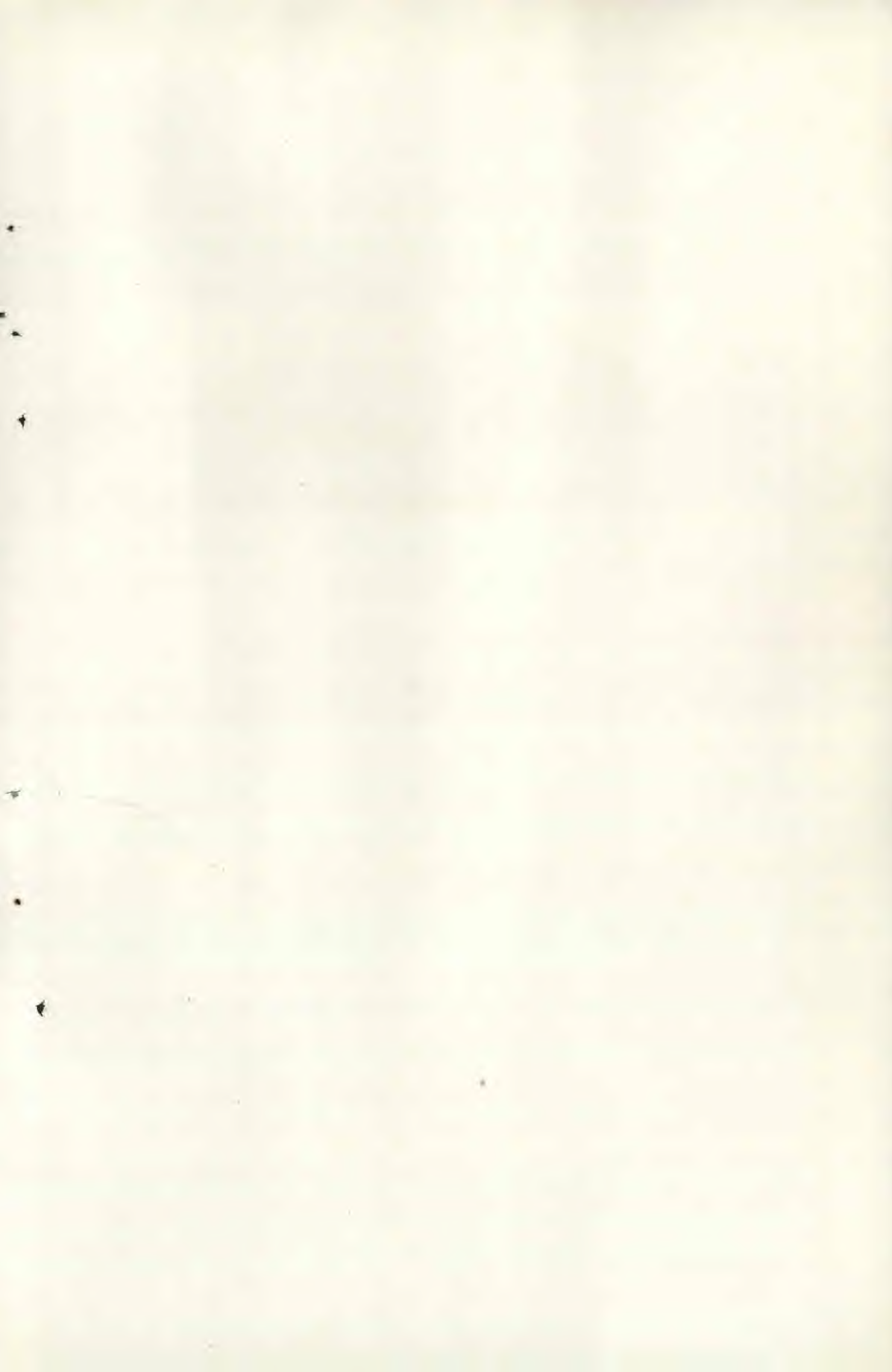
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THE HOLY FAMILY

*By Vecchio*



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- VEGETARIAN CAFE, 8. 170 Howard St., Spokane, Wash.
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# Between Ourselves

A Chat with the Editors and Managers of GOOD HEALTH

## A PERSONAL NOTE

Last summer I had a sick baby. Playing gayly one evening, bubbling over with mirth and vitality, seemingly in perfect health; a few hours later an almost lifeless victim of the dread *Cholera infantum*.

For weeks he lay suffering patiently, motionless, and scarcely breathing. It was months before he was well again.

I know how *that* mother suffered. I know the agony that wrenched her soul as she watched by her baby's bedside as he lay there day after day within the shadows of the borderland. And I know what mother's care, combined with a knowledge of the sensible methods of treating sick babies, did for this one—as bouncing a youngster to-day as you could wish to see.

But this is only one case out of tens of thousands. There were many funerals that summer and not a few of them were short processions, only a carriage or two, sometimes no hearse at all, just a little casket carried on the knees of an agonized father and mother. Oh, the pity of it! Who is there that does not feel a pang of regret when even the unopened bud of a flower is carelessly broken off or withers away?

We thought of these things last December when we were planning GOOD HEALTH for 1907. That's one of the reasons, indeed the main reason, why the August issue was made the Mothers' Number.

Thousands of babies are dying every summer—many needlessly. This is a stern, hard fact, but let us face it, and facing it, make the most of our opportunities for counteraction. That is what this number of GOOD HEALTH is for. You are helping as you read it and scatter the light which it purposes to disseminate. We have done our best to make this number thoroughly practical and intensely helpful, and believe that

the purpose is well accomplished. It is interesting, but only with the practical side well in view. And its attractiveness is in our minds the last consideration.

\* \* \*

If only a copy of GOOD HEALTH for August could be placed in the hands of every mother in America during these first few days of August, how much good might be accomplished this summer! Yes, even more, how many precious baby lives might it not save from useless destruction?

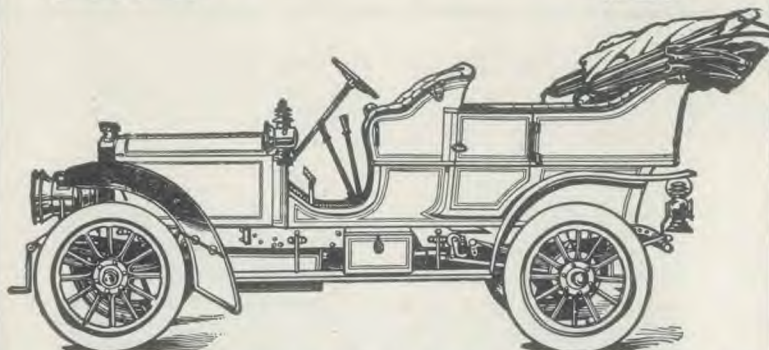
For GOOD HEALTH is helpful. Sometimes, you know, we doubt if we are doing all the good that we started out to do. Proneness to doubt is part of human nature. Our friends, of course, have good words for us. Occasionally, sometimes frequently, we receive letters filled with glowing words of praise from comparative strangers. But the question recurs from time to time, "What is the *general* effect, so far as helpfulness is concerned, upon the thousands of readers GOOD HEALTH reaches every month?" What a great big help it would be to us if every one of the readers of this magazine would take a notion to write us just what he or she thinks about it, the points best enjoyed and those in which they think improvement could be made. Occasionally one does it. If more were only inspired along the same line, the suggestions would be of inestimable value to us.

\* \* \*

GOOD HEALTH for September will be another special number. Our general purpose is to have special numbers every other month, but in this one instance two special numbers come together. Throughout the country there will be important gatherings of temperance workers in the month of September, and it is for the purpose of cooperating with this good work that we publish the Temperance Number a month earlier than it probably would have been issued otherwise.



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# GOOD HEALTH

## HOME-HEALTH MAGAZINE

Vol. XLII AUGUST, 1907 No. 8

### FOR MOTHERS

MANY mothers seem to think that when the babe is out of arms, the need of care becomes diminished. Some who systematically give the infant a bath both morning and evening, allow the child, when a few years old, to go unwashed, save its face and hands, for days and even weeks.

The fact that a child can feed himself does not lessen the mother's responsibility to see to it that his food is suited to his needs; that he does not eat more than he requires for proper nourishment; and that he masticates it thoroughly.

Although able to dress himself, the mother must still give thought to his clothing, making sure that it is suited to the weather, and so adjusted as to permit perfect freedom of movement.

There is danger of perverted development just so long as development is in progress. The need of continued hygienic watch-care extends through all the years of childhood and youth.

I HEARD once of a wise woman, who, being weary of the unending task of keeping a large house in order, and un-

able to indulge in the luxury of a trip away from home, camped out near a

A  
Simple-Life  
Vacation

beautiful little stream on the outskirts of the village in which she lived. Her husband, herself, and four children, two boys and two girls, comprised her family. The equipment was exceedingly simple, and consisted of a few hammocks, two of which served as beds for the boys, and four cots, some bedding, three or four chairs, a table, some shelves, and several other pieces of furniture, manufactured by the boys from packing boxes, an oil stove, a few dishes and cooking utensils. They had good drinking water from a near-by spring. A retired spot in the pretty stream, with the aid of an old piece of awning and a sheet, made an excellent bathroom.

The children did much of the work of the camp, and each day seemed full of the delights of a picnic. The mother had perfect bodily rest and more time for reading than she had had for years, while she enjoyed a close, almost hourly, companionship with her children, which had been impossible in their former surroundings. The constant out-



door life did wonders for them all, and at the end of two months they returned to their pretty home convinced that no other family in the country had spent quite such a happy vacation.—*Mrs. T. W. Birney.*

ACCORDING to a writer in the *Mother's Magazine*, among the peasant mothers of Russia the following Russian Treatment for Colic is a common treatment for colic in the child:

When the pain begins, the child is laid on its back and the stomach covered with a thin coating of any household oil accessible. The mother then takes the palm of her hand and softly rubs this oil into the skin. She gives the palm a circular twist in doing the work and does not cease until all the skin of the stomach and bowels is warm. When this condition is reached, she binds a warm flannel cloth about the stomach, restores the child's nightclothes, and tucks it into bed. It is said to be usually asleep long before the cloth is bound about it.

OF all the possessions of the child, the garden is the best, "Particularly is the cultivation of gardens owned by the boys, and their cultivation for the sake of the produce. For here man for the first time sees his work bearing fruit in an organic way—fruit which, although subject to the inner laws of natural development, depends in many ways upon the character of his work. If the boy can not have the care of a little garden of his own, he should have a few plants in boxes, filled, not with rare and delicate plants, but with common plants that have abundance of leaves and blossoms

and thrive easily. The care of plants will gratify his desires to observe other living things, such as beetles, butterflies, and birds, for these seek the vicinity of plants."—*Froebel.*

"WE may lay it down as a fixed law," says a writer on infant feeding, "that where the mother is in good health, there is no nourishment so well adapted to the needs of the child as that provided by nature. It is well to keep continually before us the fact that we can not violate the laws of nature with impunity. If young animals were not suckled by their mothers, how many would perish. What an unnatural state of things it would be considered. A mother who is able to suckle her babe and will not do so, can not have much love for him, and as indifference begets indifference, she can not expect much love from him later. There is no apology for the selfishness and folly of a woman who prefers the vanity of a fashionable life to the joy of nourishing the choicest gift that God can bestow upon her.

"The wide-spread impression that nursing is deleterious to the health of the mother, is utterly false. On the contrary, it is highly beneficial and strengthening. It is a natural function, and, properly performed, is no more injurious than any other natural function. It would be quite as reasonable to say that eating is injurious when you mean that eating certain things under certain conditions is injurious. If the nursing mother obeys the laws of hygiene, eats a proper amount of simple, nutritious food, eschews strong coffee and other stimulating drinks, has plenty of fresh air and exercise, and maintains an even



and cheerful disposition, she ought to be able to perform this function satisfactorily, and the care of her child during the first year of its life becomes a comparatively simple matter; for the babe will suffer little from intestinal troubles, and will cut its teeth much easier, and enjoy a happier existence."



MUCH has been said about the use of the word "don't," but few mothers seem to heed it. The One mother of a child nine- Mother's teen months old whom I Way have observed, has seemed to leave it entirely out of her vocabulary. When it is necessary to make the child understand that there are things which he can not do and places where he can not go, she says, "No, no!" but if he does something wrong and is not conscious of the wrong, she quickly emphasizes the right, so that he naturally learns to choose it.

I watched him playing with some buttons and asked the mother if she were not afraid he would put them into his mouth. She replied, "No, I never mentioned the word mouth in connection with them, but showed him how to play with them by laying them in different positions on the floor, or putting them from one thing into another, making them jingle, all of which he takes great delight in doing, and he has never once put them to his mouth." At another time he saw her sewing and asked for a pin so that he might imitate her. I expressed some surprise at her letting him play with a pin, but she said, "It is the same as with the buttons. I taught him the right use for it and did not say anything about his mouth in connection with it, so he has never thought

of putting it there, but takes great pleasure in sticking it into things."

The result of this principle as applied to this child is a happy disposition with no desire to do wrong. He is made to understand in a very positive way that there are things which he can not do, but there are so many things left for him to do and his attention is so often turned to them, that he forgets the prohibited things.—*Sel.*



I WITNESSED on the street, a few days ago, a little scene that set me thinking.

A Careful Nurse-Maid	A nurse-maid was wheeling a perambulator in which was a baby, perhaps a year old, when two ladies stopped her.
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"Is this Mrs. —'s baby?" one asked; and then a second later:

"You dear little thing! I must kiss you."

She was about to kiss the baby when the maid interfered.

"Mrs. — has given me orders that no one may kiss Baby Helen when she is out-of-doors," she said.

The lady drew back indignantly.

"You may be sure," she said, with a stare of haughty surprise, "that I shall not fail to report your impertinence to Mrs. —," and she swept on. The little maid looked after her with a troubled face, and as I passed the perambulator, I could not help saying:

"I am sure baby's mother will be glad to know how carefully you carry out her orders. It is very hurtful for baby to be kissed so much, and by strangers."

"Yes, ma'am," she replied. "This cold weather it chaps her little lips, and that lady had a cold blister on her lip anyway, and Mrs. — wouldn't kiss baby herself if she had one."—*Sel.*



"O," COMPLAINED the pale, exhausted young mother of two lively, small boys, the other day to an older woman, "I am *so* tired of my family! They have climbed on me and clawed me and shrieked in my ears all day. And they're just as tired of me as I am of them."

Of course they were. It isn't possible for any three human beings, of any age whatever, to be shut up continually and everlastingly together, with no rest or change. This mother, in spite of her uncomplimentary remarks, was really too devoted to her children. She stayed with them all the time. Her rest was broken, her nerves unstrung, and of course her own nervousness affected the children.

"The thing that you want to do," said the more experienced mother, "is to leave those babies for an hour, or better still, two hours every day of the week. They need a change of society and so do you. If they could talk, they'd probably say:

"O, I'm *so* tired of this nervous, stupid mother. She has said, 'Please don't, baby,' all day."

"How did you know?" asked the mother.

"I've been there. You must hire somebody, if you haven't an obliging relative, to stay with them while you go for an outing."

"Or take a nap," said the mother.

"No, ma'am! A nap isn't what you need. You're suffering for a change of interests. You must get out of the house, breathe a different atmosphere, and talk to different people. Just try it."

The tired mother did try it. It helped wonderfully. The daily outing brightened and refreshed the woman, and made her forget in time that she had ever had nerves, and her coming home

fresh and rosy from other experiences provided a new sensation for the children, who hailed her coming with delight. Her usefulness as a mother was just about doubled by this simple but sensible means.—*Carroll Watson Rankin.*



THE cry being the only means by which the infant can make known its wants, parents and caretakers should study to understand this mode of expression.

#### Interpreting the Baby's Cry

Hunger is usually expressed by crying, but it should not for this reason be concluded that whenever a baby cries, it is hungry. He may as likely be thirsty! Most often a baby cries because he is uncomfortable, and care should be exercised to see that he is at once made comfortable. Overanxious mothers often help to establish a "crying habit" by too much coddling, rocking the child, walking with it, taking it up at the very first intimation of restlessness.

An authority upon the subject says:

"Crying without remission means probably steady, continued pain somewhere (the location may be discovered by the child's position, or where it places its hands), also thirst and hunger, though concerning the latter it must be noted that not every cry which feeding stops is due to hunger, since feeding will sometimes temporarily stop an attack of colic, while adding 'fuel to the fire.' Persistent crying may mean a pricking pin, or a continued irritation from some skin trouble.

"Violent crying suddenly precipitated may be due to other things than mere temper. If the abdomen is larger than usual, I should suspect colic, while a severe injury would, of course, produce it.



"If taking baby up makes it cry, the pressure applied in the act is probably the cause, and might point to the seat of the trouble as being most likely in the chest or abdomen. Such painful pressure might be produced in pleurisy, intercostal neuralgia, rickets, or even pneumonia. Crying from fatigue or need of sleep is fretful, and generally accompanied by rubbing of the eyes. Peevish crying is seen in debilitated, weakened states of the system. Crying when anything touches the mouth locates the trouble—or a part of it—there.

"Localized trouble in the brain or spinal cord is accompanied by a shrill cry or scream—a most heartrending form of crying. Brief, broken cries that seem to cause pain characterize an inability to get the necessary amount of air into the lungs, as seen in various troubles of the chest. A nasal cry is seen in nasal obstructions as well as in head colds. A child waking suddenly in the night and screaming, has 'night-terrors,' a nerve affection independent of ordinary 'nightmare.'

"Feeble moaning, or expressions of crying in which no sound is uttered, another especially pitiful form of crying, shows great weakness, unless perchance there is some acute affection of the larynx, as croup.

"A short cry coming immediately after coughing indicates that the effort hurts either throat or chest; coming with a bowel movement, it means pain in the abdomen."



THE care and training of children is the greatest subject on earth, and every mother's interest should be broad enough to include the needs of children in the community as well as of those in her own home. "The childhood of the world is given to the womanhood of the world as a sacred trust."—*Sel.*



THE child who is taught to control himself, and to live within God's laws, will be pure, honest, and faithful in manhood.—*Sel.*

"Come, let us live with our children! "

Earnestly, holily live,  
Learning ourselves the sweet lessons  
That to the children we give.  
Fresh from the kingdom of heaven  
Into this earth-life they come,  
Not to abide—we must guide them  
Back to the heavenly home.

"Come, let us live with our children! "

Leading them tenderly on  
Into the fields that God's love-light  
Ever shines brightly upon;  
Then when our feet grow too weary  
For the safe guidance of youth,  
We shall be led, like the children,  
To Him who is goodness and truth.

—*Anon.*



# Toxic and Antitoxic Diet

BY J. H. KELLOGG, M. D.

WHEN Bouchard, the eminent French scientist, startled the world a few years ago by the announcement of the discovery that the human body is a factory of poisons, he opened up a new field of inquiry, and started numerous lines of research which have borne fruit of the greatest importance to the human race.

The researches of Bouchard have been supplemented by those of his pupils, Roger, Charrin, Metchnikoff, Tissier, Combe, Brieger, and other scientists, who are now giving to the world the results of their labors, some of which are of such tremendous significance that it is important that they should be brought to the knowledge of the lay public as quickly and in as many different ways as possible; for they influence, more perhaps than any other factor, the physical welfare of every human being.

Bouchard pointed out that while the body is a factory of poisons, there are two sources of poisons and two classes of poisons. Recent discoveries have made the importance of this distinction clearer than before. The normal poisons are those which are produced in the tissues as the result of the changes which take place through the regular operation of the bodily functions. The body is like a furnace. The fuel which burns in the furnace is converted into poisonous gases and ashes. The gaseous poisons escape through the chimney. The solid poisons fall into the ash pit, where they accumulate and are likely to choke the fire unless carried away.

The analogy between the furnace and the human body is perfect. A burning, wet combustion is going forward constantly in the body. It is by this means that animal heat is produced and the temperature of the body maintained at 100° in an atmosphere much lower.

Food is fuel. No substance can serve as food in the body which may not also serve as fuel in a furnace. A large part of the food is converted into a gaseous poison,  $\text{CO}_2$ , which escapes through the lungs and the skin. Solid poisons, corresponding to ashes from wood or coal, dissolved in water, are carried out through the kidneys, liver, and the mucous membrane of the stomach and intestines. When the gaseous poisons accumulate in the body, suffocation or asphyxiation occurs, the lips become blue, the skin livid, and death quickly follows unless the condition is removed. When the solid poisons accumulate in the body, the result is gout and allied diseases, sometimes coma and death from uremic poisoning.

But these natural poisons, while capable of producing death through their accumulation, are really harmless when compared with another class of poisons which are also produced within the body, but the formation of which is not incident to the life processes and which might be suppressed altogether without in any way interfering with any bodily activity. These poisons are the result of the growth of germs in the intestine. At first it was supposed that germs were necessary to life. The great Pasteur entertained this erroneous view, which has since been proved to have no solid foundation in fact. Nuttall and Thierfelder raised guinea-pigs, made them gain in flesh, and proved that they had no



bacteria whatever in their intestines. Levin has, after the examination of a great number of animals in the Arctic region, especially in the vicinity of Spitzbergen, showed that polar bears seldom have germs in their intestines and that the alimentary canals of most of the animals in that region are perfectly sterile.

It is now thoroughly established that the growth of germs in the stomach and intestine of man is not only unnecessary for the maintenance of life, but is one of the greatest and most active causes of fatal disease. There are many different kinds of germs growing in the intestine. Roger, of Paris, in a very recent work enumerates 161 different species of bacteria which thrive in the alimentary canal. Some of these are harmless, producing substances which are without injurious effect upon the body, but nearly half the total number are highly dangerous organisms, producing poisons of the most deadly character. Everybody is familiar with the fact that in the decay of a dead body, whether that of an animal or a human being, highly deadly poisons are produced. Butchers often lose their lives as the result of a small cut made by a knife which had been used in cutting "prime" meat. Cooks are often poisoned in the dressing of game which has been kept until highly flavored with the products of putrescence. Doctors and medical students have sometimes suffered the loss of a hand or an arm and sometimes even the loss of life as the result of a very small puncture made by some sharp instrument during the examination or dissection of a dead body.

The poisons produced by the action of germs upon animal flesh are the most deadly known to man. There are great numbers of these poisons. A few only have been definitely separated and described. Among these are *putrescin* and *cadaverin*, described by Brieger, of Berlin, which are capable of killing in very minute doses. The germs which produce these changes in meat are known as "meat germs" or putrefactive bacteria. They grow only in parts or places to which the air has not free access, and so are called *anaerobes*, in distinction from other germs which grow freely in the presence of air, known as *aerobes*.

Everywhere a battle is going on between these two classes of germs,—the aerobes, air-loving germs; and the anaerobes, germs which grow only when secluded from air. A simple illustration of this may be seen in the changes which take place in milk compared with those which take place in meat. A pound of milk and a pound of beefsteak placed side by side in a warm, moist place, undergo very different changes. Within a day or two the meat becomes horribly putrid, loathsome. The milk becomes sour, but not offensive. The investigations of Tisser, of the Pasteur Institute, have shown the reason for this. When an animal is killed, its body is rapidly invaded with bacteria, and within a few hours the germs of putrefaction are to be found swarming everywhere. These are the so-called "meat germs," or anaerobes, which produce the deadly poisons of putrefaction, cadaverin, putrescin, etc. Warmth and moisture promote the growth of these bacteria so that meat very quickly putrefies, the proteid substance of which it is chiefly composed being converted into deadly poisons unless kept at a temperature so low as to prevent the growth of the putrefactive germs.

Ordinary milk also contains these same putrefactive organisms, although in far less numbers than are found in meat. They are not found at all in milk

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# Home Management of Intestinal Colic in Infancy

BY KATE LINDSAY, M. D.

**I**NTESTINAL colic is a painful spasmodic disorder of the bowels due to many causes, being very prevalent in infants during the first year of life, especially the first three months. In fact, few babies escape entirely from the disorder.

In ordinary cases of infantile colic the usual exciting cause is gas due to decaying food in the stomach and bowels, or constipation and masses of curd and other undigested foods. In breast-fed infants, any cause impairing the mother's health or any excitement affecting her nervous system, is liable to so change the character of her milk that it becomes more or less indigestible, the fault usually being an excess of some food element, most generally the proteids of the milk, or sometimes the fats or sugars may be wanting or in excess. Often the infant has colic as long as the mother remains in bed. When she is able to be up and out-of-doors again, the disorder disappears. Unsuitable foods, which produce indigestion in the mother, are likely to cause colic in the nursing. Cathartics and drugs taken by the mother may cause colic in the baby. A sedentary and indoor life often causes colic, because the mother's milk becomes poor in fats and sugar, with an excess of proteids. Masses of curd form in the intestines, undergo decomposition, and the baby is subject to frequent attacks of colic pains, often wearing itself and the mother out from sleeplessness and constant fretting. Violent outbursts of anger, fear, grief, as well as chronic depression, fretting, and irritability on the part of the mother, frequently react on the infant in the form of indigestion and colic. Over-

work, sudden chilling after overheating, or exposure to cold and darkness on the part of the mother will cause colic in the nursing infant. Fatigue from loss of sleep or physical pain often brings on an attack.

The writer has known of cases caused by toothache, a felon or carbuncle, neuralgia, or an attack of inflammatory or muscular rheumatism in the mother. Babies whose mothers are wage earners in offices, shops, and factories, often suffer from colic while nursing. Women who are overfat and indolent, and who overeat, are not good wet nurses, and their children often suffer from colic. The same is true of mothers who are poorly nourished and suffer from indigestion or underfeeding.

Bottle-fed infants are especially subject to colic from infected milk of improper composition, and from being fed in excessive quantities. Unclean bottles and nipples and other milk vessels and utensils used for bottle feeding; chilling the arms and feet of the infant from short-sleeved dresses and undue exposure of the lower extremities during the short-dress period, often cause colic and other serious digestive and respiratory disorders.

Colic in infants after weaning, and in older children and adults, is usually caused by indigestible food, also by the use of too cold food or drink, such as ice-water, ice-cream, and the like. Sudden chilling, especially of the extremities, after being overheated from severe exertion, may also induce the disorder.

There are usually severe colic pains at the onset of an attack of acute appendicitis. These pains are common in diarrhea, also in constipation and wher-



ever there is any obstruction of the bowels from any cause. Sometimes intestinal worms are the cause of colic. Again, the cause may be bad foods containing toxic substances, especially spoiled meats and canned foods.

The symptoms of infantile colic are somewhat familiar to most mothers, an attack beginning with loud crying, pain and tenseness of the bowels, which is usually relieved by pressure. The extremities become cold, and the little one draws its legs up to the abdomen and frequently throws itself about. In severe cases there is paleness about the lips, sometimes a cold sweat on the forehead, and vomiting and diarrhea. Relief usually comes with a free passage of gas and fecal matter from the bowels.

In the days of our mothers and grandmothers, babies were supposed to be foreordained to suffer from colic for at least the first three months of their lives, and beyond giving a dose of catnip or anise seed tea in milder cases, and administering an opiate in the form of some soothing syrup or a dose of laudanum or paregoric, nothing was done by either the physician, nurse, or mother to prevent or cure the colic. The helpless little ones just had to wear it out, or to use the common expression, "outgrow the disorder." Millionaires have made their riches selling pain-killers, soothing syrups, teething powders, and other nostrums for the cure of colic, a disorder which, when the causes are known, is easily preventable.

The treatment of colic consists first of treatment for the prevention of the disorder. Secondly, the administration of remedies for the immediate relief of the painful symptoms.

In the case of breast-fed infants the prevention of colic rests almost entirely with the mother or wet nurse, and the

manner in which the child is cared for as to its daily supply of air, water, food, rest, and other hygienic environments. To avoid colic, the nursing mother must give herself up to the function of furnishing food for her infant. Every other vocation during the nursing period should be secondary. The first consideration is that of self-regulation and self-denial. The mother who gives way to violent emotional storms of anger, or who allows herself to be fretted or harassed by the petty annoyances of every-day life, who worries over the present and looks into the future for expected evil, is sure to make trouble for herself and the infant depending upon her for its life and health.

The unwilling mother is also likely to have a babe that suffers from colic. The mother who is a society climber, or who fancies she has a mission or vocation of more importance than the welfare of her infant, will not furnish her child proper food. The mother who refuses to restrain her appetite or regulate her diet and eats whatever the palate craves, attending parties of pleasure and indulging in late hours and late suppers, will not make a good wet nurse. The use of iced foods and drinks by a nursing woman, even when no marked symptoms of disorder occur in the mother, often causes colic in her nursing infant. The writer has been called upon to treat many cases of colic after the ice-cream, lemonade, and soda water of the Fourth of July, both mothers and nursing infants suffering from severe indigestion and colic. Overeating, and the use of rich foods, especially flesh meats and pastries, frequently cause such changes in the milk of a woman taken into a wealthy family as a wet nurse, that her own child, which was doing well while its mother could afford only plain fare, begins to suffer



from indigestion and colic attacks, as well as the infant she is hired to wet nurse. The only way to make her a successful wet nurse for either baby is to put her back on the more simple diet and also let her take regular out-of-door exercise.

Dress has much to do with healthful normal nursing. Dr. Rotch mentions the case of a mother willing to nurse her infant, but her milk, being overrich in proteids, produced colic and indigestion and the infant did not gain in weight. He directed her to walk several miles a day for exercise, as she was inclined to obesity. Her milk did not improve in quality as he expected. Accidentally he discovered that the mother was taking her walks in tight, high-heeled shoes. The doctor had her fitted with broad-soled, low-heeled shoes, and in a short time her milk improved. The infant began to grow, and the colic and indigestion ceased.

The following are some general principles given by Dr. Rotch for guidance in managing disturbed lactation:

#### General Principles in Managing Disturbed Lactation

"To increase the total quantity—Increase proportionately the liquids in the mother's diet, and encourage her to believe that she will be enabled to nurse her infant.

\* "To decrease the total quantity (rarely necessary) — Decrease proportionately the liquids in the mother's diet.

"To increase the total solids—Shorten the nursing intervals; decrease the exercise; decrease the proportion of liquids in the mother's diet.

"To decrease the total solids—Prolong the nursing intervals; increase the exercise; increase the proportion of liquids in the mother's diet.

"To increase the fat—Increase the proportion of proteids in the diet and of fats which are in a readily digestible and assimilable form.

"To decrease the fat—Decrease the proportion of proteids in the diet.

"To increase the proteids—Decrease the exercise. (Very rarely indicated.)

"To decrease the proteid—Increase the exercise up to the limit of fatigue for the individual."

Many farmers' wives and other hard-working women will read this article and sigh because their every-day work compels them to overheat and overtire themselves. But even for these the future promises much. There is fireless cooking, the apparatus for which is being rapidly perfected, as well as cooking more simply. The farmer's wife and mother who could let her cook stove go out after breakfast and still have a warm, well-prepared midday meal, would escape a vast amount of heat and hard work, and could spend much more time out-of-doors. In many ways housekeeping tasks can be lightened for the working mother with a little forethought, each one so modifying her own work as to save her health and strength. This subject might be helped by free discussion in mothers' meeting, taking up each branch of housework and finding in what way the methods of performing it could be improved so as to lessen the danger to the nursing from overwork on the part of the mother.

The treatment for an attack of colic due to indigestion is first to empty the alimentary canal of foul gases and fermenting foods. This is best done by loosening all bands and tight clothing and giving a large warm enema. In some cases a lavage is also required, or an emetic. The feet, which are usually cold, should be warmed by a mustard foot bath or a leg pack. A fast of from



six to twelve hours for an infant, and a day to two or three days for a child over a year old, is often needed in severe cases. During this time the patient may drink freely of warm sterile water. Sometimes a dose of castor oil is needed, or a saline cathartic, to remove offending matter from the alimentary canal. An enema which is medicated by adding a teaspoonful of milk of asafetida to a pint of the enema water, or from three to five drops of turpentine,\* will often give temporary relief. A warm bath or pack is often very soothing and will cause the patient to sleep after the bowels are freed from gas and morbid excretions. A few drops of anise or peppermint water

added to the hot water the patient drinks, will aid in relieving the spasm. All opiates, either in the form of soothing syrups, teething powders, laudanum, or paregoric, should be shunned by the mother and nurse, and never given except under a physician's directions and personal supervision. They are dangerous, often causing death, or fixing a terrible drug habit on the helpless little patient. With the practice of proper infantile hygiene they are seldom required.

The writer hopes that some mother and some infant may be helped by this article so as to pass the critical period of babyhood more safely and with less suffering to the little one.

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## The Mother's Hymn

"Up to me sweet childhood looketh,  
Heart and mind and soul awake;  
Teach me of Thy ways, O Father,  
Teach me for sweet childhood's sake:  
In their young hearts, pure and tender,  
Guide my hand good seed to sow,  
That its blossoming may praise Thee,  
Praise Thee wheresoe'er they go.

"Give to me a cheerful spirit,  
That my little ones may see  
It is good and pleasant service,  
Pleasant to be taught of Thee.  
Father, order all my footsteps,  
So direct my daily way,  
That, in following me, the children  
May not ever go astray."





# A FOREST SCHOOL

A German Educational Experiment Looking Toward the Improvement of the Bodies as Well as the Minds of Delicate Town Children

Drawn by W. RUSSELL FLINT, from Photographs



*Reproduced from The Illustrated London News.*

The Berlin educational and medical authorities have organized a wonderful forest school for the city children from the crowded districts of Berlin and Charlottenburg. In a wide clearing one hundred and fifty children pursue the ordinary routine of school, delightfully varied by nature study at first hand. The hours of work are short, and fresh air and exercise are given a supreme importance. The children cook their own dinners at a camp-fire, and their desks and seats and shelter-sheds were made from the timber felled to form the clearing. At one o'clock they must all take an hour's sleep, for which each child is provided with a blanket and a deck-chair.



# A PRACTICAL MATERNITY WARDROBE

## Sensible Dress Suggestions for Coming Mothers, With Ideas Easily Workable at Home

BY MABEL HOWE OTIS, M. D.



THE philosophy of dress is easily explained and readily understood, but the practice of sensible ideas in any line is not easy. This is true in the matter of dress because of

the difficulty experienced by those who are dependent upon garment makers, or whose friends predict unnecessary notoriety if the ideas do not exactly harmonize with the fashion. Whatever is really artistic, however, must be sensible, practical, pleasing, and unobtrusive.

In expressing to the reader some practices which have been useful to me, personally, and to those who have come to me for direction, it is with the hope that something may be suggested which will start her thinking along lines of sensible dress, and enable her to evolve for herself more beautifully what is plainly depicted here.

Dress, at any time, and under any circumstances, is becoming and attractive if adapted to the occasion and the need. There is one period in a woman's life when she is allowed the utmost freedom in enjoying her happiness, and seeking her comfort. The holiness in living for two, when one is being molded by the Great Creator in his own mysterious, beautiful way, throws a halo about every detail of living. The changes so rapidly taking place demand a garment which will not require constant altering to be always comfortable. There need be no strenuous effort to

conform one's clothing to fashion or to dress for the public eye. This is the time when home and home folks are all-sufficient and absorbing.

The principles governing sensible or scientific dressing are ever the same:

- Simplicity
- Equal distribution for heat
- Weight adjusted with reference to anatomical supports
- Consistency.

The German scientists are very emphatic in condemning some bad prac-







tices along these lines. Hemmeter quotes their conclusion when he says: "The most judicious female clothing, conformable to the object of relieving the abdominal organs of pressure, would be represented by garments made in one piece, of which the upper part supports the lower from the shoulders."

The accompanying illustrations require but little explanation. Every GOOD HEALTH reader is familiar with the freedom waist and jeannettes. The seams of the waist are arranged to correctly support other undergarments, and give a substantial foundation for all outer clothing. The jeannettes combine

drawers and short skirt in one. Using the yoke of the waist, replacing the fitted body part with the chemise-like fulness shown, and thus adjusting the jeannettes, we have a garment easily made, readily laundered, entirely comfortable, and strictly feminine.

Wearing over this the chemise, with knee-deep ruffle, as in the fitted skirt worn with the jeannettes, one has a foundation of entire comfort for the outer garment. The yoke of the chemise may be high-necked and adjusted with sleeves. If the fulness is objectionable, the gar-





ment may be fitted loosely from yoke to waist line, and then any ordinary skirt, after having band removed and placket changed, may be adjusted. The skirt can easily be returned to its original arrangement when desired. Thus, with no other expense than an hour's time, and one and one-half yards of muslin, one can be comfortable when it is quite imperative such should be the case.

These two garments alone, or with the union suit next to the skin, are all that are needed. The arrangement of the outer garment gives opportunity for individuality. A suggestion of breadth at the shoulders and generous fulness in every detail are desirable. "Suggested form is artistic; revealed form is vulgar." The knee ruffle makes walking much easier; at the same time it gives sufficient weight to hold the skirt down nicely. Inexpensive cotton or wash material can be used for these gowns. Silk or challis give beautiful colors from which to choose. Contrasting colors may be selected for the narrower ruffles. The skirt portion may be accordion plaited. Black silk trimmed with a favorite color, worn under the long empire coat, gives a street gown of unobtrusive elegance.

The beauty and importance of correct body poise need only be mentioned here. The empire gown will always be artistic, and may be made becoming



because the girdle encircles the body at the ninth cartilage, and when the body is poised well, any gravid enlargement is disguised by the simple folds in the skirt. This is only one of the many vital reasons why correct carriage of the body should be cultivated.

## The Family

"The family is like a book;  
The children are the leaves,  
The parents are the cover  
That protective beauty gives.

"At first the pages of the book  
Are blank and purely fair,  
But Time soon writeth memories  
And painteth pictures there.

"Love is the little golden clasp  
That bindeth up the trust;  
O, break it not, lest all the leaves  
Shall scatter and be lost."





*Photo by TAPPING, BATTLE CREEK*

A PAGE OF  
GOOD HEALTH  
BOYS & GIRLS





# What the Mind Should Feed Upon

BY MRS. E. E. KELLOGG

THE foundation for a taste for good literature should be laid in the nursery. What the child receives during the first seven years of life, will



leave a deeper impress than that received during any after period. The wise parent, recognizing the golden opportunity of these

early years, will begin, before the child can read, to store his mind with good thoughts by reading to him.

The choice of books for the little child can not be made too carefully. The intellectual food given to the young mind should be the product of writers who have had actual contact with children, who have lived with them upon their own plane, who know their needs and understand their nature. All books for children should have educational value; not that all ought necessarily to convey knowledge, but they should serve to draw out the best in the child, to unfold and to build up his character. In tone they should be simple, joyous, and true, containing no false ideas or statements to be unlearned in later years. In sentiment they should be pure and uplifting, and withal, they must be interesting; for even the best book from a moral standpoint will fail in its purpose if not interesting. There are such books, though they are rare; but they are well worth searching out.

When a knowledge of that which is bad must be presented to the child, let the evil be shown so plainly that it ap-

pears as evil, hidden under no gloss or charm. The Book of all books for the child is the Bible itself. Its principles and precepts should be among the first thoughts instilled into the young mind. Before he can talk plainly, the stories of Bible child life, of Moses and Samuel and the Babe in the manger, will stir his heart with love and thoughtfulness, if told in simple child vernacular.

There are parents who purposely delay the time when their children shall be taught to read, that they may themselves have the privilege of first filling the young mind with high and pure ideals, with a knowledge of the Creator and his wonderful works, with facts about life, nature, and the world in which we live. When the child has learned to read, it may require the utmost vigilance to keep objectionable matter out of his hands. Before he can read, the parent may give him only that which he deems wisest and best. Most children enjoy hearing a good reader better than reading for themselves, and what they thus hear is likely to be more firmly fixed and longer retained in mind, particularly if pains be taken to explain the words and phrases yet beyond their comprehension, and to arouse thought by talking about the subject in hand.

Fathers and mothers can ill afford to miss the opportunity of reading with their children. Not only do such seasons serve as a source of information and entertainment to the child, but they help to put the parent in sympathy with him, and form a bond of soul unison between them that may last through life. That it takes too much of the parents' time is an unworthy excuse. To clothe and feed the child's body requires



time; why should it be thought less necessary to feed and clothe his mind and heart? His physical being is only a part of the real child; he possesses a threefold nature. For symmetrical development his mental and moral faculties must be cultivated as well as his physical. Indeed, it should be the parents' aim to call into vigorous activity the higher, nobler, spiritual part of the child's nature before he has become hardened by contact with the sin and

selfishness around him. One of the most effective helps in doing this is reading to him stories of other lives which illustrate the noblest and best Christian principles. Learning of other lives helps him better to understand his own life. As he sees himself in comparison with others, he realizes more clearly the possibilities within himself, and begins to form an ideal, toward which in after years he continually strives.

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## Table Manners for Children

BY MARY WOOD-ALLEN, M. D.



SOME years ago I was a guest in a home where there were three children of average intelligence, and one who, without exaggeration, might have been styled imbecile. When we sat down to the table, the intelligent children at once began helping themselves to food, reaching across the table for what they desired, and even sparring with one another for the possession of some article. The imbecile sat down to the table quietly, bowed his head for

some seconds as if saying grace, then quietly waited until food was given him; and during the progress of the meal always prefixed his request with "Please," and received the food given with "Thank you." The mother seemed to feel somewhat annoyed by the rudeness of the children whose mental ability was undoubted, and remarked with irritation: "The only young one we have that has any manners is the idiot." The poor child thus designated fortunately was



not able to be hurt by the brutality of the term applied to him.

The question naturally will arise, How did it happen that the children with intelligence were so unpardonably rude, and the one lacking in intellect had good manners? The answer is simply that the one child had received training in the school for the feeble-minded where he had spent some months, and the other children had grown up absolutely without training. If a child deficient in intellect can be taught good table manners, there is no question that children of average brain power can be so taught.

Many parents seem to labor under the impression that instruction in manners can not be begun until the child is old enough to reason. In truth, it is a waste of time and effort to allow bad manners to be acquired; for the effort to overcome these wrong ways and learn right ones is far more tedious and exhausting than teaching the child right in the first place. It is a mistake to leave the child untaught in table manners for the first three years of his life, as so many parents do; for it is possible for a child to be so trained that he knows nothing but good manners from the outset. I have the pleasure of sitting every day at table beside a little man, eighteen months old, who feeds himself with all the decorum and dignity of an adult. He uses his little spoon in the right hand and his silver pusher in the left with dexterity and neatness. He is disturbed if food is spilled upon his tray, and calls at once for it to be taken up. If his face becomes soiled, he either calls for some one to use a spoon to remove the offensive material, or endeavors to remove it himself. He has learned not to pull the tablecloth; not to seize dishes; not

to throw things on the floor; to wait with commendable patience until he is served; and to remain at table until he is through with the meal. This has required considerable watchfulness and, also, in the beginning, assistance. As soon as he manifested a desire to feed himself he was allowed to hold the spoon, while some one helped him to fill it and guide it to his mouth until his muscles had been trained to know the movements necessary to feeding himself. The daintiness with which he holds his utensils and manipulates them is admired by all who have the privilege of eating with him. If one child can be so trained, others may be.

One of the first lessons in table etiquette which a child should be taught, is to wait patiently until his turn comes. Parents too frequently educate their children in impatience and selfishness by serving them first, with the remark that "little people are so hungry, they can not wait, and must therefore receive attention before adults." As waiting, for the benefit or pleasure of others, is one of the important lessons in life, it would seem unwise to deliberately teach children that they can not wait. It would be far better to teach them in the outset the courtesies which they will be expected to observe when they enter into social life. Respect for parents and for older people can thus be taught, and little boys can learn the chivalrous feeling by being taught that it is polite for them to wait until the ladies, including their sisters, are served.

We often see grown people who, during every interim in the progress of a meal, continually play with knife, spoon, or napkin ring. It is certainly a breach of good table manners, and this should be taught to the little child. Even a baby can learn to say "Please" when



asking for food, and "Thank you" when it is received. Even a baby can be taught to chew with the mouth shut, and not to make a noise in taking food.

Children too often are allowed to decide what foods they shall have. Father or mother asks, "Do you want this?" or "Will you have that?" As the child has no judgment, he should not be expected to express a judgment, especially in so important a matter as his diet. You may say that he likes or dislikes certain articles, but taste is largely a matter of education, and he will learn to like the things which are good for him if the parent takes pains to make him gradually acquainted with each new and desirable article of food. I think it will be the experience of most parents that a child expresses a dislike for new flavors. If not compelled to take these in large quantity, he can be gradually accustomed to them, so that in time he will come to like them.

He can also be trained to see foods upon the table which are eaten by older people and which the children must not have. If accustomed to this from earliest childhood, it will be no special hardship. If children are allowed to decide for themselves what they will eat, they will become unbearably dictatorial, and their dietary will soon be of foods entirely unsuited to their digestive powers. I have known mothers to give their children tea and coffee because, they said, "I think it cruel to put before my children things which I so greatly enjoy myself and yet deny them the enjoyment of them." As tea and coffee are objectionable for both old and young, it would be far kinder if the parents would deny themselves these luxuries for the sake of the welfare of the children. But there are many foods perfectly wholesome and allowable for

adults which are entirely unsuited to the digestive powers of the young child, and the child should be trained to the knowledge of this fact. I remember an instance where a little two-year-old girl had been forbidden by the physician to use butter. It was always on the table and partaken of by every member of the family except herself. She understood this perfectly. Yet with a mischievous twinkle in her eye, she used often to say: "Nellie wants butter." The reply invariably was, "Butter is for papa and mamma, and not for Nellie." Then she would laugh as if it were a joke, and sing over and over again most merrily, "Butter is for papa and mamma, and not for Nellie." This same little girl saw tea and coffee on the table every day, but has grown to womanhood without using either. She was accustomed to seeing cake; but when a lady once offered her a piece of cake, she looked up with utmost surprise, saying, as if it were the most inexcusable offer: "Why, I don't eat cake." At sixteen she had never tasted pie. Yet never once did she grumble because she was denied articles which were allowed to others, and I think to-day would not admit that she suffered any hardship.

Children are often allowed to indulge in little habits which they must either unlearn when they come to maturity, or expose themselves to severe criticism. Not long ago I attended a stylish luncheon and observed one elegantly dressed lady soaking her cracker in her coffee. She enjoyed it doubtless and probably did not realize that by this simple act she had revealed her childish training. A more flagrant instance of carrying a childish habit into adult life came to my knowledge the other day when I was told that a lady, judging by her appearance, in a restaurant lifted her



sherbet glass and ran her tongue around on the inside of it, unwilling to lose any morsel of the delicacy. She doubtless did it automatically, and would have been mortified had any one called her attention to this breach of good manners. But it was a revelation of herself, a betrayal of the fact that she had not been thoroughly trained in the usages of good society. She evidently kept her good manners for public occasions, and at times her bad manners, with which she was more familiar, obtruded themselves under circumstances which rendered her an object of severe criticism.

It would seem almost needless to speak of such breaches of ordinary decency as blowing the nose or picking the teeth at table, and yet, intelligent and supposedly refined people are constantly guilty of such conduct.

A person may be excusable for not knowing with which fork to eat the fish, or whether ice-cream should be eaten with a spoon, but there are certain observances of delicacy and good breeding which should be so ingrained in the mental fabric of the little child that he could by no means be guilty of violating them when he has grown to adult life.

## THE VALUE OF PLAYGROUNDS

Their Importance to the Development of City Children—The Marvelous Growth of the Playground Movement



IT has been well said that "as character depends upon habit, habit upon repeated action, and repeated action upon the feeling of interest that stirs to action, so the child's chief interest—play—will be the mainspring of his acts and habits, and finally, of his character; and he who properly provides for and determines the child's play, will largely determine the child's character."

Much importance, then, attaches to what the child plays, how he plays, where he plays.

By far the larger proportion of the world's population is children. In our cities, two-thirds of these have no place to play but the streets, where they are in more or less danger, and where most good games are against the law, thus making law-breakers of the participants.



In summer, too, these streets are sun-baked, hot, and stifling. With no opportunity to do what children love to do, and ought to have the privilege of doing without trespassing or law-breaking, it is not difficult to see how the trend is toward cheating, lying, and stealing, until the bad sides of play furnish the chief source for the formation of character, and the street playground becomes a veritable school of crime.

To encourage the good side of play, to foster the child's natural activities, to interest him in good wholesome sports and teach him to play fairly, to change the spirit of lawlessness into one of self-government and consideration of others, summer playgrounds have been opened by various philanthropic societies and school boards, where, under careful direction, both boys and girls are permitted to enjoy their birthright of play. The results of these efforts demonstrate clearly that public playgrounds are just as essential for the right upbringing of the future citizen as are the public schools.

Boston was the first city to take the lead in providing space and opportunity for right activities during the child's leisure.

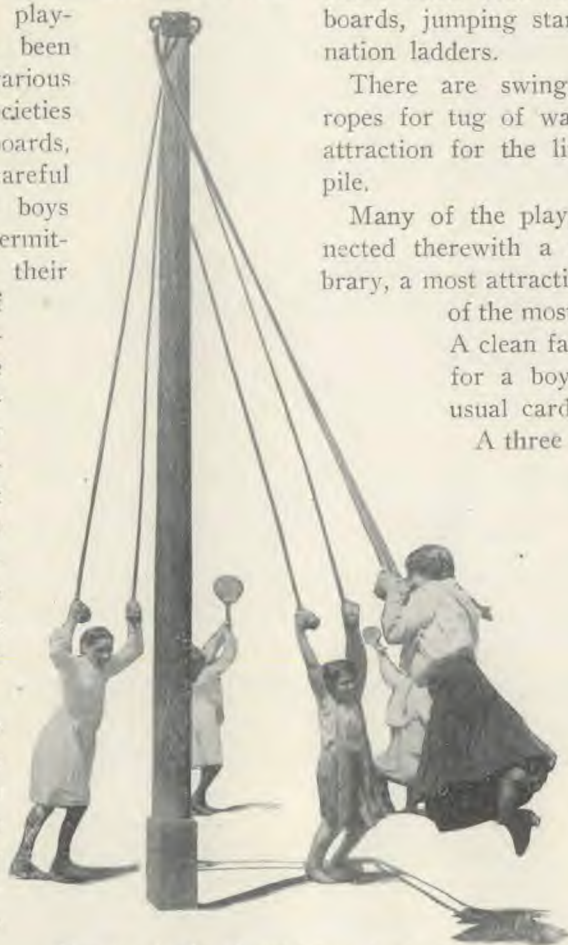
Other cities soon followed, until at present there are many well-equipped summer playgrounds in the densely crowded districts of both eastern and western cities with daily attendance ranging from a few hundred to a thousand children varying in ages from the tiny tot just learning to walk, to boys and girls in their teens.

Some of these playgrounds are used by girls during one half the day and by boys the other portion. Others have different hours for the younger children, when directors of kindergarten games are in attendance. Many of the playgrounds are veritable outdoor gymnasiums fitted with vaulting bars, springboards, jumping standards, and combination ladders.

There are swings, see-saws, balls, ropes for tug of war, and that special attraction for the little ones, the sand pile.

Many of the playgrounds have connected therewith a free circulating library, a most attractive feature, and one of the most refining influences. A clean face, clean hands, and for a boy, "hat off," is the usual card of admission.

A three day's session of the Playground Association last June in Chicago gave a comprehensive study to the play problem, leaving the conviction with all thoughtful persons that public playgrounds are an absolute necessity to the child's physical and mental de-



Here is a Lively, Healthful Sport for the Little Ones





Such a Place to Read In!

velopment and to save the boys and girls from the evil influences of the streets.

A teacher of experience says:

"The class-room influence of the best teacher is quickly dissipated when the boy is turned out into the street to do as he pleases. This is par-

ticularly the case in the overcrowded slum and tenement quarters of our large cities. Give the children attractive playgrounds all the year round and they will go to school more, and trouble the police and truant officers less."

Properly directed play will likewise tend to lead the child to an intelligent interest in the industries.

Froebel says: "A child that plays thoroughly, with self-active determination, persevering until physical fatigue forbids, will surely be a thoroughly determined man, capable of self-sacrifice for the promotion of the welfare of himself and others."

E. E. K.



What Fun! And It's All Free, Too



## The Sick Baby

**D**R. J. P. CROZER GRIFFITH, in his excellent work, "The Care of the Baby," offers the mother the following valuable points to aid her in discerning when her babe is ill, and what is the probable nature of his ailment:

The position assumed in sickness is a matter of importance. A child feverish or in pain is usually very restless even when asleep. When awake, it desires constantly to be taken up, put down again, or carried about. Sometimes, however, at the beginning of an acute disease, it lies heavy and stupid for a long time. In prolonged illnesses and in severe acute disorders the great exhaustion is shown by the child lying upon its back, with its face turned toward the ceiling, in a condition of complete apathy. It may lie like a log, scarcely breathing for days, before death takes place. Perfect immobility may also be seen in children who are entirely unconscious, although not exhausted. A constant tossing off of the covers at night occurs early in rickets, but, of course, is seen in many healthy infants, especially if they are too warmly covered. A baby shows a desire to be propped up with pillows or to sit erect or to be carried in the mother's arms with its head over her shoulder whenever breathing is much interfered with, as in diphtheria of the larynx and in affections of the heart and lungs. The constant assumption of one position or the keeping of one part of the body still may indicate paralysis. When, however, a cry attends a forcible change of position, it shows that the child was still because movement caused pain. Sleeping with the mouth open and the head thrown back often attends chronic enlargement of the tonsils and the presence of adenoid growths in young chil-

dren, although it may be seen in other affections which make breathing difficult. In inflammation of the brain the head is often drawn far back and held stiffly so. Sometimes, too, in this disease the child lies upon one side with the back arched, the knees drawn up, and the arms crossed over the chest. A constant burying of the face in the pillow or in the mother's lap occurs in severe inflammation of the eyes.

The gestures are often indicative of disease. Babies frequently place the hands near the seat of the pain; thus in slight inflammation of the mouth they tend to put the hand in the mouth; in earache to move it to the ear; and in headache to raise it to the head. In headache or in affections of the brain they sometimes pluck at the hair or the ears, although they may often do this when there is no such trouble. Picking at the nose or at the opening of the bowel is seen in irritation of the intestine from worms or oftener from other cause. The movements of the hands are, however, frequently misleading, unless their apparent meaning is corroborated by other symptoms. For instance, a child with a painful disease of its chest may sometimes refer the discomfort to the abdomen and place its hands there. In approaching convulsions the thumbs are often drawn tightly into the palms of the hands and the toes are stiffly bent or straightened. Very young babies, however, tend to do this, although healthy. The alternate doubling up and straightening of the body, with squirming movements, making of fists, kicking, and crying, is an indication of colic. This is especially true if the symptoms come on suddenly and disappear as suddenly, perhaps attended by the expulsion of gas from the bowel.



The color of the skin is often altered in disease. It is yellow in jaundice, and is bluish, especially over the face, in congenital heart disease. There is a purplish tint around the eyes and mouth, with a prominence of the veins of the face, in weakly children or in those with disordered digestion. A pale circle around the mouth accompanies nausea. The skin frequently acquires an earthy hue in chronic diarrhea, and is pale in any condition in which the blood is impoverished, as in Bright's disease, rickets, consumption, or any exhausted state. Flushing of the face accompanies fever, but besides this there is often seen a flushing without fever in older children the subjects of chronic disorders of digestion. Sudden flushing or paling is sometimes seen in disease of the brain.

The expression of the face varies with the disease. Young, healthy babies have little expression of any kind except that of wondering surprise. In whooping-cough and measles the face is swollen and somewhat flushed, giving the child a heavy, stupid expression. There is also swelling of the face, especially about the eyes, in Bright's disease. Repeated momentary crossing of the eyes often indicates approaching convulsions. In very severe acute diarrhea it is astonishing with what rapidity the face will become sunken and shriveled, and so covered with deep lines that the baby is almost unrecognizable. The same thing occurs more slowly in the condition known as marasmus. Often the face has an expression of distress in the beginning of any serious disease. If the edges of the nostrils move in and out with breathing, we may suspect some difficulty of respiration such as attends pneumonia. The baby sleeps with its eyes half open in exhausted conditions or when suffering pain. Chewing movements during sleep result

from disordered digestion, and a smile in very young infants often has the same cause.

The head exhibits certain noteworthy features. Excessive perspiration when sleeping is an early symptom of rickets. It must be remembered, however, that any debilitated child may perspire more or less when asleep, and that even healthy, full-blooded children are sometimes affected if the weather is very hot. Both in this disease and in hydrocephalus (water on the brain) the face seems small and the head large, but in the former the head is square and flat on top, while in the latter it is of a somewhat globular shape. The fontanelle is prominent and throbs forcibly in inflammation of the brain, is too large in rickets and hydrocephalus, bulges in the latter affection, and sometimes sinks in conditions with only slight debility.

The chest exhibits a heaving movement with a drawing in of the spaces between the ribs in any disease in which breathing is difficult. A chicken-breasted chest is seen in Pott's disease of the spine, and to some extent in bad cases of enlargement of the tonsillar tissue; a "violin-shaped" chest in rickets; a bulging of one side in pleurisy with fluid; and a long, narrow chest, with a general flattening of the upper part, in older children predisposed to consumption.

The abdomen is swollen and hard in colic. It is also much distended with gas in rickets, and is constantly so in chronic indigestion in later childhood. It is usually much sunken in inflammation of the brain or in severe, exhausting diarrhea or marasmus. It may be distended with liquid in some cases of dropsy.

The manner of nursing or swallowing frequently affords important information. A baby whose nose is much obstructed or who has pneumonia can nurse for but



a moment, and then has to let the nipple go in order to breathe more satisfactorily. If it gives a few sucks and then drops the nipple with a cry, we must suspect that the mouth is sore and that nursing is painful. If it swallows with a gurgling noise, often stops to

cough, and does as little nursing as possible, we suspect that the throat may be sore.\* The ceasing to nurse at all, in the case of a very sick baby, is an evidence of great weakness or increasing stupor, and is a most unfavorable symptom.

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## The Herald of Autumn

BEHOLD! the herald of the autumn comes,  
A flaming torch of yellow in his hand,  
Lighting the dim ways of the forest wide,  
And spilling golden patches o'er the land.

Beside the sluggish brook he stands and waits  
The time for stars above his head to bloom;  
Then, as the whispering breezes gently wake,  
He swings his burning censer in the gloom.

And now near to the highway you may see  
This graceful errant bowing in the breeze,

Scattering his wealth of pollen, Cræsus-like,  
Or yielding his sweet soul to bandit bees.

So, through the mist-hung days of summer's  
close,  
Transforming into beauty clay and clod,  
His footsteps marked with spots of yellow  
gold,  
Goes autumn's princely herald—Goldenrod!

—Edwin Carlile Litsey.







## The Barefoot Boy

BLESSINGS on thee, little man,  
Barefoot boy with cheeks of tan!  
With thy turned-up pantaloons,  
And thy merry whistled tunes;  
With thy red lip, redder still

Kissed by strawberries on the hill;  
With the sunshine on thy face,  
Through thy torn brim's jaunty grace:  
From my heart I give thee joy—  
I was once a barefoot boy!

—Whittier.



# The Pioneer Class of the Sanitarium School of Health

BY RUTH C. TENNEY

Member of the Class of 1907

THE first class of the School of Health and Household Economics was graduated in June. The graduation exercises of this class, which consisted of eleven members, were held on the evening of June 10, and were more than ordinarily interesting, in that they

the idea of a "School of Domestic Science," the Hand that shapes and controls our destinies had foreseen the need and prepared the way.

The object of this course was not simply the acquirement of ordinary methods of housekeeping; neither was



The Pioneer Class of the Sanitarium School of Health

marked the success of an interesting experiment.

Domestic Science is nothing new in the land; but the combining of this work with the principles and purposes of the Battle Creek Sanitarium has given, in our minds, one of the greatest of opportunities to womankind and to the world. The founding of this school has been "different." It has been like moving into a house furnished, ready for occupancy. It would seem that long before our minds had ever conceived

it a course in fancy cookery. The underlying consideration throughout has been to encompass the well-being and perfection of the home in health, in arrangements, in happiness and true comfort.

Naturally, in such a school, the first consideration has been given to health and hygiene. With the aid of microscopes and cultures, chemical apparatus and reagents, treatment rooms and nurses' supplies, kitchens and cooking utensils, and so on through the entire





Demonstrating Healthful Cookery

catalogue of equipments, the teachers have worked most faithfully to enable the student to penetrate the realms of germdom, the haunts of bacilli, to seek on fields of agar the dangerous fowls and fishes of the microscopic world, which, flying about in the air, and swimming in the water and milk, finally take up their abode in lungs, liver, and leucocytes, and there set up their nefarious business of undermining constitutions.

"A class of small children once decided," said Mrs. Alice Peloubet Norton, in her address to the graduating class, "that the moon was of more importance than the sun, as it shone at night when it was most needed, while the sun shone when it was light anyway. So people generally regard housework. They say it is not of high importance, because it has to be done anyway. The advancement in home life does not keep pace with the general progress of the world as it should. Our domestic administrations are behind the times. Moral training is left to those outside the home."

Mrs. Norton is professor of Household Management in the University of Chicago, and instructor in Household Economics in the New York Chautauqua. In her address to the class she drew upon her rich store of experience with true womanly instinct and sym-

pathy in such a manner as to make her words most helpful and interesting. She spoke of the education of younger children.

"It is here that we place particular stress upon our work," she said, "because of its influence upon those who are coming into the world of action. The objection is raised that the curriculum of the public schools is already overcrowded. The first plea that I would make for the introduction of household science into our primary schools is that it will economize time. If this is done, will it not be possible to deal more easily with the overcrowded curriculum in the grades?"

"The quickest way to promote mental development is through handicraft. The measuring of the ingredients by



A Table Showing Modern Nursing Methods





Chemistry

cups and half-cups is a continual object-lesson on the abstract problems the pupils are trying to solve in their arithmetics. One does not appreciate how this domestic work pervades the realms of science until he has tried it. It leads the mind to reason between cause and effect, and teaches the children the use of powers or abilities which constitute what we call efficiency—the ability to control material objects. It develops a sense of responsibility with habits of exactness which are so essential to good character.

"With the older ones the intelligence in household affairs which the training in home management and economics develops, works but very little transformation in the homes. We need to learn to discern between the essentials and non-essentials of our work.

"Ruskin remarks that every leaf of the trees is not only receiving life, but giving as well, and when it ceases to give, it dies. Success in life depends upon your giving back to the world that which has been given to you."

"The Sanitarium," said Dr. Kellogg, as he distributed the diplomas, "was never designed to act simply as an asylum for the sick, a sort of penal institution where people might be sent to serve out their time of suffering the consequences of bad living. Its greatest aim

has been to educate the people, to enlighten the world in regard to the best ways of living and prolonging life and health.

"It has often been reported from scenes of these modern scourges that 'the drunkards are dying off by hundreds. The gluttons also fall an easy prey. The imbeciles and all classes with defective health were the ones to succumb to these ravaging diseases, so that it becomes really a question of a survival of the fittest, and these overflowing scourges serve to eliminate from our communities the weaker elements and thus to raise the average standard of vitality.' Now these eliminative processes are prevented, and the consequence is that our insane asylums and hospitals, all classes of defectives, are filling up, thus imperiling the health of all our communities. The only way to meet this state of things is through education and the elevation of our domestic economy. Our housekeepers and homemakers must understand what is necessary for the conservation of the health of the inmates of our homes, the members of our families."

Following the exercises, the visitors were led to the Sanitarium parlors, where separate tables represented the various divisions of the work. Sewing was represented by beautiful fancy work and hygienic clothing for the baby and the grown-ups.

There was a table spread with "fresh-air castles" which the class had planned and furnished in their home building classes. Various roasts, tempting jellies, breads, pies and cakes, beautiful and hygienic, allured the visitors to the tables devoted to cookery. One table representing home treatments illustrated, by models of dolls, the methods of bandaging, hydrotherapy, and other rational treatments for emergencies.



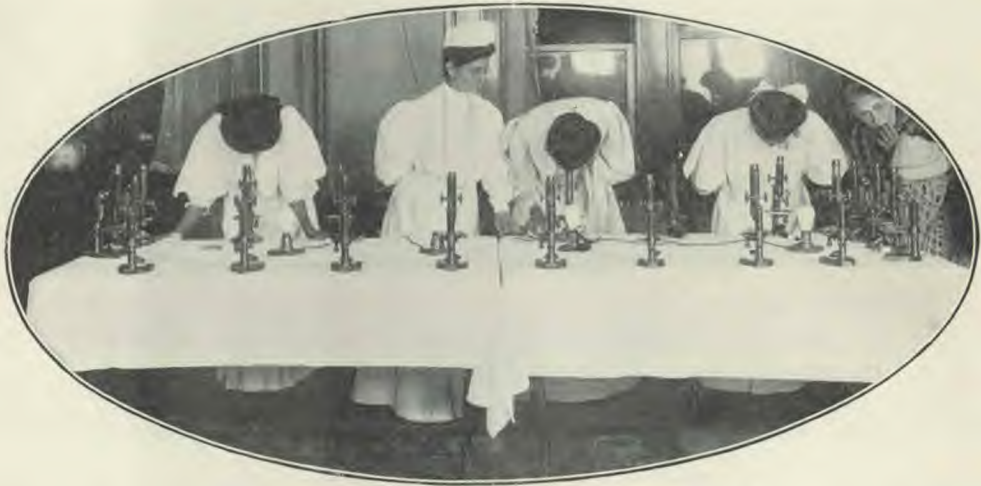
At the chemistry table the calorimeter was explained; different authorities were quoted as to the amount of food needed; water was distilled, and soap manufactured.

Another table was covered with linens, silks, woolens, ribbons, and doilies which had been neatly laundered by the students.

At the bacteriology table the wonder-

ful formation and growth of microscopic plants and animals were clearly drawn on paper or shown under numerous microscopes.

As a great part of the class work has been theoretical, this practical exhibition was a great surprise to many of the visitors. Those attending the display numbered between three and four hundred.



Demonstrating Bacteriology

"My little craft sails not alone;  
A thousand ships from every zone  
Are out upon a thousand seas,  
And what for me were favoring breeze  
Might crush another with the shock  
Of doom upon some hidden rock.  
And so I do not dare to pray  
For wind to waft me on my way.  
Then whatsoever wind doth blow,  
My heart is glad to have it so.  
And blow it East or blow it West,  
The wind that blows, that wind is best."





## The Child and the Nurse-Maid

BY ROSE WOODALLEN CHAPMAN

OH, yes, I make all my children's clothes myself. Aren't they pretty? I make them all by hand, you know. I wouldn't think of putting machine work on baby's clothes."

The mother was spreading the pretty garments out before me as she spoke, but I was not able to give them the attention their beauty seemed to deserve. Upon my ears fell the sound of severe slapping, followed by sharp cries of pain, and quick, cross words of reproof. In the next room I knew was my friend's little girl and her nurse-maid, and I marveled that the mother could appear so absorbed in the results of her own handiwork that she failed to hear these pregnant sounds. At last I spoke:

"Where is Pauline?" I asked.

"Oh, she's in the next room with Marie." Then, apparently catching my meaning, the mother went on complacently, "Oh, I never interfere when Marie punishes her. Marie is a very good girl, and Pauline is so hard to manage. She positively is getting to be the worst-tempered child I ever saw. I don't know how I would manage her if I had to look after her myself. Marie is a perfect treasure, I think, and she speaks *such* good French."

My heart sank within me. What hope was there for this child, thus deliberately left by her mother in the hands of a hireling?

I saw my neighbor frequently, and

her hands were always filled with some dainty work pertaining to her little daughter's wardrobe. But I could not see in this evidences of maternal devotion. It was but another expression of personal pride,—pride in her ability to devise and produce beautiful garments. The mother-heart was dead within her, or she could not leave the delicate fabric of her child's soul to be injured beyond repair by the uncareful handling of a girl who knew little and cared less for the value of that which was entrusted to her care.

That there are many mothers who make the same terrible mistake has been impressed upon my mind over and over again since that time. As I pass through the city park, I see row after row of babies in the care of nurse-maids, and my heart aches to see the little eyes exposed to the full glare of the sun; for I realize what that must mean to the eyesight of that child when grown into an adult. Or, if it is a windy day, I note the unprotected forms and the little blue cheeks and noses that bespeak physical discomfort and threaten possible illness. The nurse-maids, meantime, are busy chatting together, completely oblivious to the discomfort of their little charges. They are not unkind; they are simply ignorant. They have no comprehension of the importance of such apparently small items in the life of the child.

Many dangers threaten the child who is left entirely to the care of a nurse-maid. Sometimes a baby will almost starve to death before the mother discovers that the nurse has been calmly ignoring all directions given by the physician for the preparation of baby's food,



and refusing to admit her disobedience to the doctor's commands. Oftentimes, a child is stricken down by a contagious disease to which it has been exposed through a thoughtless nurse, who took the child with her on a visit to friends or relations. Sometimes the nurse is a source of dangerous contagion. It is not always possible before engaging a girl to ascertain whether she is the victim of tuberculosis, or even of that more terrible disease, syphilis, which has become so widely prevalent as to arouse the physicians of all lands to the necessity of stringent measures for its suppression. When mothers learn that this dreaded disease may be transferred through using the same towel or drinking from the same cup, they will begin to gain some comprehension of the great risk they run when they engage a nurse-maid merely because of good recommendations and pleasing appearance.

Once in a while we meet a human being who has been forced to go through life with a crooked, misshapen body because a careless nurse-girl allowed the little child to fall to the floor in the early months of its existence. The agony of soul endured in such a life is terrible for a mother to contemplate.

Yet there are worse evils that may befall our children if we put them into the hands of those less loving, less conscientious, less willing to learn, than we are ourselves. Crooked bodies are an affliction; dwarfed souls are infinitely worse. The petulance and wilfulness of my friend's child had been brought about. I felt convinced, by the unwise treatment it had received at the hands of the maid, and who knows how many of our unmanageable, irresponsible, uncontrollable adults owe their deplorable mental and moral condition to the treatment of unkind, unprincipled nurse-maids?

If the rules laid down by the mother add to the nurse's work, she will often disregard them. If this calls for direct disobedience on the part of the child, the nurse shields the disobedience by deceit, and so teaches the child to be untruthful and dishonorable as well as disobedient. The nurse indulges in vulgar conversation, and the child imbibes the atmosphere of vulgarity. Nurses have even been known to teach a little child the habit of self-abuse because they have found this an easy way to keep the little one quiet. What an awful possibility for a mother to consider, leading, as it does, not only to physical deterioration, but to undermining of the moral nature!

Nurses frequently find it easy to control children by means of threats and stories of horrifying terrors. As a result the child becomes nervous, excitable, afraid of the slightest sound, and afraid of the dark. Sometimes a dangerous illness comes as a result of sudden fright working upon this nervous excitability, and children have often lost the use of their minds through such an experience. Could a mother ever forgive herself who had allowed her child to be so treated that its mental soundness paid the price of her neglect?

Even where there is no positive wrong done the child by the nurse, there is still usually much positive good left undone. Childhood is the time when all the possibilities of the character spring into being; and these tender shoots require loving thought and careful tending to bring them into sturdy growth. The unthinking mind fails to see the signs of these new possibilities, and probably would not know how to aid their growth did it catch a glimpse of their existence. So, even under the care of a kind, conscientious nurse, the child may suffer great wrong because the



foundations of a strong, true character are not laid in the most impressionable years of life.

Children imitate those with whom they are most closely associated. If they live with servants, they learn the servants' mode of eating, talking, and thinking. They look at life from the view-point of the untrained intelligence. They fail to acquire the gentle ways of the well-mannered, and the culture which comes from association with refined people.

The mother might have some one to assist her in making the children's

clothes, keeping them in order and taking the hundred and one steps that the care of a child requires; but she should keep the child with her, or under her direct supervision, every hour of the day. Then the questions that arise can be asked of her and wisely answered by her. She can see when wrong tendencies are developing, and gently prune them away. She can see also the budding of right aspirations, and encourage them into lasting existence. It is through the intimate intercourse of daily life that the foundations of character are laid.

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## Baby's First Clothing

THE too customary practice of binding the chest and vital organs of a baby with three tight bands, folding a pinning blanket over his legs, with a purpose to keep him warm, and a result of making it difficult or quite impossible for him to move his limbs, at the same time forcing him to sustain the weight of several yards of unnecessary though ornamental fabrics, and often in the hottest of weather, is certainly an irrational, if not cruel, method of clothing an infant. Dr. Alfred Cotten, Professor of Children's Diseases in Rush Medical College, has designed a sleeveless sack, which seems to be a most ideal garment for the wee babe. It is made of light, flexible, non-conducting material (Scotch flannel is very suitable for the purpose) so constructed as to envelop loosely the entire body. This simple clothing interferes in no wise with perfect freedom of motion of all the muscular structures of the infant's body.

The garment appears in shape like a bag, fastened with a safety-pin in

front at the top, and with a draw-string at the bottom. Dr. Cotten believes there is good reason for including the child's hands in this covering for the first five or six weeks of life, as a prevention of the habit of putting the fingers in the mouth, which, as he says, is "a most unhygienic practice: first, because it favors introduction of infections; second, because the subsequent chilling of the parts from rapid evaporation of moisture induces local congestions, causing symptoms of indigestion, colic, etc.

"When necessary under the sack, additional protection against cold is afforded by separate undergarments, as a light knitted shirt of silk and wool and a sleeveless slip of baby flannel."

Dressed in a knitted long-sleeved shirt, and wool stockings pinned to the diaper, which, in turn, is fastened back and front to the shirt, the child is ready to be enveloped in the baby bag, and in moderate weather requires no other clothing for the first few weeks.

In cold weather an additional slip of



soft baby flannel made without sleeves, reaching from the neck to ten or twelve inches below the feet, may be used next the shirt.

No material is better suited than wool for body protection of the infant, and two thicknesses of light-weight goods is preferable to one of heavier weight.

A soft shawl or comfort may be used

for protection when carrying the baby from one room to another. This is essential when there is a difference of temperature.

When the baby bag has served its purpose, and the little one has grown enough to be clothed in a simple Gertrude suit, it may be used for a night garment, for which for the first six months there could be nothing better.

## The Power of Suggestion

IT has been said that "to trust a child implicitly is the only way to make him trustworthy." If parents would begin on this principle when a child is one year old—yes, even younger than that, and carry it out in every detail, they would save themselves much trouble and possibly heartaches in after years.

I am a firm believer in "suggestion," and that it is a wonderful help in the training of children. For example: If a child is doing wrong, a mother can say gently and firmly, "Don't do that again," with a firm conviction that she will be obeyed, and she will. This I know by personal experience to be true. A lady once said to a mother of four healthy, wide-awake boys:

"Mrs. H—, do you murder your boys when they disobey you? I've noticed when you call pleasantly from the

door, 'Come in now, boys,' they fairly run for the house."

The mother of the boys smiled as she said: "Did you also notice that after calling them I immediately closed the door? That is the secret of the whole thing. As a rule mothers *watch* their children to see if their orders are carried out, instead of trusting them and *knowing* they will do as they are told."

Never reprove a child in company. If persisted in, they will lose their self-respect and become sulky. I've heard mothers make remarks of this kind to their children: "You are the worst boy I ever saw." "Are you telling me a lie?" "Are you sure you are telling me the truth?" Dear mothers, never once give your child the impression that you doubt its word.—*Evelyn Barlow, in The Housekeeper.*





# A DIET AND ENDURANCE TEST

## A Remarkable Experiment in Low-Proteid Diet and Thorough Mastication, and the Astonishing Results Secured

BY PROFESSOR IRVING FISHER, in the "Yale Courant"

THERE have already appeared some statements in the newspapers as to the experiment tried at Yale last year by nine students to determine the relation which diet holds to endurance. In view of the fact that the statements which have been current in regard to the experiment have been more or less erroneous, I am very glad to accede to the invitation of the editor to give, in advance of the publication of the full report, a brief account of the experiment and its conclusions.

Two or three years ago Mr. Horace Fletcher, living in Venice, visited New Haven and made great claims to Professor Chittenden for the virtues of thorough mastication, stating that in consequence of acquiring this habit he had overcome serious personal disabilities. He had, he said, nearly rejuvenated himself, and was able to celebrate his fiftieth birthday by riding 190 miles on a bicycle. Dr. Anderson tested him in the Yale gymnasium and reported that, for endurance, he was the most remarkable man of his age he had ever seen.

On analyzing Mr. Fletcher's diet Professor Chittenden found that it was extremely low in "proteid." Proteid is that element in our food which repairs waste and builds tissue. Most, though not all, of the proteid in an ordinary diet comes from meat and other flesh foods, such as fowl, fish, oysters, etc. Our bodily machinery wears out and needs to be repaired. Only proteid (together with "mineral salts") can do this. The other food elements—fats,

starches, and sugars—are unable to repair waste. These elements merely enable the body to do work, just as coal enables a steam engine to do work. They are for fuel, not repairs. Proteid is more analogous to the iron and steel of which the engine is made, although in the economy of nature it has been arranged that if more proteid is used than is necessary for repairs, the surplus is used as fuel and then supplies energy, just as do fats, starches, or sugars. It occurred to Professor Chittenden that possibly the reason for Mr. Fletcher's extraordinary endurance was due to the fact that he consumed so little proteid, and that when an excess of proteid is used and has to be burned as fuel, it is so ill adapted for the purpose as to leave behind clinkers, as it were, which in the form of uric acid and other products produce fatigue. Mr. Fletcher's consumption of proteids was less than half of that which had formerly been considered as almost necessary for continued health and well-being. He seldom ate any meat at all. His experience was a challenge to those authorities who taught that a large amount of proteid was necessary. This opinion seems to rest on nothing more than the mere fact that people ordinarily do consume these large quantities.

Professor Chittenden's experiments took place three years ago and were made on squads of soldiers, athletes, and professors, to discover to what extent the proteid could be reduced. The army squad was soon nicknamed the "starvation army," an ingenious misnomer



which helped to spread misconception; for, as a matter of fact, there was no attempt to restrict the total quantity of food, but only to bring down the proteid. Professor Chittenden's results showed conclusively that the small amount of proteid used by Mr. Fletcher was sufficient to maintain good health in all the men who took part in the experiments. They even seemed to improve in efficiency, certainly as far as the tests of strength were concerned.

Professor Chittenden concluded his experiments by food prescriptions. But most people do not have the knowledge or facilities for measuring their food. Mr. Fletcher himself had not used any process of measurement or restriction. He had simply followed his instinct and thorough mastication. The object of the experiment conducted last year was to discover whether or not thorough mastication would lead to the reduction of proteid as it had with Mr. Fletcher, and also whether or not the health and endurance of the men would remain unimpaired.

The experiment began in January and continued throughout the entire second college term, or about four and one-half months. Nine men volunteered, eight of whom were graduate students. During the first half of the experiment the men followed two rules only. The first was to masticate thoroughly all food up to the point of "involuntary swallowing," with their attention, however, concentrated upon the taste and enjoyment of the food, and not upon the mere mechanical act of mastication. There was no "counting of chews," no forcible holding of food in the mouth, and nothing to make eating a bore. On the contrary, the aim was to get a greater sense of enjoyment from the prolonged tasting of the food. The food was simply allowed to "swallow

itself," neither being forced down or "bolted," as is done by the ordinary student who fears that he will be late for chapel. Nor was it forcibly retained in the mouth. The result was, as the days and weeks passed by, that the time which any mouthful of food *naturally* remained in the mouth grew longer, until no food was swallowed before it was thoroughly liquid and its flavor had been extracted. It was then fully ready to be swallowed, and the swallowing instinct came into play of itself.

The second rule was to obey explicitly the leadings of the appetite, both in regard to the quantity of food eaten and the choice between different kinds of food. In order that this obedience to appetite might be the more easily followed, a wide range of choice of foods was supplied, and no food was placed before the men which was not specially ordered by them, as at an *a la carte* restaurant.

The first half of the experiment was, therefore, an experiment in natural or instinctive eating. Most of us eat in an unnatural state of hurry. We regard meal-time as an interruption to the business of the day, and usually allow for it too short an interval before our engagements. What we eat is apt to be ill adapted to our taste. When food is set before us, we often eat it, not of our own choice, but out of politeness to our host, or out of habit. Many have to eat what is provided or go without. It is almost inevitable, under such circumstances, that our food instinct should become blunted. In consequence, our choice of foods has become more or less perverted. The aim of last year's experiment was to discover what a *recovered food instinct* might accomplish.

Careful records of the amount of food taken and the constituents in (1) proteid, (2) fats, and (3) starches and



sugars, was kept for each man for each day. In order to avoid weighing the food at the table and the annoyance which such a procedure involves, the food was all weighed in the kitchen and served in definite portions of known food value. From the records thus supplied, it was easy, by means of a "mechanical diet indicator" devised for the purpose, to find the proportions of food elements.

During the second half of the experiment the two rules above mentioned were continued in force, but a third rule was added; namely, when the appetite was in doubt, to give the benefit of that doubt to low-proteid and non-flesh foods. In other words, the influence of suggestion was invoked to hasten the change which had been inaugurated by arousing the natural appetite. Suggestion was introduced merely because the experiment was limited in time. In no case was it allowed to override the dictates of appetite.

The results were certainly surprising. In the first place the men enjoyed their meals more than before, and discovered unsuspected flavors in common foods. In the second place, they reduced somewhat, though not greatly, the total quantity of food eaten. The most marked reduction was in the quantity of liquid of all kinds taken at meals—water, tea, coffee, and even soups, for there was no longer any temptation to "wash" food down. In the third place, there was a marked reduction in the amount of meat and other high-proteid foods. By the end of the experiment, some of the men had entirely lost their taste for meat and other flesh foods, and all had greatly reduced the amount. Finally, there was a great increase in the powers of endurance of the men, amounting to about 100 per cent.

The subjects of Professor Chitten-

den's previous experiment had experienced an increase of strength, but no tests were made of their endurance. In last year's experiment, therefore, special attention was paid to endurance. Strength is measured by the utmost force which any muscle can exert *once*; endurance by the number of times a muscle can perform an exertion well within its strength. Seven endurance tests were used—rising on the toes, deep knee bending, leg raising, raising above the head 5-lb. dumb-bells, raising to the shoulders dumb-bells of 50, 25, 10, and 5 lbs., holding the arms horizontal, and running on the gymnasium track. These tests were taken at the beginning, middle, and end of the four and a half months of the experiments. In the intervals the men led sedentary lives. Consequently exercise had no part in their increase in endurance. Nor can this increase be ascribed to any other factor than diet. Every known element except diet tended to diminish rather than to increase the endurance of the men. The men were, without exception, convinced of the importance of diet as the cause of their increased endurance, and have tried to continue the habit of thorough mastication ever since. One states, "During the spring I have not felt that 'all-gone feeling' which usually has appeared in the past. The diet which we have had has relieved me of the sour stomach after meals, and I have felt better and worked harder on less exercise than ever before."

The experiment was one which caused great sacrifices on the part of the men who took part in it, for the tests were exhausting and all were stiff and sore for days afterward. The general conclusion, both from the experiments of Professor Chittenden and the experiments last year, is that the claims of those who have advocated slow eating



are not exaggerated. Most persons, and students perhaps especially, will probably never give up their hurry habit, even if they know that in the end it costs them far more time than it saves, and sows the seed of future dyspepsia; but those who wish to get the best re-

sults of which their minds and bodies are capable, and have the necessary self-control, are taking the hint which Mr. Fletcher has dropped. Athletes particularly are finding that a proper management of diet will add greatly to their efficiency and staying power.



*Courtesy Suburban Life.*

A Delightful Place to Work or Study\*Out-of-Doors

### A MORNING PRAYER

Let me to-day do something that shall take  
 A little sadness from the world's vast store,  
 And may I be so favored as to make  
 Of joy's too scanty sum a little more.  
 Let me not hurt by any selfish deed  
 Or thoughtless word, the heart of foe or friend;  
 Nor would I pass, unseeing, worthy need,  
 Or sin by silence where I should defend.

However meager be my worldly wealth,  
 Let me give something that shall aid my kind:  
 A word of courage or a thought of health,  
 Dropped as I pass, for troubled hearts to find,  
 Let me to-night look back across the span  
 'Twixt dawn and dark and to my conscience say,  
 Because of some good act to beast or man,  
 "The world is better that I lived to-day."

—Ella Wheeler Wilcox.



# The Walking Club

GOOD HEALTH has been constituted the official organ of the Overland Walking Club, a national organization with headquarters at Jackson, Mich. Hereafter the scope and purposes of this Walking Club department will be greatly extended. Instead of being devoted wholly to nature study with merely occasional sketches of travel, a share of the space will be given each month to a description of the club's doings, to official notices, and to articles and sketches furnished by members of the club, as well as by the editor of this department. In this way, GOOD HEALTH proposes to cooperate to the fullest extent with the club in the furtherance of its work and of the principles for which it stands.

The Overland Walking Club was organized in Jackson, Mich., by James M. Hutchinson, on April 1, 1904. Mr. Hutchinson was the club's first president and organizer, and the original membership numbered eleven. The principles established at the start were these:

Total abstinence from all drugs, alcohol, tobacco, and profanity. Clean exercise and clean thinking.

These principles have been rigidly adhered to, the lines being drawn the more closely as membership has increased, rather than permitting of any laxity. To stimulate interest, annual trips have been planned by the club each year, as many members participating in them as were able. In 1905 the trip was through the New England States, on foot, of course. The tour for 1907 was through Colorado, the most interesting part of this trip having been described in the Walking Club department of GOOD HEALTH for June. This year some of the members are taking a trip through parts of Pennsylvania, Maryland, Virginia, West Virginia, Delaware, New Jersey, and the District of Columbia. They are visiting such points of interest as the Jamestown Exposition, Luray Caverns, Gettysburg, Antietam, Shenandoah, the national capital, etc. Interesting descriptions of the experiences met with



James Hutchinson, Organizer



on this trip are promised for numbers of this magazine in the near future.

Present officers of the Overland Walking Club are:

Organizer, James M. Hutchinson, Lansing, Mich.; President, Clarence Fox, Jackson, Mich.; Vice-President, William D. Hunt, Jackson, Mich.; Secretary, Albert A. Chamberlain, Jackson, Mich.; Treasurer, Elmer D. Fox, Jackson, Mich. The club motto is the English form of that grand old Roman phrase, "A Sound Mind in a Sound Body."

The main purpose in making the Overland Walking Club a national organization, an action which was only taken this year, has been to widen its scope and to extend the interest in walking as an exercise. The club was originally established on the right principles, and had existed long enough to prove that if it was an experiment in the beginning, it was at least entitled to the credit of having been a successful experiment. So enthusiastic were the members over the success and accomplishments of the organization that they were uniformly anxious to extend the privileges of membership to all who were willing to subscribe to the principles and conform to the club requirements. The principles have been cited. The one requirement, besides those contained in the constitution and by-laws, relating merely to organization, is that each member shall walk at least two hundred miles during his first year of membership and four hundred miles each year thereafter, walking to and from a business or on ordinary errands not to be counted.

Clubs already organized along these lines, conforming with the principles

and requirements above mentioned, may become affiliated with the national organization upon application and proof of their eligibility.

Individuals everywhere who are interested to the extent of becoming members may do so upon subscribing to the principles and the constitution and by-laws. Each member receives a copy of *GOOD HEALTH* monthly. His dues are comprehended in the subscription price of one dollar per year, while there is an initial membership fee of twenty-five cents. Persons who are already subscribers to *GOOD HEALTH*, therefore, may become members of the club by agreeing to conform with the principles and rules of the organization upon payment of the membership fee of twenty-five cents. Those who are not subscribers will be required to pay \$1.25, which will include a yearly subscription to *GOOD HEALTH* and copies of the constitution and by-laws.

It will be seen from this that virtually no dues are exacted. The sum paid by a new member simply covers the cost of the magazine *GOOD HEALTH*, and pays for the copies of the club constitution and by-laws which he receives. The magazine forms a means of intercommunication with the members, and it is therefore essential to active membership.

There is no exercise so truly inspiring as walking. It was the favorite pastime of men like Gladstone, Dickens, Henry Ward Beecher, and many others whose names are pointed to with pride by the Walking Club members. The club as a national organization is entitled to strong support, and should gain a large membership of clean, high-principled young men.





A Roadside Wild Garden in Midsummer



# Midsummer Chapters in the Lives of Well-Beloved Spring Flowers

BY JULIA ELLEN ROGERS

SPRING after spring we renew our youth in the short season of bloom for violets, bloodroots, trilliums, and hepaticas. What a shock of foliage surrounds the blossoms! How surprisingly brief is the interval since we went carefully over the same ground, finding it still destitute of any signs of life! We carry home those earliest flowers. It is the morning of the year. There is an exaltation of spirit that every one feels, vaguely if not keenly, in this first woodland pilgrimage. We make up our minds to go again. But things intervene between our resolve and its fulfilment. Presto! The early flowers are gone, and columbine, wild geranium, and sweet-william lift their heads above the tall grass.

When we think of it, blossoming is but one chapter in the life of each of these early bloomers. The flower is the culmination of the story. The revolving year is a kaleidoscope, changing the forms and colors in the mosaic carpet that covers the brown earth from March till November. All through the growing year the violets and their April companion plants are growing. It is worth our while to go out to the place we visit in April, to find them where they hide among the taller plants whose turn to blossom has come.

Violets of many species grow in our woods and meadows. Some grow to much larger proportions than others. All kinds show in summer time a surprising vigor and size, to match the lush vegetation all about. The violet plant is engaged in the same occupation as the largest tree. Food drawn from soil and air and elaborated in the laboratory

of the sun (the green leaves) flows back to feed the growing plant in every part, much as in animal bodies whose ultimate cells are renewed and multiplied by food the blood conveys to them, prepared for use.

We must dig in order to discover the lusty stem of most violets. It lies horizontally, with a shock of leaves at one end forming what we have been calling the whole plant. All that is above the ground must die on the approach of winter. The herbaceous plants all "know" that. So it is in this underground stem, called the *rootstock* by botanists, that preparations are made for the future. The strong leaf system is but a temporary structure; the rest lives on from year to year. Such plants are known as perennials.

When the violet petals fall, a pod, three sided and green, is shown in the center of the flower. Belated blossoms may be found as late as August, and quite often the bird's-foot violet, with finely cut foliage and two-tinted purple flowers, forgets so far as to bloom in autumn, as if it mistook the season for spring. To mature seed is quite the most important function the violet undertakes in early summer. The growth of the plant can wait. All energies are centered upon the maturing of the precious seeds. In due time the pod turns brown, and at the moment when it becomes just dry enough, it flings back its three doors with a force that throws the seeds away in all directions. The walls bend backward, forming a flat, three-pointed star. A few seeds usually remain, showing that all were attached to the inner faces of the three



walls. What other plants discharge their seeds explosively?

Violet flowers have each a horn or pouch at the base of the lower petal. In this the nectar is contained. The little bee, or other insect, that seeks to find this treasure has the delicate penciling of purple as guide lines, the faint perfume, and a good solid footing afforded by the beard that grows in the flower's throat. I am taking, now, the common blue violet as a type.

If it is too late in your neighborhood to find a violet in blossom to verify these interesting points, look closer to the ground, and I will help you to find some violet blossoms that you probably never saw or heard of before. They may be quite underground. If clustered on short stems near the base of the plant, you may mistake them for unripe pods, for they are green, pointed, tightly closed and drooping from leafless stems.

Insects cross-fertilize the regular flowers as they wander about in quest of nectar. The setting of seed depends on these unconscious helpers. Adverse weather or other circumstances might prevent the insects from coming at the time that the pollen is just ready. As if for fear that some calamity may pre-

vent the production of perfect seed by the flowers above, these little "hidden flowers," capable behind their closed doors of self-fertilization, set and ripen seed and scatter it, nearly all through the growing season, "making assurance doubly sure."

Have you looked in the wet places for the scarlet cone that has taken the place of the Jack-in-the-pulpit? There are the three broad leaflets, somewhat weather-beaten to be sure, but able to work yet, ripening the red-walled kernels, and storing up food in the fleshy, turnipy rootstock with the fiery taste! Don't let a piece of it touch your tongue, unless you wish to have a mouthful of red-hot needles and pins for hours!

All our early spring flowers are able to come up and blossom in less than no time because all through the summer they are forming leaf and flower buds underground, and storing about these precious growing points sugary food that in the spring forces this marvelously rapid growth. How many other spring favorites can you find now? What are their rootstocks like? What kind of seeds have they made? Look for new violet plants sprung from the rootstocks; also from seeds.

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A WALK with a purpose is always more enjoyable and more profitable healthwise than the mere going just for the sake of walking. A writer in *Country Life* offers the following "Nature Study Lines on Which to Thread Vacation Observations," delightful invitations to go forth into Nature's domain and study her ways:

*Birds.*—Careful notes made daily on the nesting habits of one pair of birds. A study of crow habits and language in crow roosts. The birds that are found

near some stream from its source to its mouth. The reason and the use for decorations of nests, like the use of spider webs by the vireos.

*Mammals.*—Notes made daily on the habits of some particular squirrel, chipmunk, woodchuck, rabbit, or other wild animal. The species and habits of the mice, moles, and shrews of a locality.

*Fishes, Toads, etc.*—A study of all the species of fish found in a certain pond or stream. The nesting habits of the sunfish, or any other common species. The tree toads of a locality in all their stages. The history of some in-



dividual toad or frog, or snake, or salamander.

*Insects.*—The butterflies of a locality. The insects which live in running streams. The insects which live in and about a pond. The nests of carpenter, leaf-cutter, and mining bees. The study of an ant's nest and all that goes on within it. Notes on the relation of certain species of ants to certain species of aphids. A study of all the insects which live upon and within goldenrod, and those which visit its flowers. A careful study of the fertilization by insects of the flowers of some species, genera, or family of plants, like the mints, jewel-weed, violets, etc.

*Plants.*—A collection of the ferns of the vicinity. The flowers and seeds of

twenty-five common weeds. A study of all the species of plants which can be found in a fence corner, and their relation to each other. The flora of a brookside. The water plants of a pond. The plants which grow in a shaded woodland of deciduous trees. The plants that grow in pine or other ever-green woods.

*Trees.*—A complete list of the trees of a locality: A careful study of the differences in growth between the trees in forests and those growing in open ground: A list of trees, shrubs, and vines found along fences, which were probably planted there by birds or squirrels: The trees of a swamp, compared to the trees on dry, high hillside or mountain.

"AROUND me stood the oaks and firs;

Pine-cones and acorns lay on the ground;  
Over me soared the eternal sky.

Full of light and of Deity;

"Again I saw, again I heard,

The rolling river, the morning bird;—  
Beauty through my senses stole;

I yielded myself to the perfect whole."



*Courtesy Home Magazine, Indianapolis.*

A Little Mother and Her Family



# Chautauqua School of Health

## HOW AN INFANT DIGESTS ITS FOOD

### The Difference between Infant and Adult Digestion Pointed Out— Some of the Important Rules to be Followed

**D**IGESTION in an infant differs somewhat from digestion in an adult, so we must ask the question, How does the adult digest? Here is the story in a nutshell:

There are three digestible food elements,—starch, albumen, or proteids, and fats. In an adult the saliva digests starch, converting it into a form of sugar known as maltose. Maltose is also formed by a similar digestive process in sprouting seeds. The process of starch digestion by the saliva begins in the mouth and continues for one or two hours in the stomach. It is then stopped by the acid of the stomach, but begins again after the food passes into the small intestine, where it is completed. Maltose is in the intestine in part changed into fruit sugar; some of it is absorbed directly into the blood, where it is first changed into fruit sugar and then assimilated.

Proteids or albumens, represented by the white of egg, the gluten of wheat, the casein and lacto-albumen of milk, are digested in the stomach by the gastric juice, which dissolves them so that they are able to pass into the intestines, where they are further acted upon by the pancreatic juice.

Fats are not digested either in the mouth or in the stomach, but are acted upon by the bile and pancreatic juice

in the intestine after the food passes out of the stomach. When taken in a natural state, as found in mother's milk, and in such natural foods as nuts, fats are in a finely separated or emulsified state, and require but little change to prepare them to be absorbed; but clear fats, in the form of butter, oils, etc., require to be emulsified in the intestine before they can be absorbed, and often interfere more or less with digestion while lying in the stomach waiting for the rest of the food to pass onward where their digestion can begin.

Cane-sugar and milk-sugar require digestion before they can be absorbed. Cane-sugar and commercial milk-sugar are digestible with difficulty, and are not wholesome for infants. They may be found in the urine and feces, showing that they have not been assimilated. Malt sugar and sugar of fruits do not require digestion, and may be absorbed into the blood at once and utilized in tissue-building.

Starch can not be digested by infants. They must take their carbohydrates in the form of sugar, for their saliva and pancreatic juice will not convert starch into maltose, as in adults. This condition continues until the child acquires teeth. When the teeth appear and mastication becomes possible, the digestive ferment which changes starch into mal-



tose appears in the saliva and pancreatic juice, and then starchy foods may be digested, at first in small quantities only, but in increased quantity as the child advances in age and acquires more teeth. On this account young children must take their carbohydrates in the form of sugar. Clinical observation and careful laboratory experimentation have shown that the only sugars adapted to a young child are milk-sugar as it is furnished to the child in mother's milk—and in a condition less well adapted to its use in cow's milk—and maltose, prepared by the digestion of starch (meltose, or malt honey, and malt honey sugar). To these may be added the sweet juice of fruits, especially the juice of raisins and sweet grapes.

When a child is born into the world, its body is absolutely free from germs. Not a germ can be found in its tissues, in its mouth, stomach, or intestines. It is germless. By contact with the air, and through the taking of food and drink containing germs, its stomach and intestines, particularly the large intestine, soon become infected with germs of various sorts. One particular germ, known as the *colon bacillus*, thrives very abundantly in the large intestine. It is a constant source of danger to the little one, as the infant body must continually battle against the attacks of these germs

which constantly seek entrance to the blood, where they may become a source of untold mischief. More or less of them find their way into the veins of the intestines and are filtered out by the liver in the bile. Cow's milk contains these same germs in countless numbers, derived from the excreta of the cow, and sometimes also other germs, especially the germs of consumption or tuberculosis.

These germs make great trouble for infants. The colon germ gives rise to diarrhea, cholera morbus, cholera infantum, and other intestinal disorders, and is responsible for many deaths. The tubercle germs taken in with cow's milk often develop in some hidden portion of the body, as in the lymphatic glands of the intestines, and remain for years, to appear later in the form of so-called scrofulous glands about the neck or other parts, and still later may affect the lungs, brain, bones, or any other organ, or may develop into intestinal tuberculosis, one of the most serious and fatal forms of tubercular disease.

The young infant's body has less power to resist germs than has that of the adult; hence every possible care must be taken to protect it against the invasion of these parasites through the food or by any other means.

J. H. K.

## Treatment of Some Common Wounds

WOUNDS require different treatment, according to their character. Cuts generally heal up quite readily, if properly dressed soon after the wound is inflicted. After the flow of blood has been stopped, the wound should be carefully washed in pure sterilized water, or water in which there

is five to ten drops of carbolic acid to the ounce. When the wound is thoroughly cleansed of blood and all foreign matters, the edges should be brought together and held in position by means of stitches, adhesive plaster, or bandages, or all combined. If stitches are employed, they should be removed



after three or four days, or as soon as the parts have become united, as if retained too long, they are a source of irritation. If adhesive plasters are used, narrow strips should be employed, so in case there should be any discharge, there will be an opportunity for it to escape between the strips. When the cut is a long one, adhesive strips will generally require to be reinforced by a bandage. Simple water dressing or cloths wet in a solution of carbolic acid (five or ten drops to the ounce) constitute a suitable dressing for most wounds.

If the end of a finger or toe has been cut off by a sharp instrument, it should at once be replaced, even though it may have been entirely severed. In very many instances the portion replaced in this manner has grown fast. If the severed part is frozen or badly bruised, an attempt to secure union will, of course, be useless.

Punctured wounds, when inflicted with a clean, sharp instrument, generally heal quite readily. When the wound is made by rough, blunt, dirty, or rusty instruments, healing occurs more slowly, violent inflammation sometimes being produced.

Punctured wounds frequently heal quickly at the surface, while union does not take place in the deeper tissues. This gives rise to an abscess, making it necessary to make an outlet by opening the wound.

When the wound is made by a thorn or splinter, the foreign body should be removed by means of a pair of tweezers. It is a poor plan to pick at the splinter with a needle, as it will be likely either to be driven further in or be broken off.

When a fishhook is caught in the flesh, if it be embedded beyond the barb, no attempt should be made to withdraw

it, but the point should be moved forward until it emerges from the skin, when it may be cut off by means of a file or pair of pliers and the balance of the hook withdrawn, or the line may be detached, the eye cut off, and the whole hook pushed through the tissues.

If a crochet-hook has been thrust into the flesh, a not uncommon accident, no attempt should be made to withdraw it directly, but a large knitting needle or darning needle should be introduced alongside of it and placed against the hook, when both may be drawn out together without inflicting further injury.

Punctured wounds should be treated by means of hot fomentations or poultices or compresses of tepid water. Torn or contused wounds heal much more slowly than cut or punctured wounds. The usual healing process is known as *granulation*, or *secondary union*, and is accomplished by more or less profuse discharge of pus. When the granulations grow so rapidly as to fill up the wound and aperture above the surrounding tissues, we have what is known as *proud flesh*. The new skin destined to cover the wound is gradually formed about the outer edge, extending inward until the whole is covered. The new tissue formed by this process of healing contracts after the healing process is complete, and forms a scar.

When the process of healing is more rapid, a protective substance is thrown out which, when dry, forms what is known as a scab, beneath which the repair of the injured part takes place.

Torn wounds should be thoroughly cleansed, and the injured parts drawn together by means of adhesive plasters and bandages. Care must be taken not to employ too strong compression. Either water dressing or lint saturated with sweet oil containing ten drops of



carbolic acid to the ounce may be employed. If the parts have been badly bruised, hot fomentations should be applied. Heat is especially essential in cases in which considerable portions of tissue have been nearly severed from the body, but have retained a sufficient amount of attachment to justify the attempt to secure union.

For contused wounds, carbolated vaseline, spread on pieces of thin cloth, constitutes an excellent dressing.

If there be a marked disposition of the injured part to become gangrenous or to slough, the parts should be kept immersed in water as hot as can be borne for a time, or treated with fomentations.

## How to Manage a Ravenous Appetite

**A**N invalid who suffered from hyperpepsia accompanied by a ravenous craving for food, not an appetite for deleterious articles, but for excess in quantity, and which he had tried in vain to curb by will power, asked his physician if fasting would prove a cure for the difficulty. "I fear," was the reply, "that the more you fast, the more hungry you will be. There is, however, a very simple remedy for that trouble. Eat a small quantity of food about half an hour before the usual meal time. You know if you eat something half an hour or so before a meal, it lessens your appetite. That is what a person who has a ravenous appetite needs to do. The food taken would better be an apple than something more complicated. A glass of apple-juice or a cracker will answer very well. It will do no harm so far as digestion is concerned, and will mitigate the appetite to some extent. When you are hungry, a nerve center in the brain is clamoring for food. The solar plexus is the seat of hunger, but appetite is in the brain. When you are hungry or have a ravenous appetite, we will say, the trouble may be in the brain or it may be in the stomach. It is perhaps difficult to say where it is. But suppose it is in both places; then you

have appetite and you have hunger for food. Both these can be appeased only by the presence of food in the blood. When you eat, you do not have to wait until that food is all digested before your hunger is appeased. As you eat, in a little while you feel less hungry, and less hungry, and finally your hunger is entirely satisfied, and you leave the table. How did it happen? That food is still in the stomach, is still undigested. But a small quantity of it has been digested; in fact, has been absorbed and has been circulated in the blood, and has been brought in contact with these hunger and appetite centers; so they recognize the fact that food is coming.

"Now, here is where the trouble is. Those who eat fast get too much before the notice has been served. They get too much before enough food has been absorbed to serve notice on the appetite center that food has come in sufficient quantity; so that is one way in which one is apt to overeat. If one eats slowly, then the amount of food absorbed will be sufficiently great to satisfy the appetite center and to appease the hunger. Eat slowly. Take a little food in advance; then eat slowly, and masticate very thoroughly."



# THE CHILDREN'S COOKING CLASS

CONDUCTED BY LENNA FRANCES COOPER

DEAR CHILDREN OF THE GOOD HEALTH FAMILY:

We have already studied two kinds of proteid foods; namely, eggs and milk. This month we shall take up two other kinds—legumes and nuts.

The legumes are a class of vegetable foods with which many are already familiar. This class of food consists of peas, beans, and lentils in the mature state. They differ from other vegetable foods in possessing a high percentage of proteid, the average being about 25%. Besides proteid, they contain about 60% carbohydrate and about 1% fat. The legumes have always filled an important place in the diet of the nations of the Orient. Lentils formed the chief part of

Egyptians. It is  
ers of the Pyra-  
chiefly on this class  
no doubt a dish  
kind of red lentil  
sold his birthright.  
variety of red len-  
source of proteid,  
vegetarians, and  
their proteid from

For people with  
there may be one  
of legumes—the  
tough, and indiges-  
removed, however,  
cooked legumes  
Thus they are  
digested, and are a  
tious food.

be carefully looked over before cooking. Reject all imperfect ones. Then wash and put to soak in cold water for several hours if possible. If not convenient to treat them this way, they should be put to cook in cold water and allowed to come slowly to the boiling point. Cook until tender. This usual requires several hours, the time depending upon the age.

Nuts and nut preparations are another important source of proteid. Nuts contain, on an average, from 15% to 20% proteid, 50% to 60% fat, and 9% to 12% carbohydrate. Pine nuts contain as high as 33% proteid. It is because of this large amount of proteid that the legumes and nuts are often used in place of meats. The two constituents of flesh foods are proteid and fats, the



Putting Legumes through a Colander

the food of the  
said that the build-  
mids subsisted  
of foods. It was  
made of a certain  
for which Esau  
In India to-day a  
til forms the chief  
the people being  
therefore obtaining  
a vegetable source.  
delicate stomachs  
objection to the use  
hull, which is hard,  
tible. This may be  
by putting the  
through a colander.  
much more easily  
much more nutri-

Legumes should



proteid, which is the distinguishing feature of flesh foods, ranging from about 10% to 20%. The carbohydrate is lacking, since meat contains neither sugar nor starch. The fat is a varying quantity, ranging from .4% to 42%.

By referring to the following tables, taken from Atwater's tables published by the Department of Agriculture, it will be readily seen that these foods may be substituted for flesh foods. The proteid in these foods is as high as or higher than that of flesh foods, pound for pound. The fats, which are not necessary accompaniments of the flesh foods, are in excess in nuts. This is a substance which may be added to the food if it is not already present. As will be seen, the nutritive value in these vegetable proteids is higher than that of the flesh foods:

## FLESH FOODS

	Protein %	Fats %	Carbohydrate %	Food Value per lb.	
				Calories	
Steak (Porterhouse) . . . . .	19.1	17.9		1,110	
Ham (Smoked) . . . . .	17.5	18.5		1,105	
Bacon (Smoked) . . . . .	15.5	42.6		2,085	
Chicken . . . . .	21.5	2.5		505	
Cod . . . . .	16.5	.4		325	
Salmon . . . . .	15.3	8.9		660	
Oysters . . . . .	6.2	1.2		235	

## NUTS AND NUT FOODS

	Protein %	Fats %	Carbohydrate %	Food Value per lb.	
				Calories	
Almonds . . . . .	21.0	54.9	17.3	3,030	
Brazil-nuts . . . . .	17.0	66.8	7.0	3,265	
Butternuts . . . . .	27.9	61.2	3.5	3,165	
Filberts . . . . .	15.6	65.3	13.0	3,290	
Nuttolene . . . . .	12.1	10.46	6.9	848	
Pecans . . . . .	9.6	70.5	15.3	3,435	
Pine-nuts . . . . .	33.9	49.4	6.9	2,845	
Protose . . . . .	21.3	10.2	2.8	912	

## CEREALS AND LEGUMES

	Protein %	Fats %	Carbohydrate %	Food Value per lb.	
				Calories	
Beans . . . . .	22.5	1.8	59.6	1,605	
Peas (Dried) . . . . .	24.6	1.0	62.0	1,655	
Lentils . . . . .	25.7	1.0	59.2	1,620	



Savory Roast



By referring to the table it will be seen that the nutritive value of a pound of nuts is about three times that of a pound of meat. A pound of shelled nuts of most varieties can be obtained at fifty cents. Meat will cost, on an average, not less than twenty cents a pound. Of course, some varieties can be bought for less. If the meat has no bone or waste, the nuts are still the cheaper food; but there is considerable waste to flesh foods, hence from an economical standpoint, nuts and nut foods are much the cheaper. Vegetable proteids vary from the proteid of flesh foods in that they are free from disease and unwholesome substances. Animals are as likely to be diseased as human beings. Thus we may be contaminated by them even though the animals may have been healthy. Their living organisms are continually breaking down and forming waste products that are poisonous substances and must be thrown off by the excretory organs if the animals remain in health. In our bodies we are constantly breaking down and forming waste products which must be carried off. We have special organs for carrying off these waste products in normal amounts, but if we take in foods which are already laden with waste products, we are adding to the excretory organs an additional task which in time may overburden them and cause serious results.

For our practice work let us try the following recipes:

*Bean Croquettes.—*

- |                                  |                                  |
|----------------------------------|----------------------------------|
| 2 cups stewed beans              | 2 tablespoonfuls butter          |
| 3 cups corn flakes               | 3 tablespoonfuls strained tomato |
| 1½ teaspoonfuls salt if desired. |                                  |

Soak one cup of beans in cold water overnight or for several hours. Then put to cook in three or four pints of water and let cook until tender. When cooked down quite dry, add the butter, tomato, corn flakes, and salt if desired. Steam together and form into croquettes. When shaped, place in the hot oven and bake until nicely browned.



Bean Croquettes

*Savory Roast.*

- |                                   |  |
|-----------------------------------|--|
| 1 cup lentil, bean, or peas purée | 1 cup strained tomato                  |
| 2 eggs                            | 2 cups nut meal or finely chopped nuts |
| ½ cup granola                     | ½ cup browned flour                    |
| Juice of medium-sized onion       | 2 teaspoonfuls celery salt             |
| 2 teaspoonfuls sage               | ¼ cup cream                            |
| 1 teaspoonful salt.               |  |



Cook the legumes (either lentils, peas, or beans) until quite tender and dry, then put through a colander, in this way removing the hulls. Beat the eggs slightly and add the other ingredients in the order given. Then bake in a loaf in a hot oven twenty to thirty minutes or until nicely browned.

Serve with *Lentil Sauce*.

- |                                   |                           |
|-----------------------------------|---------------------------|
| 1 cup lentil, bean, or peas purée | 1 cup strained tomato     |
| $\frac{1}{4}$ cup browned flour   | 1 teaspoonful celery salt |
| 2 teaspoonfuls onion juice        | 1 cup cream               |
| 1 teaspoonful salt if desired     |                           |

Prepare the lentils as above, putting them through a colander, then add the strained tomato, and put through a colander. Add the celery salt, onion juice, and salt. Put all to heat over the fire. Moisten the browned flour with a little cold water and stir until smooth, then add to the boiling liquids. Cook five minutes, then add the cream. Reheat and serve at once.

*Panned Protose.*

- |                           |   |
|---------------------------|---|
| $\frac{1}{2}$ lb. protose | 1 cup strained tomato                     |
| 1 teaspoonful butter      | $\frac{1}{2}$ teaspoonful salt if desired |

Slice the protose in one-half inch slices and arrange in a frying pan. Cover with the strained tomato, add the salt and the butter, and let simmer over the fire for one-half hour or more, or until the tomato becomes quite thick.



One Way to Keep Cool



## EDITORIAL

### "I AM TOO BUSY; GO AWAY!"

#### Thwarting of the Child's Natural Communicativeness Works a Great Evil. Other Things that Cause "Spoiled Children"

THE whole life and character of a majority of children are to a large degree spoiled very early in life. In the first place, a child is communicative. The average child likes to come and tell his mother everything, but the mother says, "Stop, I am too busy; I don't want you to bother me now." When the child has been told that about five hundred times, he gets frozen up and driven in upon himself, and ceases to be communicative. By and by the mother wonders why the child does not confide in her, but seeks his companions elsewhere. The mother should be the most entertaining companion that the little boy or girl can have. If she were, she would have no trouble about the outside influences.

A man who was complaining of his boy's fault of stealing food and overeating, said that he had already broken two sticks on him without any effect. That is another way to spoil a boy. If that boy ever gets over his fault, it will be by learning self-control. All that the stick will do will be to make him a sly thief; he will get the things he wants without being found out.

That father's idea was doubtless that he must break the boy's will before he could do anything with him. If you want to spoil the boy, you will do it by breaking his will. The only thing in the boy that is worth anything is his will, and if he is a lively boy, all you have to do is to get that will working on the right side. How many a boy has had all the manhood

crushed out of him by a man calling himself a father who goes around with a big stick or a whip, and tortures the boy until he surrenders and lives in constant fear of a thrashing.

But how are we going to cure boys of their faults if we do not punish them? Does not the Bible say, "Spare the rod and spoil the child"? Yes; but many people who do not spare the rod also spoil the child,—they spoil the child with the rod. The rod may have a place, but it seems that the only place for the rod is in the hands of a man or a woman who is so ignorant, so stupid, that he can not compete with a small child and command his respect in any other way. The man or the woman who has not dignity, character, mental ability, and acumen enough to cope with a small boy and get the mastery without beating him, has nothing but brute force to help him. He must be lacking in moral power and intellectuality if he has to appeal to brute force to control a little child.

If you watch children and study them, you will see that the little child has a sort of manhood or womanhood; he has the spirit of selfhood in him, and he is bound to stand up for it; and when you crush or blast it by maltreatment, you have crushed the very thing that is necessary to maintain his self-respect, to hold him up against temptation, to make him hold his head up in the world, and command respect from his fellows. That is the secret of the ruin of a great number of poor fellows that we find in the slums; they



have been crushed until the manhood is crushed out of them.

Every child is a bud, a little blossom; and we must take care of them and watch them as the gardener does his choice plants. How careful he is to have just the right temperature and just the right amount of moisture. With what wonderful care and precaution an expensive orchid is protected! A man who can raise choice orchids and properly care for them can command five thousand dollars a year as a gardener.

But no such care is taken of the boy. A gentleman in New York called upon a friend of his who had two splendid little boys that were committed to the care of a tutor. He had also four fine dogs kept in a beautiful kennel, and these dogs he himself fed carefully and took them out to exercise every day. The friend said to him, "How is it that you turn your boys over to the tutor, while you give your personal attention to the dogs?" "Oh," he said, "don't you know, those dogs have a pedigree." The boys had no pedigree that was worth considering. If the thought of that father had been arrested so that he could appreciate the things that are great,

he would have seen in the boys something far more important to command his attention than in the dogs. It was worth while to attend to the dogs, but it was a thousand times more worth while to attend to the boys. The father could not be a tutor because he was not equal to the task; he was only competent to care for the dogs, so he hired some one else that he thought was capable of caring for the boys.

A man has no business to pose as the father of boys unless he is competent to rear and to teach them. At any rate, if he is incompetent and recognizes the fact, it is his duty to make himself competent. The reason why we are degenerating, why the boys and girls of the present generation are as a rule less respectful to their elders, less obedient, less religiously inclined, less studious, is that they have such poor parents; there are so few fathers and mothers who have studied child character, or appreciate what it means to rear a child. The brain of a child is a harp of a million strings upon which one can play almost any tune.

## Mischievous Sensationalism

DR. S. A. KNOFF, who has for several years been engaged in the campaign against tuberculosis, and whose splendid work has given him an international reputation, has been for some time suffering the most distressing persecution from the press through the misrepresentation of an address which he gave before the National Association for the Study and Prevention of Tuberculosis. The report represented him as stating that in the treatment of tuberculosis in the incurable stage it was his practice "to give the sufferer morphine in plenty that the end may come quickly and painlessly." Dr. Knopf explicitly denies ever having made any such statement, and his denial is supported by Dr. Frank Billings, of Chicago, President of the National Association for the Study and Pre-

vention of Tuberculosis, and also by Prof. George Dock, of the University of Michigan, who presided at the meeting at which Dr. Knopf spoke, and states explicitly:

"I heard clearly what Dr. Knopf said. I am sure that I know what he meant; and am sure that everybody in the room must have understood what he said. His words could not possibly be converted into the meaning given in the public press. It was perfectly clear that he meant to relieve patients in the last stages. Everybody knows that this prolongs life, while making it very much easier for the patient."

Dr. Knopf's denial, corroborated by the two distinguished physicians whose names are given, ought to set at rest this mischievous canard which, besides doing gross



injustice to a distinguished humanitarian, must do great harm by putting into the minds of many sufferers a feeling of distrust and suspicion toward the medical profession which is most unwarrantable.

## SYMPTOMS LIKE MALARIA

Intestinal Autointoxication, Says Dr. Combe,  
Produces the Same Results in  
Many Instances

DR. COMBE, of Lausanne, in his excellent work, "Intestinal Autointoxication," calls attention to the fact that persons suffering from general poisoning as the result of the absorption of toxic substances produced in the colon through the action of bacteria upon remnants of undigested food, often manifest symptoms so closely akin to those of malarial infection that a diagnosis of malarial disease may be made, so that quinin may be administered in antiperiodic doses, but, of course, without any beneficial effect.

The writer has encountered a number of cases of this sort in which quinin had been administered for a considerable length of time, and in large doses, without the slightest benefit. In such instances the patient is relieved as soon as the alimentary canal is thoroughly cleared out. This relief may be easily rendered permanent by putting the patient upon an antitoxic dietary, which consists of natural food, simply prepared, and excluding meats of all kinds, and eggs excepting in greatest moderation.

## WANT WATER DRINKERS

Thirty-Nine out of Forty-One Life Insurance  
Companies Decline to Insure even  
Moderate Users of Intoxicants

OUT of forty-one companies that were asked the question whether they consid-

ered the habitual user of intoxicating drinks as good an insurance risk as a total abstainer, thirty-nine replied that they would not insure moderate drinkers at all except under special conditions, and considered them as a rule very bad risks. Dr. Hughes really states the reason for this by asserting that no man can continually narcotize the neurons and sensory centers, no matter how slight the degree, without permanently disabling and destroying his vital resources.

This principle applies, of course, to tea, coffee, and tobacco, as well as to alcohol.

## HYDROTHERAPY GAINING

Physicians Interested in Hydriatic Principles Hold a Conference and Plan a  
Symposium for 1908

CHIEFLY through the efforts of Dr. Simon Baruch, a conference of physicians interested in hydrotherapy was held at the Hotel Marlborough, Atlantic City, on June 4, 1907. Dr. Simon Baruch was called to the chair, and Dr. Frank E. Brown was appointed secretary. Representative physicians from several States discussed the importance of furthering the study, teaching, and practice of hydrotherapy and other physiological methods. A committee consisting of Professors Hare, of Jefferson; Thayer, of Johns Hopkins; Baruch, of Columbia; and Dr. F. E. Brown, of Baltimore, was appointed to formulate a symposium on these subjects for the next meeting of the American Medical Association.

For a whole generation Dr. Baruch has been carrying on an earnest campaign in behalf of physiological therapeutics, and especially for the promotion of the principles of hydrotherapy. The value of the work which he has done can not be overestimated. It must be a great satisfaction to Dr. Baruch to see hydriatic principles gaining ground so rapidly at the present time.



## LONGEVITY OF ATHLETES

Actual Records Show Remarkable Health  
on the Part of Those Most Active  
In Athletic Pursuits

DR. WM. G. ANDERSON, director of the Yale gymnasium, has been making a study of the longevity of "Y" men. The data which he has collected cover the lives of 807 athletes who had obtained preeminence in rowing, football, track athletics, and baseball. Of these 807 persons, only fifty-eight deaths have occurred in the last fifty years. Of these, eighteen were oarsmen, sixteen football players, thirteen track athletes, and eleven baseball players. The average number of years of life was found to be smallest among football men. Compared with the select mortality tables of the Actuarial Society, Yale athletes were found to be ahead in longevity. The percentage of dead among the general graduates of Yale was found to be 12.9, while of the athletes the percentage of dead was 7.2,—a mortality a little more than half that of the general graduate. Of the fifty-eight deaths, nine were by violence; twenty-four, lung diseases or heart failure.

These facts seem to indicate that vigorous physical exercise, even when carried somewhat to an extreme, as is generally the case with professional athletes, is conducive to longevity, or at least is more favorable to longevity than are the habits of the average college student. It should be remembered, of course, that a large proportion of the men who were active in athletics during their college life, lapsed into sedentary professional work after leaving college.

## TOXIC AND ANTITOXIC DIET

(Continued from page 401)

when it comes from the udder of the cow, but in the process of milking, the milk becomes contaminated with stable dust and litter, which abounds in putrefactive organisms. Why, then, does not

the milk undergo putrefaction as well as the meat? The answer is found in the fact that the milk contains, along with the anaerobes or putrefactive organisms, large numbers of aerobes. The aerobes produce acids, while the anaerobes produce alkaline substances commonly called ptomaines. The aerobes can grow in an acid medium, while the anaerobes can not. Putrefying meat is always alkaline, never acid. The acids produced by the aerobes prevent the growth of the anaerobes, and thus prevent putrefaction. If we place the pound of beefsteak in the pan of milk instead of beside it, the putrefactive process will be prevented. This is an experiment which any one can very easily try, and demonstrates at once the protective influence of the aerobes—the air-loving, acid-forming germs.

Metchnikoff was one of the first to call attention to the importance of the struggle which is taking place between these two classes of germs in the human body. He was one of the first to point out the fact that the aerobes, or acid-forming germs, serve a beneficent purpose in the body. By forming acids, they hinder the growth of the anaerobes, the poison-forming germs, and thus protect the body against these dangerous enemies of life.

Tissier has made a most interesting study of the germs found in the intestines of infants and young children. He noted that although an infant was born with an absolutely sterile alimentary canal, within twelve hours after birth the intestine was swarming with bacteria. The numbers may be greater even than are found in the adult intestine. In a case investigated by the writer with the assistance of Dr. Risley, of the Battle Creek Sanitarium laboratory, the number of bacteria in an infant a week old was found to be eight billions in a gram of dried fecal matter. But according to Tissier, the bacteria which first take possession of the alimentary canal of the infant are harmless organisms which produce acids rather than poisons, and thus serve a beneficent purpose in keeping out the deadly poison-



forming anaerobes. So long as these organisms keep possession of the alimentary canal, everything goes well with the child. When the child begins to use cow's milk, and especially when the child is fed meat, then, according to Tissier, the deadly anaerobes make their appearance in great numbers. These germs are always present in enormous numbers when a child suffers from diarrhea, enteritis, cholera infantum, etc. The presence of mucus or membranes in the stools is always evidence of the presence of these germs in great numbers, as is also the case when the bowel discharges have a foul or putrid odor. When the child becomes older, and meat constitutes a considerable part of its dietary, then the anaerobes or poison-forming organisms appear in the feces in enormous quantities. According to Herter, the average human being discharges every day from his bowels about 150 billions of bacteria, of which about one-third are anaerobes, or poison-forming germs. In various conditions of disease this number is found to be enormously increased. This is especially true in relation to the anaerobes.

Dr. Baldwin and others have shown that in rheumatic gout there is an enormous increase in the number of putrefactive or meat germs. The stools in this disease are always highly putrid.

Numerous experiments have been undertaken by various European bacteriologists within the last ten years for the purpose of determining the influence of food upon the growth of these various species of germs. These experiments have shown that meat, eggs, and animal fats greatly encourage the development of anaerobes, or poison-forming organisms. Combe and Amman, of Lausanne, and a great number of other observers have shown that when meat is eaten, the amount of putrefactive poisons found in the urine may be increased to five or even ten times the ordinary amount. Eggs have a similar effect, though not quite to the same degree. Animal fats of all kinds increase putrefaction probably by hindering the secre-

tion of hydrochloric acid in the stomach and thus preventing the destruction of putrefactive organisms by the disinfecting action of the gastric acid. Sterilized butter has less injurious effect than suet, lard, and other animal fats. In some cases milk also may become a source of autointoxication. Generally, however, a milk diet diminishes the formation of poisons. This is due to the fact that milk contains sugar of milk, which feeds the aerobes or friendly organisms, and thus enables them to form lactic acid, which prevents the growth of anaerobes. If, however, large curds are formed, these may remain undigested until after the sugar of milk has been absorbed, and, lodging in the colon, may there undergo the same sort of putrefactive changes which meat undergoes, and so may lead to the formation of poisons.

It is found there is no difference between red meats and white meats as regards putrefaction, but fish of all kinds, particularly shell-fish, oysters, and clams, as well as lobsters, crabs, and shrimps, especially encourage putrefactive processes in the intestine because of the readiness with which they undergo putrefactive changes.

When these forms of animal food are swallowed in a raw or half-cooked state, they introduce into the intestine enormous quantities of putrefactive germs. Oyster juice is filled with anaerobes, or poison-forming bacteria, which the oysters have picked up from the sewage and other decomposing substances upon which they feed. Smoked, dried, and salted fish, such as herring, codfish, halibut, etc., are swarming with meat germs, and hence are especially to be avoided by those who do not care to encourage the putrefactive processes in their intestines.

On the other hand, the experiments of Tissier and others have shown that there are certain foods which discourage the growth of putrefactive organisms. This is especially true of vegetable foods of all sorts. Even vegetable proteids when eaten in the pure state are less likely to undergo putrefaction than are animal proteids, for the reason that the germs of putrefaction



attack vegetable proteids much less readily than animal proteids. Carbohydrates, that is, starch, sugar, dextrin, pectin, and fruit acids, encourage the growth of the aerobe, the acid-forming germ, and hence discourage and prevent the growth of anaerobes. This is the reason why so many babies' lives have been saved by the use of barley water. Combe, of Lausanne, perhaps the foremost European specialist in the diseases of infancy and childhood, has shown that the water gruels prepared from barley, rice, and other cereals, by encouraging the growth of aerobes in the intestine, drive out the deadly anaerobes which are the cause of inflammation of the intestine, enteritis, cholera infantum, cholera morbus, and other similar disorders.

Fruit acids are helpful because they not only destroy the anaerobes, but prevent their growth. It may be that instinct has led to the use of lemon juice and vinegar with raw oysters as a protective measure, though the protection thus afforded is quite insufficient, for the acids are quickly absorbed, while the germs are carried along with undigested portions of the infected substance, and finally reaching the colon, find there conditions favorable to rapid growth.

From the above it must be easily apparent to every one that meat eaters, and even those who make free use of eggs, are exposed to a special cause of disease from the enormous production in their colons of unnatural and most deadly poisons. Fragments of undigested meat lying in the colon feed the meat germs or "wild germs," as Professor Herter calls them, and thus flood the body with deadly toxins which impose upon the liver and kidneys such an enormous amount of unnecessary and unnatural work that they become worn out and finally undergo degeneration, producing Bright's disease, cirrhosis of the liver, dropsy, and other maladies. These changes have been actually produced by injecting into animals the poisons produced by meat germs and by the toxic matters found in the feces.

The effects of a meat diet in increasing the growth of bacteria in the intestine were well shown by a series of experiments recently made in the laboratory of the Battle Creek Sanitarium. Four young men who had lived for a considerable time upon a non-flesh dietary, were each given four ounces of scraped beef daily for three days. The effects of the meat diet upon the number of bacteria is well shown in the following table, which shows the number of bacteria found per gram of dried feces:

	Without Meat Millions	With Meat Millions
A	64	16,725
B	357	39,200
C	141	12,250
D	332	67,200

A glance at the above figures is sufficient to convince any one of the enormous influence of a meat diet in increasing the production of bacterial poisons in the alimentary canal. Fragments of undigested meat swarming with bacteria being carried down into the colon, remain there for hours under conditions the most favorable for active putrefaction, and so encourage the growth of poison-forming germs in numbers too great for comprehension.

All of the young men who engaged in the above experiment felt ill effects from the experiment, and were glad to return to their ordinary diet. One became positively sick and did not recover for a few weeks.

Persons who habitually use meat doubtless become more or less accustomed to meat poisons, so that they do not recognize immediately the ill effects; but that serious mischief is constantly going on, notwithstanding, has been clearly proved by Metchnikoff, who has shown that the poisons produced by these meat germs or putrefactive organisms are the cause of hardening of the arteries and of other changes which result in premature old age. According to Metchnikoff, these same poisons are the cause of Bright's disease and of various degenerative changes which take place in



the brain, spinal cord, liver, and other parts, and thus give rise to paralysis and numerous other chronic disorders.

It has become clearly apparent that to the putrefactive processes in the intestine, the result of the growth of meat germs in the production of poisons in overwhelming quantities, must be attributed a large share of the chronic disorders which are so rapidly increasing in all civilized communities.

The great mischief resulting from the use of flesh foods and the free use of eggs is, then, the introduction into the body of material which promotes the growth of deadly germs in the intestine, particularly in the colon, thus producing a chronic condition which is recognized as intestinal autointoxication.

The toxic diet, then, is one into which meat and eggs enter more or less largely. The antitoxic diet is one which excludes meat and eggs and, if necessary, even milk. Such a dietary need not be by any means an impoverished one, for it offers the whole range of fruits, fruit preparations of all sorts, cereal foods of every description, fresh vegetables, nuts,—indeed, all the food products of the vegetable kingdom. These never contain anaerobes or animal germs, and when taken into the body do not promote their growth, but discourage their production. Tissier goes so far as to say that a person who has never eaten animal food of any sort can not possibly suffer from enteritis, and in the treatment of his patients he takes care to exclude, for a time at least, animal substances of all sorts. In this way a rapid cure is effected. By the employment of this method Tissier has become the most popular physician in Paris, and is sought by persons suffering from chronic stomach and intestinal disorders from all parts of Europe. Combe, of Lausanne, is enjoying a similar popularity. He has recently published a work entitled, "Intestinal Autointoxication," from which many of the above facts have been obtained, and which will doubtless do a most excellent work in calling attention to the importance of diet in relation

to the production of a great number of common maladies the causes of which have been heretofore wrapped in mystery.

J. H. KELLOGG, M. D.

## THE COMMITTEE OF ONE HUNDRED

UNDER the leadership of Professor Fisher, Chairman, the Committee of One Hundred is making great progress in awakening the interests of the country at large to a realization of the importance of giving greater attention to the question of health. President Roosevelt has given the Committee substantial encouragement in the shape of practical advice and assurance of sympathetic cooperation. The purpose of this Committee, as previously mentioned in this journal, is to secure the organization and efficient operation of a bureau of health as a part of the national government. It is proposed that the work of this bureau, as outlined by Professor Norton in his paper read before the American Association for the Advancement of Science last year, shall be classified under the following subdivisions:

- National Bureau of Infant Hygiene
- National Bureau of Education and Schools
- National Bureau of Sanitation
- National Bureau of Pure Food
- National Bureau of Registration of Physicians and Surgeons
- National Bureau of Registration of Drugs, Druggists, and Drug Manufacturers
- National Bureau of Registration of Institutions of Public and Private Relief, Correction, Detention, and Residence
- National Bureau of Organic Diseases
- National Bureau of Quarantine
- National Bureau of Health Information
- National Bureau of Immigration
- National Bureau of Labor Conditions
- National Bureau of Research Requiring Statistics
- National Bureau of Research Requiring Laboratories and Equipment.

The efficient operation of such a bureau as is above outlined ought to cut down loss from death and sickness at least one-third, which would mean a money saving to the country of sufficient to pay off the national debt every six months, or two or three billion dollars.





## CORRESPONDENCE SCHOOL OF HEALTH

*Correspondents should bear in mind that no questions can be answered in these columns sooner than one month. Questions received in May, for instance, can not be answered sooner than June, and if received late in the month, may have to wait over two issues.*

### 10,502. Macaroni — Mattress — Infant Food.—H. O. D., California:

1. "What proportion of starch and proteids does raw macaroni contain?"

*Ans.*—Macaronis differ in composition. The best macaroni is made from wheat, which contains an exceptionally large proportion of proteids. The composition of average macaroni is as follows:

Proteids .....	13.4%
Fats .....	.9%
Carbohydrates .....	74.1%

2. "What kind of mattress is most sanitary?"

*Ans.*—A moderately hard mattress, which may consist of hair, cotton, wool, excelsior, or other similar material. Feathers and soft mattresses are objectionable, as they are likely to overheat the body.

3. "What food is best for a child of eleven months?"

*Ans.*—Mother's milk, with a small amount of liquid cereal food.

### 10,503. Instep.—L. M. B., Ohio:

"Is there any way of developing or heightening the instep?"

*Ans.*—All exercises which develop the muscles of the feet will be helpful in this direction. Walking on the toes, with the heels turned slightly outward, is the best exercise for this purpose.

### 10,504. Twitching of the Eye.—Mrs. R. M., Pennsylvania:

1. "What is the cause of frequent twitchings around the eye? What should be done?"

*Ans.*—It may be due to weariness of the eye, or it may be a nervous disorder. An oculist should be consulted. Bathing the eye

with very hot water often affords relief from this annoying difficulty.

2. "What can be done for rheumatism in the hands?"

*Ans.*—Chronic rheumatism is a general disorder. It is induced by autointoxication. Careful attention to diet and regulation of the bowels are essential. Meat, eggs, and ordinary milk should be avoided. Buttermilk and cottage cheese may be used in moderation, but milk may be wholly discarded without risk. The diet should consist of fruits, grains, and fresh vegetables. Fruits and fruit juices may be freely used with advantage. Empty the bowels thoroughly every day by an enema of ordinary soap and water if necessary. The temperature of the water should be about 80° or less. The diet should be such as to keep the bowels regular.

### 10,505. Pain in the Side.—Mrs. W. F. L., Missouri:

"What is the cause of pain in the left side, of several years' duration? This is accompanied by nausea. Is it ulcer of the stomach? In such cases do you advise an operation? What diet and treatment would you suggest?"

*Ans.*—It is impossible to answer this question without further information, as you do not state the location of the pain. It is possible that the pain is due to an ulcer, although pain from ulcer is more likely to be at the epigastrium, on the right side. In such cases an operation is sometimes necessary, although most cases of simple ulcer not of long standing may be cured by proper diet and other measures.



There is no formula for the dietetic treatment of ulcer of the stomach, but in general the following course should be pursued. If the attack is acute, the stomach should be permitted to rest for a few days or until all pain ceases. Nutritive enemas may be administered in the meantime. A day or two after pain and vomiting have ceased, an ounce or two of frozen malted nuts may be given three or four times a day. After a few days, corn flakes with cream, granose flakes, and similar foods may be added. Flesh foods, condiments, and irritants of all sorts should be avoided.

**10,506. Grape Fruit—Regurgitation of Food—Catarrh of the Stomach—Normal Weight—Sterilized Butter—Mackintosh—Cold Morning Bath.**—A. B. C., Virginia:

1. "Please tell something about grape fruit? Is half of one eaten first thing at breakfast wholesome? If not, why not?"

*Ans.*—The grape fruit is a very wholesome fruit, but those whose stomachs are very sensitive as a result of hyperacidity or gastritis, are likely to suffer from the acidity of grape fruit.

2. "What effect would it have on a person troubled with excessive uric acid provided the person did not live on the Battle Creek Sanitarium diet?"

*Ans.*—Fruits of all kinds do not counteract in the same degree the evil effects of uric acid.

3. "What causes regurgitation of food? Is this an indication of catarrh of the stomach? What is the remedy?"

*Ans.*—Spasms or contraction of the stomach. Catarrh of the stomach may or may not be present. Great pains should be taken in eating to masticate the food very thoroughly. Irritating foods should be carefully avoided; also drinking at meals.

4. "If catarrh of the stomach is not arrested, will it develop into cancer of the stomach?"

*Ans.*—Cancer of the stomach frequently follows catarrh. There is no doubt that gastritis is a very common cause of cancer.

5. "How is cancer of the stomach diagnosed? Does it always cause suffering?"

*Ans.*—A positive diagnosis of cancer of the stomach is often impossible in the early stages of the disease. In the later stages, diagnosis can generally be made, this disease being indicated by the presence of tumor, absence of acid in the gastric juice, loss of appetite, emaciation, and general decline. The same is generally accompanied by more or

less pain, but this symptom may be absent.

7. "Can sterilized dairy butter be obtained anywhere except at the Battle Creek Sanitarium?"

*Ans.*—The best way to get sterilized butter is to make it yourself. Get the sweet cream, sterilize it, then churn it.

8. "Does the mackintosh you advise to be used over the heating compress come in different widths? What is its cost, and where can it be obtained?"

*Ans.*—You can get mackintosh at any dry-goods store, any size you wish. The cost is usually about nine cents a yard.

9. "Following the cold plunge on winter mornings, I suffer from terrible stinging of the flesh, and the skin seems dry. Would you advise omitting the bath, or is there some ointment which will relieve this condition?"

*Ans.*—Apply vaseline freely before taking the bath.

**10,507. Shingles.**—E. B. S., Massachusetts:

1. "What is the cause of the disease called shingles?"

*Ans.*—A germ disorder.

2. "In one of ordinary health, may it be occasioned by insufficient nutrition, lack of exercise, or living entirely on grain foods?"

*Ans.*—Yes, through lowering of the general vital resistance.

**10,508. Nervousness.**—I. L. S., Michigan:

1. "What is the cause of and cure for attacks of nervousness in one of fifty-two which last two or three weeks? The nervousness affects the entire body."

*Ans.*—The case is doubtless one of auto-intoxication.

2. "Would a change of occupation be beneficial? My present occupation is indoors."

*Ans.*—The outdoor life will doubtless be of great service to you.

**10,509. Nervous Prostration.**—A. W., New York:

"A woman of seventy-five, following an attack of nervous prostration, sciatica, and *la grippe*, is very weak and emaciated. Would rubbing with oil strengthen her?"

*Ans.*—The case is doubtless one of chronic autointoxication. The patient is suffering from the effects of poisons absorbed from the colon. Rubbing would be beneficial. Rubbing with oil is an advantage not because the oil is absorbed and utilized as food, but because it facilitates the rubbing.

**10,510. Rheumatism in the Feet—Naiad Filter.**—Mrs. R. G. W., California:

1. "Please advise treatment for a severe case of rheumatism in the feet."



*Ans.*—We infer that the rheumatism is chronic. If this is the case, see answer to No. 10,504, second part. In addition, apply fomentations or hot applications to the feet morning and night, or as often as necessary, and in the interval wear the heating compress, which consists of a towel wrung very dry out of cold water, wrapped about the feet, then covered with mackintosh and flannel so as to retain the heat.

2. "Do you recommend the Naiad Filter?"

*Ans.*—It is a thoroughly reliable apparatus.

**10,511. Winchester's Hypophosphite of Lime and Soda.**—A. Q., New York:  
"What do you think of this remedy?"

*Ans.*—We have made no use of the remedy. We have serious doubts whether it is of any value.

**10,512. Chronic Colitis.**—Mrs. N. I. K., Pennsylvania:

1. "What diet is best in chronic colitis?"

*Ans.*—A diet consisting of fruits and fruit juices, cereals, berries, vegetables, and buttermilk, or better, a special preparation of milk resembling *voghout* of Bulgaria.

2. "How many meals should such a patient eat daily?"

*Ans.*—If the patient eats the proper amount of food, two meals are quite sufficient.

3. "What fruits may he eat?"

*Ans.*—Sweet fruits, very sweet oranges, baked sweet apples, berries.

4. "Would corn-meal mush with cream be injurious?"

*Ans.*—Cream is sometimes mischievous in such a case. Mush is not a very wholesome food. Dextrinized cereals, such as corn flakes, granose flakes, granose biscuit, and similar products, are preferable.

5. "How about eating dates when the shell is removed?"

*Ans.*—Dates are generally wholesome, but are sometimes dirty.

6. "Would you recommend olive oil? How often, and how much a day?"

*Ans.*—For those who are fond of olive oil it is a wholesome food. A tablespoonful two or three times a day is sufficient.

7. "Would the yolk of hard-boiled eggs be advisable?"

*Ans.*—Yolks of hard-boiled eggs are much more easily digested than the whites and conduce to a gain in flesh.

8. "Should I wear the wet abdominal compress at night?"

*Ans.*—The abdominal bandage will doubtless be found beneficial.

9. "What causes pain in the region of the heart?"

*Ans.*—The pain is most likely due to an irritability of the intercostal nerves. In this case the painful point is to be found between the ribs especially in the sternum near the axillary line and close to the spinal column.

10. "What causes pain in the left arm, with numbness to the tip of the fingers?"

*Ans.*—It may be neuritis.

11. "What general treatment would you recommend for severe headaches, abdominal pain and hysteria?"

*Ans.*—The case is doubtless one of intestinal autointoxication. Meats, milk, and eggs should be avoided. The colon should be emptied by a large soap and water enema daily. For the abdominal pain apply hot applications and the abdominal bandage at night. Possibly the hot douche may be found helpful. The hysteria will probably disappear with the improvement of the general health.

12. "Is such a case curable at the age of forty, having always been in delicate health?"

*Ans.*—Probably yes.

**10,513. Circulation—Lungs.**—J. A. F., Canada:

1. "Am employed at sedentary work, and have poor circulation. When chilly, I have a tendency to hold my breath, and it seems an effort to begin to breathe again. Take half an hour's walk night and morning; exercise in gymnasium two nights weekly, and exercise every other morning,—all of which is insufficient to warm me up. For six months have been taking breathing exercises three times daily, lying on the back, taking seven full breaths, holding them eight seconds and exhaling slowly. Still I am unable to get any air into the upper part of my lungs, which causes soreness in the small of the back. In taking these exercises I raise the small of the back when inhaling. Is this correct?"

*Ans.*—It is quite possible that you are suffering from emphysema. In deep breathing the chest should be raised. This will naturally cause an elevation of the small of the back.

2. "Would my lungs be flabby from continual holding of the breath when chilly?"

*Ans.*—No.

3. "How may they be brought back to normal condition?"

*Ans.*—By outdoor exercise, particularly rapid walking, rowing, and swimming.

4. "What breathing exercises will increase lung expansion and promote health?"

*Ans.*—Swimming is perhaps the best of all breathing exercises. Swimming movements may be executed by the arms with the breath-



ing exercises, care being taken to breathe in connection with the movements, which should be made rhythmic while counting 1, 2, 3; 1, 2, 3; etc.

**10,514. Capacity of the Stomach.**—D. E. S., California:

1. "In February GOOD HEALTH you say that the ordinary stomach can not receive, at one time, the amount required for twenty-four hours without overtaxing it. Ancient history says that the Persians, 'when they were at the zenith of their power, ate but one meal a day. The one-meal-a-day plan, taken at noon, was successfully practiced by some eighty millions of people, the healthiest, wealthiest, and most intelligent nations of antiquity, for nearly a thousand years.' Were their stomachs overtaxed?"

*Ans.*—You are entirely right. Most savage tribes eat but one meal a day. Life may easily be sustained by one meal a day of simple food thoroughly masticated. The average civilized stomach, however, has materially deteriorated. Its mobility, or muscular power, as well as its creative power, is greatly depreciated, and for the majority of persons it is far better to divide the food between two meals, instead of taking it all at one meal.

2. "Have we deteriorated in physical vigor?"

*Ans.*—Evidences of race deterioration are very marked in all civilized lands.

3. "My wife, who is sixty-nine years old, for the past ten years has lived on one meal daily, with increased health and vigor. Which is normal, the one-meal plan or the two?"

*Ans.*—Some persons, whose digestive process is very slow, can not eat more than one meal a day without injury; but such cases should not be taken as the law for everybody.

**10,516. Diet.**—E. H. W., Massachusetts:

1. "On a diet of malted nuts three times daily and nut and fig bromose and corn flakes, would one necessarily experience a bloated feeling?"

*Ans.*—No. Bloating is probably due to fermentation which is occasioned by the presence of gas-forming germs.

2. "What changes in diet would you suggest?"

*Ans.*—It is quite possible that the difficulty is due to infection of the colon, and may be relieved by washing the colon out daily for a few days with soap and water at a temperature of 80°.

**10,517. Abdominal Bandage — Apple Juice—Water—Worms.**—E. F., Missouri:

1. "Is it injurious to wear the abdominal bandage nightly for months?"

*Ans.*—No, not if proper care is taken to keep the skin and bandage clean. The bandage should be washed and boiled daily, and the surface to which it is applied, should be washed daily with soap, and rubbed with cold water. When these precautions are neglected, distressing and obstinate eruptions of the skin sometimes result from the long wearing of the moist abdominal bandage. These eruptions were formerly considered to be very beneficial, but this is an error. They are simply the result of infection of the skin from the accumulation of bacteria in the bandage, in which they grow with great rapidity under the stimulating influence of warmth and moisture.

The long-continued use of the moist abdominal bandage is one of the best means of combating chronic congestion of the stomach, liver, bowels, and other viscera. It is an excellent remedy for chronic dyspepsia in all its forms, and is valuable as a means of relieving chronic constipation. It is also a **valuable remedy for insomnia.**

2. "Can a 'hyper' drink apple juice?"

*Ans.*—Yes. A person suffering from hyperhydrochloria, or excessive formation of acid in the stomach, may use fruit juice of any sort in moderation, unless there exists at the same time an abnormally sensitive or inflamed condition of the mucous membrane. When this condition exists, organic acids are not well tolerated, and fruit juices containing acids must be avoided. However, even in such cases, the juice of sweet apples may generally be taken in small quantities without ill effect.

3. "Are the small white bugs found in water injurious?"

*Ans.*—If not positively dangerous, they are at least horribly repulsive. Water containing living forms of any sort should be first filtered, and then boiled before using. It is important that water should be filtered before boiling, as otherwise the germs and animalculæ are dissolved by the heat, and the water becomes a broth of abominable things.

4. "What is the test for water?"

*Ans.*—About the only safe test for water is the biological test. This can be made only in a well-equipped laboratory, and consists in a careful examination of water for germs by making a culture and studying the character of the germs which it contains. There is no simple test that can be relied upon. The only safe plan is to boil



the water for at least five minutes. This should always be done when the water is not known to be derived from a perfectly safe source. Boiled water is always safe.

In traveling, the writer relies largely upon oranges and other fruits as a source of liquid food, and frequently carries in his pocket a bottle of boiled water so as to be wholly freed from any anxiety on the water question, which is certainly at the present time one of the most important with which sanitarians have to deal.

5. "What is the cause of and treatment for worms?"

*Ans.*—Worms and other intestinal parasites are derived from the food. Some of them, as the different varieties of tapeworm, are derived from flesh foods, particularly beef and pork, beef more frequently than pork. Most parasitic worms, however, are derived from vegetable foods, and are traceable to such raw foods as celery, lettuce, radishes, strawberries, parsley, and other products of the vegetable garden which are commonly eaten raw. The use of light soil and barnyard manure for fertilizing purposes, especially as a top dressing, which is very com-

mon in vegetable gardens, unquestionably provides a ready means for contamination.

Metchnikoff, the famous savant of the Pasteur laboratory, has definitely shown the connection between raw foodstuffs and intestinal parasites, and has called attention to the fact that many cases of appendicitis are due to infection through the agency of intestinal worms. All foods eaten raw should be first thoroughly washed, then dipped in boiling water for a few seconds so as to destroy the eggs or embryos of parasites which may be clinging to them. The best plan, of course, is to make sure that foods are obtained from sources which insure against contamination. This plan is not always practicable.

**10,518. Pain in the Shoulder—Warts—Sour Milk Enema.**—Mrs. R. M. W., Indiana:

1. "What is the cause of continuous pain in the left shoulder, side, and arm?"

*Ans.*—This symptom is generally due to indigestion. In such cases, there is to be found in connection with it pain at the pit of the stomach and between the shoulder blades. Sometimes, however, the cause may be a diseased condition of the heart. Every

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person suffering in this way should have a careful medical examination, so that the cause may be ascertained, and, if possible, removed.

2. "How can a wart be removed from the head?"

*Ans.*—The best method of dealing with a wart is to have it snipped off by a surgeon. A simple remedy which one may employ himself is to apply glacial acetic acid. Moisten the end of a toothpick in the glacial acetic acid and with this rub the end of the wart until it is moistened. Repeat this daily until the wart disappears.

3. "Is there any objection to using the whey from sour milk as an enema?"

*Ans.*—Sour whey may prove very beneficial as a remedy in cases of membranous colitis.

**10,519. Catarrh.**—M. A. S., Nebraska:

"What proportion of salt and soda to the quart of water should be used as a solution for nasal catarrh?"

*Ans.*—One teaspoonful of each is a good proportion.

**10,540. Cottonseed Oil—Swift's Jewel Compound.**—M. C. J., Vermont:

1. "Is it possible to get refined cottonseed oil like that in cottolene? Where, and at what price?"

*Ans.*—We have no information in reference to the constituents of cottolene. We make no use of cottonseed oil, and hence are not acquainted with the manufacture of this article. The information you desire may possibly be obtained from any wholesale druggist.

2. "Do you know of a similar compound without lard?"

*Ans.*—No.

3. "What about Swift's Jewel Compound?"

*Ans.*—We know nothing about this compound.

**10,541. Varicocele.**—C. F. L., Texas:

"What is the best and most permanent cure for varicocele?"

*Ans.*—An operation for removal of the diseased veins is the only proper remedy. This operation is perfectly safe when done by a skilled surgeon with antiseptic precautions.

**10,542. Throat Trouble.**—B. J., Iowa:

"Following attacks of sore throat and tonsillitis, I am troubled with hoarseness of the throat—so much so as to hinder common conversation. What is the trouble? Advise treatment."

*Ans.*—It would be impossible to say what is the nature of your difficulty without a personal examination. The hoarseness may be caused by chronic inflammation, a tumor,

ulceration, tuberculosis, and various other conditions. You should at once consult a physician competent to make a laryngoscopic examination. Such a condition is always sufficiently serious to demand immediate attention.

**10,543. Exophthalmic Goiter.**—L. W. B., Iowa:

"A young man of twenty-one is in a weakened condition from exophthalmic goiter, part of which was removed, without any improvement. Do you know of any reliable publications on this disease? Advise treatment."

*Ans.*—All standard works on surgery treat of exophthalmic goiter. It is probable in this case that another surgical operation is required, either removal of an additional portion of the gland, or ligation of the arteries. The services of a competent surgeon are required.

**10,544. Paralysis—Constipation—Appetite.**—S. N. G., Illinois:

1. "What is the best diet for a case of paralysis of three years' standing? The patient is seventy-two years old and has been bedridden for eleven months."

*Ans.*—All meats should be avoided. Eggs should be used sparingly, if at all. It is better to discard eggs altogether, or at least to eat only the yolks. Avoid sweet or raw milk. Buttermilk may be used in moderation. A low-proteid diet is especially important; that is, albumin and allied substances should be taken in very small quantities. The patient should take pains to chew thoroughly, to eat sparingly, and should eat freely of fruits and such fresh vegetables as spinach, purées of peas, beans, and potatoes.

2. "Suggest treatment for constipation in this case."

*Ans.*—The free use of fruits and vegetables will tend to relieve the constipation. Additional measures may be required, such as the free use of such laxative foods as fruit acids, honey, malt honey or meltose, and granose flakes or biscuit.

3. "What causes dizziness in turning from side to side?"

*Ans.*—Disturbance of the cerebral centers which control equilibrium.

4. "The patient has a ravenous appetite. What do you think of well-cooked porridge in this case?"

*Ans.*—While not generally to be commended, the diet suggested might serve a useful purpose in this individual case. The porridge should be well cooked, and a small amount of rich cream or butter should be



added to it. Salt should be omitted, and food should be given in small quantities at frequent intervals, instead of in large quantities, so as to avoid overdistension of the stomach. Not more than a pint and a half or two pints should be taken at one time.

**10,545. Parched Corn — Stomach Trouble—Toast—Fruits.**—S. F. T., New York:

1. "My employment is sedentary. For lunch for two months I have been eating a small handful of well-parched corn and a slice of bread and butter. If it proves satisfactory, should I continue this diet?"

*Ans.*—It would be well to add apples, oranges, berries, or some other good fruit to the lunch bill of fare.

2. "Can not whole-wheat grain be treated in a similar manner, and would it be preferable?"

*Ans.*—Yes.

3. "What is the cause of uric acid in the blood? Is it caused alone by a flesh diet?"

*Ans.*—The cause may be deficient oxidation, or burning, of certain waste elements. Uric acid may be present in certain diseases in which the spleen is enlarged, even when meat is not eaten, because of the extensive destruction of blood cells.

4. "Does gas in the stomach and flatulency indicate disease?"

*Ans.*—Yes, the condition named is abnormal.

5. "Is bread thoroughly toasted in the oven a good article for breakfast with milk?"

*Ans.*—Toasted bread is a wholesome food; in fact, raised bread should always be thoroughly toasted before eating, as the ordinary process of baking does not sufficiently cook the interior of the loaf. Milk is apparently wholesome for many people, but a large number of persons are injured by it. The writer has serious doubts whether, on the whole, cow's milk might not be advantageously discarded from the human dietary. Certainly there are many persons who can not take it without considerable injury. Dr. Combe, an eminent European physician, recognizes such persons as suffering from caseous dyspepsia, but this class is so large, constituting about one-half of all invalids, the question naturally arises whether all persons are not more or less damaged by the use of cow's milk, although they may be for a long time unconscious of the fact.

Fruits and fresh vegetables, as potatoes, spinach, etc., sterilized cow's butter, and nuts will be wholesome additions to the breakfast



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bill of fare. The food should be varied in character, although it is well to limit the number of kinds at each meal. The food should vary day by day, and care should also be taken to obtain the necessary salts to maintain the alkalinity of the blood, by the free use of fruits, fruit juices, or fresh vegetables.

6. "Do you recommend a liberal use of stewed dried fruits, such as prunes, apples, peaches, etc.?"

*Ans.*—Yes. Such fruit should be thoroughly cooked and well masticated.

7. "Is the use of phosphate of soda injurious in a case of constipation?"

*Ans.*—The habitual use of this substance or of any other drug can not be recommended. The bowels need regulating by proper attention to diet.

**10,546. Nightmare—Poor Circulation.**  
—L. D. G., Wisconsin:

1. "What is the cause of nightmare?"

*Ans.*—Disturbance of the brain from indigestion.

2. "Why should one feel dizzy after meals? What will relieve this condition?"

*Ans.*—Overdistension of the abdominal blood-vessels, so that an excess of blood is diverted from the general circulation. The result is insufficient blood supply to the brain. The remedy is to maintain a horizontal position for half an hour or an hour after eating. This suggestion will be found highly beneficial by most persons suffering from gastric disorders. It is better often to lie upon the face, inclined toward the right side. Some people find it advantageous to lie across a small hard pillow. The pressure of this against the abdomen prevents overfilling of the abdominal vessels.

3. "Is there any home treatment for slow circulation?"

*Ans.*—We are not certain that we understand what our correspondent means by a slow circulation. Probably, however, this term is intended to express a condition of coldness of the hands and feet. If this is true, the cause is probably vasomotor disturbance arising from irritation of the stomach and bowels. It is possible also that the cause may be the absorption of poisons from the colon, or intestinal autointoxication. This is a very common cause of cold hands and feet, a condition wrongly attributed to slow circulation. The real cause is spasm of the vessels of the extremities and an excessive accumulation of blood in the abdomen. Sev-

eral measures are serviceable in this condition, which may be briefly mentioned:

1. A firm bandage applied across the lower abdomen is especially valuable in cases in which the abdominal walls have relaxed.

2. Low-proteid diet, especially the disuse of flesh foods of all kinds, the sparing use of eggs and milk. This will limit the amount of toxins developed from the putrefaction in the colon of the undigested remnants of proteid foodstuffs.

3. Lying horizontal for half an hour or an hour after eating. It is better to lie on the face. This prevents the diversion of an excess of blood into the abdomen.

4. Vigorous rubbing of the extremities with cold water for a few seconds in the morning.

5. Warm clothing of the extremities.

6. Daily moderate exercise in the open air, and improving the general health in every possible way.

7. The moist abdominal bandage worn at night is an excellent means of relieving gastric and intestinal irritation.

8. Special attention must be given to the thorough mastication of the food, and to the avoidance of unwholesome articles of food. A natural dietary, consisting of fruits, grains, and nuts, will be found especially advantageous.

4. "What is the best diet for one who has only seventy-five per cent starch digestion and not enough hydrochloric acid?"

*Ans.*—The conditions named constitute a very unusual combination, as the starch digestion is almost always especially good in cases in which there is a deficiency of hydrochloric acid. If this condition really exists, of which there is certainly room for doubt, the indication would be a great depreciation of digestive activity, not only in the stomach, but in the intestine as well, and probably involving the pancreas. The relief of such a condition requires the most thoroughgoing measures for the reinstatement of the general health, as well as the relief of local conditions. The outdoor life and a thorough course of tonic treatment is certainly indicated. A cure could not be expected in such a case from dietetic measures alone. The best results will probably be attained in such a case from the use of well-prepared dextrinized cereals, such as well-toasted corn flakes, thoroughly toasted bread, browned rice, toasted rice flakes, a very moderate amount of cream and butter. Possibly buttermilk



might prove serviceable, but it should not be taken in large amount in connection with solid foods. Well-baked potatoes, spinach, and well-ripened or thoroughly cooked fruits should constitute an essential part of the dietary. Even though the starch may not be completely digested, the undigested remnants will do no particular harm. If the meats, eggs, and other highly proteid substances are substituted for the starch, these also will be digested only in part, and the remnant will be converted into highly poisonous substances through putrefaction in the colon. Thus great harm will be done. The products of starch fermentation do little or no harm in the alimentary canal. In fact, they are to some degree beneficial by preventing putrefactive processes. This is an important difference between the carbohydrate and the proteid elements of food.

**10,547. Appendicitis.**—Mrs. J. L. T., Texas:

"Is continual soreness in the right side and hip an indication of appendicitis?"

*Ans.*—Not necessarily, but it is a condition which should lead to careful investigation by a competent physician.

**10,548. Use of the Diaphragm—Vegetable Diet—Sugar—Churning Milk—Eggs—Lard—Indoor Life.**—N. V. M., Georgia:

1. "What is the chief use of the diaphragm in breathing—to empty the lungs or to fill them? If the former, what muscles fill the lungs?"

*Ans.*—The diaphragm is the chief breathing muscle, and is important also as an aid to the circulation of the blood. As the diaphragm contracts, it moves in a downward direction, thus increasing the size of the chest cavity and drawing in air. At the same time, this powerful muscle compresses the liver, stomach and other organs which lie beneath it, thus diminishing the size of the abdominal cavity and forcing out of it a portion of the venous blood which tends to accumulate in this portion of the body. Thus it is a sort of double-acting pump. When it fills the lungs, it empties the abdomen, and its service in thus aiding the circulation of the blood is almost as great as that which it renders in supplying air to the body.

2. "If horses can make powerful muscles from a vegetable diet, can not man do the same?"

*Ans.*—Certainly he can, but it should be remembered that man's stomach differs from that of the horse, and that his digestive or-

gans are adapted to a different class of vegetables. From a dietetic standpoint, there are three classes of vegetable products: (1) Fruits, including nuts, which generally consist of a fleshy pulp connected with the seed of the plant, and rich in highly nutritive sugars, acids, or fats. (2) Seeds of grasslike plants, which are rich in starch, and contain a considerable amount of proteid, and but little or no fat or sugar. (3) Other portions of plants which are not associated with the seed, consisting chiefly of roots or underground stems, and, in a few instances, of the buds, flowers, leaves, and stems. Man's digestive organs are adapted to the first two classes of vegetables named. This fact is clearly stated in the first chapters of Genesis, which contain an account of the creation of man. Even those who do not admit the divine authority of this statement, must be compelled to recognize the fact of the extreme antiquity of the statement, and the evidence thereby afforded that this belief existed among those who lived in the most ancient times.

3. "If sugar interferes with the digestion of a dog, does this prove that it will interfere with the digestion of man?"

*Ans.*—The experiments made upon the dog have been repeated upon men, and the results have been found to be the same. Besides, clinical experience shows beyond any question that cane-sugar, taken in more than very small quantities, and especially when taken in concentrated form, is highly injurious.

4. "Some countrywomen pour hot water into their churns to make the butter come quicker. This makes the white butter generally considered inferior, but is it not really emulsified to some extent, and hence more wholesome than yellow butter made by a slower process?"

*Ans.*—Boiling water will coagulate the lacto-albumin of milk, and this is doubtless the cause for the changing of color referred to. The amount of fat emulsified can not be sufficiently great to make any particular difference.

5. "Suppose we admit for a moment that the flesh of vegetable-eating animals is wholesome; would the flesh of a meat-eating animal fed on a vegetable diet all its life be wholesome?"

*Ans.*—In the strict sense of the word, the flesh of no animal is wholesome. However, there can be no doubt that the flesh of a carnivorous animal always fed on vegetable food, would be at least as wholesome as that of a hog fattened in the ordinary way.



6. "Since food must be converted into chyle before it becomes blood, will not a very little milk aid in the digestion of starchy foods?"

*Ans.*—Chyle and milk are very different in composition and character. There is no basis for the reasoning of our correspondent, but it is important that we should remember that questions of physiology must be settled by experiment and experience, not *a priori* reasoning. It may be said, however, that milk has the effect to lessen the formation of gastric acid, and hence in cases in which an excess of acid interferes with the digestion of starch, the free use of milk might have the effect to aid starch digestion by lessening the formation of gastric acid.

7. "Since eggs are the product of a flesh-eating animal, are they not poisonous to the blood, and will they not furnish the pabulum for cancerous and other disease-producing germs?"

*Ans.*—Eggs are certainly not by any means a typical food. Experiments made by Combe and other European investigators have shown that the use of eggs encourages the formation of poisons in the intestine, by promoting putrefaction and the growth of poison-forming germs. The free use of eggs is unquestionably harmful, and it is more than probable that the human race would be better off for an entire disuse of eggs, along with meat and other animal products. There is no possible proof that eggs encourage the development of cancer; but it can not be denied that anything which deteriorates the bodily health and thus lowers vital resistance, must encourage malignant disease and other maladies.

8. "If heat will kill bacteria, is not a hard-boiled egg more wholesome than a soft-boiled one?"

*Ans.*—Yes, so far as germs are concerned, but the chief danger from eggs is not the germs which they contain, unless they are stale, in which case the odor and flavor ought to be a sufficient warning against their use. Even boiling will not render stale eggs wholesome. The chief objection to the use of hard-boiled eggs is the fact that hard boiling renders the albumen of the egg very difficult of digestion, so that fragments of the undigested albumen find their way into the colon, and there furnish food for putrefactive bacteria and various disease-producing germs, thus leading to autointoxication.

9. "Is it true that pure lard fat has none of the hog or pork qualities, and is not more injurious than butter?"

*Ans.*—It is difficult to conceive such a thing as "pure" lard fat. Steam refined lard may be free from living germs, but many impurities must cling to the product being dissolved in the oils. Combe and others have shown that animal fats are much more difficult of digestion than vegetable fats, and that they encourage autointoxication. This is true even of butter, but less true than of other animal fats.

10. "A man of eighty saws and splits all the wood for a family of seven. He eats heartily and sleeps 'like a log.' Has reared thirteen children, all but one healthy like the father, eating three 'square' meals a day. Their small children are fed on pork, sausage, coffee, and such like food. All the older ones are inveterate users of tobacco. Does not such a case seem to smash some of our hygienic theories?"

*Ans.*—Certainly not. The fact that a few persons usually enjoy good health for a short time or even for a long time while violating the laws of health in the use of poisons and indulgence in other bad habits, can not offset the well-recognized fact that hundreds and thousands of persons are constantly seen suffering from disease and premature death as the result of these infractions of physiologic law. The fact that Captain Webb was able to swim across the English Channel does not prove that it is safe for other men to undertake the same thing. Captain Webb was uncommonly strong and enduring, but even he overestimated his strength and his endurance, for he met his death in an attempt to swim the Niagara Rapids, just as hundreds and thousands of other men are doing in their defiance of the laws of health through the use of tobacco and alcohol. All that is proved by our correspondent's argument is that some persons are uncommonly hardy and enduring.

11. "It takes about ten years for a person reared on a farm to become accustomed to sedentary habits. Would it be better for professional men to be accustomed to indoor life from their youth up?"

*Ans.*—No. Such persons never attain the full measure of vigor and endurance to which they are by hereditary endowment entitled. The man who has an opportunity to spend his boyhood in an outdoor life lays in a stock of vitality and resistance which often enables him to endure for many years gross infractions of the laws of health. Most of the men who are recognized as prodigies of working ability in the business world, spent their boyhood in the open air.



**10,549. Paralysis — Obesity.**— Mrs. W. H. B., Illinois:

1. "What is the cause of paralysis, and the premonitory symptoms?"

*Ans.*—There are many forms of paralysis. Most cases of paralysis are due to the effects of poisons in damaging nerve tissue. The paralyzes which occur in young or middle-aged persons are generally due to acute poisoning, the result of acute germ infections of various sorts. Such are the paralyzes which follow typhoid fever, diphtheria, scarlet fever, and meningitis. The paralyzes which occur in old persons are due to chronic intestinal autointoxication; that is, to the absorption of poisons formed in the alimentary canal, and chiefly in the colon. These poisons are produced by germs which are fed by the undigested remnants of foods which accumulate in the colon. These poisons are formed in greatest abundance when flesh foods are freely used, as the poison-producing germs thrive most luxuriantly and produce the most virulent poisons on a diet of flesh. Eggs, especially the whites of eggs, and sometimes the curds of cow's milk, also encourage the growth of these deadly organisms. The poisons produced by these germs, generally known as anaerobes, because they grow best when excluded from the air, have been shown by Metchnikoff, Voix, and others to be the cause of degenerative changes in the blood-vessels of the brain, liver, kidneys, and other important vital organs. Under their influence the walls of the blood-vessels become brittle, and this leads to rupture of the vessels at some weak point when the blood-pressure is increased. The paralysis which follows apoplexy, the most common of all forms, is believed by Metchnikoff to be almost always due to the poisons formed in the manner indicated.

The premonitory symptoms may be easily discovered by a physician, but are not always evident to the patient or his friends. The most important of these is increase of blood-pressure. This can sometimes be recognized by examination of the pulse, but more often it can be detected only by means of measuring the pulse pressure with an instrument especially designed for the purpose. The ordinary pulse pressure is 90 to 140. In a person liable to apoplexy, the pulse pressure may be found at 300 or more, or two or three times the normal. Not infrequently, the approach of apoplexy is indicated by insomnia, giddiness, a change in character or disposi-

tion, nervousness, depression, and by the hardening of the arteries, which may be felt in the radial artery of the wrist, and often in other arteries. Not infrequently, however, changes take place in the arteries of the brain without corresponding changes in the arteries of the extremities.

2. "What is the cause of obesity? Is it not a form of disease?"

*Ans.*—Deficiency of oxidation of fat. Obesity is recognized as a disorder of metabolism. Of course, it is possible a person may be overfat simply because he eats excessive amounts of food. Such cases are easily curable, as it is only necessary to restrain the appetite or to increase the amount of daily exercise to effect a cure; but in certain cases the tendency to obesity is so inveterate that simple regulation of the diet and exercise is not sufficient to restore the patient to normal proportions. Hydrotherapy, especially cool baths and massage, combined with careful regulation of diet and exercise, are required for a radical cure.

**10,551. Diet in Constipation and Dyspepsia.**—G. H. R., District of Columbia:

1. "I have been troubled with constipation and dyspepsia for over twenty years, and am very nervous. Memory and mental powers have been considerably weakened. Have experienced pain in my left shoulder, keeping me awake much at night. Have been using health foods, and living on two meals a day. Have a light lunch at noon and rather heavy dinner at six. I have experienced slight pains in the heart. I fasted four days and felt much benefited. I suspect uric acid poisoning. What diet and treatment would you advise?"

*Ans.*—It is evident that you have been suffering from autointoxication. The heavy dinner at night is objectionable. The largest meal should be taken in the middle of the day. The evening meal should be light, and should consist of foods which are easily digestible. Pastry, ices, tea, coffee, meats, and all foods difficult of digestion should be avoided. Fruits, rice, cereal flakes, and other simple preparations should constitute the evening bill of fare.

2. "Does malted nuts, and especially protose, contain uric acid?"

*Ans.*—No. It is true that nuts, as well as all other seeds, contain minute quantities of uric acid, but in the making of protose and malted nuts, the small amount contained in the original substances is removed by the process of manufacture. A careful examination of protose and malted nuts by one of



the most skilled chemists in the country shows that they are free from uric acid.

**10,552. To Increase Weight.**—H. R. S., Canada:

"Why should a young man of twenty-one, five feet five inches tall, not gain in weight, with present weight at 115 pounds? He is physically weak, although he has never been ill. He does not use tobacco, liquor, tea, coffee, or meat."

*Ans.*—Probably because he is not taking a sufficient amount of food, or possibly because he is suffering from indigestion and lack of assimilation. A more detailed account of the diet and habits of life will be necessary to enable us to make a proper diagnosis. The average person requires about two thousand calories of food; that is, an amount of food which, when burned, would raise four tons of water one degree in temperature. This amount of heat will be generated by the burning of two candles constantly for twenty-four hours, or by the combustion of half a pound of butter, or two-thirds of a pint of kerosene oil.

**10,554. Exercise — Diet.**—A. H. F., Louisiana:

1. "Do you consider a two and one-half mile walk before breakfast and the same at night after supper, with a mile during the day, sufficient to keep one in perfect health whose occupation is sedentary, and from eight o'clock A. M. to eight P. M.?"

*Ans.*—No. According to the best English authorities the average man requires exercise equivalent to walking nine miles daily. However, the amount of work done in walking a given distance may be very greatly increased by quickening the pace. For example, by running two and a half miles, or walking very rapidly, the amount of work accomplished in traveling a distance may be more than doubled. It must also be remembered that the evil effects of exhausting sedentary work can not be antidoted by the addition of physical work. Exercise requires the toning up of the nervous system as well as the muscles. The nerve centers are exhausted by twelve hours of incessant labor, certainly a very great excess, and one can hardly hope to profit very greatly by adding to this excessive work a still further expenditure of energy, even in the open air. The hours of sedentary labor should be shortened. One can not atone for excessive mental work by muscular work. Health is to be maintained only by the proper adjustment of the different sorts of exercise.

2. "Should one avoid sweets on account of liver trouble? In such a case would it be advisable to eat cooked fruits sweetened with honey?"

*Ans.*—Cane-sugar should be avoided, not only on account of the liver, but also on account of the stomach, and for other reasons. Sour fruits may be sweetened by the addition of sweet fruits. Honey is preferable to cane-sugar, but its flavor prevents its general use as a sweetening agent.

3. "Which are more healthful—cooked or raw apples?"

*Ans.*—Both are entirely wholesome, provided the cooking is well done and the raw apples are thoroughly ripe.

4. "Would a ten-mile bicycle ride in the morning be better than so much walking?"

*Ans.*—No. The amount of exercise done in a ten-mile bicycle ride is only equivalent to the amount of work done in walking two and a half miles.

**10,555. Fruit Juices and Buttermilk—Fats.**—B. E. E., Massachusetts:

1. "You recommend drinking freely of fruit juices and buttermilk. When should they be taken—at meals or between meals?"

*Ans.*—This depends upon the amount taken. A small amount, as for example a glassful of fruit juice or milk, may be taken with a meal; but if large quantities are to be used, they should be taken at a separate meal when solid food is not taken.

2. "At what temperature are fats rendered indigestible?"

*Ans.*—At a temperature which is sufficient to burn or decompose them, which is about 300°.

3. "Is butter as indigestible at a high temperature as other fats?"

*Ans.*—Yes.

4. "Is a moderate amount of butter in cooking injurious? Is it at all injurious if added on the removal of food from the fire, as in seasoning vegetables?"

*Ans.*—When butter is used for seasoning foods, it should not be cooked in, but should be added after the cooking is completed, and the temperature is reduced. Butter lessens the secretion of hydrochloric acid, and encourages auto-intoxication. It is nevertheless much more digestible than other animal fats, though much less digestible than vegetable fats. Persons whose stomachs form an excess of gastric acid may take a considerable amount of cream without great difficulty, and often with great benefit. But persons whose stomachs produce a deficiency of gastric acid,



suffer from indigestion usually manifested by biliousness when butter is used at all freely.

**10,557. Asthma.**—J. H. K., Michigan:

1. "What is the cause of and cure for asthma?"

*Ans.*—Asthma is a symptom which may be caused by various conditions. A very common cause, and perhaps the most common of all causes, is intestinal autointoxication; that is, general poisoning due to the putrefaction in the colon of undigested remnants of foodstuffs, particularly of flesh foods, eggs, and the undigested parts of cow's milk.

2. "What can be done in case of tuberculosis?"

*Ans.*—The outdoor life, proper feeding, and tonic baths will generally effect a cure in incipient cases. Advanced cases rarely recover under any method of treatment, but life may often be prolonged by the measures suggested.

3. "What will relieve a case of asthma?"

*Ans.*—The cause must be sought and removed. The correction of the diet and an outdoor life will generally effect a cure of this disease.

**10,558. Rheumatism.**—E. L. H., Ohio:

"Following two attacks of grippe, I am troubled with soreness in wrists and feet. The pain is very severe at night. Is this rheumatism, and what will relieve it?"

*Ans.*—The symptoms referred to are doubtless the result of the infection with the influenza germ. Evidently the body has not been able to eliminate the poisons produced by the invading germs. The symptoms may possibly be due to colon infections. This is often indicated by the presence of mucus and membranes in the stools. The relief of this condition requires the disuse of meats of all kinds, and sometimes cow's milk must be discarded. The pain is likely to be relieved by a short hot bath just before retiring. The colon should be emptied daily by means of an enema, if necessary, employing soap and water at a temperature of 80° or less.

**10,559. Bread—Fomentations.**—G. F. B., Texas:

1. "Would you recommend graham and corn bread in a case of catarrh of the stomach and bowels?"

*Ans.*—Fermented breads should be discarded. Zwieback and dextrinized cereals are to be preferred to ordinary bread.

2. "Are daily fomentations good for soreness of the stomach?"

*Ans.*—Yes.

3. "What general outline should one follow who has nervous prostration?"

*Ans.*—This depends upon the cause of the nervous prostration. The cause should be ascertained and removed. In most cases, so-called nervous exhaustion is the result of autointoxication,—general poisoning through the putrefaction of undigested remains of food substances in the colon. Meats, fish, shellfish, and eggs are especially likely to give rise to these poisons, as they encourage the growth of the poison-forming bacteria. The adoption of a natural dietary, the daily use of tonic baths, the daily use of very short cold baths, with an outdoor life and the avoidance of bad habits, will generally effect a cure. Bad cases require a special course of treatment and training.

**10,560. Epileptic Fits.**—J. C., Canada:

"What diet and mode of living should one follow who is troubled with epileptic fits?"

*Ans.*—The patient should live an outdoor life, should take a large amount of muscular exercise, sufficient to produce weariness. The superintendent of a large colony for epileptics in New York reports that he finds the exercise of hoeing extremely good in cases of this sort. He says the epileptic works the fits off through the hoe. Experience has shown that diet has a very great influence in these cases. All physicians of experience condemn the use of meats in all forms in these cases, and the writer's personal experience leads him also to condemn eggs and ordinary milk. If milk is used at all, it should be in the form of buttermilk. Recent experiments show that the use of chlorid of sodium or common salt is a factor in this disease. In the leading hospitals of Europe, epileptic patients are required to wholly discontinue the use of salt. This so-called dechlorinated diet is found to have a remarkable influence upon the disease.

**10,561. Lung Trouble—Vegetable Gelatin—Fruits—Pocket Vaporizer.**—C. E. M., Virginia:

1. "Is there a sanitarium at Battle Creek for consumptives?"

*Ans.*—No.

2. "Outline diet for a girl of fourteen with tendency to lung trouble."

*Ans.*—There is no specific diet for the prevention of consumption. The things to be accomplished by diet which antagonize consumption are improvement of the blood, building up of the general bodily vigor and stamina. This requires an exact adaptation of the diet to the individual's needs. It is important that the quantity of food should be



suitable, while not in excess; that great care should be taken to masticate the food thoroughly, and that all the elements required for perfect nutrition should be supplied. Thorough mastication will answer most questions in relation to diet for each individual; for the palate, when afforded a suitable opportunity by thorough chewing, will select the foods containing the needful food elements, and will determine the quantity in accordance with the bodily needs. This fact has been made very clear by Mr. Horace Fletcher, and has been demonstrated many times in individual experience. A few specific suggestions may be made, however:

1. Meats of all sorts should be avoided, including fish and fowl. Care should be taken that fats are employed in proper quantity. Fats may be taken in the form of nuts, especially pecans and almonds, or in the form of sterilized cream and butter. Raw cream and ordinary butter are unwholesome. They are likely to contain tubercle bacteria as well as many harmful germs. When sterilized, this danger is avoided. Proteids should not be taken in excess, but there is really very little danger of this when meats are discarded. Eggs may be taken in moderation.

3. "In the booklet, 'Vegetable Gelatin,' the latter is recommended as a remedy for constipation. Should it be used alone or in combination with fruit juices?"

*Ans.*—It may be eaten either by itself or in combination with fruit juices.

4. "In a recent number of *GOOD HEALTH* you say that all fruit should be sterilized. Can strawberries, raspberries, etc., be sterilized without spoiling the fruit?"

*Ans.*—Yes, these foods are very excellent when well cooked. They may be sufficiently sterilized to render them safe, however, by

thorough washing and dipping for a few seconds in boiling water.

5. "How often should the pocket vaporizer be filled in case of nasal catarrh?"

*Ans.*—Often enough to furnish a vapor capable of producing a decided sensation when drawn into the lobes of the lungs.

**10,562. Cereals.**—G. C. W., New Hampshire:

1. "What do you mean by well-dextrinized cereals?"

*Ans.*—Cereals which have been dextrinized by the action of diastase or by exposure to a high temperature until a light brown color is produced.

2. "What do you mean by the coarser varieties of vegetables?"

*Ans.*—Such vegetables as carrots, turnips, parsnips, cabbage and lettuce, asparagus, string beans, green peas, radishes, and corn.

3. "What foods should be used and which should be avoided in case of kidney trouble?"

*Ans.*—Discard meats of all sorts. It is also well to avoid eggs. Spices, pickles, all condiments, including common salt, should be strictly avoided. Cane-sugar should be taken in very small quantities, or should be wholly discarded. A list of wholesome foods is found in the Battle Creek Sanitarium Diet List, which may be obtained for the asking.

**10,563. Piles—Pazo Ointment.**—E. F., Michigan:

"A few years ago I was operated upon for piles. The pain was removed, but the tumors have not disappeared. Would you advise the use of Pazo Ointment, made by the Paris Medicine Co., of St. Louis, Mo.?"

*Ans.*—We know nothing about this preparation, but on principle we could not recommend this or any other nostrum.

## Literary Notes

If baby uses a bottle, as soon as he has finished his meal, the bottle, which ought to be round and marked off in ounces, should be rinsed at once in cold water—it should never be allowed to stand a minute with the remains of the milk in it, says Dr. Emma E. Walker, in *Good Housekeeping*. Then wash in hot soap-suds with a bottle brush, and fill it with water to which a pinch of soda has been added. If the bottle is left standing filled with water, it should be cov-

ered. Otherwise it should be emptied and allowed to drain. Always just before using the bottle, boil it for three minutes in water.

The nipple should be a simple rubber one that slips over the neck of the bottle; never use one with a long tube. After using, it should be turned inside out and scrubbed on both sides in cold water with a brush kept for this purpose only. Between feedings it should be kept in a covered cup of borax water, and washed in scalding water just



before using. Boiling softens the rubber and develops both an unpleasant odor and taste.

"I believe that there is a higher meaning in a vacation in the country than the getting of exercise, or the regaining of health even, and that is to get in close touch with power at its fountain-head, to put beauty into the life, to drink in the harmonies of Nature which restore the lost equilibrium, the shattered ideals. Nature is the great restorer, the great corrective. Intercourse with her makes us normal in mind as well as healthy in body. In this driving, rushing, commercial age we do not appreciate the great value of developing the esthetic side of our nature. Beauty is as important to the higher nature as bread to the lower."—O. S. Marden, in *Success Magazine*.

**The Journal of Inebriety.** T. D. Crothers, M. D., Editor. The Gorham Press, Boston.

The *Journal of Inebriety* has been for more than thirty years edited and conducted by the editor in the interests of a special department of therapeutics and preventive medicine. It has recently been greatly improved by enlarging its scope so as to include physiologic therapeutics. As an authority on inebriety, Dr. Crothers, the editor, has acquired a world-wide reputation, and has won the admiration of all who are interested in the deliverance of the race from slavery to the drink habit, by his persistent and able defense of scientific temperance, and especially the unremitting warfare which for many years he has waged against the abuse of alcohol in therapeutics.

This excellent quarterly ought to be in the hands of every physician.

**"The Care of the Baby."** The new (4th) edition. By J. P. Crozer Griffith, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. 12mo of 455 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$1.50 net.

This is a valuable treatise on that most important subject to all parents, the physical care of the young child. The fact that, as estimated, one-fourth of the human race die of preventable diseases before reaching the age of five years, indicates the need of the study, by parents, of just such an admirable and reliable book as is Dr. Griffith's.

**"The School of Health."** A guide to health in the home, containing the elementary facts of physiology, a practical course in physical culture, instruction in healthful cookery, and directions for the home treatment of the most common diseases. By Alfred B. Olsen, M. D., and M. Ellsworth Olsen, M. A., Editors of the English *Good Health*. International Tract Society, Limited, 451 Holloway Road, N., London. Price, \$1.35, postpaid.

This is a handsome volume of four hundred pages, which, as the title indicates, is intended to give practical instruction in relation to the care of the health. The authors have been for many years careful students of subjects pertaining to health, and this excellent manual presents ample evidence of the wide scope of their studies and experience. The following list of chapter heads will give something of an idea of the practical nature of the work and the excellent judgment displayed in its preparation: The Human Body—Physical Development—Physical Deterioration—Beauty Culture—Healthful and Artistic Dress—Personal Hygiene—Aids to Pure Living—A Healthy, Comfortable Old Age—Household Hygiene—The Food Problem—Underlying Principles of Healthful Cookery—Simple Food Recipes—Foods for the Sick—Wholesome Combinations of Food and Balance in the Bill of Fare—The Feeding of Infants—The Feeding of School-Children—The Place of Fruits and Nuts in a Healthful Diet—"Nature's Food Filter," or the New System of Thorough Mastication—Popular Beverages: Their Possible Effect on Health—The Smoking Habit Physiologically Considered—Alcoholic Stimulants—Common Diseases and Their Hygienic Treatment—Hydrotherapy in the Home—Poisons and Their Antidotes—Accidents and Emergencies.

This book is prepared especially for English readers, and although but recently from the press, is selling rapidly in Great Britain. It is well deserving of a wide circulation in every civilized country.

The book is printed on good paper, with substantial binding, and is suitably illustrated.

**"The Deadly Cigarette, or, The Perils of Juvenile Smoking."** By the Rev. John Quincy Adams Henry, D. D., of the Christian Temperance Campaign, author of "The Slaughter of Young Men," "The Peril and Protection of Young Womanhood," etc.



This book has been published to help forward the movement to check the growing habit of juvenile smoking. In its 186 pages Dr. Henry gives the results of much careful collection of facts and figures, and in his earnest and forceful manner seeks to awaken a deeper realization of the magnitude of the evil. Many testimonies are given from both America and England, but, as the Rev. F. B. Meyer points out in his commendatory preface, "as yet there is no sufficient barrier against the swiftly advancing tide," and this

book, with its mass of English and American evidence, should be an effective warning. The concluding chapter on the "Crusade against the Cigarette by Agitation, Legislation, Organization, Exemplification, and Evangelization" will be especially suggestive. Over a score of illustrations serve to make the publication the more helpful and attractive. 30c, paper covers; 45c, cloth boards, gilt. British Lads' Anti-Smoking Union, Floraville, Malmesbury Rd., Woodford, London, N. E.

## Publishers' Department

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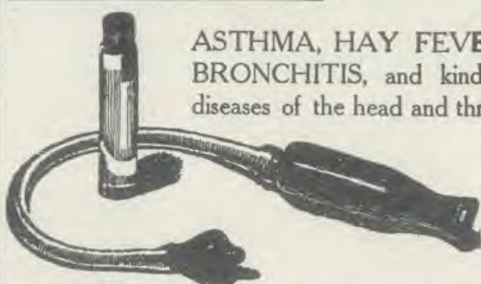
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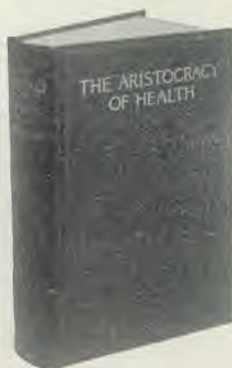
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Dept. A

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