

# GOOD HEALTH

MARCH  
1907

Edited by  
J. H. Kellogg, M. D.



Good Health Publishing Company  
Battle Creek, Mich.

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By ELIE METCHNIKOFF

THREE LECTURES ON THE  
PREVENTION OF INFECTIOUS DISEASES]

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No reader of GOOD HEALTH can be unfamiliar with Metchnikoff's great discoveries along hygienic lines, which have had so much to do with the remarkable progress the last few years have witnessed.

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# BETWEEN OURSELVES

A chat with the editors and managers of GOOD HEALTH.

About a year ago, we began to print a page for our readers under the heading, "Between Ourselves," to tell specifically what we were doing and what we were planning to do.

We saw a great many things to be done. The field before us seemed to have unlimited opportunities, and we proposed to tell you about them. We printed the page two or three months. Then we became so thoroughly absorbed in the actual doing of the things to be done that we did not take time in the succeeding issues to tell you how we were doing them.

\* \* \*

Last month we made some announcements on our Contents page. This month there are still more announcements to be made, and a few comments as well, so we are reinstating this page, and this time we hope to make it a permanent feature. There are a great many things that the editors and managers of GOOD HEALTH are doing which you, as members of the GOOD HEALTH family, will be interested in.

\* \* \*

Last month we announced that George Wharton James would begin his series of "Simple Life Biographies" with the April number. We are pleased to know from Mr. James that this series is in preparation, and the first instalment has already reached us.

\* \* \*

Most of our readers will be intensely interested in the sketch of Louisa M. Alcott, which appears in this number, written by her kinsman, William Penn Alcott. Some sidelights are thrown upon the life of this great woman in this story which have never been prominently revealed before. Mr. Alcott will write several other sketches in the course of the year about other members of this illustrious family.

\* \* \*

Besides the contribution from Mr. James, the April number has other treats in store for us. There will be, as announced last month, an unusually interesting description, accompanied by excellent pictures, of Upton Sinclair's cooperative housekeeping venture. Since this young man came into sudden prominence through the authorship of the great book, "The Jungle," intense interest has been manifested throughout the country in the work he is carrying on. The description of the unique enterprise he has recently undertaken has been prepared for us by Mrs. Rose Woodallen Chapman, one of the editors of *American Motherhood*.

\* \* \*

We wonder how many people this year will take definite steps for the hygienic improvement of their yards and surroundings. Springtime is the great yard-cleaning period. We see illustrated in the great country life magazines remarkable metamorphoses which are being accomplished each year in the beautifying of dwelling places and their surroundings, and these changes are almost invariably accompanied by proportionately better health conditions. We know that many of our readers by giving attention to these matters can this spring accomplish something very definite in the way of improving their hygienic surroundings. We would like to hear from those of the GOOD HEALTH family who are able to do this. Interesting descriptions of the changes brought about will be deemed worthy of place in GOOD HEALTH, especially if accompanied by pictures. Photographs of the conditions existing before and after such changes are made, usually define the contrast sharply, and we recommend that those of our readers who have it in mind to attempt such improvements, and who have access to cameras, make it a point to take such pictures. We will be glad to pay our regular rates for such sketches and photographs as we may use.

\* \* \*

There are scores of experiences which our readers could give us for the benefit of other members of the GOOD HEALTH family. There are some who could tell us interesting episodes in connection with their efforts to adopt health principles; how they remodeled their homes to make them healthful; how they have managed in matters of diet; how they have brought up their children to avoid the evils of ill health; how they regained their own health. Such experiences, well told, will almost invariably prove an incentive, —an inspiration, if you will,—for some misguided one to make a like effort, and perhaps to reap similar results.



## **The Battle Creek Sanitarium and Hospital Training-School**

**For CHRISTIAN NURSES**

***A Great Opportunity***

For all Christian young men and women who are in sympathy with the principles taught at the Battle Creek Sanitarium, and who desire to prepare themselves to work for the betterment of the race in the capacity of Christian nurses.

A three-years' course is provided, and the instruction given comprises a larger number of subjects and more thorough training than is offered by any other school in the world. In addition to the subjects taught in hospital training schools special attention is given to all branches of physiologic therapeutics, including hydrotherapy, radiotherapy, phototherapy, kinesiotherapy, or manual Swedish movements, and massage.

There is also a very thorough course in surgical nursing. Ladies receive thorough theoretical and practical instruction in obstetrical and gynecological nursing.

The course also includes instruction in bacteriology and chemistry, comprising laboratory work, lectures, and recitations.

Nurses receive on an average two hours of regular class work daily, besides the regular training at the bedside and in practical work in the various treatment departments.

The course in gymnastics embraces not only ordinary calisthenics, but also the Swedish system of gymnastics, medical gymnastics, manual Swedish movements, swimming, and anthropometry.

The school of cookery affords great advantages in scientific cookery, and also instruction in dietetics for both the sick and the well, the arranging of bills of fare, the construction of dietaries, and all that pertains to a scientific knowledge of the composition and uses of foods.

The course for men covers two years of instruction and training.

Graduates receive diplomas which entitle them to registration as trained nurses. Students are not paid a salary during the course of study, but are furnished books, uniforms, board and lodging. Students are required to work eight hours a day, and are expected to conform to the principles and customs of the institution at all times. Students may work extra hours for pay. The money thus earned may be ample for all ordinary requirements during the course.

Applicants received whenever vacancies. The next class will be organized the first of April, 1907. Applications will be received during February, March, and April.

Students who prove themselves competent may, on graduation, enter into the employ of the institution at good wages. For particulars address the

**BATTLE CREEK SANITARIUM TRAINING-SCHOOL,**  
Battle Creek, Michigan



# WINTER AT THE BATTLE CREEK SANITARIUM

COLD air is nature's greatest tonic. Warm air is depressing, enervating. Winter is the healthiest season of the year.

The only reason why invalids go to warm climates in winter is that they are afraid of cold air and cold weather.

There is some foundation for this apprehension. Sick people have less power than well people to create heat. They are more easily



The Sanitarium from below "the Hill"

chilled, more readily "take cold," and hence are more liable than others to suffer from maladies which prevail in cold weather,—maladies which are often introduced by a cold or a chill.

In winter the germs are frozen. Decay, animal and vegetable putrefaction, germ growth and dissemination—all cease with the advent of Jack Frost. Win-

ter breezes gather no dust or germs from snow-covered fields.

This pure, winter air has priceless value to the invalid. No miasma, no noxious vapors, no malarial parasites, no mosquitoes, no flies, no germs, no dust, no odors—nothing but pure, vitalizing, invigorating air



An Airing on one of the Verandas

and crisp, dry, blood-purifying, tissue-renovating oxygen. This is Michigan air in winter.

The invalid's dread of cold weather is really a dread of chilling or getting cold—a dangerous thing for sick folks. That, however, is quite another matter.

## WINTER AT THE BATTLE CREEK SANITARIUM

The invalid should breathe cold air, but he must be kept warm. The idea is: Cold air for the lungs, warmth for the rest of the body. This secures powerful tonic effects while maintaining a perfect circulation.

How a cold face bath does refresh one when weary! How a breath of cool air revives one overcome with heat! How cold weather brightens the fire on the hearth and sharpens the appetite! What a splendid bracer is the cold morning bath!



A Winter Walk

All these facts testify to the tonic, stimulating power of winter air as utilized at Battle Creek; every breath bears life, vigor, vitality, and health. Each breath is a tonic uplift.

You breathe a thousand such healing, invigorating breaths every hour. The cold, pure air which enters the body is spread out over a surface of two thousand square feet of membrane in the ramifying air-cells and passages of the lungs.

Under this membrane,—thinner than the most delicate gauze,—all the blood of the body passes every two or three minutes to be cleansed by this crisp, pure, germless air. Eighteen times a minute the lung bath is repeated; in an hour, sixty times as many, or more than a thousand cold-air baths, which, stimulating and healing, encourage the sick body to right itself.

It is this tonic, internal lung-and-blood bath, combined with all known dietetic and other rational therapeutic aids, that makes the Battle Creek San-



Skating on the Pond

itarium an ideal winter resort for the invalid and for those seeking better health.

Open-air sleeping arrangements are provided for all who desire them and can be induced to use them. There are sleeping porches for men. In another part of the building there are separate, carefully screened sleeping porches for women. Here those who enjoy sleeping in the open air are snugly tucked away by the nurses, wrapped as warmly as for a sleigh-ride in the Polar regions, and



## WINTER AT THE BATTLE CREEK SANITARIUM

protected, if need be, by hot-water bags or thermoelectric blankets, which furnish heat in any amount and as long as desired—warmth on tap, like water; simply touch a button, and the bed warms up right away.

Skating, tobogganing, skeeing, and other outdoor sports are awaiting those who are strong enough to enjoy them. There is almost always ice, and usually plenty of snow, during the midwinter season in the "Peninsula State."

Some of these outdoor amusements are enjoyed as much by the companions of invalids as by those invalids who are strong enough to indulge in them with pleasure and benefit.

How the appetite grows under the stimulus of this pure, Michigan air at the Battle Creek Sanitarium! The feeble pulse grows stronger by the magic touch of the frosty tide of crisp, germless air, which tones and heals, purifies and invigorates the whole system.

The gastric glands feel the vitalizing influence of fresh, red blood. The nerve centers fill themselves with new stores of energy from the abounding stream of renewed blood, pregnant with life and vigor, which courses through them.



For an Afternoon's Nap

Thus all the vitalizing energies of the body, all its natural defenses and healing agencies, are set at work with new activity and increased efficiency.

The reconstructive processes whereby the sick man is cast off and the healthy man brought into being, are promoted and accelerated by each breath of this pure, winter air of Battle Creek.

Here are seven acres of indoor space, all under perfect control by the most modern methods of heating and ventilation. The dry, crisp, Michigan air is supplied in such abundance that no trace of staleness or odor or fustiness of any sort is discoverable; no hotel smells, no kitchen or hotel odors, no fumes of tobacco or liquor, no dust,—just pure, fresh, sweet, germless, warm, winter air night and day.

The great Sanitarium Gymnasium, 66 x 120 feet, is equipped with the most complete modern apparatus and devices for exercise. There are great classes for exercise four times a day. There are large, indoor swimming pools connected with the two extensive bath departments.



An Outdoor Sleeper



## WINTER AT THE BATTLE CREEK SANITARIUM

Health training is the central idea of the Battle Creek Sanitarium. This means much more than simply training the muscles by gymnastics, massage, and manual Swedish movements. It means the study of all that pertains to bodily health and vigor. It means training in the actual practice of all those things which make for the best and soundest health.

To this end a school of health is in constant operation. In this the patients are taught the general principles of diet, their individual dietetic needs, and the scientific modes of preparing food so that it shall be both appetizing and wholesome, and also the use of simple remedies.



The Walking Club

Under this system the body is trained to more effectually resist disease. Restoring vigor to the skin by hydriatic training is one of the essential means of accomplishing this. This training consists of a carefully graduated series

of baths and water applications, whereby the skin circulation is improved and congestion of internal parts is relieved. The patient soon learns to enjoy this hydriatic training, especially for the fine glow, and warmth, and exhilaration which follow it.



Window Tent for Outdoor Sleeping

Life at the Battle Creek Sanitarium is never monotonous. There is hardly a day or evening passes without an entertainment of some kind—a musicale or recital, stereopticon or moving pictures, a pleasant travel talk, a song or prayer service, a Bible reading, lectures or addresses by notable men and women from all creeds, denominations, and walks of life; a contest, exhibition, or drill; a party Question Box; lectures by the physicians, etc. Even the very routine of the Sanitarium life is fascinating—never a moment when there are not interesting guests to meet and chat with.

It is an education, an inspiration, to be at the Sanitarium. It lifts you up out of your ruts, makes you forget yourself, fills you with new hopes, and gets you started in wholesome, life-prolonging habits.









"Daffodils,  
That come before the swallow dares, and take  
The winds of March with beauty,"  
*Shakespeare.*



# GOOD HEALTH

## HOME-HEALTH MAGAZINE

Vol. XLIII      MARCH, 1907      No. 13

Metchnikoff, the famous French savant, who more than any other man has filled the place made vacant by the death of the great Pasteur, has recently presented the world with a new book entitled, "The New Hygiene," in which are presented new facts and new principles which from a hygienic standpoint are truly revolutionary.

### The New Hygiene

During many thousands of years an unremitting effort has been made to protect and defend human beings against the attacks of disease by means of quarantine, disinfection, and allied measures.

The battle of the ages has been the struggle between the human family and the disease-producing, death-dealing foes which surround us. Fiercely the conflict has been fought. Victories have been won on both sides. More than once some new discovery has seemed to point the way to the final triumph of human science and skill over the insidious bacillus,—man's most deadly and hitherto unconquered foe,—but in spite of all the bacillus has steadily gained ground. Every year laboratory research brings forth new marvels of potency and subtlety in the character of these invisible but mighty enemies of human life.

Within the last two or three years numerous most remarkable facts have been discovered, analyzed, and interpreted. One of the most interesting and revolutionary of these is the surprising fact that the deadly organisms against which such a relentless war has been waged with quarantine, disinfection, and the whole arsenal of public health artillery, are easily able to elude the most rigid of quarantines and to escape the most thoroughgoing disinfectants; that, indeed, some of the most deadly of the infectious organisms, as those of pneumonia, diphtheria, tuberculosis, and the germs which produce peritonitis, abscess, boils, gall-stones, catarrhs and inflammations of the stomach, bowels, bladder, kidneys, and other vital organs, are always with us; that the deadly organisms which give rise to these and various other maladies are often to be found swarming upon the external and internal surfaces of the body in countless multitudes. For example, diphtheria germs are often found present in the throats of persons who are apparently in perfect health. Pneumonia germs are so frequently present in the saliva that certain forms of pneumonia are now known to be due to the drawing of small portions of saliva downward into the lungs in inspiration.

*A Germ Breeder.*—The colon is a veritable hotbed of germs. One observer, Strassberger, claims that there are produced in the human alimentary canal every twenty-four hours not less than 131,000,000,000,000 bacteria,—a countless multitude of death-dealing organisms capable of producing inflammations,



degenerations, gall-stones, kidney diseases, lung diseases, chronic autointoxication, arteriosclerosis, apoplexy, paralysis, and scores of other diseased conditions.

Formerly it was supposed that healthy people were necessarily free from the presence of these malign elements, and that the presence of disease-producing bacteria necessarily meant active disease; but it is now thoroughly demonstrated that people who are in ordinary good health may carry about with them pathogenic or disease-producing bacilli for many years. For example, Metchnikoff tells the story of a woman who, though apparently enjoying excellent health, was found to be carrying about in her colon a countless multitude of typhoid-fever germs. She had had an attack of typhoid fever twelve years before. Although she recovered from the fever, the bacteria remained with her. She was the proprietress of a bakery. Nearly all the persons in her employ suffered from attacks of fever, doubtless the result of infection of their food, which the woman prepared for them.

An American physician has recently observed a case in which typhoid-fever germs were found in the bile of a patient whose gall-bladder was operated upon. This patient had had typhoid fever some eighteen years before. It was evident that the typhoid-fever bacilli had been carried about in his body during the entire interval.

*Germ*s Not the Cause of Disease.—These facts show that the presence of bacteria in the body is not alone a sufficient cause for infectious disease. Germs, in other words, are not the sole cause of so-called germ diseases. There is another factor which is equally as important as the infecting germs; i. e., a state of bodily susceptibility. The real battle is between the germs and the tissues. So long as the bodily tissues are able to resist the germs, that is, to destroy them as rapidly as they work their way into the blood or the tissues, a state of health may be maintained.

Very recent researches made chiefly by Wright, of England, have shown that the ability of the body to resist disease depends very largely upon the presence of certain substances in the blood which are known as opsonins. When germs invade the blood, they become saturated with opsonins, and then become an easy prey to the blood-cells which capture and destroy them in very much the same way as the jelly-fish captures animalculi. When opsonins are not present in the blood, the white cells are not able to destroy the invading germs, and they grow and develop without hindrance. When opsonins are present, but in insufficient quantity, then the attack made by the white cells upon disease-producing bacteria which invade the blood, is too feeble to destroy or repel them, so that they are able to grow and develop, and thus give rise to various disorders in the body.

It is thus apparent that the real battle is between the blood and microbes.

While questions relating to the purity of air, food, water, milk supplies, etc., are of great importance, a question of still greater importance is purity of blood. Said the ancient prophet, "The blood is the life;" "the life is in the blood." The modern physiologist tells us that this is not simply a figure of speech, but that it is literally true. There is an active, living force in the blood,—a defensive force, a repairing, creating force. This force is embodied in the



living cells, the so-called leucocytes, or white blood-cells. These are the defenders of the body. It is by the skilful working of millions of these mysterious little bodies that wounds are healed, exudates absorbed, and various other damages repaired. By the aid of the newly discovered bodies, the opsonins, the white blood-cells defend the body against various sorts of germs which attack the citadel of life.

*The Vital Question.*—The questions of greatest importance, then, to every human being are, What is the state of my body, or my blood? Is it such that I am able to meet all comers in the shape of germs?

One of the most wonderful discoveries that has been made in recent times is a means by which a person's state of fitness to encounter and vanquish disease germs or any particular species of disease germs, may be accurately determined. The measure of a person's defensive ability is termed the opsonic index.

What is the opsonic index? Without going into all the technical details of description, the opsonic index may be briefly described as follows:—

A drop of blood is placed upon a slip of glass. A so-called "culture," containing disease-producing germs, say tubercle bacilli, for example, is then added. The mixture of germs and blood is kept warm at the body temperature for fifteen minutes, then it is inspected through a microscope. Examination should show that the white cells contained in the blood have captured great numbers of the tubercle bacilli. The captured germs can easily be seen with the naked eye. If on counting these, they are found to be the number of germs which should be captured by the white cells within the space of fifteen minutes, then the individual's opsonic index is said to be 1.00. If the number that has been captured has been only half the proper number, the opsonic index is .50; if twice as many, the opsonic index will be 2.00.

In other words, the ability of an individual to successfully combat and vanquish any particular germ may be determined by arranging an experimental conflict between a drop of blood and a quantity of the germs in question. If the blood wins, then the individual is safe; for if one drop of blood can destroy the germs in question, then every other drop of blood in the body can do the same, and the individual is safe from attack by this particular disease-producing organism.

For a complete test of this sort, it is necessary to make an actual trial with each one of the different classes of germs which are to be tested; that is, a drop of blood will be exposed to tubercle germs, another drop of blood to typhoid-fever germs, another to pneumonia germs, and so on through the whole list of pathological bacteria, or disease-producing germs. If the blood wins in each case, then the individual is, for the time being at least, proof against all the diseases represented by the germs which have been used in the tests. If the opsonic index is found to be low in case of one or more of the germs tested, then the individual is liable to the diseases resulting from infection by those germs, and quite likely may be already suffering from the disease.

It has been shown by Briscoe and others that when the opsonic index for tuberculosis is found to be .80, or less, in several successive examinations, the individual is undoubtedly suffering from tubercular disease in some form.



*The Real Problem.*—The great problem, then, is not simply to discover means whereby we may destroy the germs which produce typhoid fever, cholera, consumption, and various other maladies, but to discover methods whereby the body may be made proof against these diseases.

*We can not rid the world of germs, but we can live above them.*

That is, it is possible so to care for, train, and discipline the body, to maintain such purity of blood and tissues by a correct mode of life, that the so-called disease-producing germs will not be disease producing in us. Germs can not obtain a foothold in a thoroughly healthy body, or if they do manage to survive, they can not grow and develop so rapidly as to be able to produce the pain and various other symptoms which constitute disease processes.

We shall never be able to cleanse the earth from bacteria, but we may learn to live so close to nature that germs will cease to be a terror to us.

*The new hygiene* concerns itself, then, less with the exterior but more with the interior. If a man will keep his blood and tissues in a perfectly normal condition by a healthful life, he need have no fear of anything which germs can do to him. Germs are really scavengers, and it is only when the body has been reduced to an enfeebled condition by wrong habits of life that germs become able to do the mischievous work which is so graphically described in our medical text-books under the heads of various forms of disease.

"The blood is the life." *Pure* blood means *vigorous* life.

The blood is not to be purified by putting into it drugs or so-called blood purifiers (which do not purify), but rather by *refraining* from putting into it those things which render it impure. Alcohol, tobacco, tea, coffee, condiments of all sorts, flesh meats, bad air, and impure water are the greatest sources of blood impurity.

The Bible says, "Blessed are the pure in heart."

There is a physical as well as a moral truth in this divine precept.

"Through her works Dame Nature offers ever  
For our acceptance, one persistent thought:—  
'Tis but by patient, sturdy, brave endeavor,  
The greatest, best, and grandest things are wrought."



# LOUISA MAY ALCOTT

## The Simple Life Influence Which Developed an Eminent Authoress as Narrated by a Kinsman

BY WILLIAM PENN ALCOTT



Louisa May Alcott as a Girl

IN this article we can note little more than some of the influences under

which an eminent authoress was developed. Mrs. E. D. Cherrey's excellent biography is in print, also many sketches of my kinswoman's life. Thus I am released from general details.

Our subject was fortunate as to parentage. Her mother, Abba May, was city-born, descended from some of the noblest historic families of Boston, such as the Sewalls and Quincys. Her father was of country-birth, coming from sturdy Connecticut farmers, in whom was the strength of their native hills. Both parents were vigorous in body and mind. Of the father I may write at another time. The mother was a woman of domestic tastes, of eminently practical piety, of great tact and wisdom, and remarkably loyal to her husband in the great trials of their earlier years.

Four daughters lived to womanhood: Anna Bronson, born in 1831; Louisa M., who first saw the light at Germantown, Pa., November 29, 1832; Elizabeth Sewall, 1835; and Abba May, 1840. These are respectively Meg, Jo, Beth, and Amy of "Little Women" and other stories. Anna was quiet and domestic, her mother over again, and in 1860 married John Pratt, a Concord farmer of noble life, the son of Miniot Pratt, the horticultural and botanical leader at Brook Farm. Two sons were

born to Anna. With a cousin, now in Switzerland, of all the family, these "Little Men" alone survive,—Frederick, who lives in the Thoreau-Alcott, and John, whom Louisa formally adopted.

Mr. Pratt died in 1870, and Anna did not long survive Louisa. Beth, a frail, sweet girl, first broke the family circle at the age of twenty-three. May, as the youngest was usually called, early developed strong artistic tastes, and was enabled by the generosity of Louisa, when reaping golden harvests, to study painting in Paris and London, where she attained high honors for one so young, even Ruskin complimenting her for her success in copying masterpieces of Turner.

In 1878, May was married to a Swiss gentleman of refined and artistic tastes named Nieriker. "Little Lulu" was given this young couple the next year, but the mother sacrificed her own life, and soon the little girl came to her aunt Louisa to be a comfort for her remaining years. The aged mother rested from life in 1877; Louisa and her father, in 1888.

As to their home, the family removed to Boston in 1834, and in 1850 to Concord, twenty miles northwest, where they dwelt most of the years remaining. After residence in "Meg's Cottage," and other tenements, they were aided to purchase the "Hillside" in 1845. Three years later, work opened to the parents in Boston, and soon the "Hillside" was sold to Hawthorne, who enlarged and renamed it. They owned and inhabited the "Orchard House"





Alcott's "Hillside", Afterward Hawthorne's "Wayside"

adjoining, or "Apple Slump," from 1858 to 1878. The "Thoreau House" was bought for Anna's family about this time, and there Mr. Alcott and Louisa found their last home.

This is the skeleton of a family life unusually eventful, unusually filled with failure and success, love, loyalty, beneficence and victory. Devotion to one another's happiness and comfort was most marked. As we shall see, it was love for these dear ones that spurred on the pen of Louisa Alcott to win the fortune which she dreamed should be hers. Indomitable "grit," a deep faith in God's personal care for her, with a keen sense of His presence in nature, and gratitude for all success, were among her characteristics. The home education contributed greatly to her success. Her mother took great pains to train her moral character and her manners, even in little things, often writing notes to her in which with great tact she hid her suggestions under expressions of affection. Louisa never attended a public school, and for but little time, a private. Her father, with occasionally a governess, was her

teacher as well as her sister's. He gave time and study and all the fruits of a long experience as teacher and educationalist to these children. He played with them upon the floor. He made their fun instructive and their study amusement. So soon as able, he had each keep a journal. He prepared written or printed exercises for their daily use. Louisa owed her facility with the pen and her powers of natural and apt expression largely to her father. Bronson Alcott never supported his family by his own direct earnings, but he brought great pecuniary wealth to the household in its later years by this education of his children.

Inheritance, example, training brought the love of the best books and familiarity with the masterpieces of literature. Mr. Alcott was a lover of nature and of gardening; the children had the same taste. Concord, with its varied scenery, its beautiful rivers and meadows, its wooded hills coming down to the back doors of the "Hillside" and the "Orchard House," its pedate violets carpeting large areas with dense bloom, its sandy woods, dry and warm even in winter,



is an ideal place to develop the Thoreau nature. Such influence in the home and about it, helped educate this authoress.

She was also greatly favored in personal acquaintance with a large number of eminent men and women. In 1836 Ralph Waldo Emerson made his permanent home in Concord. Bronson Alcott, having become intimate with him, soon moved to the same town. Emerson was always, in every sense, a near neighbor. Louisa almost worshipped him. He was her Goethe, and she, his Bet-tina. Theodore Parker gave her much encouragement through her earlier struggles. She says: "To him and R. W. E. I owe much of my education. May I be a worthy pupil of such men." The gifted Margaret Ful-

ler was intimate with the family and also Elizabeth Peabody, Wendell Phillips, Garrison, Channing, Thoreau, Sanborn, and many others of the eminent she often met. Concord was her family home, but Boston was her literary home where she spent much time, and often heard and met its celebrities.

Good health was a corner-stone in this life. Till she reached maturity, Louisa Alcott knew not the taste of meat, and I suppose she never ate it. Out of respect for the father's views, the family were in practice vegetarians of the straightest sect. In their earliest years, their diet was mainly

fruit, plain boiled rice without sugar, and graham meal without butter or molasses. At Fruitlands, milk and its products, salt and spices were prohibited and I suppose were never much used in this family. On this diet, Louisa enjoyed exuberant health through all her early life, and later was enabled to overwork her brain most fearfully for a considerable period. As a girl she delighted in muscular activity for its own sake. Her mother wisely encouraged this, and cared not if she were called a "tom-boy." Till quite

mature she loved to run and to climb trees, and rarely found a mate of either sex who could excel her. Always she was fond of walking long distances like her father. In her diary for May, 1859, she says: "Walked from C to B, one day, twen-

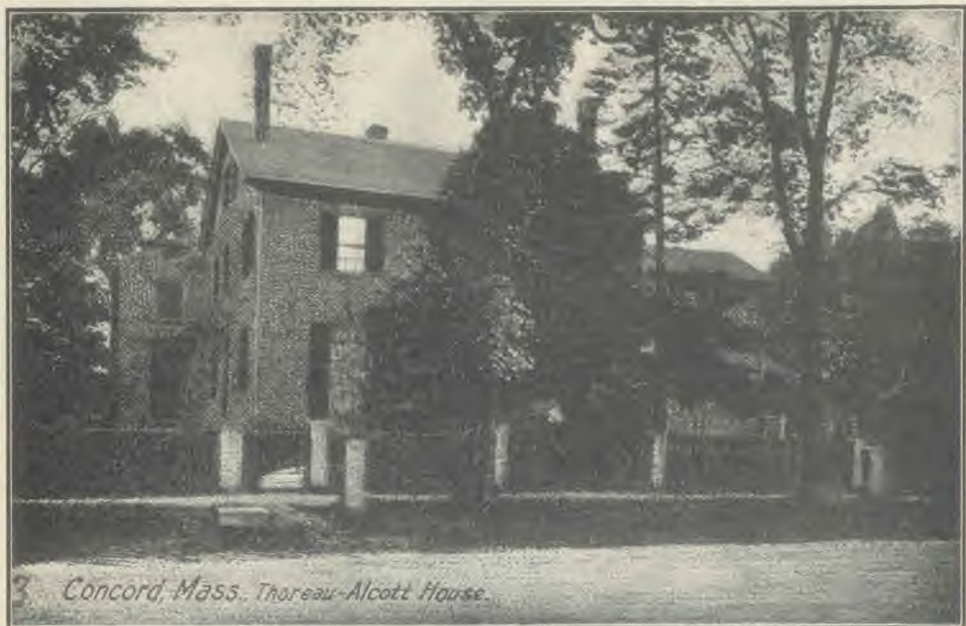


Orchard House.

ty miles in five hours, and went to a party in the evening. Not very tired. Well done for a vegetable production." Without this foundation of physical vigor she could never have won the moral and literary victories of her life.

One more influence is to be noted: It is remarkable how often poverty has "its finger in the pie." So was it here. For a time the father's schools paid him. Then his ideas and ways were too radical for Boston. But he boldly defied society and started upon the fatal Fruitland experiment. In that even money was tabooed, and thereafter, as if marked, he always found it





difficult to earn or keep a dollar. This experiment left the family utterly bankrupt, and almost friendless. "Let them leave their folly," the world said.

For years Louisa describes themselves as "The Pathetic Family." After these experiences she always pitied and helped as she could the Silent Poor. Emerson, their good Providence, would often call and somewhere would drop a generous bank note. A few relatives and friends remained true and helpful, saving the family from utter despair. Although our heroine was always mirthful and loved a joke, there is usually in her writings a background of pathos which causes them to touch all hearts. She had been baptized in the waters of sorrow.

These were the conditions of Louisa's girlhood. In deep affliction she said to herself, "I must earn money. My noble mother and my good father and my sisters shall not always suffer thus." At eighteen she began to teach, but, singularly she had little gift or fondness for

this. She preferred needle-work or even housework, and was proud to bring home two dollars a week, as "second girl," and at one time thirty-four dollars. After many disappointments, often very bitter, she received five dollars for a story and felt richer than in later days over many times as much for the same labor. Money for the family was her chief aim for years. Gradually a higher ambition, so called, asserted itself. But after her dream was fulfilled and she was supporting her dear ones, almost in luxury, she gave most lavishly to many a needy cause or individual. Finally the goal was won. The last time I met her she told me that she had just received one hundred dollars for a story which in her girlhood no one would print. Her wealth was then considerable, but she had toiled very hard and shortened her life.

Miss Alcott's books and many of her briefer pieces had to do, in substance, with personal or family experiences.



The location was usually Concord, yet strangely enough she wrote little there. When she had work to do, she would take a quiet room in Boston, and there, without interruption, scarcely to eat or sleep, drive her pen sometimes for fourteen hours daily; and if a book were in hand, for weeks at a time. She would often plan several chapters on her bed, then scribble them down, as if copying.

In spite of vacations and trips abroad, her vigorous constitution gave way. Insomnia, indigestion, nervous debility, much suffering, a private sanitarium, seclusion, temporary improvement, a grave brain trouble, unconsciousness,—then the quiet end March 6, 1888. Such is the story of her last days. Her biographer says: "Whether it would have been possible for her to have rested more fully, and whether she might then have worked longer and better, is one of those questions which no one is wise enough to answer. Yet the warning of her life should not be neglected, and the eager brain should learn to obey the laws of life and health while it is yet time."

Louisa Alcott was willing to pay this price. She desired to live longer,



Louisa May Alcott in Later Life.

only to lay her father to rest. But without her knowledge, he preceded her a few hours. In death they were not divided. At Sleepy Hollow Cemetery, near their country home, the Alcott lot is found and her grave. Before a modest stone with only "L. M. A. 1832-1888" upon it, we lay the humble token of our admiration and our gratitude.

## "I Thank Thee"

BY CLARA LOUISE STRONG

I thank Thee for the failure sore  
That followed that weak pride of mine,  
But pray that I may fail no more  
Since from this hour my will is Thine.

'Twas not that Thou wouldst grieve thy child:  
I know full well thy loving heart;  
But storms and sorrow tempests wild  
Teach one to "choose the better part."

I thank Thee for the hopes that lie  
All crushed and withered on the ground,  
And for each sadly broken tie  
Since through all this Thy way I found.

Then let the treacherous billows roar,  
And all around me rage the sea.  
Now I am anchored fast to Thee,  
Their power I shall fear no more.



## BARCLAY OF URY

Up the streets of Aberdeen,  
By the kirk and college green,  
Rode the Laird of Ury;  
Close behind him, close beside,  
Foul of mouth and evil-eyed,  
Pressed the mob in fury.

Flouted him the drunken churl,  
Jeered at him the servant-girl,  
Prompt to please her master;  
And the begging carlin, late  
Fed and clothed at Ury's gate,  
Cursed him as he passed her.

Yet, with calm and stately mien,  
Up the streets of Aberdeen  
Came he slowly riding;  
And, to all he saw and heard,  
Answering not with bitter word,  
Turning not for chiding.

Came a troop with broadswords swinging,  
Bits and bridles sharply ringing,  
Loose and free and froward;  
Quoth the foremost, "Ride him down!  
Push him! prick him! through the town  
Drive the Quaker coward!"

But from out the thickening crowd  
Cried a sudden voice and loud:  
"Barclay! Ho! a Barclay!"  
And the old man at his side  
Saw a comrade, battle tried,  
Scarred and sunburned darkly;

Who with ready weapon bare,  
Fronting to the troopers there,  
Cried aloud: "God save us,  
Call ye coward him who stood  
Ankle deep in Lutzen's blood,  
With the brave Gustavus?"

"Nay, I do not need thy sword,  
Comrade mine," said Ury's lord;  
"Put it up, I pray thee:  
Passive to His holy will,  
Trust I in my Master still,  
Even though he slay me.

"Pledges of thy love and faith,  
Proved on many a field of death,  
Not by me are needed."

Marveled much that henchman bold,  
That his laird, so stout of old,  
Now so meekly pleaded.

"Woe's the day!" he sadly said,  
With a slowly shaking head,  
And a look of pity;  
"Ury's honest lord reviled,  
Mock of knave and sport of child,  
In his own good city!

"Speak the word, and, master mine,  
As we charged on Tilly's line,  
And his Walloon lancers,  
Smiting through their midst we'll teach  
Civil look and decent speech  
To these boyish prancers!"

"Marvel not, mine ancient friend,  
Like beginning, like the end;"  
Quoth the Laird of Ury:  
"Is the sinful servant more  
Than his gracious Lord who bore  
Bonds and stripes in Jewry?"

"Give me joy that in His name  
I can bear with patient frame,  
All these vain ones offer;  
While for them He suffereth long  
Shall I answer wrong with wrong,  
Scoffing with the scoffer?"

"Happier I, with loss of all,  
Hunted, outlawed, held in thrall,  
With few friends to greet me,  
Than when reeve and squire were seen,  
Riding out from Aberdeen,  
With bared heads to meet me.

"When each goodwife, o'er and o'er,  
Blessed me as I passed her door;  
And the snooded daughter,  
Through her casement glancing down,  
Smiled on him who bore renown  
From red fields of slaughter.

"Hard to feel the stranger's scoff,  
Hard the old friend's falling off,  
Hard to learn forgiving:  
But the Lord his own rewards,  
And his love with theirs accords,  
Warm and fresh and living.



"Through this dark and stormy night  
Faith beholds a feeble light  
Up the blackness streaking;  
Knowing God's own time is best,  
In a patient hope I rest  
For the full day-breaking!"

So the Laird of Ury said,  
Turning slow his horse's head  
Towards the Tolbooth prison,  
Where through iron gates he heard  
Poor disciples of the Word  
Preach of Christ arisen!

Not in vain, Confessor old,  
Unto us the tale is told  
Of the day of trial;  
Every age on him who strays  
From its broad and beaten ways,  
Pours its sevenfold vial.

Happy he whose inward ear  
Angel comfortings can hear,  
O'er the rabble's laughter;  
And while Hatred's fagots burn,  
Glimpses through the smoke discern  
Of the good hereafter.

Knowing this, that never yet  
Share of Truth was vainly set  
In the world's wide fallow;  
After hands shall sow the seed,  
After hands from hill and mead  
Reap the harvest yellow.

Thus, with somewhat of the Seer,  
Must the moral pioneer  
From the Future borrow;  
Clothe the waste with dreams of grain,  
And, on midnight's sky of rain,  
Paint the golden morrow!

—Whittier

## CHILD SLAVERY IN SOUTH CAROLINA

ACCORDING to the *Woman's Tribune*, 80,000 children are employed in the cotton-mills of South Carolina who receive as compensation only twenty-two cents a day. They are required to rise and begin work long before daylight, have only half an hour at noon, and live under the most miserable conditions. It is stated that the average child lives only four years after entering the mills. Many die of pneumonia, and many are injured by the machinery.

It is indeed surprising that such a state of things should be tolerated in a civilized country. In the cotton-mills of Mexico the writer found some years ago the same evils existing, and was not surprised that in a country which is only just emerging from barbarism into civilization, such inhuman practices should be tolerated; but in a land of enlightenment like the United States, with all the centuries of civilized in-

fluences behind us, it is a marvel indeed that public sentiment does not assert itself in such a manner as to compel the monsters who are guilty of such crime to cease their traffic in human flesh. It would seem to be great inconsistency for us to be sending missionaries to the heathen and appointing commissioners to investigate the condition of things on the Congo when atrocities of this sort are being perpetrated in our own land under our very eyes. As an eminent statesman not very long ago said, "The great problem at the present time is not how to civilize the heathen, but how to get heathenism out of civilization."

Know whate'er  
Beyond its natural fervor hurries on  
The sanguine tide; whether the frequent bowl,  
High-seasoned fare, or exercise to toil  
Protracted, spurs to its last stage tired life,  
And sows the temples with untimely snow.

—John Armist.



# HYGIENE IN JAPAN

BY MARIA L. EDWARDS



A Japanese Home with its Health Inspiring Environments

THE past few years Japan has rapidly been taking her place among the important nations of the world, not because of her vast and thickly populated territory,—for Japan is but little larger than California, with about 48,000,000 people,—but because of her ability to think and to execute, as shown in her educational standard, the careful work done along scientific lines, and especially in the record she has made during the recent war with Russia in patriotism, courage, and perfection of detail. She has also demonstrated that during war it is possible for the bullet to cause more deaths than preventable disease in quarters.

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The question has often been asked—How has this been possible? It has also often been answered in the public press by different observers who have told us that long before the war began, Japan had made extensive preparations in the establishment of the Red Cross Hospital system with stations in every part of the empire; of hospital ships; of storerooms well stocked with everything necessary, and of institutes prepared for the study of infectious diseases and the control of preventable diseases. When the activities of war had begun, the food question was carefully guarded; surgical work was avoided on the field as far as possible;



medical officers held high rank and were everywhere guarding against contaminated food and water, lecturing the men in camp on sanitation and hygiene, about clothing, eating and drinking, bathing, and even the paring and cleaning\* of the finger nails to prevent the danger of bacteria. As a result of these timely precautions, Japan wasted no time treating thousands of intestinal and contagious diseases.

And what was true of the carefulness and vigilance of the medical officers toward the army during the war, is also true, of the efforts of the health officers of the different cities to prevent the spread of diseases at all times. A person with typhoid fever is not allowed to remain in his home, but must be immediately sent to a hospital where wards are reserved for that special disease. Following investigation of every case of contagious or infectious disease where a patient had not been removed from his home, the health officers were on hand to do faithfully the work of fumigation.

An instance is told of an American missionary who had lived in that country about seven years. One member of his family had tonsilitis, and when the disease was over, he disinfected his home with the aid of an atomizer which he happened to possess. All of his efforts availed him nothing, for in due time the health officers came and went about their work in the usual methodical and thorough manner, even to the careful fumigation of the atomizer.

While visiting the hospital for the asane in Tokyo, I noticed that in every instance where the accompanying physician or I had touched a patient, the nurses were on hand with water, soap, a disinfectant solution and towel to thoroughly cleanse our hands before

passing out of that ward. When we left the tubercular ward, not only must we have our hands cleaned, but our clothes sprayed with a disinfectant solution, special attention being given to our feet and to the buttons on our clothing.

The Japanese as one sees them on the street look robust and strong, especially the men and boys. The muscles are so well developed that fatigue seems out of the question. A corpulent person is rarely, if ever, seen. The jinrikisha man can run for miles without stopping. We timed the three men who were taking our party of three to the station, and they ran the five miles in thirty-five minutes, without stopping. The postmen, delivery boys, and newsmen all run while at their duties, and with such wonderful ease that they evidently prefer it to walking. It really seems to be a pleasure to them. The practice of running is acquired while in school. At all the public schools they conduct out-of-door gymnasium exercises, which are carried on under large, flat roofs made of from seventy to one hundred square feet of woven bamboo, and supported by posts. Under this shelter from the sun hundreds of children can exercise at one time. The smaller children spend a large part of their time in drilling. The gymnasium teacher is at work all day with the pupils of different grades. The exercises consist of marching, drilling in soldier style, and of running games. The older ones have wand drills and simple dancing steps taken to music which is furnished by an organ taken out-of-doors for the occasion.

One of the running games that the children entered into with an enthusiasm almost beyond their years was this: The drill master arranged them in two equal rows on opposite sides of the



pavilion. He then called two children, one from each row, to a point near the center of the grounds and handed each of them a flag, and placed a ball in the hands of child No. 1, the head of each row. When he gave the signal, No. 1 from each row ran as fast as he could to the child in the center who was of his row and exchanged the ball for the flag and hurried back to his place handing the flag to No. 2, who in turn ran as fast as he could to exchange the flag for the ball at the center, and returned to his place handing the ball to No. 3, who took, it and ran for the flag and so on down the line—to see which row would get through the series of changes first. As the game progressed, the enthusiasm would nearly equal that of the spectators of a football game.

Another similar game was to have the members of the two rows take the flag by turn and run in opposite directions around the drill grounds and upon taking their place in the row again, hand the flag to the next one, and as before see which one would first accomplish the task. This fleet running and close application to business that they might quickly and accurately per-

form their task, was one of the most interesting sights that I saw while in Japan. It certainly proved of advantage to them later in life. When I discovered the work being done in the out-of-door gymnasiums, there was no more marvel that the jinrikisha men, postmen, and newsmen were so expert at running.

*Ventilation and Heat.*—"The simple life" comes as near being lived in Japan as it does anywhere. The homes are

so arranged with sliding doors at the front and back that when wide open, as they are all day, the air can circulate freely—not even a screen to prevent—because there are no flies and no need for screens. Whatever the work of the family,—basket-making, preparing rice, baking cakes, etc.,—it is done outside or in the so-called shop, which is also wide open. If the housewife



A Perfect Picture of Health

is doing her washing, she takes the tub on the ground in front of the house, and squatting down beside it, washes out her clothes with her hands, taking them to the nearest public hydrant or well to rinse them. As this work is carried on, each one seems intent on seeing and knowing all that is going on.

As soon as the children are awake,



they are out-of-doors. If they are too small to walk, they are tied to the back of a larger child or grandpa or grandma. In this position they seem happy and contented. It is said that a Japanese baby never cries, but I am sure that that can not be true, because exactly the same sounds that babies make in this country have been heard coming from their direction. But they do seem remarkably contented and happy tied in position on the back. They are fastened in place by a piece of cloth three or more yards long and twelve inches wide (the regulation width of Japanese cloth). It is first placed across the back of the child and under its arms, then the carrier dextrously swings the little fellow in place and brings the ends over her own shoulders, crosses them in front of her chest, and carries them around under her arms and around the baby just above the knees, crosses them and brings the ends back around her body and ties them in front at her waist. From this

*(Concluded next month.)*

position the little creature can watch the games of the children, and seemingly take as much delight in them as do the older children. They often fall asleep and the games continue. To be sure, their heads bob around as their carriers run and play, but that seems to do them no harm. They are thus continually in the open air. When the weather is cooler, the baby is not left inside, but is tied on just the same, and a warm quilted kimono is put on over baby and all, so that the one garment serves for this purpose.

At night the ventilation is not so good as during the day, because for fear of robbers, the sliding doors are closed and securely fastened, and I fear that the oiled paper which serves as glass does not admit much air. Many homes are still further protected by solid wood doors which are firmly fastened in place at night, thus making the entrance of air practically impossible.



A Living Room with Open Shoji



# DAME NATURE'S BROOM



Monk's Head, Garden of the Gods.

## A Reflection

BY

WINIFRED BENNETT

A DESIRE to locate some of our resident winter birds had taken me far afield. All afternoon I had struggled along in the face of a boisterous wind, that had blown my hat awry, disarranged my hair and filled my eyes with dust. Now, while I fumbled for a latch key at the house door, this same rude wind gave me a last patronizing slap on the back and slammed the door at my heels.

"Oh, dear!" I exclaimed, "Why must we have such windy days?"

The small boy of the house looking at me, in the very superior fashion of one with great knowledge, said:—

"Don't you know that this is old Dame Nature's sweeping day and the wind is her broom?"

Why, certainly, how stupid of me to forget that this was only a part of the great dusting and sweeping process that goes on more or less continuously all the time. This atmosphere that surrounds us is a most wonderful thing, constantly changing and shifting, bringing us warm days and cold days, days of cloud and sunshine, of terrible storm or calm and so, either directly

or indirectly, acting upon the earth and all its life.

Even the lightest breeze will carry dust particles, and a fair wind can carry sand grains some distance. No more notable record of the great distances to which such materials may be carried, is known, than that following the eruption of the volcano, Krakatau, in 1883, when great quantities of ashes and dust, thrown into the air by the eruption, were caught in the upper air currents and carried thousands of miles across the sea to be deposited on distant continents. In dry regions such as the deserts of the West, there is a constant shifting of the soil due to the greater sweep of the wind and the lack of vegetation to hold the soil together. The same phenomena take place on all shores of oceans and large lakes, where the beach sand is heaped up in ridges called "dunes." Under certain conditions the shifting of these dunes may cause considerable damage.

Still another kind of work is done by these sand-laden winds. As they are hurled against the face of rocks, the rocks are worn away and carved into





fantastic shapes. Tall columns with a cap rock resting horizontally across the top, or mushroom-like rock forms, are the result of this wind erosion. Some, notable examples are to be found in the region called the "Garden of the Gods."

While these are the effects upon the earth itself, the effects upon life are equally great. An old lumberman pointed out to me the result of a great wind years after its occurrence. For a distance of twenty miles we could trace the mile-wide swath through the forest. Not a tree had escaped. But as compensation for this wanton destruction, think of the millions of plant seeds that the winds distribute season after season. Before the seed is even a possibility, the winds scatter the pollen of the trees. Our cereal crops are dependent upon the wind for the fertilization of their seeds, and all mankind is in turn dependent upon these cereals.

When we attempt to enumerate the more indirect effects of the atmosphere upon the earth and its life, we open the inexhaustible subject of Meteorology. Let us consider the question of evaporation. When the wind blows, this process is very rapid as every housewife knows who ever hung a washing upon a line. Just as the clothing is dried out, so lake, river and

ocean waters are evaporated more rapidly when the air above them is in motion. This increased evaporation means increased rainfall, though not necessarily over the same region. Temperature also exercises a direct influence upon the activities of the atmosphere. In high mountain regions the variation in temperature between day and night is sufficient to cause breaking off of great masses.

It may seem a considerable leap from the small particle of dust to the granite blocks weighing hundreds of pounds, yet both are the result of "Dame Nature's broom"—the wind and its mother body,—the atmosphere.





# DANGEROUS PATENT MEDICINES

## A Few Established Facts about Some of the Most Injurious of Advertised Nostrums

**H**UNDREDS of deaths occur annually as the result of patent medicines. Thousands become addicted to the alcohol and opium habits by the use of drugs containing these poisons.

**PERUNA** (sometimes *Pe-ru-na*), which is one of the most dangerous and widely advertised nostrums, contains 28 per cent of alcohol. In a circular to Indian agents and school superintendents in charge of agencies, issued by the Department of the Interior Office of Indian Affairs, Washington, D. C., Aug. 10, 1905, the sale of Peruna was absolutely prohibited on account of the alcohol which it contains. The sale of Jamaica ginger to Indians was also forbidden for the same reason.

**HOSTETTER'S STOMACH BITTERS.**—This nostrum contains 44.3 per cent of alcohol, which is nearly as much as ordinary whisky.

**PAINE'S CELERY COMPOUND** is another alcoholic nostrum, which is often used as a substitute for whisky. It contains 21 per cent of alcohol.

**CHAMPAGNE** contains about 9 per cent, **CLARET** 8 per cent, and **BEER** 5 per cent of alcohol, from which it readily appears that the drugs mentioned are much more intoxicating than beer or wine.

**ACETANILID.**—This is a highly dangerous drug, the effect of which upon the heart is often depressing to a fatal extent. Many cases of death from acetanilid and other nostrums containing this cheap but dangerous poison are being constantly reported. The following well-known proprietary remedies depend chiefly upon acetanilid for their

effects, and hence are all capable of producing fatal results:—

Orangeine,	Bromo-Seltzer,
Ammonol,	Salacatin,
Anti-Headache,	Dr. David's Headache
Royal Pain Powders,	Powders,
Phenalgin,	Miniature Headache
Cephalgin,	Powders,
Megrimine,	Antikamnia,

and practically all of the drug-store-vended "headache cures" and "anti-pain" remedies.

A dog in Illinois died immediately on swallowing some samples of headache powders.

**COCAINE.**—This is another drug the use of which produces most direful effects,—mental, moral, and physical. A large number of popular remedies contain it in considerable quantities. It is the chief ingredient of many popular catarrh remedies, among which may be named Birney's Catarrhal Powder, Dr. Cole's Catarrh Cure, Dr. Gray's Catarrh Powder and Crown Catarrh Powder. The Board of Health of the State of Illinois sometime ago analyzed these catarrh powders, and finding their dangerous composition, secured the passage of a law forbidding their sale; but their sale is still going on in many parts of the country with the result that many hundreds of lives are being wrecked by the cocaine habit.

**OPIUM.**—Mrs. Winslow's Soothing Syrup, Kopp's Babies' Friend, and many other similar remedies have been responsible for many deaths, and in thousands of cases have laid the foundation in early infancy for the opium or alcohol habit in later years.



# SIGNIFICANT HEART RECORDS

## The Effects of Alcoholism and Drug Taking as Traced on Paper by the Overtaxed Heart Itself.

BY T. D. CROTHERS, M. D.

NARCOMANIA is a new term which describes a craze for relief from pain and discomfort. It is a craze for narcotics to cover up and drown this suffering and pain. The man who over-eats and is poisoned by toxins in the blood and the one who overworks and neglects to sleep properly, are its victims. Or, perhaps it is one who is harassed continually by care and worry in the frantic effort to attain wealth and secure position, and who works his body to its utmost limit, saying that he will rest by and by. Such persons suffer from exhaustion, weariness, discomfort, insomnia, indigestion and a great variety of pains and aches that are simply signal flags of danger. By accident they find relief in a patent medicine, or in a prescription from a physician, or possibly in the thoughtless advice of an associate; alcohol is the basis of all these medicines; it covers up the pain signals, deceiving the victims with the thought that they are achieving health.

Later spirits fail or are required in such large doses that their danger is recognized; then comes opium, morphia, cocaine, chloral and other narcotics, each one covering up the danger and again deluding the mind with false promises of health.

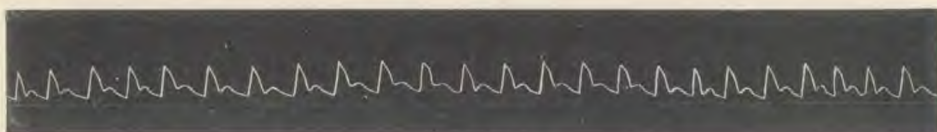
Only the heart is not deceived. The good or ill results of these drugs fall most heavily on it. In health it should beat from 70 to 80 times a minute, but

under the influence of spirits, it goes up to 100 and then drops down to 60 or less. Alcohol whips up the heart to the highest speed. Like forcing a horse into a run until he is exhausted and falls back to the slowest walk, this continued stimulation of the heart's action, forcing the blood current to its highest speed, is followed by exhaustion and slowing up to a minimum degree. This continuous driving of the heart to its highest speed and then allowing it to fall down to the lowest pace, can be registered and shown on paper. A little instrument called the sphygmograph traces this action on a blackened paper, and shows every pulsation and beat of the heart. It is not a new instrument; it has been used a great many years, but has never been very popular with physicians because of the time and skill required to handle it. It is comprised of a delicate spring held in a frame and pressed down over the arteries of the wrist. Attached to the spring is a needle moving up and down and a little clock work driving blackened paper under the touch of the needle. The needle records every impulse of the heart, and tells whether it is moving too slowly or too rapidly, or whether the current is feeble and with little force.

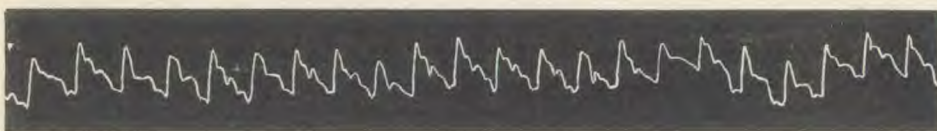
I select some tracings showing conditions that are very common and should approximately be the same in health. This is the heart's record of a



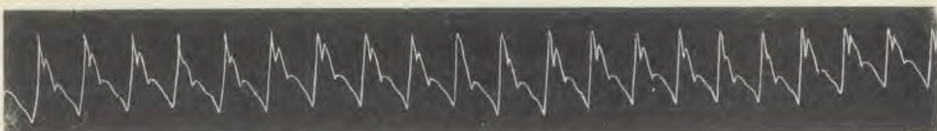
healthy man who does not use tobacco or spirits, and who lives outdoors a good deal of the time and takes proper exercise:—



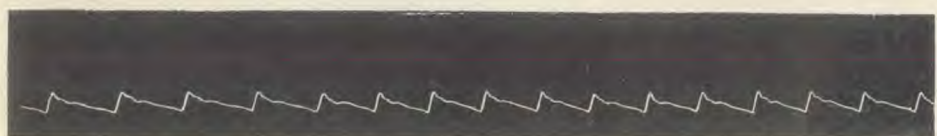
The next is the tracing of a man who works hard during the day, and for his sleeplessness at night, is obliged to take spirits. Note the high tension in the curves and the general feebleness of the stroke, with nervous tremors. It is evident that the heart is rapidly wearing out and the uniform activity is breaking up:—



Following this is the tracing of a man who when weary from overwork, in the middle of the day took a large glass of whisky. This was taken twenty minutes after. Note the rapid heart beats and the quivering motion as the blood dashes through the valves. It is probably beating over 100 times a minute:—



Three hours later another tracing was made. Note how feebly the current is driven; consider how imperfectly the heart must be nourished from the fact that the blood current is forced so languidly. Suppose another glass of spirits is taken, the heart starts off again at a rapid pace, then finally falls down and is more exhausted. This is the record of that condition:—



After a time the doors between the two cavities of the heart become thickened and diseased, and the blood current is not shut off, but flows back again giving these strange double curves. Note how feeble and weak the movement is. This is called valvular disease, from which the patient dies suddenly:—





Should the patient resort to opium to cover up the pain and exhaustion, the following would be a record of the heart's action. There is a certain uniformity in the movements, but the tension is low, and the curves are feeble:—



Later the person makes a great effort to abandon the drug, and it is finally taken away, and this is the record of the heart in the feebleness and exhaustion which follows from its removal:—



Note how weak and slow the impulse is; like a tottering old man, it barely moves. The story of its exhaustion and debility is seen at a glance. Later it recovers, but it is doubtful if the heart ever is the same in its uniform action. The great monster engines on the railroads are kept at a uniform pace, and when pushed to their extreme limit, then slowed up, the strain is so great that the machinery is quickly destroyed. How dangerous it is to treat the heart in this way. The spirit drinker and the drug taker are destroying their hearts, and this little instrument gives a permanent record of the damage done. Heart disease, heart failure, heart collapses, and apoplexies are direct results.

## Cold Storage Dangers

### Investigation of Effects upon Eggs, Meats, etc., Reveals Interesting Facts

DR. H. W. WILEY has been investigating the effects of cold storage upon eggs, meats, and other foodstuffs. He has found that meats of all kinds deteriorate rapidly in cold storage. He pronounces meat which has been in cold storage more than three months to be entirely unfit to eat, but states that eggs deteriorate much more rapidly than does meat. The result of his investigations will doubtless be to liberate and put in the hands of the public scavenger enormous quantities of eggs and the decaying carcasses of beasts of various sorts which have been confined in cold storage for indefinite periods. Dr. Wiley says the contents of many cold storage

warehouses "seem to be serving life sentences, with no commutation for good behavior."

The proprietor of a cold storage warehouse in Chicago stated to the writer some years ago that there were dead ducks in his warehouse to the number of many thousands which had been incarcerated there for more than three years. The antique specimens all doubtless found burial in human stomachs without their rotten condition being discovered, through the dexterity of the experienced chef who knows how to disguise the flavor of putrescence with hot condiments of various sorts.



# THE REINDEER HERDS OF ALASKA

## A Fortunate Enterprise Established by the Government and Its Effects Upon the Natives

BY WALDON FAWCETT

ONE of the most useful branches of the United States government, the Bureau of Education, is now engaged upon an important movement for the mental, moral, and physical upbuilding of the Eskimo of Alaska. Uncle Sam is taking these natives of the north-land as his wards, much after the policy pursued with reference to the Indian tribes of the West and with promise of vastly more gratifying results. Schools have been established in various parts of Alaska, and the rising generation of Laplanders are being instructed in the branches of knowledge to be found in the white man's books.

In their dealings with the Eskimo, it early became apparent to the United States government officials that the problem of education for the natives could not be separated from the question of subsistence. The invasion of white folk into Alaska in great numbers during recent years—particularly following the development of the gold fields—not only destroyed the old tribal life of the Eskimos but in a great measure robbed them of their time-honored occu-

pation,—hunting and fishing. Therefore, any project for uplifting the Eskimos must embrace some scheme for rendering them self-supporting.

The American government officials cast about for means of bettering the economic condition of the natives, and finally hit upon a most novel scheme,—nothing less than the introduction of reindeer into Alaska with the view of creating for the Eskimo the vocation of reindeer herder and driver. Climatic conditions in the republic's most northerly possession make the reindeer the best animal helper available to man. Five-sixths of Alaska is barren in so far as agriculture is concerned, but yields as its sole vegetable product an abundance of reindeer moss which is the best possible food for those useful animals.

The employment of the Eskimo in connection with the reindeer industry also enables the natives to make them-

selves of use to the white settlers, which obviously is a desirable situation. Indeed, Eskimo owners of reindeer herds are in a position to supply the white miners, sal-



A Group of Reindeer Drivers





A Belle of the Reindeer Region

mon packers, etc., with food, clothing, and means of transportation. The reindeer is the equivalent of the sheep as regards material for clothing, and equals the horse for purposes of transportation. A full-grown animal can travel sixty miles a day drawing a man on a sledge, or a train of eight or

ten reindeer will haul a ton of freight twenty or thirty miles a day.

When the United States government decided that the salvation of the Eskimo was to be found in the fostering of the reindeer industry, importations of reindeer were made from Siberia. Only a few hundred were brought to Alaska, but such is the rapidity of natural increase that there are now more than 11,000 reindeer in Alaska. Young Laplanders who prove themselves capable and trustworthy by five years apprenticeship at a government reindeer station—during which time they learn the English language—are granted the loan of one hundred reindeer. The equivalent of these animals in number, age, and sex is returned to the government herd a few years later, but the young Eskimo retains as his own the increase of the herd, and as the animals are valued at from \$30 to \$50 each, the government has provided him with a very comfortable capital with which to begin business on his own behalf. Uncle Sam is reaping benefits from this novel undertaking aside from the general benefit conferred upon the Eskimo, for native owners of reindeer teams are now acting as contractors for carrying the U. S. mails in regions where such service was previously impossible.



Reindeer Herd





GEORGE WHARTON JAMES AND DR. KELLOGG •

From a photograph taken in front of the GOOD HEALTH office when  
Mr. James was in Battle Creek several weeks ago



# ONE MAN'S INFLUENCE FOR GOOD

## An Observation, Showing What a Single Individual's Conscientious Interest and Example Accomplished in a Great Corporation

BY GEORGE WHARTON JAMES

(Written Especially for Good Health)

FEW men of position, comparatively speaking, realize the influence for good or evil they unconsciously or consciously exert upon the subordinates who come under their immediate direction.

I have before me now a man of Scotch-Canadian birth, with all the stern, Puritan instincts of a devoted follower of John Knox, and yet full of the red blood of active, modern life. For many years he was the superintendent of a Presbyterian Sunday School in the city of his residence. Early in his young manhood he entered the office of a growing railway company. Soon he became an assistant general passenger agent, one of three, and he the junior; then he was promoted to be the senior assistant, and within the past few months has been appointed general passenger agent. The railroads that he administers number upward of seven thousand miles, and reach from San Francisco on the west to Mexico on the south and Oregon on the north. Naturally his office requires a large force of clerks, assistants, stenographers, etc.

For fully a dozen years I have been in close touch with this man, first merely in a business way, and then for several years in a more friendly and personal relation. I have thus been able to watch, year after year, the personnel of his numerous staff. Seldom has it been my privilege, in a life which

necessarily brings me in contact with many large employers of labor, to see so marked and positive an influence for good exercised upon those whom a man's work has brought around him. There is nothing "goody-goody" either about him or his staff. His religion is sturdy, vigorous and in a measure broad, though for himself he lives in close sympathy with the more conservative elements of his church. Though his assistants and subordinates represent every phase of religious life, thought, and relationship, they are all without exception, largely influenced by this man's high integrity, religious zeal, and spiritual insight. For, not content with seeing that they discharge aright the duties they owe to the great corporation by which they are engaged, he takes a warm personal interest in their life outside of business hours. This is not done in a cold, critical, spy-like manner, but in a true-hearted, friendly sympathetic way that makes friends of the wives of the employés. He is interested in their home life, their recreations and the like. He stimulates them and cheerfully affords help and advice, practical as well as verbal, to further their desires for good. One of them showed a talent for writing. At once he set him to work to write for a monthly magazine he had been instrumental in starting to exploit the great western world of the Pacific Coast. As the young man's talents developed, he



aided and suggested other avenues for his abilities. This quickened his intellect, and the close relationship that it engendered brought about a clearer business understanding. The result was that the younger man was soon promoted to a more responsible position, then to one still higher, and now, while still a young man, he occupies one of the most honored positions in railroad circles in the West, second only to that of the man to whom he owes so much.

Another of his assistants who had wife and family had an opportunity to improve his financial condition. It came about in this way. A large hotel was about to be opened. Its management decided to install an information department that should not only give the hotel patrons information about the hotel and the city, but about the state at large. It needed a man to head this department who had had a peculiar training. My friend was appealed to, and at once, thinking of the advancement and welfare of his younger friend, he suggested him for the position. It was accorded to him, and although thereby the railroad lost an excellent servitor for a while, the relationship between the two men was kept up in the most helpful way possible. A few years passed. The general passenger agent of one great branch of this vast railway system resigned, and when a new man was looked for, the former assistant of my friend was at once offered the position, which he now fills with honor and credit. Another assistant is one of the most prominent men in a large and influential church in the nearby university town. He is a lay reader and preacher, and I have twice heard him most successfully occupy the pulpit to the edification and practical help

of all who listened—during the absence of the regular pastor.

Still another is interested in the work of another church, and when it was in need of funds, I was personally a witness to the unselfish and wise, practical advice the younger man received from his superior to aid him in rescuing his church from a burdensome debt. I could write by the hour of the kind, helpful work of this great and good man.

In his home life he is equally to be admired. Unmarried, he lives with a married brother, who, with his wife, are devoted to him. I have been privileged often to spend happy hours in this harmonious and sweetly blessed family circle. From it the influence radiates still further, and so it will continue to radiate, for the glory of goodness is that it continues in the lives of others after one is dead; "Blessed are the dead who die in the Lord, for their works do follow them." My friend is yet alive, very much so, and with all the energy of his tireless nature is helping in the work of rebuilding the city of destiny so nearly destroyed last April by earthquake and fire; not only is he doing his own share, but his example, his precept, and his splendid courage are influencing others and holding up their hands so that they do not faint by the wayside.

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Take joy home  
And make a place within thy heart for her,  
And give her time to grow, and cherish her;  
Then will she come and oft will she sing to thee  
When thou art working in the furrows, aye  
Or weeding in the sacred hour of dawn.  
It is a comely fashion to be glad.  
Joy is the grace we say to God.

—Jean Ingelow.



# The Only Woman Blacksmith in the World



Mrs. Wilcox at Work Assisted by Her Husband

THE only woman blacksmith in the world is Mrs. Philo P. Wilcox, of College View, a suburb of Lincoln, Neb. Mrs. Wilcox is a little woman less than five feet in height and weighing scarcely 100 pounds, but she possesses wonderful strength and remarkable health. This she attributes to her diet and to the exercise she receives every day in the pursuit of her strenuous occupation. The Wilcoxes are vegetarians. They eat no meat nor condiments. They subsist entirely on cereal foods and fruits.

"If women would care more for exercise and engage in some occupation like this instead of shutting themselves up in school rooms, offices and stores, there would be less sickness among them," says Mrs. Wilcox. "If they would pay more attention to what they

eat, abstain from meats, salads, condiments and various fancy concoctions, there would be less dyspepsia."

Mrs. Wilcox does all branches of the work, repairs wagons, shoes horses and forges irons. She swings a 16-pound sledge with ease and adds to her strength the dexterity of the woman. Nor is she rough and uncouth. She is, on the contrary, refined in manner and cultured in mind. Her conversation is interesting; and she speaks in a gentle, well-modulated voice. She has been a school-teacher for five years, but declares she would much rather be a blacksmith.

She practices what she preaches, too. Her three daughters are being brought up in their mother's footsteps. One of them is an expert bicycle repairer. The others are able assistants in the shop. They go to school and take music lessons besides. Mr. Wilcox, the father, is proud of his family and thinks there is no other in the world that approaches it.

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"SOMEBODY gives the following excellent advice: 'Drink less, breathe more; eat less, chew more; ride less, walk more; clothe less, bathe more; worry less, work more; waste less, give more; write less, read more; preach less, practice more.'"

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Back of the loaf is the snowy flour,  
And back of the flour is the mill;  
And back of the mill is the wheat and the  
shower

And the sun and the Father's will.

—Maltbie D. Babcock.



# Do We Need Salt in Our Food?

BY AUGUSTA C. BAINBRIDGE

I N April, 1877, the editor of *The Health Reformer* wrote an article in that journal having the same title as that which appears at the head of these few lines. It began something like this:—

"The God who made man made also the food which he had given to this man. Knowing that the same intelligence guided the two creative acts, there could be no disagreement. The man was made for the food as truly as the food was made for the man. Then there must have been put into the food just as much salt, as well as everything else, as the man needed. Genesis 1:29 was included in the 'everything' of verse 31 that was pronounced 'very good.'"

Then followed a description of various diseases that were caused by using salt—perhaps an "overamount" in food.

If God made the food "very good," and we add salt to it, is not any quantity an "overamount"? Does not our adding salt really question His ability to make it "very good"? Will it not surely become less than "very good" when we make a change in it? When less



*From the Union Signal*  
Mrs. Bainbridge in the uniform worn during relief work for the earthquake sufferers of San Francisco

than "very good," will it work in our bodies the result He designed who made it "very good"? Do we not then hinder His purpose in thus changing the nature and taste of our food? Do we not make evil what He made good?

An apparently incurable bladder and kidney trouble had fastened itself upon me. Drugs only aggravated the diffi-



culty. Temporary relief was followed by increased suffering. In the description of diseases above mentioned, my case was clearly pointed out. As I read it over carefully a second time, the conviction came that I should discard salt. As I made the attempt, I soon learned that I must develop a new taste. This proved true beyond my expectations, for in a little while I found flavors in food wholly unknown before. Eating became more of an enjoyment because of the satisfying taste of things. This was particularly true in grains. Wheat and oats had tasted very much alike, corn was somewhat different; but now they were as separate as cherries, apples, and grapes. The legumes, particularly the beans, became new foods when I lost the idea that they needed salt. Unleavened bread, without salt, was almost a confection; now did the change stop here. The bladder and kidney trouble entirely disappeared. I was a well woman, and what a relief that brought.

Genesis 1:2 does not need any salt. Should one stray into Genesis 1:30 and eat what God gave to beasts and fowls, it might be that salt would be needed; as one remarked, no provision was made in the human body for foods that needed two chewings, hence these must be eaten with salt, or they would decay before digestion had done its work. If any one would go to Genesis 9:3 for their menu, salt would be a stern necessity. For years I had been distressed by being the possessor of a very treacherous memory; but in a year after I dropped salt from my dietary, the trouble largely disappeared. In stating this fact once to a specialist on brain and nerve action, he gave me this explanation:—

In extremely sensitive organizations,

the relation between mind and body is exceedingly close, and such a one using salt would notice the effects that others would pass by. The body naturally casts out salt when introduced with food into the stomach. Very often the food goes with it, so that the body loses the nourishment it would otherwise receive from the food, and poor assimilation is the result. The mind follows suit, and ideas introduced make little impression and are lost—a poor memory and a weak mind resulting. As long as I follow a diet without salt, I am free from the disorder mentioned; but if I use salt for any length of time, the malady returns, and remains until I again discard salt. A smoother skin and freer perspiration come with the diet of Genesis 1:29.

Is it safe to rely on that diet in times of distress or severe strain? Surely the disaster that overtook San Francisco was a test, and there were many who kept the faith. One man and his wife who were burned-out refugees went without food for two days, preferring to drink water and wait until they could get the food they honestly believed God would bless.

As for me, I took Dan. 1:8 for my pattern, knowing the temptation would be strong, but believing that the Word of God was stronger. The burden of work at home and among the refugees in Golden Gate Park was laid heavily upon me day after day, but the promise was fulfilled. My strength failed not. At one time the menu came to crackers and water, but that did not fail; and while many others who ate mixed foods of various kinds became ill or nervous, the dear Father kept me calm and strong amid all the work and the confusion.

*"Trust and Obey"* is a safe motto.



# REFORMS THAT NEED REFORMING

## A Plea for Simple, Descriptive Names for New Dishes Rather Than Confusing or Meaningless Appellations

BY D. H. KRESS, M. D.

IN sitting down to one of our modern tables spread with the many things, good, bad and indifferent, it is often difficult to know what foods to select and what to leave alone, or how to combine the various foods. The names of the prepared dishes are as a usual thing no help in the selection of a well-balanced and properly combined meal. The names of these dishes instead of being meaningless should always express their real contents. For instance, instead of calling a roast made of brown lentils, nuts, and bread a "*Vegetarian Turkey*," let us name it what it is, "*Lentil, Bread, and Nut Roast*." If onion or other flavoring is put into a roast or into soup, it should also be stated, for many are not able to use these seasonings even in the minutest quantities without experiencing uneasiness. "*Lentil, Tomato and Onion Soup*" would be a more appropriate name for a soup composed of lentils, tomato and onions than "*Mock Turtle Soup*" or some other name of no significance to the eater. On account of the many confusing names one encounters on the modern so-called reform menu, it is difficult and often impossible even for an expert in diet to make an intelligent selection or combination of foods at a meal. This is undoubtedly one of the chief reasons why a so-called reform diet so often causes fermentation or distressing symptoms. The person who is sick of a meat diet enters a vegetarian café and eats what is placed before him. That

one experiment is usually sufficient to convince him that vegetarianism does not agree with him.

We often hear the remark made, "I do not wish to eat meat, but I find bread, meat, and potatoes agree with me better than a vegetarian diet." It no doubt does and will continue to do so until some intelligence is brought into the reform diet and greater simplicity in the preparation of dishes is practiced.

When a person selects meat and potatoes and bread, he has a simple, well-balanced meal that will not as a usual thing create digestive trouble. I do not advocate a meat diet—far from it—but in spite of the fact that meat is a stimulant and contains wastes and impurities (even when free from disease), such a diet would be preferable to the free use of the many mixtures at one meal which is thought necessary by some so-called reformers in order to adopt what they suppose to be a reform diet. Breads and cream, rice and eggs, and a little fruit at the close of the meal makes a simple, well-balanced meal. Baked potatoes, nut meat, green peas, and breads form another good and substantial meal.

Bread and milk and a couple of poached eggs will do for another meal.

Granose biscuits, almonds or walnuts, and fresh fruit make another good meal. Breads, bromose, and stewed prunes or stewed figs form still another



good meal. Less cooking should be our aim.

So-called reforms in diet need *re*-forming. I have for years refused, even in my own home (although I have the utmost confidence in my wife as a cook), to eat prepared dishes without knowing their contents. It is not bliss to remain in ignorance of what we eat; it is not folly to become wise in such an important matter.

We need to study the needs of the body and to understand how to supply these needs in an intelligent manner. There is altogether too much ignorance in regard to this matter and too much haphazard eating. Come, let us be simple in our habits, and let us reform our reforms.

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## Fatigue

WHEN any large group of muscles, for example those of the legs, is set in active operation, as in jumping or running, one becomes very quickly out of breath. This is a species of fatigue. It is due to the fact that when the muscle is at work, it throws into the blood which passes through it a large quantity of carbonic acid gas, which is poison to the body, and must be hastened out through the lungs. The greater the amount of this gas thrown into the blood, the quicker one becomes out of breath, and the more rapid and urgent the breathing movements. Under the influence of active exercise the lungs are expanded to their utmost capacity by strong chest movements, which are made without voluntary effort, for the process of breathing is under the control of the higher will. The breathing movements induced by

vigorous exercise are deeper than those that can be induced by an imperative command from the nerve centers through which the automatic will controls the lungs.

If the exercise is less violent and continued for a longer time, one may not get out of breath, but after a time the muscles will become wearied, so that movement is difficult, and may become impossible. This fatigue, or exhaustion, is due, not to the using up of the supply of energy with which the muscles are stored, but to the production of certain poisonous substances which result from the muscle work, and which have the effect to paralyze the muscle. If one rests for a time, the sensation of fatigue will disappear, the fatigue poisons having been washed out by the blood. The fatiguing exercise may then be repeated.

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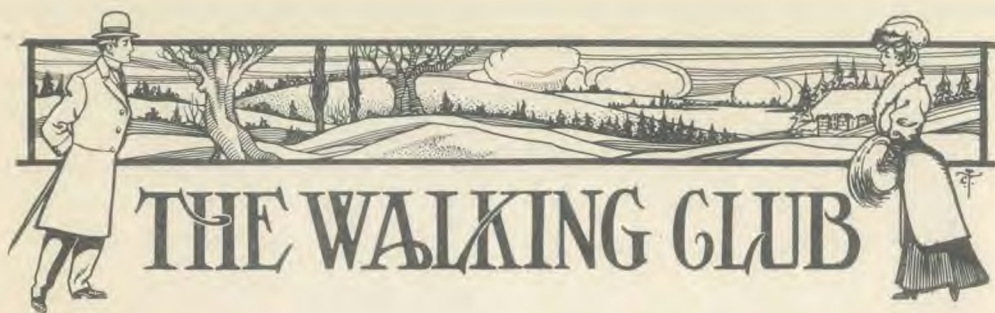
## Vegetable Mince Pie

THE following recipe has been called for frequently by readers of *GOOD HEALTH*, and accordingly is given in this number:—

- 5 cups chopped apples,
- 5 cups protose (diced),
- 1 cup prune marmalade,
- 2 cups boiled apple juice,
- 1 cup raisins,
- $\frac{1}{2}$  cup sugar,
- 1 cup meltose or molasses,
- 5 level tablespoonfuls butter.

Mix together the chopped, tart apples, minced protose, prune marmalade, boiled apple juice, raisins, butter, meltose, and the sugar. Cook gently for three hours. The quantities are sufficient for five pies.





## GET ACQUAINTED WITH THE BIRDS

### What the Health Seeker May Gain from a Study of Their Haunts and of Their Daily Lives

BY B. S. BOWDIE H

A healthy mind is the best recipe for a healthy body. If the mind frees itself from the worry of physical ills, and busies itself with something outside of the body and its ailments, a work of great value has been commenced. Especially is the value great if the field in which the mind is engaged is one of intrinsic worth.

Field studies have ever been conceded to be a most excellent mind training, not alone because of the store of knowledge thereby gained, but equally for their value as a training in powers of quick and accurate observation.

In all nature there is no field more accessible or attractive than the study of birds, not a study of mounted specimens or dried skins, nor yet of still drier books, but the making of first-hand acquaintance with our live feathered neighbors.

Cultivating an acquaintance with the birds is even more than a diversion. As to the practical value of bird study, it has taught men that birds are their friends, and not, as many of them were formerly regarded, enemies.

As to the question of what there is to do, there is a boundless work, which is too delightful to become wearisome. Cultivate the acquaintance of your nearest bird neighbors. Note the minute details of their daily lives. Some birds are permanent residents where found—that is, some individuals of a species are to be found in a given locality throughout the year. It is of interest to know whether the same individuals remain, or whether the summer residents move further south, being replaced by more northern birds.

The dates of arrival in the spring, and departure in the fall, of the summer residents, are varying to some degree, and there is always something to be learned in this respect. Another class of birds are those that come from northern summer homes to spend the winter with us. There are many others that spend the summer north of us and the winter to the south, and there is always the interesting possibility of stragglers, i. e., birds appearing unexpectedly far from their regular habitat.

The direct and indirect effect of





weather, food supply, and topographical features of the country are all objects of profitable study and are inexhaustible.

To the beginner, of course, these things will be incidental. What he will naturally seek will be to know Mrs. House Wren and Mr. Brown Thrasher by name, just as he knows Mrs. Smith and Mr. Jones. He will learn that the former occupies apartments in "The Bird House," while the latter has lately erected a summer cottage in Wildwood Grove, and there will be more interest in these things than in the social happenings of his neighborhood, because in bird life there is so much more of simplicity and genuineness.

One of the greatest charms about bird study is the constant array of surprises it holds in store. A dreary winter landscape is suddenly enlivened by the unexpected arrival of a flock of snow buntings; a pine grosbeak or a siskin comes to feed in the conifers

about the house. As the winter advances into spring, the bird lover, strolling out some day, is greeted by the first robin or blackbird. In early May he awakens some morning to find myriads of warblers where yesterday there was not the flutter of a wing. Along in summer there is no bush or tree or clump of grass or weeds but that may hold a glad surprise in the shape of the housekeeping secrets of some bird family. Fall often brings the inexplicable occurrence of birds far out of their normal range, and always the puzzling plumages of the young birds of the year.

Unfortunately men have not always recognized the true relation that birds bear to them. Early legislation regarding birds usually took the form of bounty acts, the purpose being to reduce the number of species supposed to be injurious. In this way the State of Pennsylvania paid out thousands of dollars for the scalps of hawks and owls, thus doing great harm, aside from the waste of the money raised by taxation, because of the resulting increase of vermin, the natural food of these so-called birds of prey.

To-day legislation is more in the direction of conserving the public asset that the birds constitute. There is, of course, much lingering, ignorant prejudice to be overcome. Particularly it is hard to convince most people that, with two or three exceptions, the hawks and owls, instead of being man's enemies, are among his most valuable friends. Then there is the market hunter who makes a nefarious living at the expense of the public good; the foreigner who shoots even the smallest birds for eating; the small boy and his larger cousin who shoot everything in sight for the love of shooting; finally there is persistent recurrence of the





fashion among the gentler (?) sex of wearing the feathers of wild birds for adornment; then they cease to be things of beauty, and become badges of cruelty.

There is, then, in the study of birds opportunity for the accumulation of any amount of data, much of which may be new, the forming of acquaintances that will prove delightful, a pursuit that will be most healthful and invigorating to both mind and body, and last, but far from least, a chance to take part in a great public work for the welfare of the nation in the preservation of our feathered friends.—*From the Journal of the Outdoor Life.*

ON the western sky, in a yellow line,  
 The wind of His might paints a warning sign.  
 The March clouds, torn like shipwrecked sails,  
 Drift at the will of the angry gales.  
 On crumbling logs the moss grows green;  
 The freed brook laughs the rocks between.  
 The melting snow, the sap's full tide,  
 The polished buds the young leaves hide,  
 These, with the flush on the Mayflower's cheek,  
 To dullest heart Spring's message speak.

—Sara Andrew Shafer.





## How the Body Resists Disease

### III.

BY WILLIAM S. SADLER, M. D.

#### 4. By Incapsulating the Germs.

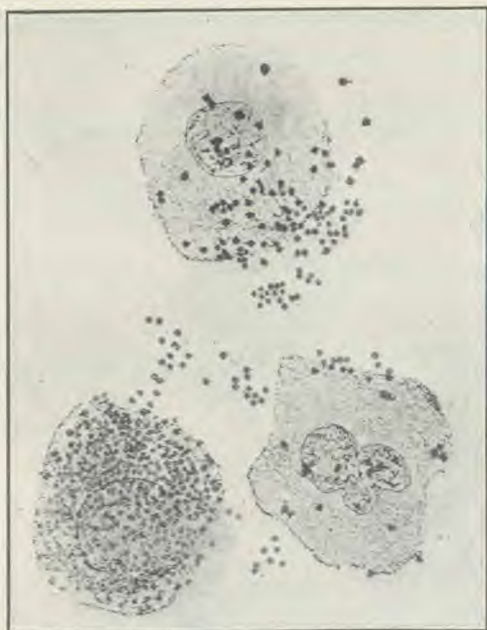
When the germ-invaders become securely lodged and firmly established in the body, and all efforts to eliminate them are without avail, then it is that a wise and wonderful process of nature begins the work of making these germs veritable prisoners. The wonderful process of incapsulation begins, by which they are soon surrounded by structures so dense and impenetrable as to effectually cut off their escape to other parts of the body, as well as to prevent their offspring from spreading on tours of further mischief-making. This marvelous process of incapsulation is carried on by means of the combined influence of a number of agencies, as follows:—

(a) *Coagulation of Fibrin.*—The circulating blood of man contains a liquid, fibrinous substance, which under the influence of certain substances, which may be produced in the blood, is caused to coagulate, just as the white of an egg hardens when dropped into boiling water. This coagulation of blood is first manifested by the formation of delicate threads, which serve as guiding strings, or we might say bridges, over which untold millions of white

blood cells, the invincible army of the interior, find their way to the seat of the struggle, and line themselves up for battle royal against the hemmed-up enemy.

(b) *The Wall of Leucocytes.*—The next step in this bottling-up process of the disease germs consists in the building of a wall about them. These little white-cell soldiers after fighting with all their energy in the struggle with the germs—a battle where many are overcome and lose their lives—line themselves up around the germs on all sides in battle array. They are found to range themselves very orderly in several layers; the leucocytes of one order occupying the front ranks, while another rank of body-defenders are lined up immediately behind, and still another order of soldiers occupy the flank. These all press together, and by utilizing the dead bodies of their fallen comrades, build up a solid, compact, and usually impenetrable wall about the disease-breeding germs. It often develops that the germs are too many in number to be thus destroyed, and so large pus cavities or abscesses may subsequently develop by the breaking down in one place of this wall which





White Blood Cells Attacking and Devouring Germs

was so ingeniously built up by our valiant little soldiers.

(c) *Digestion and Absorption.*—The question will naturally be asked, "What will become of such a colony of bottled-up germs, should the white blood cells be successful in hemming them in and walling them up?" The answer is, These same little cell-soldiers which have encompassed the destruction of their enemies, secrete from their own bodies a fluid which contains a substance similar to pepsin, and has power to literally eat its way into the germs. It actually dissolves them, and later they are absorbed by the surrounding fluids, and carried off in identically the same way that a piece of meat or the white of an egg is dissolved by the pepsin in the gastric juice of the stomach, and afterwards absorbed through the walls of the digestive tract. In this way, untold millions of disease germs may be finally disposed of, after having been overpowered in their struggle with the leucocytes.

The digestive substances thrown out from the white cells which effect this work are called alexins.

5. By **Neutralizing, Modifying, and Destroying Toxins.** These manifold changes which are wrought upon the secre-

tions of the germs, to render them less hurtful or to neutralize them altogether, are accomplished by three different processes:—

(a) *Neutralization by Antitoxins.*—

These substances are secreted by the body under the stimulus of the disease poison, and they are able to partially or completely neutralize the poison of the germs in the same way that an acid will chemically neutralize an alkali. There is a satisfying union that takes place between the two that results in the formation of a new substance which is neutral and harmless to the system.

It is on this principle that the antitoxin of diphtheria operates. It neutralizes the toxin secreted by the diphtheria germs, and thus affords almost immediate relief. It often requires a



Injecting Diphtheria Antitoxin into the Arm



number of days, sometimes a week, for the body to acquire the ability to make sufficient antitoxin to neutralize the enormous quantities of poisons which are secreted in the case of sudden infections.

Not all is known concerning the action of these various bodies but it is supposed that specific bodies must be secreted with power to neutralize the specific poisons of the various different diseases.



A tubercle in the lung, showing the areas containing germs and the wall of surrounding cells which oppose the spread of the disease area

(b) *Modification by the Liver and Other Agencies.*—The body not only eliminates poison, dilutes it, neutralizes it, etc., but it possesses means whereby it may modify many poisons, and thus render them less destructive. This work is largely carried on by the liver, which has power to actually change harmful poisons into harmless substances, and also is endowed with the remarkable property of receiving into itself large quantities of poison which may be gathered up through the portal circulation from the digestive tract, and held within its own body, subsequently changing it into a harmless sub-

stance; or, if this is impossible, doling it out into the circulation in small quantities, day by day, enabling the body to eliminate it, and thus escape poisoning from being overwhelmed at once by the whole amount.

(c) *Destruction by Oxidation.*—One great good to result from fever is that by its elevation of temperature, the oxidation or burning up of large quantities of toxins is effected. This oxidation is best promoted by a temperature between  $101^{\circ}$  and  $102^{\circ}$ . A higher temperature is no more efficacious while it results in the unnecessary destruction of the tissues of the body.

## HEALTH CULTURE

HEALTH culture is like a gold mine. You must dig for what you get, and one can not know what riches are in store for him till he is in actual possession of them. There is an important difference, however. A man can hire some one to work a gold mine for him, but he must work out his physical salvation himself. He must work his own muscles to gain strength of body, must discipline his own body to get pure blood, must develop soundness of heart and lungs by an open-air life both day and night. None of these things can be done by proxy.

Good health is a mine well worth working. A Cræsus or a Rockefeller can not buy it; but it is free for all comers. Everybody may work it who wishes.

Showers and sunshine bring  
Slowly, the deepening verdure o'er the earth,  
To put their foliage out, the woods are slack,  
And one by one the singing-birds come back.

—William Cullen Bryant.



# The Home Management of a Cough

BY KATE LINDSAY, M. D.

**S**TOP that cough!" was the imperative heading of a patent medicine advertisement of a vaunted sure-cure cough remedy. It set the writer to thinking, not about patent cough remedies, but about coughs, and to inquiring if it were not reasonable to demand at least an abatement of the coughing habit. Everywhere we see the legal notices for the suppression or regulation of the spitting nuisance, and at least three fourths of the expectorating done is preceded by and due to the coughing which dislodges the irritating exudates from throat or bronchial tubes and necessitates the spitting to expel the morbid air-passage secretion. The regulation of the spitting habit is to prevent air defilement by infectious disease germs, and also outraging scenes of uncleanness—sidewalks, floors and other surfaces covered with disgusting masses of filth.

So far as air contamination is concerned the coughing habit, especially indoors, is a far more potent agent than the spitting nuisance, for dried sputum dust subjected to the disinfecting influences of sunlight and fresh air soon loses its infectious character. But the fresh droplets of mucus expelled by coughing fill the air for many feet around the patient with an unclean mucous spray of infected matter filled

with the diseased germs of tuberculosis, pneumonia, influenza, or whatever infectious disorder the patient may be suffering from. These microbes, fresh and vigorous and not crippled by long contact with fresh air or sunlight, are much more likely to infect others than dried germs, which sooner or later are

destroyed by the action of oxygen and light. Out-of-doors this may not be so serious, but indoors, especially in church congregations, lecture rooms, operas, theaters, and other places of public gathering, where the ventilation is defective and the atmosphere full of foul gases and body wastes given off by the mass of people crowded into a limited air space, the addition of the infectious mucous spray of the coughing members of the assembly becomes positively

dangerous. In schools and even in the homes the same air contamination is taking place wherever there is a coughing inmate suffering from tuberculosis or any other infectious respiratory disorder. A number of children of a family ill at one time with whooping-cough or measles if put to sleep together in a small, illy ventilated bedroom, will be likely to have these diseases in a more severe form and be much more predisposed to dangerous complications and a fatal ending than if each had a separate room cleaned



**Stop That Cough!**

"For six years I was troubled with a severe cough every winter. A friend told me about **Dr. Buffum's Wonderful Discovery**. I took six bottles and was completely cured.

"A. H. S., Andover, Tex."

**Dr. Buffum's  
Wonderful  
Discover  
Cure**



daily and thoroughly exposed for hours to the purifying effects of fresh air and sunlight.

No doubt one reason why open-air treatment is so successful in the treatment of infectious respiratory disorders is because the patient is saved from the danger of reinhaling the infectious matter thrown off from his own body. This is a danger it is hard to impress upon the average person. I have seen tubercular subjects in an advanced stage of the disease so afraid of other cases even in the incipient stages of the disorder that they were afraid to sit at table with them or to meet them in public halls or on the street. Yet these same patients would not hesitate to shut themselves up in an overheated, badly ventilated room taking no precautions to avoid filling it with tubercular germs and infected sputum dust. No manner of reasoning would convince them that they were in more danger from the infection given off by themselves than from that of any one else nor could they be induced to believe that destruction of their own sputum and similar precautions were measures of safety more important to themselves than to any one else.

It would seem that enough reasons have been stated why coughing should be stopped or some measures taken to prevent air contamination by this habit. The question is, Can the disorder be cured or so safeguarded that the dangerous indoor air infection may be stopped or at least mitigated? In the first place, we will inquire, What is a cough? The dictionary definition is "a forcible expulsion of air through a partially contracted glottis for the purpose of removing some morbid matter from the air-passages," and Webster further adds that a cough is not a *disease* but a *symptom* of many diseased

conditions. Among these are all forms of infectious respiratory lung and air-passage disorders, as pneumonia, bronchitis, la grippe, measles, whooping-cough, croup, colds and like acute respiratory disorders, or the cough may be due to chronic constitutional disorders of the lungs, heart, kidneys or liver, or reflex from indigestion and fermentation in the stomach and bowels. Inflammation and swelling of the mucous lining of the nasal passages, polypi and other obstructions of these air channels, enlarged tonsils, even irritation from cutting teeth or from gum-boils and decayed teeth, also inflammation, abscesses or tumors of the middle ear will cause coughing. Some forms of cough are due to nervous disturbance, and many times coughing is caused and kept up by the breathing of impure air saturated with foul, irritating dust or disease germs. Air may be either too moist or too dry, too hot or too cold, but the writer has found that it is oftener an impure than either a cold or moist atmosphere that is responsible for causing coughing. Dry, hot air by extracting moisture from the mucous membranes of the respiratory passages will often cause irritation and coughing from overdryness of these surfaces.

I had been subject year after year to a so-called winter cough, when I became convinced a few years ago that this cough, like almost any other disease, must be due to some cause, and that the cause was most probably avoidable. Since then every winter has seen the coughing tendency diminish until months often pass now without even a hack. In church and other crowded places it is safest to get in a good, strong draught and on the windy side of the building where everything foul is blowing past and being carried away by a swift-flowing air current. Often



I have noted the location of the numerous cough victims in church, and almost invariably have found the chief center to be the middle aisle unless the windows were tightly closed on the lee side. On the windward side the number was always much less even with closed windows. Often not a hack or even the cleansing of a throat would be heard from this section, while the middle congregation were continually accentuating the minister's special points by more or less vigorous outbursts of coughing. They were located where the air current was too feeble to carry away the impure gases and infected spray from themselves and their fellow victims and where they were subjected to the inflow of these same air impurities from the windward part of the congregation. What wonder that the respiratory organs submerged in all this foul air should make violent efforts to cast off this unclean, irritating matter which was coming in contact with their surfaces. The coughing habit is often made worse by unconscious imitation. Let some one begin coughing in school, church or other assembly, and soon there will be a concert of barking to help him along in his earnest endeavors to disturb the peace.

Now as a cough is an evidence of something irritating the respiratory organs, some foul foreign matter which is damaging their structure or hindering their functions, the proper treatment is not the administering of some narcotic cough remedy to silence the struggle to dislodge and throw off the offending matter, but to search out the causes and remove them. The writer has often seen chronic bronchitis in children cured by a change of diet including regular times of eating, proper mastication and more out-of-door life. Cases of catarrhal croup to which many

children are predisposed can often be prevented by a light supper taken early in place of a late evening meal of indigestibles. Giving an enema when the bowels are constipated or washing out the stomach when it is full of indigestible food material will often relieve a coughing patient and procure for him a good night's rest. Dr. Northrup, of New York, demonstrated the curative effects of clean, fresh, cold air when he took the little dying pneumonia child out into the fresh, cold, winter air, where it began to breathe freer and to cough less, and finally recovered. And in our Mountain States hundreds of tubercular patients in all stages of the disease are getting relief from their hacking coughs and becoming ex-cunsumptives.

Fresh air is just as needful in the cure of influenza, acute bronchitis or a common cold as for the consumptive. When there is nasal obstruction, enlarged tonsils or any local cause of irritation, the removal of the morbid growth or unhealthy condition of the mucous surface may require a surgical operation and special treatment to the diseased member. To withstand changes of temperature and to react quickly, the skin needs toning up by cold-water bathing and exposure of the surface to cold air. Often when the cough is dry and irritating, it can be relieved by inhaling medicated steam or plain hot-water vapor, and by massaging the neck and chest, followed by a cool compress at bed time to be worn all night. Deep breathing, especially when induced by brisk exercise in open air, will do much to relieve a cough by loosening up the exudates in the air-passages, thus changing a dry to a loose cough. Mind cure will help by suppressing a cough until the matter is loose, and will save much coughing and irritation of air-passages.



# THE CHILDREN'S COOKING CLASS

CONDUCTED BY LENNA FRANCES COOPER



DEAR CHILDREN OF THE GOOD HEALTH FAMILY:—

Last month we talked about starch, its composition, and some of its characteristics. This month we will consider some of its uses and some of our foods in which it is found. Starch forms the largest portion of our foods, and its practical use in the body is to furnish us with heat and strength, which we sometimes call *energy*, in other words, to keep us warm and enable us to do work.

Have you ever felt your face or your body and then a piece of stone or marble and compared the difference in temperature or warmth? The stone, we say, is cold, but our bodies are always warm. Because this is so, we sometimes forget the wonderful processes that are constantly going on within us. Heat is always the result of a fire, although it may be so small that we can not see it. In this case we call the fire *oxidation*. Now, we are not able to see this fire that keeps our bodies warm, but it takes place in every part of our bodies. In order to have the fire, we must have fuel, and the fuel for our body fire is the food which we eat. Some of our foods produce more heat than others, but starch is one of the *chief* sources of body fuel.

Before our food can be burned to produce heat, it must go through a process which changes and reduces it all to a liquid so that it can be taken up by the body. We call this process digestion. There are certain fluids or juices in the body which bring about these changes. The first of these is the saliva, or the fluid given off by the glands of the mouth. The purpose of the saliva is to digest starch, but there is one thing strange about it, and that is that it will not digest *raw* starch, and so when boys and girls eat green apples or raw potatoes, they can not be digested until they have gone through the stomach and into the intestines. And because the starch should be partly digested in the mouth, these *raw* substances very often cause considerable trouble before they reach the intestines.



The digestion of starch is not so easy a thing as we might think for. There are five distinct juices in the process. But we can aid this work before the food enters the mouth, as part of the digestion may be accomplished by *cooking*. Starchy foods that have been thoroughly cooked are partly digested, and the more thoroughly cooked they are, the more easily they will be digested. All of the grains—oatmeal, rice, wheat, barley, rye, etc.—contain a great deal of starch. Indeed, rice is almost *all* starch. When properly cooked, these are all wholesome foods. The best way to cook them, of course, is to bake them until they are of a golden brown, for then three of the five steps in digestion are actually accomplished. When they are eaten as mushes, these grains are generally not very wholesome. In the first place, they usually are not sufficiently cooked; and in the second place, they are so moist that we do not chew them sufficiently to thoroughly mix the



An Italian Macaroni Shop

saliva with them. Dried foods take up the saliva very much like a dry sponge when it is dipped in water, but foods that are already filled with water can not take up very much saliva, and are that much harder to digest. If these cereals are to be eaten as mushes, they should be cooked for a long time. Oatmeal, for instance, ought to be cooked in a double boiler for about three or four hours.

Macaroni is another food that contains a large amount of starch as it is made from a very nutritious kind of wheat. It was first made in Italy, but now it is made in several parts of the world. The wheat is first ground into a sort of a meal and then mixed into a stiff dough with hot water. It is kneaded and rolled, and then made into hollow stems by being forced through





Apple with Oatmeal

perforated cylinders. These are placed over a fire so that the dough is partially baked. It is then hung up and allowed to dry. In Italy, these strips are dried over long bars, as you will see from the picture.

The story is told of an Irish woman who, when asked by her mistress if the macaroni had come from the grocer's, replied by saying, "Yis, mum, but I sent it back. Iviry wan of thim

leettle stims was impty." There are several other preparations made from this same paste besides macaroni—spaghetti, vermicelli, and other little fancy shapes called *Paste d'Italia*. These preparations form the chief article of diet in Italy.

In preparing macaroni, it should not be washed, but if dusty, wipe with a dry, clean cloth. Break into pieces about one inch in length and drop into boiling, salted water, using about eight cups of water to one cup of macaroni. Let this boil rapidly from twenty minutes to one hour or until it is perfectly tender. The length of time will depend upon its age and quality. When tender, turn into a colander and pour over it a dash of cold water. Drain, and it is ready to be used with any kind of sauce desired.

Rice forms a very important food for a large share of the world. The Chinese, Japanese, and people of India depend almost entirely upon it, but often use it with some other form of food, such as peas, beans, milk, eggs or other substances containing a food combination which we call *proteid*. That is because people can not live upon starch alone, although it is a very important *part* of our food.

Here are recipes for preparing some of these important foods:—

*Boiled Rice, Japanese Method.*—Heat five cups of water to boiling in a sauce pan. Add one teaspoonful of salt and one cup of rice. Boil, not too fast, for fifteen minutes. Cover, and put into the oven for another fifteen minutes. When finished, there should be no water to be seen standing about the rice, and each grain should be allowed to separate. A pleasing variation from this method is to use half milk instead of all water.

*Corn Flakes with Tomato Cream Gravy.*—Place the Corn Flakes in a shallow pan and put them into an oven a few minutes until very thoroughly heated and very crisp.

Prepare the *Tomato Cream Gravy* as follows:—

Make a cream sauce as you did last month, and when done, add just before serving one-half cup of tomato which has been put through a fine colander to remove all seeds. Beat it



Rice When Properly Cooked



thoroughly into the sauce and serve with the Corn Flakes in a grain bowl.

*Banana Toast.*—Toast six slices of stale bread in a slow oven until of a golden brown throughout. Then dip into a little hot cream or milk just long enough to moisten a little on the outside of the slices. Peel half a dozen bananas, and put them through a colander. On each of the slices of moistened toast, place a spoonful of this banana pulp. This makes a very wholesome breakfast dish.

*Oatmeal with Apples.*—Heat one and one-half cups of water to boiling in the inner part of the double boiler, and stir into it one-half cup of rolled oats, and one-half teaspoonful of salt; allow to boil rapidly until it begins to thicken. Then place in the outer part of the double boiler, and cook for three hours or longer. This should be prepared the day before using.

Pare and core, making large cavities in the center, six large apples, and cook in a liquid made of one quart of water and one and one-third cups of sugar.

Turn the apples frequently to insure their cooking evenly all around. When the apples are done, lift out immediately onto a platter, and fill the centers with the oatmeal. Boil down the sugar and water until it is of the consistency of syrup, and pour over the filled apples. This makes a nice breakfast dish.

*Macaroni au Gratin.*—

One cup macaroni,

One and one-half cups of cream,

One and one-half cups of cottage cheese,

One-half teaspoonful of salt,

Two eggs.

Cook the macaroni in eight cups of boiling water according to directions given above. After it has been drained, place the macaroni and cottage cheese in alternate layers in a baking dish, and prepare the dressing in the following manner:—

Beat the egg; add salt and cream (sour cream is preferable), and bake in a slow oven until the mixture is set.



## Danger from Fresh Fruit and Vegetables

As spring is approaching, the markets will soon be filled with fresh vegetables and fruits, brought in from the Southern States, and hence this is an opportune time for calling attention to the danger of swallowing along with these relishable and

wholesome esculents various disgusting and more or less dangerous parasites which find in the human body a favorable habitat during certain periods of their multiphase existence. There are numerous curious creatures which live parasitic lives within



the bodies of other animals. Some of these are so curiously organized that they require two hosts in order to complete the cycle of their lives, and these two hosts are very often of different species. For instance, dogs are subject to tapeworms, the eggs of which are always found in great numbers in their excreta, and may by accident come in contact with human food and, being swallowed into the stomach, develop in the body into minute organisms which are surrounded by bladder-like formations and are known as hydatids. These are most likely to form in the liver, but they may make their appearance in the brain or other parts. The writer once saw one of these hydatids in the eye of a young woman in a London hospital. Peeping in through the pupil of the eye through an ophthalmoscope, the pearly colored bladder with the imprisoned parasite could be readily seen. After death, the flesh of such a person being eaten by a dog, the hydatids will in the dog develop into the full-grown parasite; thus the dog acts as the host for the adult, and human beings as host for the young ones in case of this particular species.

In the case of the ordinary tapeworm, the situation is reversed. Man is the host for the adult, while the pig, the ox, and other animals act as the host for the young parasites. The eggs of these and various other parasites which may be harbored by human beings and other animals, are found mixed in great numbers in the excreta.

It is the prevalent custom among gardeners to employ a top dressing to stimulate the rapid growth of their crops. The consequence is that the soil becomes polluted, and the leaves of the growing plants are often soiled with excreta, and when gathered carry with them multitudes of young parasites, or eggs of parasites, which are capable of developing in the human alimentary canal.

Metchnikoff, one of the savants of the Pasteur Institute, has recently called attention to this danger, and emphasizes the

necessity for thoroughly sterilizing fresh fruits and vegetables of all sorts. This may be accomplished, so far as parasites are concerned, by simply dipping them in boiling water for two or three seconds.

Strawberries are, of all fruits, particularly liable to infection, as they grow so near the ground; and there can be no doubt that they are often the means of infecting the alimentary canal with various sorts of worms, particularly thread worms and pin worms. Lettuce, cabbage, celery, spinach, and other fresh vegetables may be easily disinfected by dipping in hot water in the manner suggested. Metchnikoff is so thoroughly impressed with the danger from this source that he avoids the use of uncooked foods altogether, taking care to thoroughly sterilize every morsel of food or drink which passes his lips.

There is strong suspicion that cancer and various infectious maladies, besides the parasitic diseases referred to, owe their origin to infectious material conveyed through the use of raw foods. This is a matter to which increasing attention will be given in the future.

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## PACKING-HOUSE HORRORS

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Those That Have Long Been Known  
No Less Horrible Than the Ones  
Lately Disclosed

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It is amazing to see what an international stir has been made over the so-called "disclosures" of packing-house horrors. As a matter of fact, the things disclosed have not been half so awful and repulsive as the things which have long been known and which were so patent that no exposure was needed.

It is, of course, distressing to know of the filthy condition of the packing-houses and of the careless habits of employees, the mixing of street dirt from the feet with sausage and other meat products; but such dirt is clean compared with the ptomaines and toxins which always abound



in butcher's meat which has been kept until "high" and tender.

Rotten meat is carrion. Ordinary dirt is not really loathsome nor dangerous; but carrion is, even though sold under the name of prime beef, or "game," and disguised by all the subtle artifices of the cook.

When the fact is known, as pointed out by an eminent German bacteriologist, that within a few hours after an animal dies, its carcass is swarming with billions of wriggling bacteria, each spitting out deadly poison in a steady stream, it immediately appears that the time-honored custom of hanging meat until it becomes tender, is simply waiting for it to rot or decay to a moderate extent. In other words, a man who eats a dead beast, a sheep, a rabbit, a cow, or a turkey that has been thus treated, is devouring a stinking corpse, and is making a scavenger of himself as truly as is a turkey-buzzard feasting on a dead horse or a dead man on a battle-field.

These modern discoveries about the packing industry, while they add something to the details of the horrid pictures which the practice of flesh-eating has constructed, are mere trifles when compared with the background of awful facts which have always been connected with the unnatural and disgusting practice of slaying and eating creatures so near like ourselves in nature and structure that, killed and served as food, only an expert can distinguish their flesh from our own.

The recently discovered "packing-house horrors" are horrible enough to shock the sensibilities of the civilized world, but they are less horrible than is the practice of slaying animals itself, and the evils which are inseparably connected with it.

Seek not to know to-morrow's doom;  
That is not ours which is to come.  
The present moments are our store,  
The next should Heaven allow  
Then this will be no more;  
So all our life is but one instant—now.

—William Congreve.

## DIET AND SENTIMENT

### The Esthetic Sense of the Eater as a Physiological Factor — An Apt Comment

SAID a physiologist to the writer not long ago: "Physiology has nothing to do with ethics or sentiment in the settlement of questions pertaining to human nutrition."

Is this really true?—We think not. Pawlow has shown us how important it is that the esthetic sense should be satisfied in the serving of food. His experiments have demonstrated in the most positive way the intimate relation between the psychic centers and the stomach; that, in fact, the secretion of gastric juice, hence the digestive process also, is controlled by certain psychic centers which are more or less under the control of the will and the consciousness.

It is evident, then, that the ethical considerations, so far as they may influence the mental attitude toward any particular article of diet, must have an important bearing upon digestion and nutrition.

In an interesting article in *Chamber's Journal*, Dr. Josiah Oldfield, an English physician, ably discusses this question from a practical standpoint. We quote a few paragraphs which we feel sure will be cordially endorsed by most GOOD HEALTH readers:—

"There is no doubt about it, hide it as one may, there is something in the very idea of eating a dead body which is repulsive to the artistic man or woman, and which is attractive to the hyena and the tiger. The poet who recognized that there was a tiger side to man, recognized too that it was the lower and the evanescent and the transitional, and that there was also an angel strain in the human race, and that this is the higher and the progressive and the permanent. The tendency of an advancing evolution is to war out the ferocity of the tiger and the vacuous imitativeness of the ape, and let the grace of the angel live.



"This law holds as good of food as it does of all other fields of human activity. We are, therefore, perforce driven to face the problem of evolution in dietary, and to ask ourselves in what direction and on what lines this evolution tends. To me, the development of humaneness and esthetics necessarily makes for an increasing bias toward a humane and esthetic dietary. Whether we search in the majestic language of the prophets, or in the sweet melodies of great poets, or in the weighty thoughts of meditating philosophers, or in the fairy visions of romancers, or whether we turn to the brush-pictures of inspired painters, or to the imperishable mementoes of sculptor's dreams, we find that the aspiration of the upward-gazing man is toward the simpler life in food, and toward a bloodless, guiltless feast, and toward the products of the orchard and the harvest-field, the vineyard and the olive-yard, and away from the shambles, and the stock-yards, and the gore-stained slaughter-dens.

"My opinion, after a quarter of a century's study of diet, is that the future lies with the fruitarian, and that the practice of flesh-eating will become more and more relegated to the lower classes and to the unimaginative minded."

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## FOOD VALUE OF ALCOHOL

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### Fact That It Is Burned in the Body Does Not in Any Way Justify Habitual Use

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SINCE the publication of the statement by Professor Atwater that he had proved by exact experiments with the great calorimeter at Middletown that alcohol was burned in the body and that it appeared to have a fuel value equal to that of sugar, a considerable number of persons have been glad to use this announced fact as an apology for the habitual use of this dangerous drug, and for its free use in various disorders characterized by weakness and feeble nutrition, the supposition being that

alcohol had been given to be a food of exceptional value.

No error could be more specious and pernicious. The only thing proved by Atwater's experiment was that alcohol was burned in the body, and that the heat thus generated seemed to serve as a substitute for that derived from an equivalent amount of sugar. This is far from proving alcohol to be a food, as was freely admitted by Dr. Atwater's associates, some of the most prominent of whom did not hesitate to say after the experiments were completed, "Alcohol is not a food."

The fact is that almost any organic substance may be oxidized in the body, and heat will, of course, be given off. What was claimed by Atwater respecting ethylic alcohol is equally true of butylic and amylic alcohols, as well as of opium, strychnia, and most other poisonous alkaloids. So simple oxidation proves nothing to the point.

On the other hand, close or warm atmosphere may take the place of sugar; that is, may render smaller the amount required. Thus both the findings respecting alcohol are found wanting, when examined, at least so far as proof of its food character is concerned. Foods are burned in the body without leaving toxic effects behind or doing damage to the tissues. This certainly can not be said of alcohol.  
—*Modern Medicine.*

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## COOKING SCHOOLS FOR MEN

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### United States Soldiers to Receive Instructions in the Culinary Art as Part of Training

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THE United States Army is to be taught to cook. The Army is well supplied with cooks, but cooks may lose their lives through sickness or stray bullets, and so the conclusion has been reached that every soldier ought to know how to cook, and cooking schools have been established at the Washington barracks and at some



of the western forts. Men are taking the cooling classes in many of our agricultural colleges. This is one of the results of the general physical decadence from which every civilized race is suffering. Women, naturally weaker than men, show the results of physical decay earlier, and as machinery is taking the place of many of the arduous manly occupations with which men have heretofore been engaged, they are gradually taking the place of women in many of the more arduous pursuits which have formerly been monopolized by the gentler sex.

It is certainly well that men should learn to cook, but the aversion to the art of cookery and other household arts which seems to be growing among women during the last generation should not be encouraged because of the interest men are taking in culinary affairs. While some men may succeed with cookery, the average woman is far better prepared than is the average man to preside over the culinary department of a household.

## A PERPLEXING QUESTION

### Why Will Editors of Religious Papers Countenance Deceptive Advertising?

It is certainly puzzling to an ordinary mind when the average editor of a religious periodical can reconcile with Christian ethics the publication in his advertising columns of deceptive and grossly misleading statements which he would certainly hesitate to publish in his editorial department. Somehow the view seems to have become current among these good folks that the golden rule and the ten commandments do not apply to the advertising department, and that they may without culpability print in the form of an advertisement whatever may be offered, provided it is not patently immoral or indecent.

Fortunately, there are a few noble exceptions, and the number is increasing.

The religious editor's conscience is awakening, and in due time the family religious weekly will become as safe and as sane in the matter of advertising as are the *Ladies' Home Journal*, *Collier's Weekly*, and a few other secular papers. The quack and the nostrum vender are wearing sad faces these days, but they still count.

## Another Letter from the Christian Scientists

"EDITOR OF GOOD HEALTH:

"In your editorial comment upon my communication which appeared in your December issue, you say that I confess that 'Eddyism is based upon a special definition of the word "thing." If you will excuse me, I made no such confession, principally because it would not have been true if I had confessed it, and I know better. As a matter of fact the Century Dictionary definitions which you give, seem to me to bear out sufficiently my argument as to the nature and construction of 'thing.' In my article I said 'in the broadest sense a thing is an event, an occurrence, a deed, an act or action, as well as a piece of matter.' This you yourself have corroborated, since in your fifth definition from the Century Dictionary it is stated that thing is 'a matter of circumstance,' an affair, a transaction or doing; a particular object, event, or circumstance.' The point that I made and which I would like to reiterate is simply this, that it makes very little difference what definition we give the word 'thing,' whether we limit it to a lump of matter or whether we broaden our understanding of 'thing' to include mental as well as material things; the metaphysical fact remains, that if evil exists, either as a quality or as matter, and if God is the only Creator, He must have made evil, in whatever light we regard it. This doctrine is repugnant to the teaching of Christian Science, and we believe that the majority of people would rather think of God as incapable of producing wrong relations or



a capacity to enter into wrong relations, than to believe that he is capable either of directly making evil or of permitting man to create it.

"You say, 'that the Christian Scientists propose to combat evil by denying its existence.' This is not all that Christian Scientists propose to do. If the statement were left there, it might give a wrong impression. The mere denial of the existence of evil would not be sufficient to do away with it. The Christian Scientist is endeavoring to eschew evil in all its forms as fast as he recognizes it as evil. He combats evil with good, and he has discovered before he has been long at the practice, that nothing but a sinless life is satisfactory evidence that there is no evil. The man who indulges in evil propensities is not proving that there is no evil.

"The statement 'that the Christian Scientist does not make use of the English language as it is commonly written or spoken, but speaks a language of his own' is probably not intended seriously. The fact of the matter is that Christian Science literature is couched in ordinary terms, the words used are ordinary English words, and with the single exception that a special form of capitalization is used, there is nothing extraordinary about Christian Science documents. Mrs. Eddy has taken pains to explain the special capitalization adopted by her, so that critics are without excuse when they make such a charge as the above.

"The fear is expressed in your editorial that the application of Christian Science to every day living would subvert everything. As a matter of fact, forty years' experience with Christian Science in the world, as applied in the lives of hundreds of thousands of persons, does not at all confirm such a belief.

"Christian Scientists are taught to scrupulously observe the quarantine and public health regulations of their communities in deference to the fears of their neighbor, while they themselves prefer to depend entirely upon God for protection.

"I think we can both agree that while

an argument about Christian Science may be exhilarating as mental exercise, and while the intellectual wrestling with those who hold divergent opinions may be an agreeable mental pastime, yet none of these opinions really affects the great fundamental truisms of existence. The seemingly universal fact that sin and disease are dreadful realities will not be altered or eliminated by any wordy arguments pro or con. Righteousness, or right being, is the remedy for evil. Jesus taught that a tree could be known by its fruit. The practical results of a theory must be considered when judging the theory itself. The results of Christian Science practice have been satisfactory to those who have benefited by it.

Yours truly,

"WILLARD S. MATTOX,  
"Boston, Mass."

The above letter is a good illustration of the curious method by which Christian Scientists try to persuade themselves that evil does not exist, while at the same time recognizing that it does exist. The intelligent reader who has carefully perused the letter from Mr. Mattox has already discovered this; but it may be worth while to call special attention to a few points.

1. If, in his first letter, Mr. Mattox did not "confess that 'Eddyism' is based upon a special definition of the word 'thing,' he certainly very clearly recognized in that letter, as he does in this, the paramount importance of maintaining that God is the only Creator and is the Creator of all things.

2. Consistent with the above statement is the fact that in this letter Mr. Mattox adopts as his definition of the word "thing" "the broadest sense" as given by the Century Dictionary,—“an event, an occurrence, a deed, an act or action”, and then proceeds to argue that if there are such things as evil events, or happenings, or deeds, God must be responsible for these since he “is the only Creator.” This theory compels the Christian Scientist to maintain that the terrible railroad accident which happened near Washington the other day, in which nearly fifty people were killed,



did not really happen at all, but was only a bad impression which got abroad through some morbid thought action. Earthquakes, tornadoes, murders, famines, and all the other distressing happenings which are going on in the world are merely bad ideas breaking loose, and they do not really exist.

3. Mr. Mattox, after denying that evil exists, says, "The Christian Scientist is endeavoring to eschew evil. . . . He combats evil with good." Will Mr. Mattox tell us how it is possible to combat a thing which does not exist? By the very fact that he combats evil, he recognizes its existence. His theory is so inconsistent with reality that he can not stick to his theory even when talking about it, but must, momentarily at least, come back to a rational state of mind and expression. He further says, "Nothing but a sinless life is satisfactory evidence that there is no evil." This is good sense. In a state of sinlessness, there would be no evil; then evil would not exist; and when Mr. Mattox confesses that such a state is the only "satisfactory evidence" of the non-existence of evil, we agree with him. The fact that such a state does not exist and that evil is everywhere present, is conversely, "satisfactory evidence" that evil does exist. Again: says Mr. Mattox, "The man who indulges in evil propensities is not proving that there is no evil." This is a splendid truth. Mr. Mattox for a moment recovers his mental and logical equilibrium and states things as they are. "The man who indulges in evil propensities" is certainly not only "not proving that there is no evil", but he is proving the opposite—that there is evil.

4. The only reason that Christian Science does not produce more havoc in "every-day living" is because the affairs of the world in general are not ordered according to its principles. If everybody lived a "sinless life," certainly the world would be a heavenly place to dwell in; and if Christian Science stopped with the advocacy of a "sinless life" and the promotion of principles of personal piety and brotherly love, there would be nothing to

be said against this extraordinary cult; but Mrs. Eddy has undertaken to reorganize the whole fabric of society, social, religious, physical, mental, and moral.

Mr. Mattox makes a very fatal admission when he writes: "Christian Scientists are taught to scrupulously observe the quarantine and public health regulations of their communities in deference to the fears of their neighbor, while they themselves prefer to depend entirely upon God for protection." Let us see what this statement involves.

1. These neighbors are afraid of something.

2. These neighbors are protected from something by quarantine and public health regulations.

3. Christian Scientists depend entirely upon God for protection against something.

What is that something? The Christian Scientist says, Nothing. Why should he ask God to protect him from nothing? Why should he need to scrupulously observe quarantine and public health regulations to protect his neighbor even though his neighbor may have fears, provided that there is nothing against which his neighbor needs protection? If there was nothing from which the neighbor needed to be protected, would the neighbor not soon find it out? Even Mr. Mattox himself seems to have lingering in his mind the apprehension that there is something in small-pox which one needs protection against. The only difference between him and his neighbor seems to be that the neighbor depends upon quarantine and public health regulations, while he prefers to depend upon special Providence for protection. Possibly his neighbor may depend upon God also for protection, recognizing that God works through means, and that quarantine and public health regulations are divinely ordained measures which God, through civilization, has given us for protection against infectious and contagious diseases.

Says Mr. Mattox, "Righteousness, or right being, is the remedy for evil." Certainly righteousness is a remedy for



evil. It is quite the opposite of evil. But how can a thing which does not exist need a remedy? Here Mr. Mattox leaves his theory that evil does not exist and recognizes it as something which must be remedied. A remedy can not be applied to a nonentity. If evil can be remedied, it must be a thing, and hence it must exist. So Mr. Mattox himself denies his own premises and agrees with us.

Mr. Mattox ends his remarks by the assertion that "The results of Christian Science practice have been satisfactory to those who have benefited by it." Certainly such should be satisfied; but there are thousands who have not been benefited by it, and there are those who have been greatly damaged by it. The particular complaint against Christian Science is not that some people have been benefited by it, for unquestionably there are such, but that many people have been damaged by it, that it makes pretentious claims which are de-

lusive, and which lead people to place their trust for relief and succor in something which is not able to fulfil its promises. The tree is known by its fruit. There are a certain number of men and women who claim to have been benefited by Christian Science; but if a census of the world could be taken, a vastly greater multitude of men and women would be found to testify that they had tasted of the fruit of Christian Science and found it bitter.

As was said in our first article, there are some truths in Christian Science which the world recognizes, but so-called Christian Scientists, leaving these fundamental truths, have gone aside and built up a structure of so-called philosophy which has no logical foundation and can not be accepted by any logical mind. The perusal of the above letter from Mr. Mattox affords ample evidence of the truth of this statement.



#### LETTERS OF A BUSINESS WOMAN TO HER NIECE

A book of practical suggestions relating to the problems which a business woman is likely to meet sooner or later in her career offered by one whose experience of twenty years in the business world entitles her opinions to weight and consideration.

The style is pleasing and the book as entertaining as a story; but, better than all, it is wholesome. From cover to cover it is replete with sensible thought and wise counsel suited to the needs of the present-day young woman and which can not fail to be of benefit to all who are privileged to read the book.

#### BIBLE TEMPERANCE.

THAT redoubtable champion of the truth about alcohol, the Rev. John Pyper, of Belfast, Ireland, after half a century battling in the cause of temperance, still preaches with pen and voice the gospel of total abstinence with all the vigor and enthusiasm of a new convert.

A scholar of deep learning and rare attainments, especially in the ancient tongues in which the Holy Scriptures were written. Mr. Pyper has completely exposed the fallacy of the doctrine that the Bible upholds the use of fermented wine. One by one, he has broken down the entrenchments of the enemy until not one stronghold remains.





# QUESTION BOX

[Every reader of *GOOD HEALTH* is entitled to the privileges of the Question Box. All letters should be addressed to Editor Question Box, *GOOD HEALTH*, Battle Creek, Mich. Questions must be confined to matters regarding health and kindred topics. Each letter must be signed with the full name and address. The name and address are required so that when necessary, the letters may be answered directly, as it is frequently impossible to include all letters and their answers in this department, owing to the large number received.—EDITOR.]

**10,449. Rice and Proteids.** — W. S. B., Conn.: "1. In your recent editorial, 'Jackson a Vegetarian,' you suggest that a simple diet of rice steadies the nerves and energizes the muscles. Is not the quantity of proteid taken in rice insufficient to make it a substantial food, and is not the reason why the Japanese use it so successfully the fact that they use the covering as well as the kernel?"

*Ans.*—It is true that until recently rice has been considered deficient in proteid, but the number of calories of proteid contained in this food is 10 per cent of the total caloric value, thus the proteid is present in exactly the right quantity. Rice is only deficient in fat. Unpolished rice contains more proteid as well as salts and fat than does polished rice, and hence is preferable.

**10,450. Pain Back of Ears and in Neck.** — A. H., Illinois; 1. "My mother was recently attacked by a severe pain back of the left ear, afterwards shifting to the left side. Later the pain passed to the neck and left arm; the attending physician feared apoplexy. Would you consider this probably due to rheumatism, or what?"

*Ans.*—There is a close relation between rheumatism and apoplexy. The same things which produce chronic rheumatism produce degeneration of the arteries, which in turn leads to apoplexy. The patient should discontinue the use of tea, coffee, and meats, and should use fruit juice very largely. The diet should also include potatoes (preferably baked), cereals, especially well-dextrinized cereal preparations. Peas, beans, and lentils

may be used in moderation, provided the hulls are removed by passing them through a colander. Take care to keep the colon empty. If the bowels do not move daily, the enema should be employed. Use three pints of water at a temperature of 103°, followed by one pint of water at 80°. Live out-of-doors as much as possible. Secure plenty of fresh air, especially at night while asleep, either by keeping the windows wide open or by the use of a sleeping tube. The attacks of pain will probably be temporarily relieved by hot applications, followed by a heating compress. A heating compress consists in the application of a towel or several thicknesses of cheese-cloth wrung out of very cold water, covered with mackintosh or other impervious covering, and flannel, the flannel covering extending two or three inches beyond the wet cloth to prevent chilling. Though this is applied cold, it will readily warm up, and will act as a continuous heating application.

2. "Would you advise electrical treatment?"

*Ans.*—It might be beneficial.

3. "Would massage with a rubber roller or simply rubbing be beneficial?"

*Ans.*—It would doubtless be helpful.

**10,451. Cleansing Enemas—Abdominal Bandage.**—A. B. J. C., Jamaica: 1. "Is it injurious to continue using the cleansing enemas twice a week indefinitely? Will a person become so accustomed to them that it will be difficult to discontinue their use?"

*Ans.*—In some cases it is necessary to con-



tinue the use of the enemas for an indefinite period, because of the permanent dilated condition of the colon. When there is permanent dilatation, the colon is permanently crippled, and it must be mechanically emptied with a ~~enema~~ in water or an oil enema at least two or three times a week to prevent accumulations of food residue and the development of bacteria and bacterial poisons which lead to autointoxication. There is no harm in the use of the enema if used at the proper temperature. If the hot enema is used, as is sometimes necessary, it should be followed by the cold enema. When used in this way, the function of the bowel is not lessened. Care should be taken in the diet to avoid the use of highly nitrogenous foods. Meats of all sorts should be entirely avoided. Peas, beans, lentils and eggs should be used only in moderation, or better not at all. Let the diet consist of fruits, fruit juices, buttermilk, fresh cream, butter, cereals, and vegetables.

2. "Is it injurious to employ the abdominal bandage at night indefinitely; can it be left off easily after a time without being missed?"

*Ans.*—It can be used for months without any possible harm, provided the bandage is kept free from germs. It should be boiled daily, and the parts to which the application is made should be daily given an application of soap followed by rubbing with cold water or with a little alcohol.

**10,452. Drowsiness.**—J. W. T., N. J.: "I would like to know what causes me to become extremely drowsy at times. I frequently fall asleep when reading, sometimes when reading aloud with company. Am 68 years old, very active from 5 A. M. until 10 or 11 P. M."

*Ans.*—The cause is probably an overaccumulation of blood in the abdominal vessels which causes anemia of the brain. The patient should lie down for a while after eating. It will do no harm to sleep for a few minutes, but a longer sleep is not advisable.

**10,453. Piles—Sterilized Butter—Zwieback.**—W. C. H., Michigan: 1. "What is the cause of piles resulting after an enema with water at about 80°? Specify treatment in such cases."

# LISTERINE

The original antiseptic compound

¶ Listerine is peculiarly free from irritating properties, even when applied to the most delicate of the tissues, whilst its volatile constituents give it more healing and penetrating power than is possessed by a purely mineral antiseptic solution; hence it is quite generally accepted as the standard antiseptic preparation for general use in domestic medicine, and for those purposes where a poisonous or corrosive disinfectant can not be used with safety. ¶ It is the best antiseptic for daily employment in the care and preservation of the teeth.

Literature more fully descriptive of Listerine may be had upon request, but the best advertisement of Listerine is—**LISTERINE**

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*Ans.*—The cause is probably irritation of the rectal tube and perhaps the removal of the protective mucus. The use of the enema should be followed by the employment of an antiseptic of some sort, as an ichthyol suppository or ichthyol ointment. A good ichthyol ointment can be made by combining one part of ichthyol with three parts of vaseline.

2. "How is dairy butter sterilized?"

*Ans.*—Sterilized dairy butter may be made from sterilized cream.

3. "What is the difference between zwieback and toast?"

*Ans.*—The bread should be toasted and browned throughout the slice to make zwieback. Ordinary toast is only toasted on the outer surface. The interior is of the condition of new bread, and is on this account objectionable.

**10,454. Treatment of Colon Disorder.**—D. S. F., California: "In an article in your January number entitled, 'Diseases of the Colon,' you give the effects but no treatment. What treatment do you advise? What literature can you recommend outlining it thoroughly?"

*Ans.*—The treatment has been several times discussed in these columns. Of course, care should be taken to see that the colon is thoroughly emptied daily. If natural daily movement does not occur, an enema should be employed, using water at a temperature of 80 degrees. If it is necessary to use a warm enema, it should always be followed by a short cold enema to maintain the tonicity of the bowel muscles. The diet should contain a minimum amount of proteid material, as this class of foodstuffs favors the production of toxins in the alimentary residue which in these cases remains too long in the colon. Meats of all kinds should be avoided, and eggs should be rarely used. The diet should consist principally of fruits, grains, and vegetables, avoiding the coarser varieties. Drink an abundance of water daily. It is also well to drink fruit juices and buttermilk. Buttermilk contains lactic acid, and for this reason is especially essential, as this acid discourages the growth of the colon bacillus which abounds in unusual number in the retained alimentary residue. You should live out-of-doors as much as possible, and secure an abundance of fresh air, especially at night while sleeping. Take a cold sponge bath daily, especially to the trunk and abdomen. See current numbers of *Modern Medicine*,

published by the Modern Medicine Publishing Co., Battle Creek, Mich., for articles dealing in detail with the treatment of these cases.

**10,455. Buttermilk — Contents of Stomach.**—G. H. W., Arkansas: "Does buttermilk combine well with raw or cooked fruits?"

*Ans.*—Yes.

2. "Do buttermilk and sour milk contain less germs than fresh, sweet milk?"

*Ans.*—Buttermilk and sour milk contain probably just as many germs as fresh, sweet milk, but they are germs of a less dangerous character. The development of acids in the stomach destroys the more dangerous germs.

3. "Several months ago when taking a lavage for my stomach trouble, the contents consisted of thick, clear, stringy mucus. Recently the contents contain no mucus. Does this indicate improvement of the contents?"

*Ans.*—You have gastric catarrh. It would appear that there has been some improvement. However, a more thorough examination would be required to make certain that this is the case.

**10,456. Cane-Sugar, etc.**—L. T., California: 1. "Why is cane-sugar unhealthful? What should be substituted for it? What can you say about other sugars? Do people as a rule use too much sugar and syrup?"

*Ans.*—Cane-sugar is not digested in the stomach. It gives rise to fermentation and acidity and is often a source of irritation. Its use is unnecessary, as starch, which constitutes about 50 per cent of food of vegetable origin, is wholly converted into sugar by the process of digestion. Brandel, an eminent German chemist, observed, in his experiments upon a dog, that a solution of cane-sugar having a strength less than six per cent, caused irritation, with reddening of the mucous membrane. A ten-per-cent solution produced a dark red color with great irritation, and a twenty-per-cent solution gave rise to still greater irritation, and produced such distress that the experiment was terminated. We have met many cases of grave stomach disorder in which evidently the chief cause was the free use of sugar, either in the form of candy, or in connection with the use of coffee, oatmeal mush, or other so-called "breakfast foods." According to these observations, three ounces of sugar taken in connection with a full meal would produce a solution in the stomach of sufficient strength



to give rise to a decided gastric irritation. The free use of sugar continued for the same length of time gives rise to gastric catarrh.

Ogata, in experimenting upon dogs for the purpose of determining the effects of cane-sugar upon digestion, observed that the addition of one-third of an ounce of cane-sugar to three and one-third ounces of meat fibrin, interfered decidedly with digestion, the quantity of digestion in a given time being only three-fourths that of digestion in a normal condition.

The sugars to which the stomach is naturally adapted are milk sugar, or the sugar which is normally found in milk; malt sugar, which is produced by the action of the saliva upon the starch, and fruit sugar or levulose, the sweet element of fruits, also found in honey. Fruit sugar in the form of sweet fruits, as raisins, figs, prunes, and malt sugar, may be produced artificially by the action of vegetable diastase upon starch, and, as far as possible, should be used as a substitute for cane-sugar.

2. "Can you give me a formula for preparation to be used on oily skin with large pores and a great many blackheads?"

*Ans.*—The following solution is useful in these cases:—

Corrosive sublimate.....7 grains  
Sulphuric ether.....3 fluid drams  
Alcohol.....9 fluid drams  
Rose-water sufficient to make 3 fluid ounces.

Mix, apply twice daily with equal parts of hot water, gradually increasing the quantity of hot water used. Also apply massage to the face.

**10,457. Dates and Figs.**—A. M. H., Conn.: "Are dates and figs prepared in their own sugar, and what processes are employed? Also give the food value."

*Ans.*—Figs are prepared by simply drying. Tunis dates are prepared in the same way. The ordinary dates of commerce, however, are prepared by drying with molasses or sugar. Figs contain 924 calories to the ounce, of which 5 calories are proteid, 8 fat, 86.6 carbohydrate. Dates contain 101.5 calories to the ounce, of which 2.5 are proteid, 7.5 fat, 91.5 carbohydrate.

**10,458. Circles under the Eyes—Cleaning of Teeth—Nasal Catarrh—Diet.**—A subscriber, Brooklyn: 1. "What is probably the cause of and remedy for dark semicircles under the eyes?"

# Hydrozone

H<sub>2</sub>O<sub>2</sub> 9%

Destroys Pus and any Morbid Element with which it comes in contact, leaving the tissues beneath in a healthy condition.

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**Diseases of the Nose, Throat and Chest.—  
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Prepared only by

*Charles Marchand*

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

57-59 Prince Street, NEW YORK.





*Ans.*—Bathe the eyes for a few minutes at frequent intervals with very hot water. Sleep out-of-doors as much as possible. At least have the windows of the sleeping-room widely opened, or use a fresh-air tube. Spend as much time as possible out-of-doors in active exercise each day. These semicircles are a sign of autointoxication, the treatment of which is described elsewhere in these columns.

2. "Should the teeth be cleaned and the mouth rinsed after each meal and before retiring, or would that be too frequent application of the brush. Would you recommend the use of salt and water to clean the teeth?"

*Ans.*—The teeth should be cleaned before and after each meal, and as often between times as possible. It is scarcely possible to cleanse the teeth too often. When conditions are such that germs can grow in the mouth, producing a coating on the tongue and teeth, it is an evidence of a general lowering of vital resistance and depreciation of the quality of the blood, so that germs can grow in the blood and in the alimentary canal as well as in the mouth. A healthy tree does not get mildew on its leaves. Its foliage and bark are clean and bright. But if that tree gets sickly, or if the soil becomes depreciated so that the tree does not get sufficient nourishment, then the tree is liable to suffer from parasitic disease. One of the things most necessary for defending the tree against parasites is to keep the tree healthy by proper nourishment from the soil. The same thing is true of the body. When the vital resistance of the body is high, it keeps itself clean and free, just as does the tree. If germs are allowed to grow in the mouth, they develop, and are carried into the stomach and increase the number of bacteria in the alimentary canal. Thus a vicious circle is formed, for the increased number of bacteria in the alimentary canal still further depreciates the quality of the blood, which in turn allows the production of a greater number of germs in the mouth. When the tongue is coated and the teeth foul, the mouth should be cleansed many times a day. It is well also to use frequently some harmless and effective antiseptic lotion, rinsing the mouth with it every hour or two. A good mouth lotion consists of fifteen drops of cinnamon essence stirred in a glass of water. It is well to chew a bit of cinnamon bark frequently.

3. "What treatment would you recommend for nasal catarrh so severe as to compel me to breathe through the mouth at times?"

*Ans.*—Consult a specialist. There is probably some obstruction in the nose.

4. "I have used no meat for six months. I live entirely upon bread, butter, sweet milk, stewed fruit, molasses, potatoes and other vegetables. Would you recommend a continuance of this diet, varying it with the seasons as to fruits and vegetables, but continuing to use the sweet milk twice a day, for a person fifty years old employing a vegetarian diet? Would you advise the use of buttermilk, cottage cheese, cream cheese, eggs, bread, butter, peanut butter, and roasted peanuts? Or if not, what changes would you advise for such a person living in the country?"

*Ans.*—If you enjoy good health, we see no reason why you should make a change in diet.

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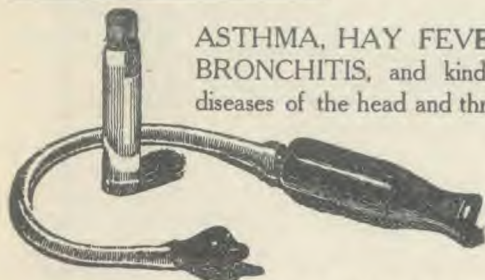


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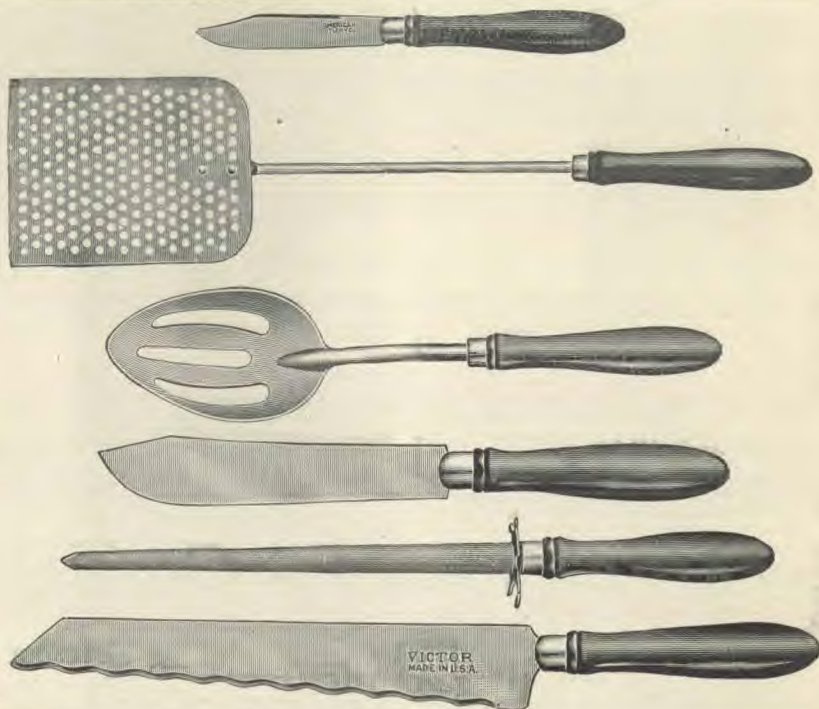
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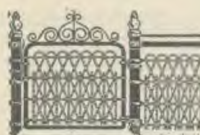
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