

GOOD HEALTH

EDITED BY J. H. KELLOGG M. D.



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JANUARY

12

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January, 1907

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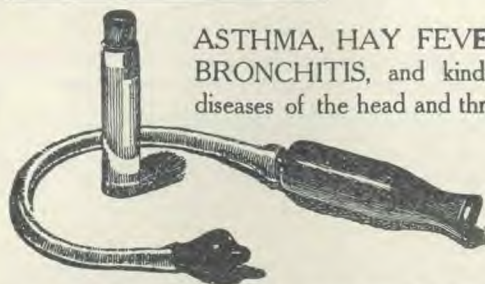
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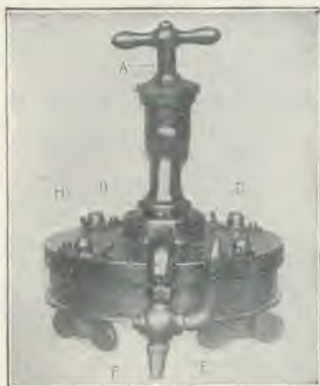
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American Magazine.....	2.00	1.25	Missionary Review of World.	3.50	2.50
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American Motherhood.....	2.00	1.25	Mothers' Magazine	1.50	1.00
Appleton's Magazine.....	2.50	1.50	Motor Age.....	3.00	1.60
Arena	3.50	2.50	Munsey's	2.00	1.35
Atlantic Monthly.....	5.00	4.00	National Magazine.....	2.00	1.25
B'rds and Nature.....	2.50	1.70	New England Magazine.....	4.00	3.00
Blackwood's Magazine.....	4.00	3.35	New Idea Woman's Magazine	1.50	1.00
Bob Taylor's Magazine.....	2.00	1.25	Orange Judd Farmer.....	2.00	1.25
Broadway Magazine.....	2.50	1.50	Outdoor Life.....	2.50	1.70
Cassell's, Quiver & Little Folks	5.50	3.50	Outdoors	2.00	1.25
Century Magazine.....	5.00	4.25	Outing	4.00	2.50
Charities	3.00	2.20	Outlook	4.00	3.30
Chautauquan	3.00	2.35	Pearson's	2.50	1.50
Cooking Club Magazine.....	1.50	1.00	People's Magazine.....	2.00	1.30
Cosmopolitan Magazine.....	2.00	1.25	Philistine	2.00	1.25
Country Gentleman.....	2.50	1.50	Pilgrim	2.00	1.25
Daily Bible	1.50	1.00	Popular Science Monthly....	4.00	3.30
Delineator, McClure's and World's Work.....	6.00	3.50	Reader	4.00	3.00
Designer	1.50	1.00	Review of Reviews.....	4.00	3.00
Everywhere	1.50	1.00	Scientific American.....	4.00	3.00
Farming	2.00	1.25	Scribner's	4.00	3.50
Forum	3.00	2.10	Smart Set.....	3.50	2.50
Garden Magazine.....	2.00	1.25	Smith's Magazine	2.50	1.70
Good Housekeeping.....	2.00	1.25	Southern Watchman.....	2.50	1.50
Harper's Bazaar.....	2.00	1.25	Strand Magazine.....	2.20	1.75
Harper's Magazine.....	5.00	4.00	Suburban Life	2.50	1.50
Harper's Weekly.....	5.00	4.00	Success	2.00	1.25
Home Magazine.....	2.00	1.25	Sunset	2.00	1.25
House Beautiful.....	3.00	2.00	Table Talk.....	2.00	1.25
Housekeeper	1.60	1.00	Trained Nurse.....	3.00	2.00
Human Life.....	1.50	1.00	Travel Magazine.....	2.00	1.25
Journal of Outdoor Life....	2.00	1.25	Vegetarian Magazine.....	2.00	1.25
Juvenile Abstainer	1.75	1.00	Watson's Magazine.....	2.50	1.50
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See Announcement page 7, this section

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Sanitarium, National City, Cal.

See Announcement page 5, this section

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VEGETARIAN CAFE, 45 Hunter St., Sydney, N. S. W.

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CALIFORNIA

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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.

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A Great Missionary System

Back-to-
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An Edu-
cation
without
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Conducted in Connection with the
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*Are you planning to be A Physician, A Nurse, A
Teacher of Health, A Cook, A Leader in Domes-
tic Science, A Hygienic Dressmaker, An All-
Round Gospel of Health Evangelist?*



Nowhere else in the world are such splendid opportunities offered as here for a thorough and many-sided training at so small a cost. Here the highest standard of technical scientific knowledge is joined with that of perfect Christian ideals. The great need of the world at the present time is strong men and women prepared for grand and noble enterprises. Of one of these schools, the American Medical Missionary College, Stephen Smith, A. M., M. D., LL. D., of New York City, a well-known medical teacher, and one of the most eminent physicians and surgeons in the world, says: "Standing alone as the pioneer institution devoted exclusively to the training of those who have been chosen to go 'before His face into every city and place whither He Himself would come,' it inaugurates a New Era in the efforts to evangelize the world."

JUST NOW there is opportunity for a limited number of earnest men and women of mature years and established character to matriculate in these schools. JUST NOW there is set before YOU the privilege of elevating yourself from the lowest round of the ladder to the greatest height to which you are capable of climbing, and all without money.

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Offers the delight of a beautiful and ever changing landscape, besides a magnificently constructed and equipped building, the services of Sanitarium trained physicians and nurses, a carefully prepared and daintily served hygienic dietary, the most modern facilities for the care of surgical and obstetrical cases, and a quiet homelike atmosphere.

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The twelfth annual session of the American Medical Missionary College opens Sept. 18, 1906. For catalogue and other information, address the Secretary,

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The New England Sanitarium

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2. Ample accommodations in new buildings with every modern convenience. (The cut shows one of five large buildings.)

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4. Beautiful surroundings, spacious lawns, lake shore, woodlands, nature everywhere.

5. Close proximity to the metropolis of New England.

The New England Sanitarium is the Eastern exponent of the Battle Creek Sanitarium methods. It is just the place to recuperate from tired nerves and brain fag.

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An institute of physiological therapeutics, employing the well-known Battle Creek methods. Combines the best features of a first-class home with all the medical advantages of a modern hospital, and in addition has an unsurpassed collection of appliances, methods, and facilities for training sick people back to health and efficiency.

Health by training is not palliative, but means reconstruction of the whole body. This is what we set about to do for every one who visits us. For Booklet A, giving methods and detailed information, rates, etc., address —

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WINTER IN THE COUNTRY

GOOD HEALTH

A Journal of Hygiene

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No. 1

Most invalids are afraid of cold air, of cold weather. There is some foundation for this apprehension.

The Health Mission of Winter

Cold Air a Blessing, Not a Misfortune

Sick people have less power to make heat than well persons. They are more easily chilled, they more readily "take cold," and hence are more liable than others to suffer from those maladies which chiefly prevail in cold weather, and are often introduced by a cold or a chill.

But while there is some ground for the invalid's dread of cold and cold weather, the notion that cold air is dangerous for invalids is not true as a general proposition. In fact, the very opposite has been proved to be true by the most exacting scientific tests. This fact has been known to the medical profession for nearly a score of years, but the lay public are for the most part still ignorant of this important discovery, and, misled by the old but now exploded notion that cold air is dangerous, annually migrate by thousands to warm climates as soon as Jack Frost puts in his appearance.

That this is a mischief-working error is shown by the results obtained in the tent colonies established for the cure of tuberculosis in Massachusetts, New York, and others of the eastern and middle States. The carefully kept statistics of these institutions, now numbered by the score, show that by far the best results are obtained in the coldest months of the year. Those patients who are most exposed to the cold air make the most certain and most rapid recoveries.

COLD AIR CURES. But getting cold—chilling—is dangerous, sometimes even deadly, for sick folks. That is quite another thing. The invalid should breathe cold air, but he must be kept warm. Here is the secret: *Cold air for the lungs while the rest of the body is warm.*

WINTER AIR IS PURE AIR. Why? Because the germs are frozen. Decay, animal and vegetable putrefaction, germ growth and dissemination—all cease when the reign of frost begins, and winter breezes gather no dust or germs from snow-covered fields.

This pure winter air has priceless value as a healing agent. No dust, no germs, no miasma, no noxious vapors, no malodors, no malaria parasites, no mosquitoes, no flies, nothing but pure, vitalizing, invigorating air,—crisp, dry, blood-purifying, tissue-renovating oxygen.

From November until March, those who reside in northern regions enjoy

the inestimable advantage of a germ-free atmosphere, every breath of which bears life, vigor, vitality, and health.

COLD AIR IS TONIC, WHILE WARM AIR IS DEPRESSANT. Cold is Nature's greatest tonic, the very Samson of vitalizers and rejuvenators. No drug can compare with it.

How a cold face bath refreshes one when weary! How a breath of cool air revives one when overcome with heat! How vigorously the fans work on a hot day! How cold weather brightens the fires and sharpens the appetite! What a splendid bracer is the cold morning bath! All these facts testify to the tonic, stimulating power of cold.

A Thousand Lifts an Hour. That is what cold air gives the invalid. *Each breath is a cold-air bath.*

The cold, crisp air which enters the lungs is spread out over a surface of two thousand square feet of membrane in the ramifying passages of the air-cells.

Under this membrane, thinner than the most delicate gauze, the whole blood of the body passes every two or three minutes, to be cleansed by this pure, dense, germless air.

Eighteen times a minute the lung bath is repeated, and in an hour sixty times as many, or more than a thousand cool baths, each stimulating, helping, encouraging the sick body to right itself. It is this tonic internal bath that does the work in the "cold-air cure," which is saving so many thousands of consumptives.

To get the most out of the winter's opportunity for toning up, one must spend as much time as possible out-of-doors, or at least under conditions which permit him to breathe the pure, cold, wintry air without contamination. Those who suffer healthwise during the winter months are not as a rule persons who are engaged in out-of-door employments, but those who are both day and night hived up in close, unventilated, overheated workrooms or sleeping-rooms, who dodge the fresh cold air of the great out-of-doors, even barricade themselves against it, and hence lose the benefit of its renovating influence. *Such persons are an easy prey to pneumonia, bronchitis, la grippe, and other winter maladies.*

There are now all kinds of appliances to facilitate the out-of-door life at night.

There is the sleeping-porch, constructed from an ordinary porch by enclosing with tent-cloth curtains to afford some protection from high wind and snow.

Then there is the fresh-air tube, by which the window opening may be extended, so to speak, to any part of a living- or sleeping-room.

The window tent is another device which enables the sleeper to keep his head out-of-doors while the rest of the body is inside.

Open windows allow the winter hurricanes to fill the inside of the house, chilling everything and everybody, and hence are not an unmixed blessing.

Feeble folks may avoid possible discomfort from cold by taking a hot-water bag, a Japanese fireless heater, or some other heating device to bed with them. The latest and best of all devices is a thermo-electric blanket, which may be placed either over or under the sleeper. By simply touching a button the heat may be turned on or off—warmth on tap, like water or gas!

A few hardy people will insist on sleeping out in a tent all winter. There is really nothing gained by the great sacrifice of body heat needed to warm up the bed and keep it warm, but overheating must be avoided.

Heat is depressant. Cold is tonic. The more one can get of it without getting chilled, the better. But there is no benefit in getting cold, or in shivering.

A cold skin means congested lungs and a congested liver. The hands, feet, and general surface must be kept warm, but overheating must be avoided.

Those who in the daytime live as much as possible in the open air, and at night sleep well wrapped and warm on an open porch, or with the sleeping-room windows widely opened, under a window tent, or a fresh-air tube,—such persons, other things being equal, will far surpass in health and vigor those who do not enjoy the vital stimulus of dense, cold air.

And how the appetite grows under the stimulus of cold air! The feeble pulse grows stronger from the magic touch of the frosty tide of pure air pouring down the respiratory passages. The gastric glands feel the vitalizing influence of fresh, red blood flooding them. The nerve centers fill themselves with new stores of energy from the bounding stream of blood which courses through them, pregnant with life and vigor. Thus all the vital energies of the body, its natural defenses, and healing agencies, are set at work with new activity and efficiency, and the reconstructing process whereby the sick man is cast off and the healthy man brought into being, is promoted and accelerated,—EACH BREATH A LIFT TOWARD HEALTH AND VIGOR.

J. N. Kellogg

THE HOUSE BY THE SIDE OF THE ROAD

*He was a friend to man and
lived in a house by the
side of the Road—Homer*



AIRBANKS

THERE are hermit souls that live withdrawn
In peace of their self-content;
There are souls, like stars, that dwell apart,
In a fellowless firmament;
There are pioneer souls that blaze their paths
Where highways never ran;
But let me live by the side of the road
And be a friend to man.

Let me live in a house by the side of the road
Where the race of men go by—
The men who are good and the men who are bad,
As good and as bad as I.
I would not sit in the scorner's seat,
Or hurl the cynic's ban;
Let me live in a house by the side of the road
And be a friend to man.

I see from my house by the side of the road,
By the side of the highway of life,
The men who press with the ardor of hope,
The men who are faint with the strife—
But I turn not away from their smiles nor their tears—
Both parts of an infinite plan;
Let me live in my house by the side of the road
And be a friend to man.

I know there are brook-gladdened meadows ahead
And mountains of wearisome height;
That the road passes on through the long afternoon,
And stretches away to the night;
But still I rejoice when the travellers rejoice,
And weep with the strangers that moan,
Nor live in my house by the side of the road
Like a man who dwells alone.

Let me live in my house by the side of the road
Where the race of men go by—
They are good, they are bad, they are weak, they are strong,
Wise, foolish—so am I.
Then why should I sit in the scorner's seat
Or hurl the cynic's ban?—
Let me live in my house by the side of the road
And be a friend to man.

ABOUT EXERCISE AND THE BLOOD

How Bodily Activity and Systematic Training Assist in Forwarding the Important Functions of the Circulatory System

BY BENTON N. COLVER, M. D.

(Illustrations specially arranged by the writer.)



Trunk Rotation

First Position: Bending forward with chest expanded and back straight.

Second Position: Head describing large circle, beginning at the left.

Third Position: Continuing the rotation. Legs straight.

Fourth Position: One-half rotation complete. Continue to front by circling right.

THIS is a day of panaceas and specifics. Man's search after the water of life is not ended. The wonderful patent medicines which claim to relieve and cure an endless list of symptoms and diseases have, by their boasts, won the name "cure-all." Those quack specialists who with a single device or healing trick hold forth hope to all classes of sufferers are panacea fakes.

Again the drug company which makes a specific for each ache and organ imposes on human credulity with its specious promises. Number Something will seek out the groaning nerve and

there expend all its beneficence while totally ignoring the rest of the man. Number Something Else will overwhelm one organ of the body, and the rest never know this dynamite dose has been taken. The powers of intelligent selection attributed to these elixirs are as astounding as absurd.

Depending upon these mysterious drops from the black bottle, or the square tabule after dinner and the round pellet upon retiring, thousands of trusting victims are sinking each year into helpless invalidism.

Just as illogical is the theory that



Exercise for the Muscles of the Thigh and Leg

First Position: Heel raising high on tiptoe.

Second Position: Knee bending, chest expanded, back straight. Return to first position. Then lower heels and repeat.

electricity alone, a week's soak in a hot spring, a mere change of food, or an unassisted course of exercise will "cure them all." The root of these fallacies lies in the false notions of the causation of disease. Physical disorders are the result of many disturbing factors constantly at work on the body. Conversely, health must be regained by the combined effect of a number of restorative agencies, and until these simple but foundation facts are known and practiced by the common people, the ranks of invalidism will be joined by thousands each year.

The hope of this class lies not in the mystery of a patent poison. Their hope and protection against these frauds is knowledge,—knowledge of the basic causes ever at work tending to disease,

knowledge of the ordinary rules of prevention, knowledge of the natural forces active in restoring health.

Among the deleterious, such as dietetic errors, worry, overwork, exposure, the sedentary habits are prominent—brain work without muscle work. So among the beneficent, as fresh air, sunshine, simple food, muscular exercise occupies an important place. It is not a panacea for all ills. It is not a specific for the disorders of any particular organ. It alone does not constitute a perfect system of cure, but it is an important factor in the rational all-round treatment of disease.

Human blood is one of the most complex and wonderful substances in the world. It is made in the interior of the long bones of the limb—in the bone marrow. It is buried in the spleen and liver. In its

life it does the most menial tasks for the body—yet without it the human economy is lifeless. It first supplies to the digestive organs the powerful juices which dissolve and change the potato, the peach, the pecan, the olive, into acceptable food for the tissue. Then it carries this food to every nook and corner of the body—depositing just the kinds and quantities needed. In order for this food to be used a free supply of air, oxygen, is essential. This, too, the blood provides. Spreading over 2,000 square feet of lung membrane, the blood absorbs oxygen freely. With this stored-up gas, it hastens to the active tissues and as freely gives it up to the hungry cells.

With all the activities of this little world of cells an immense amount of

waste is produced. In spite of the fact that the body is the most economical engine in existence, there is a large by-product of poison which would soon overwhelm the acting organs unless constantly removed. This housecleaning

and scavenger work also falls largely to the blood. After depositing its store of food and oxygen it loads up for the return trip with these poisons. Hastening again to the lungs, kidneys, and other outlet organs, it casts off these wastes and thus effectually rids the body of this ever-present menace. Another homely task of the blood is the heating system of the body. Activity produces heat. Evaporation dissipates heat. So without a balance, the active organs would have an ever-increasing temperature. Some of them normally are six to eight degrees hotter than the mouth. On the other hand, the

skin, the fingers, the tip of the nose would tend to become cooler and cooler until the temperature of the outside air would be reached. This is not so, because the blood is a regular hot-water heating system, taking from the too hot and carrying to the ever-cooling parts.

All of the above is as it should be,

but not as it always is. In disease the blood is of inferior quality, and does but poorly the work outlined. The digestive juices produced are weak; the appetite lacking—the food carried to the tissues is not adequate. The oxy-

gen supply is cut down—the poisons accumulate within the body. The poor sufferer has aches and pains in many nerves—cold extremities, insomnia and bad attacks of the “blues.”

What can be done? Many things. In fact, to the rescue of such a man should be called every possible natural resource within or without the body. But from muscular exercise alone, what may be expected? As stated above, the bone marrow is the blood factory. Therefore it is self-evident that a free circulation through the bones must be induced to supply the raw material to the factory. Now the same blood chan-

nels that supply any bone also supply the overlying muscles. So if the blood current flowing to a muscle is at low ebb, that to the associated bone is feeble. Conversely, an increase of the blood supply to the overlying muscle will increase that to the bone. It has been shown that muscular activity in-



Neck, Chest, and Abdominal Exercise

First Exercise: Head raising and lowering.

Second Exercise: (First position.) Bring the feet toward the body by knee bending.

(Second position.) Extend the legs without moving the thighs, and return to position.

Third Exercise is raising the feet to position shown in second exercise, second position, beginning with the legs straight from position shown in exercise one.



Arm and Back Exercise

Body supported on toes and hands.
Body straight from shoulders to heels.

Body lowered (with straight back) by arm bending.
Return to first position and repeat.

creases the blood flow through that muscle six times. Here then is the first hope for new blood: exercise will supply the blood-producing bone marrow with six times as much raw material to make new blood, at the same time this sixfold flood will wash out of the crevices of the bone and muscle the stored-up poisons. For these purposes the exercises which move the large muscle masses are best—such as (a) heel raising, knee bending, stretching and heel sinking; (b) lying with the weight supported by toes and hands, with body lowering; (2) raising by the arms, (c) walking (vigorous stride), (d) running, (e) swimming.

From the factory, turn to the seat of destruction—the spleen, liver and portal system of veins. To recall, it is here that normally the exhausted blood is broken up and cast off. But in the sedentary life it is here that a great volume of blood settles and is prematurely put out of use. By proper exer-

cise the great tank of stagnant blood is emptied as easily as a sponge is squeezed. This passive blood, supplying as it does all the organs of digestion, accounts for the inferior juices, the indigestion, the loss of appetite, the catarrh of stomach and bowels. Once it is pumped on to the heart and lungs, other blood rushes in. By persistently keeping up this emptying and filling, the old cinders are washed away, new juices are formed, and the digestive tone is improved. Thus the conservation of blood and the proper elaboration of foodstuffs eaten is assured. For such purpose take exercises like (a) trunk bending forward, backward, and sideward; (b) trunk rotation (performed by bending forward and then



Diagram of the thigh bones and blood-vessels, showing the relation of the superficial, deep, and bone branches.

Great muscle masses of the thigh, showing the large blood-vessels entering the thigh and giving off superficial and deep branches.

describing as large a circle as possible with the head turning first to the right and then to the left); (c) lying on the back and raising first the head, second the feet, with bent knees, and third the feet with straight legs.

With these exercises are associated a series of chest exercises to increase heart action and deep breathing. This insures a free supply of oxygen to the blood and thus to the tissues. It also will produce more heat in the active tissues and by the bounding blood current scatter this heat to the most distant parts. This renewal of the "heating system" is evidenced by the "sweat of the brow." By the skin and lung activity the accumulated wastes

which are being limited out by the re-vitalized blood, are easily thrown off. The breathing exercises are like food. They should be taken only when the body is hungry. A few moments of the arm, trunk, and leg exercises will set up such a cry for air that the chest must expand to its utmost to satisfy the air hunger of the tissues. The chest movements must be free with no tight clothing to interfere. Some simple effective exercises are (a) hands raising upward, forward, downward, sideward (inhale on the uplift, exhale on the sinking), (b) arm extension forward, deep breathing with arms carried sideward, backward, at shoulder height.

HEADACHE: CAUSE AND CURE

Use of the Enema Usually Very Effective— Milk and Constipation

HHEADACHE is most often the result of autointoxication. It is an indication that the system is saturated with poisons. The source of these poisons is most commonly the colon. Long-retained fecal matters undergo putrefactive changes as the result of which the blood is flooded with poisons, and the distressing symptoms of sick headache ensue. Persons suffering from headache should take care to keep the bowels freely open. If necessary, a large enema should be taken daily. Warm and hot enemas should be avoided, since they distend and weaken the bowel. A cool or cold enema has the opposite effect, contracting the over-distended colon, and restoring its lost tone so that by degrees the normal function may be

restored, and regular, natural movements secured.

The free use of milk is a common cause of headache. Milk has a constipating tendency. Portions of undigested milk lying in the colon undergo putrefactive changes which, in some cases, give rise to a very severe form of autointoxication. Many persons who have been for years, martyrs to sick headache, have been entirely cured by discarding milk as an article of diet.

"A dreamer dropped a random thought;
'twas old, and yet 'twas new;
A simple fancy of the brain, but strong
in being true.
It shone upon a genial mind, and lo! its
light became
A lamp of life, a beacon ray, a monitory
flame.
It shed its radiance far adown, and
The thought was small; its issue great;
a watch-fire on the hill
cheers the valley still!"

—Charles Mackey.

REGARDING WINTER HYGIENE

Important Points Which Should Receive Daily Attention in the Home during January

BY MARY WOOD-ALLEN, M. D.

THE words "Winter Hygiene" seem to imply that the laws of health vary with the season, and, indeed, this idea seems somewhat to prevail. The other day I heard a man say to his wife, "There is no use in giving the baby a daily bath in the winter. It's all nonsense. Of course, that was all very well in hot weather when he was constantly perspiring, but in cold weather once a week is often enough."

The bathing habits of a large proportion of civilized humanity accord with that statement, yet, in truth, if a daily bath is ever a necessity, it is in winter when the body is not bathing itself with perspiration and the skin needs extraneous aid in removing the waste material that is constantly being eliminated through it. The bath need not be the proverbial "tubbing" of the Englishman, but in some way the surface of the body should receive thorough daily attention, either by a water-bath or a dry rub that will keep the skin in a tonic state, able to withstand the evils of drafts or sudden changes of temperature. A towel wrung out of salt water at bedtime will in the morning be in good condition to give a most enthusiastic glow to the surface of the body, and, aided by the semiweekly water-bath, will keep the skin in a state of tonicity.

I am often surprised to see the ability of people to endure the open air all summer long and note the dread they have of pure air in their house in the

winter. During the summer they walk barefooted on the beach, sit in open cars with strong, or even cold, winds blowing around their ears and over their unprotected shoulders, rush to stand by open windows when heated by exercise, and yet in winter will shiver over the register in a room heated to 80 degrees Fahrenheit. During the summer their bedroom windows have been open night and day, but with the first breath of winter they are closed—one might almost truthfully say, hermetically sealed. All night long they sleep in a room growing fouler and fouler with their breath and the emanations from their own bodies, and yet wonder why they have colds, catarrhs, and kindred ailments. As the cough increases, the cracks are more tightly calked, the drafts more sedulously avoided, the temperature of the house increased, and the wonder more emphatically expressed.

"I really can't understand why I have a cold all winter long. I am sure that I protect myself all that is possible."

My dear friend, you would have just such a cold all summer if you habitually breathed so foul an atmosphere. *Malaria* only means "bad air," and that is more often found in the closely sealed houses of the well-to-do than in the swamps and lowlands of the open country. Feel the difference when you go in from the sun-purified atmosphere out-of-doors to the miasmatic air of the furnace-heated room. Modern improve-

ments in houses do not unqualifiedly mean improvement in health. There were advantages in cracks and open fireplaces not to be offset by the added warmth gained by weatherstrips and steam radiators.

The indoor air, deprived of all its moisture by furnace heat, is well fitted to irritate sensitive mucous membrane and to help to propagate all forms of lung disease. The reason why kitchens are often so much more comfortable than parlors may be found in the teakettle steaming on the kitchen stove. Of course, it would not "look well" to transfer the teakettle to the drawing room, and yet the "kettle singing on the hob" forms a most attractive feature of the English home. In the winter the outdoor air, because of the cold, contains much less moisture than at other seasons. This is an added reason for supplying moisture to the air of the house by keeping vessels of water in furnaces or upon stoves. A gas jet could be utilized in heating water to moisten the air of the room, so that it will not be unpleasantly full of steam, but moist enough to be pleasant to the throat, nose, eyes, and skin. This moistening of the atmosphere is also economical, as it makes the room warmer and more comfortable.

The question of diet is one that has received of late much public consideration, but we fail to recognize that oxygen is the most important food, and, as a result, we deprive ourselves in the winter of our truest nourishment when we shut ourselves in comparatively airtight rooms. Not only this but we run great risk of contagions of various sorts when we frequent public audience rooms where germs of all sorts thrive in the devitalized air. Oxygen is the great germicide, and a strong vitality is the body's best protection. The germs

of pneumonia or even of diphtheria will find themselves innocuous in an organism that is permeated with a strong current of vital force. But let that force be diminished by the devitalizing influence of bad air, and these germs may spring at once into destructive activity. Experience has proved that the germs of that most dread disorder—tuberculosis—could not flourish where pure air is fully admitted into the system, and outdoor sleeping is prescribed for the consumptive patient even when snowflakes fill the air or the thermometer makes it too cold to snow.

Another fact is being demonstrated, and that is that the whole body is strengthened by exposure to the air, and that much clothing is not a protection against disease. Whereas the doctors of the olden time advocated swathing invalids, especially consumptives, in flannel, they now preach as little covering as is compatible with comfort, and this not of woolen but of cotton or even of linen. Doubtless the wise plan for those who live in very warm rooms is to wear light indoor clothing and heavy wraps when going outdoors. It would be better for the nervous system if we did not accustom ourselves to such extreme heat in our houses. We would soon become used to the cooler atmosphere, and be just as comfortable. Our English cousins think 60 degrees Fahrenheit warm enough for healthy adults, and 65 degrees for babies and invalids. When they visit America they really suffer in the atmosphere that to us is only comfortable.

Children, having a greater vascularity of the skin than adults, are warmer in the same temperature. It must be remembered, however, that children when on the floor are in the coldest part of the room, and are also where they are

more subject to the drafts from underneath doorways and windows. A large piece of furniture placed in front of windows will keep the little ones at a safe distance, and rugs laid at the bottom of doors will aid in shutting out strong currents that keep the floor cold. Upper rooms are apt to have warmer floors than those in the first story, and are therefore better suited for nurseries.

A very important item in securing pure air in the house in the winter is the prevention of its contamination by germs of tuberculosis. Expectoration on the floor, or even in cuspidors, should be as rigorously dealt with as it is in legal enactments, if it is not in legal enforcements. The tubercular patient should use paper handkerchiefs to cover the mouth or nose when sneezing or coughing and to receive the sputum, and these should at once be burned.

Winter food is a matter that should receive attention, although dietetic errors are less common in winter than in summer, as the cold weather necessitates the use of heat-producing foods,—the so-called hydrocarbons, sugar, fat, and starch. But these can be taken in too large quantity, even in winter, and the result be manifested in the spring in torpid liver and the so-called "spring fever," which is a lassitude arising from an accumulation of waste materials due to a superabundance of rich foods in the winter dietary. It is an ailment not experienced by those who have lived simply and healthfully during the cold weather, and have not crowded the system with the heat-producing foods.

It goes without saying that exercise is a necessity for health in winter as well as in warmer weather. To keep the blood moving actively is to keep up the bodily heat, to eliminate waste ma-

terial, and so create a vigor of body and clearness of mind unknown to those who hover over the register or around the air-tight stove.

Winter is losing its fearsomeness and appearing more as a harbinger of good. The consumptive is turned out-of-doors even in the coldest weather, babies sleep out-of-doors in the sunny, winter days, and in the clear, cold, frosty air of the open country is found the best sanitarium for the weary and worn-out dyspeptic.

Surely a new order of poetry must evolve from these new ideas of winter. Soon we shall no longer sing that

"Leaves are sear,
And flowers are dead, and fields are drear,
And streams are wild, and skies are bleak,
And white with snow each mountain peak,
When winter rules the year;
And children grieve as if for aye
Leaves, flowers, and birds were passed away."

But the new poets will tell us of the joys of winter, the crisp, life-giving air, the sparkling snow, the chances for fun and frolic in the open, and of

"Leaves that make
Soft beds for flowers that soon will take
New forms of beauty; fields that woo;
Of streams that sleep 'neath ice-roofs blue;
The mountain peaks like jewels shine,
And winter brings us joys divine,
And children's shouts ring far and near
When joyous winter rules the year."

Full many a shaft at random sent
Finds mark the archer little meant!
And many a word at random spoken
May soothe, or wound, a heart that's broken!
—Sir Walter Scott.

"SHUT the door to the sun, and you
will open it to the doctor."—*Italian Proverb.*

THROUGH PICTURESQUE JAMAICA

What an American Saw on a Visit to This Pleasant Tropical Country, and the Impressions He Received

BY ERNEST CAWCROFT

(Illustrations from photographs taken by the author.)

WASHINGTON IRVING'S devotion to the name and fame of Christopher Columbus in an earlier age and in the region of the Caribbean, every year leads a larger number of American business men and tourists to the section



Valley of the Rio Cobre

Lafcadio Hearn's vivid pen-pictures in a later generation, serve to arouse and stimulate the interest of every schoolboy in the West Indies. This geographical interest, coupled with the general notion that Central America is the land of real adventure, and followed by the increasing predominance of this republic

which Columbus mistook for the mainland of the promised New World.

And while the American business man is rushing to the Isthmus with the expectation that he will share in the one hundred millions in fat contracts to be awarded by Uncle Sam, the more complacent Yankee tourist is content

to seek a land of settled government and established reputation for social and climatic agreeableness. Thus an increasing number of Americans of all ages and position wend their way to the island of Jamaica, which to many others as well as Charles Kingsley has

ward Passage into the fair island of Jamaica.

This is the Jamaica season. Thoughts of the zero weather of past winters, dread of the death-like dreariness which follows the falling of the leaves, turn many southward in search of the



Jamaica Women Going to Market

some of the characteristics of the re-discovered Garden of Eden. While the wind is whizzing around the tower of the *New York Times* building, and a blast from Lake Erie is sweeping down Main Street in Buffalo, or making smoky Pittsburg shudder, hundreds are leaving New York, Boston, and Philadelphia for an ocean jaunt fifteen hundred miles down the Atlantic Coast, along the shoals of San Salvador, around the eastern coast of Cuba with Hayti dimly in the distance, and through the Wind-

warmth and luxuriance of tropical lands. And to the hundreds who have gone, are going, or who are thinking of departing for Jamaica, who is there of human interest, what is there of unique creation, to serve as a source of amusement and instruction through the course of the winter's season?—Much, indeed, to the man or woman who enjoys wholesome sport, to whom the paradoxes of personality appeal, and to whom the evolution of a race as picturesque as the floral luxuriance of the tropics, may be

alike a source of instruction and mirth.

Those who are leaving for this land, where only a vest is the necessary protection against a winter evening, are to visit an island one hundred and fifty miles in length with a width varying from twenty-five to forty-four miles. A population of more than seven hundred thousand souls is divided disproportionately between twenty thousand whites and seven hundred thousand blacks. It may be proper to explain in mitigation of the latter enumeration, and as a means of casting light upon much that is unique in Jamaican life, that many of the blacks are designated a colored people. The latter have enjoyed the social advantage of being bred by one white parent, and that they are proud of this badge of distinction, is evident not only in their attitude toward the ordinary darkies but in their endeavor to secure an education and assume the manners of an Anglo-Saxon civilization. This must not lead any one to assume that the actions of these colored people are in any sense offensive; but on the contrary they possess that mellowness of manner so common in a region where the abundance of God has conduced to the ease of man, and the surviving spirit of the Spaniard has imparted the elements, if not the grandeur, of Old-World etiquette. "Yes, sir" and "No, sir" are the invariable responses of the servant and cab-driver; and "good morning, massa" are the friendly words of any passing darky woman as she wends her way in the early morning along the public roads to the public markets in Kingston. Here, as in other parts of the world, the excellence of the British Colonial administration is evident; the negro shows his deference for the white woman by keeping his distance. The splendor of the English common-law system is again demon-

strated by the paradoxical fact that while this Republic has been passing constitutional amendments assuring the civil equality of the races, the whites and blacks have been riding in the tramways of Kingston and on the cars of the Montego Bay Railroad without displaying any spirit of rancor. The possibility of such a spirit arising is lessened by the discreetness of the whites and blacks alike. To be sure, the whites are not inviting the blacks to dinner, and only the colored people of assured breeding are moving in the social circles of the capital city; but in public conveyances the negroes as well as the whites seek to occupy seats by themselves, and this spirit of deference, yet not common intermingling, has done much to prevent the development of a race problem as we know it in its vexing features in this country.

The region around Port Antonio is altogether delightful. Here the tourists will gain their first insight into the commercial and agricultural features of Jamaica.

The writer will not soon forget the night that his steamer tied up at the wharf at Port Antonio. Amidst the tooting of the steamer whistle and the repetition of the captain's orders one could hear the babble of a hundred negro boys, coupled with the songs and imprecations of their darky mammies. Around about the wharf on every side, bunches of green bananas were piled ready to be loaded upon the ship by the boys and their mothers, who preferred to work in the night rather than in the tropical heat of the morning. We were impressed at once with the fact that the banana is the business and sustenance of the Island. Since the abandonment of the sugar estates, the English and American capitalists interested in the Island have given greater heed to the successful



Rodney's Monument at Spanish Town

cultivation and exportation of the banana crop. The romance of the Jamaica banana is a story which reflects credit upon the insight and initiative of Americans. It will not serve the purposes of this sketch to chronicle in detail the story of this development, but it suffices

well-nigh throughout the year. Young men and women are everywhere cultivating, cutting, and loading bunches of bananas for the northern markets. A government report states that apart from passengers, the United Fruit Company carried away five million bunches of



Negroes in Kingston Public Markets

to recall that the circumstance of the Cape Cod fisherman, Captain Baker, taking the first ship-load of bananas to the northern market is within the memory of the generation now living. The initiative of Captain Baker met with increasing recognition and it is due to his first efforts that the United Fruit Company controls the banana business of Central America. As the visitors pass from Port Antonio to Mornat Bay, Port Henderson, and other points along the coast, they will view the same scenes

bananas from Jamaica last year. Women leading donkeys with a bunch of bananas strapped to each side of the beast, young girls walking down the road with a bunch resting easily on their heads, and boys picking bunches from the trees as visitors pass along the highways, are sights at once so picturesque and interesting, that Jamaica becomes as fully a revelation as the architectural wonders of the world.

But the banana is not the end of the chapter of tropical luxuriance. True,



Newcastle Barracks in the Mountains

indeed, Americans display an exceptional interest in this species of fruit which is exported by an American company and sold at their doors by the Italian vender; but in touring the Island the visitor should not overlook other examples of tropical vegetation. Here and there will be found a small sugar estate seeking to survive under adverse conditions; side by side with the banana plantation will be found a not less interesting orange grove; and the tourist who does not observe and taste the luscious Jamaica pineapple, misses one of the features of the Central America region. God has been kind to the tropics, and on every hand there are unique and interesting specimens of vegetation.

Kingston is the axis for an interesting week of touring. The visitor may devote his first day to getting on

friendly terms with the hotel servants, to securing a linen suit, and to learning that only the ignorant pay American prices for Jamaican products and services. Unless he assumes the air of a native, the cabmen will continue to charge a quarter, or shilling in English money, rather than the sixpence allowed by the municipal regulations. Passing through the interesting Victoria and Jubilee markets, wherein the negro men and women from the hills display their fruits, their beads, canes, and strings of tobacco, the prospective purchaser will perceive that the price asked for a real or imitation Panama hat will decrease from two dollars as the visitor moves toward an adjoining booth. In addition to the markets, there is the public square with some interesting specimens of vegetation; one may spend a profitable day

at Hope Gardens on the outskirts of the city, where successful government floral experiments have produced a garden which exceeds in splendor anything found in Paris; then there is Rochfort Gardens, on the seashore of Kingston, where the bands play every afternoon that it does not rain, and the negro boys and girls make love with all the abandon to be found in the parks of a German industrial city. The wharves of the city must not be overlooked because docks and their inhabitants are always cosmopolitan. The ships of all nations call at Kingston because of the commercial and strategic position of the Island. It does not need a mind with a large horizon to picture the coming generation when the ships passing through the Isthmian Canal will call for coal at Jamaica, and the natives of the world will be represented in the adjacent

waters to guard the interests of rival commercial powers. Girls carrying bunches of bananas for twenty-five cents a hundred; negro women aiding in coal-ing ships; men seeking to be taken to the United States in the confident belief that here they will find the streets of gold; and negro boys willing to dive from the fore-castle of a ship to bring back as their own the visitor's sixpence,—are scenes which give a human charm to the sea wharves of Kingston.

Another day a visitor may devote, as I did, to riding zigzag through the hills fifteen miles to Castleton, where cool mountain breezes and a delightful outlook afford another view of Jamaican life. Out from Kingston on another ride is Gordon Town, a typical negro village, and beyond in the mountains is Newcastle, where are quartered the few soldiers considered necessary to the



Negro Shack and Family

public welfare. Across the bay is a small settlement named Port Royal, and as the visitor passes through the streets, he may discuss with the natives the speculative location thereabouts of the greater and wealthier West Indian city which suffered, in turn, earthquake, tidal destruction, and fire. Just fancy the Anglo-Saxon in his automobile and the negro woman leading a donkey; the Rhode Island engine speeding ahead of the mule cart with a load of logwood; and the woman walking fifteen miles to market passed by the trolley cars of a Canadian corporation. These are the paradoxical features of this tropical Island.

The development of American in-

terest in the Caribbean Sea is certain to enhance the position of Jamaica as a Yankee business center and pleasure garden. There the American finds a complacent, happy people. Nature has been kind; the darky is as well satisfied with a hut and a bunch of bananas for his week's food as is the Northern copper king in his palatial villa. A kind word is always received with a smile of increasing breadth; and there in Jamaica life is easy, manners are mellow. The sun seems to burn out the harshness of existence, and out of the abundance of Nature the tourist as well as the native finds charm and satisfaction.



Lights and Shadows

THE DANGERS OF WHOOPING-COUGH

Measures Which Should Be Adopted in the Home for Cure or Prevention — Dangerous Fallacies Exposed

BY KATE LINDSAY, M. D.



DEATHS from whooping-cough equal those from typhoid fever. It ranks as the third most deadly of the so-called children's diseases, the mortality of whooping-cough coming next

to that of scarlet fever.

In Great Britain, with a population of about fifty millions, twenty-five thousand die yearly of this disorder. In the United States it is safe to say that at least forty thousand, mostly children, succumb to its ravages. Add to this deadly record the great number who only partially recover, suffering ever after from damaged lungs, kidneys, or heart, many dying a few years later of tuberculosis, pneumonia, or some other disorder which the impaired health of body, due to the debility caused by the whooping-cough, unfitted them to successfully withstand.

Whooping-cough is five times more dangerous to the baby of one year old than it is to the more resisting five-year-old, and twenty times more deadly than to the ten-year-old boy or girl. Children who inherit tendencies to tuberculosis, kidney, or heart disease, or who have suffered recently from an attack of measles, scarlet fever, or any other infectious disorder, are more liable to contract the disease, and to have it in severe and often fatal form. Those who have had rickets, rheumatism, and acute or chronic kidney disease, or are

recovering from pneumonia, malaria, or any other debilitating illness, also take the whooping-cough very readily, and are likely to suffer from a prolonged attack. In such cases there is often a fatal termination. In fact, the deaths from this disorder after ten years of age are usually among those of feeble constitution, with resistance impaired by disease. The healthy youths or maidens of ten or more seldom have the whooping-cough in a severe form, and often are able to be about all the time, going to school and everywhere else, and are chiefly dangerous because of their ability to run around and spread the disorder among the more susceptible infants and small children. The disease is not at all dangerous or deadly to healthy adults, but it may be a serious disorder to the feeble consumptive or the aged. Girls are said to take it more readily, and have a more severe form with greater mortality than boys. The history of the past shows it to be a comparatively modern disorder, the first epidemics reported in Europe having been in the latter half of the eighteenth century. Since that time it has become epidemic yearly over all civilized countries, and has been carried by the ever-restless white man to all other peoples, many of which were free from it until it was brought to them, like fire-water and deadly explosives, by the all-conquering race of pale faces, who expect to take all the good things from their weaker brethren, and in return infect them with all their deadly

diseases, and initiate them into the mysteries of all their bad habits.

There is no known cure for whooping-cough. The best that can be done for the patient after he is infected is to care for him so as to avoid complications, and keep up nutrition so as to enable him to withstand the debilitating effects of the disease. It may occur at any season of the year, although epidemics are most prevalent in the fall and winter. They usually commence with the school openings. The disease spreads from one patient to another. It is not very often carried in clothing or by other persons who come in contact with the sick, as is the case with scarlet fever and other like disorders. Overcrowding and living and sleeping in badly ventilated, unclean apartments, favor the spread of the infection. Unfortunately, very few parents feel the need for isolation of the whooping-cough patient, and always expect that if one child takes the disease, all the other children who have not already had it will be sure to take it. There is also a very erroneous idea prevalent among the people that the earlier the child has this and other infectious disorders, the better. Many mothers have told me that they have purposely exposed their children of two, three, or five years of age because they had been told that they would have it lighter if infected when small. The facts are that every year over one lessens the mortality, and if the children can be kept from contracting whooping-cough until they are ten years of age, there will be twenty-four less deaths to the hundred. In other words, of one hundred children under one year of age ill of whooping-cough, twenty-five on the average will die. Between one year and five, there will be five deaths, and after ten years, but one fatal case in one hundred.

Protect the tender infant of months from the infection, and the lives saved yearly in this nation would number over thirty-two thousand. Protecting all children under five years from the disease would mean a life-saving of some six thousand five hundred more lives. If the protected age could be extended through the first decade of childhood, the average annual mortality from whooping-cough would be reduced to less than thirteen hundred. A saving of over thirty-eight thousand lives is worth some painstaking to achieve, and is among the possibilities, for the disease is due to an infection usually directly transmitted from one patient to another.

To stamp out and save this great annual slaughter of the innocents, it is needful to keep apart the non-infected and those suffering from the disease. The schools and homes of our land are the great centers for the dissemination of contagious diseases. A patient ill with whooping-cough should be under quarantine for at least ten weeks to three months. Often parents will send their children to school when they are aware that they have been exposed to this or some other contagious disorder, unmindful of the homes into which they may carry sickness and often death. No child who is not rendered immune by a previous attack, should be permitted to go to school for twenty-one days after coming in contact with a whooping-cough patient. None who have already contracted the disorder should be allowed to enter school sooner than ten weeks after the symptoms of whooping-cough were diagnosed. Should an older child be exposed to this or any other infectious disease at school or elsewhere, and there are children in the family under five years, especially a baby under a year, they should be kept

apart until it is certain the exposed child has escaped infection, and when symptoms of the disease manifest themselves, then the provisions for a lengthy separation should be made. To separate the patient from other members of the family is not so difficult a matter as it would at first appear. Where the house is large enough, a trained nurse or some competent person can be engaged to look after the children who are infected. Often if they are sturdy boys and girls of ten or twelve or over, all they will need will be some one to get their meals, keep them properly clothed and bathed, and take them out for their daily exercise. The mother and little ones who have not been exposed may keep themselves on one floor, and the nurse and her patients keep the other, never coming in contact with each other. The mother, if she has had the disease, may be permitted to visit the whooping-cough patients once or twice daily, provided she wears a loose gown over her clothing which she discards when she leaves the room.

Children under six are not likely to go to school and be exposed there, so if parents and teachers were educated as to how to prevent the disease in the schools of our land, the little ones at home would not be so likely to suffer from this disorder. It is safest to have the younger children occupy different sleeping rooms and especially different beds from those who are at school. Usually the infectious disorders are not contagious for the first few days only a few feet around the patient. Sleeping in the same room, especially occupying the same bed, favors the spread of all these disorders in the family. A child may go to bed apparently well at night and wake up seriously ill in the morning. If he were alone for the night, he would have exposed no one. Should

he be in a room with several other children, the chances are that all would be infected. In a room by themselves they can be separated from the small children, who always suffer worst from this and other contagious diseases. The summing up of a practical quarantine for saving young children from this and other contagious diseases requires the intelligent co-operation of the parents, teachers, and the boards of health. It does but little good for the health officer to label a house with a whooping-cough or scarlet-fever sign if the members of the family who are not seriously ill run all around the neighborhood, attend school, church, and other public places, as well as associate with other children and have other children visit them in their homes.

Any contagious disease will spread under such circumstances. To be effective the separation between those who have the disease and those who are likely to take it from exposure to the infection must be complete. To be life-saving to the fullest measure, the separation must be made effective in the home first, then in the school. The conscience of the people must be educated up to that point where a mother will not knowingly send a child ill with any contagious disease where it will infect others, nor allow her own children to contract disease if it can be avoided. This educating of the public sanitary conscience will be the work of the hygienist of the future for years to come.

“THE duration of the life of men may be considerably increased. It would be true progress to go back to the simple dishes of our ancestors. . . . Progress would consist in simplifying many sides of the lives of civilized people.”—*Elie Metchnikoff*.

OVER THE RECREATIVE RAILS

The Importance of Rest to Efficient Work and the Avenues That Are Open to the Toiler

THE best worker, as a rule, is he who thoroughly can rest. In view of this, those who would accomplish much do well to cultivate the power of resting. For the brain worker, as for the muscle worker, rest or relaxation may often be best obtained by variety of labor.

W. Winslow Hall, M. D., gives some good hints as to the best methods of obtaining mental relaxation.

"Invaluable to the worker is ability to shunt the train of thought, at instant notice, to some diverse rail and there let it run freely till re-signalled for upon the working line. Three such recreative rails are eminently fit. The first is Humor. No one with a sense of humor can have failed to feel what an inestimable boon it is, what a sweetener of drudgery, what a quickener of work, what a ready delver to those precious veins of feeling that give impetus, and strength, and utility to life. Laughter, so that it be reverent and kind, is puissant as a tonic.

"The second recreative rail is Beauty. While so much of our environment remains both hideous and sordid, no least chance should be let slip of steeping mind and sense in what is lovely. And, happily, to those who know it, Beauty never is obscured: glints of sky, or leaf, or comeliness; of valor, love, or soul, are possible in even the most squalid towns: more, Beauty, when directly unattainable, is yet accessible through memory; for contemplation of the noblest poetry, or picturing, or music, always bides the beck of every lover of those arts, wherever he be

placed. Yet there are some who lack affinity for Beauty. For such, and for all, a haven of refuge, a well of refreshment, a tower of defence, exists forever in the thought of God. To no man, in any place, is communion with Him impracticable. It is possible in the briefest snatch of time; and, be it short or long, it constitutes the best, sanest rest. A branch line, this?—More properly the great main line; the longed-for express track for every driving wit; the permanent way, to build up which all tentative routes of life contribute; the terminal trunk on which all systemed truths converge.

"Distinct from such uncertain way-side spells of rest, are the meal-time intervals allowed to every worker. Here the process of personal preparation, and the mere slacked sitting at the board, are useful in themselves; then the mirth, and courtesy, and liking that should sauce the meal, not only soothe but stimulate; last, half-hour quiet that digestion claims should cap and consummate this wholesome animal pause.

"Again there is the recreation that may flow from reading. Few charms can easier wile us from our own small cares than reading a vital tale; and, in so lifting us out of ourselves, it can not fail to deepen our sympathies, and broaden our views of life, and reinforce our impulses for good. It is thus educative as well as recreative; but, that it may be so in the highest degree, there must be moderation in its use and selection of those works alone which hold a sane, ennobling outlook upon life.

"Then when the day's delightful toils are over, comes the shadowy rest of sleep. The length of sleep advisable for each must vary with the case. Children often sleep a round of the clock with benefit. Some fine workers need no more than four short hours; seven hours may be mentioned as a wholesome average. But here, as with regard to food and clothing, efficiency for work must be in every case the sole and final test.

"In its way, just as important as the nightly rest of sleep, is the weekly rest of the Sabbath. This ought to be universal. And the best use the toiler can make of this holy day is to render it as unlike his working day as possible. There should be marked alteration in his hours, in his dress, in his food, and in his doings. With regard to these last, seeing that most people work with their muscles or their minds, the Sabbath ought to be a day of muscular and mental quietude, subserving activeness of heart and soul. It ought, in-

deed, to be the festival of heart, the proper time for all the tender dues of home, the fit occasion for some generous rites of friendship. But more emphatically still, the Sabbath ought to be the festival of soul; that man is wisest who most carefully cuts down his bodily and mental joys, and who, while meeting to the full all claims of heart, concentrates his attention on the spiritual quest.

"Again, just as one requires a weekly day of rest, so, too, does one require a workless month in twelve, that one may long endure both strenuous and fit. An annual four-weeks' rest should be by law assured to all; indeed, the lower pitched the grade of work, the more essential does this medicine of rest become. Here also, studied thoroughness of change should be the note of those who would make holiday a right,—change not alone of air and scenery and house, but change of dress and food and occupations."



THE DANGEROUS DRUG HABIT

The "Short-Cut Method of Getting Results," and the Insidious Evils It Works upon the System

UNDER the constant pressure of city life a man is always on the lookout for short cuts. He jumps at every possible chance of getting bigger returns with less outlay of time. He wants to put in every minute where it will count. When he takes time out for sleep, he wants to do it up in good shape. When he gets in his recreation he wants to enjoy himself to the top limit. No matter what he is doing, he goes into it for all he is worth.

This is why drugs and stimulants make such an appeal to the city man. They offer a short-cut method of getting results. They seem to give nature a boost. A drug will often put us to sleep sooner than we can get there unaided. If we have to work extra hours, we can keep ourselves awake and up to the game by the help of a stimulant. In other words, what drugs and stimulants seem to promise is increased efficiency without increased cost. If this were really the case, the use of drugs would be a habit to encourage, but there is a fallacy.

THE EFFECTS OF DRUGS.

Speaking physiologically, the purpose of a drug or stimulant is to modify some function. It affects the work of an organ, but it does not affect its structure; at least, that is not what it is taken for. It forces an organ to do work which it couldn't do of itself. It alters the output without altering the machinery—the natural capacity.

When we put ourselves to sleep with a narcotic, we are not teaching our nerves how to let go of excitement and

regain their normal balance. They will not be in a position to do it any better another time than they were this time, and the chances are that we shall have to go to the drug again for help. When we bring about effects by artificial instead of natural means, the natural means grow more and more unreliable. The sensitiveness of the nerves has been dulled by the powder, but the conditions that made the sensitiveness have not been touched at all.

A great many people do not take the trouble to think into the matter so far as that. All they want is to get the immediate result, and if this can be done through a drug, they make the venture. The use of patent powders for headache, sleeplessness, nervous exhaustion, and similar difficulties has enormously increased within the last few years. Taken in small doses and at rare intervals these much-advertised remedies do not seem to be injurious. But a person who gets into the way of using them soon gets out of the way of sticking to rare intervals. This is almost inevitable. As long as the powder will produce the results he wants, he is really forced to keep on using it; for the actual cause of the trouble has never been reached, and it keeps making more trouble for him and demanding attention. But after the drug has been used long enough for the system to become habituated to it, the effect grows less and less in proportion to the size of the dose. So the doses have to be increased.

There is no drug that can be taken

into the system regularly without working harm. Every drug has a secondary effect as well as a primary one. The immediate effect is all a man thinks of when he takes it, but the secondary effect follows just as inevitably. It is of an entirely different nature and it is always bad. For sample, the secondary effect of most of the coal-tar headache powders is to reduce the number of red corpuscles in the blood, whose business it is to carry oxygen to all parts of the body. The same sort of double-dealing

is illustrated by every drug. The primary effect of opium is to deaden the pain and bring on an agreeable feeling of well-being which leads gradually to sleep. Its secondary effect is to stop salivary secretions and the functions of other glands, and to stop the proper actions of the intestines. The constipation that comes from opium-taking is difficult to cure. Alcohol, nicotine, chloral, cocaine, and all the rest have secondary effects just as undesirable.—*Luther H. Gulick, M. D.*

Disease of the Colon and Its Effect on the Body

NINE tenths of all chronic invalids have diseased colons. The cæcum is the cesspool of the alimentary canal, and if we eat food that easily decomposes, it accumulates in this cesspool, and the consequence is fermentation and putrefaction there. The continued absorption of the poisons which result from these putrefactions produces general deterioration of the whole body.

The lower part of the colon is in a great number of persons much enlarged. The food is discharged into this dilated cæcum, which is so crippled that it can not empty itself properly, and fermentation is continually in process there. In some cases the colon is never completely emptied, and in the body there is always a seething, decomposing mass.

Such a state of things in the body reveals itself in the fact that the fecal discharges are very fetid. They ought not to be so. Normal feces are almost odorless. The fecal discharges of sheep are not extremely offensive nor are those of a horse or cow; but the fecal discharges of a dog, a cat, a lion,

or any other carnivorous animal are horribly loathsome. The diet of a herbivorous animal does not become putrescent and produce these horrible toxic substances. If a human being subsists upon the same kind of diet as a carnivorous animal, the result is the same,—the fecal matters become just as poisonous. Fragments of decomposing meat, dead hens, sheep, pigs, etc., lie in the cæcum, which becomes a regular Golgotha. If a person has such a state of things in his body, the whole body will become contaminated, and the result will be chronic autointoxication.

This condition of the bowels is without doubt responsible for almost all chronic diseases. Dr. Dana, of New York, is responsible for the assertion that the formation of poisons in the colon is without doubt responsible for most forms of chronic paralysis.

In order to correct and cure this condition of chronic autointoxication, which is the cause of nearly all chronic disease, the first thing is to reform the diet, and to stop eating things that rot in the stomach or colon. One who does

this need have no fear of autointoxication.

To illustrate: Suppose we take four fruit jars, and into one put a piece of beefsteak; into the second, a few oysters; into the third, some cheese; and into the fourth, a piece of bread, an apple and a potato. We seal them all up tight and keep them in a warm place for a week. Think of what the conditions would be when the covers were taken off the jars at the end of the week. When the beefsteak jar was opened, everybody would want to get out of the room, and the windows and doors would be opened immediately. The condition of oysters kept a week in a warm place would also be most offensive. The cheese was old before it went into the jar, so it would not be much worse, but the odor would be concentrated. How about the apple?—You can not imagine that there would be anything very offensive about this, or any kind of vegetable food after it has been shut up for a week; but any kind of flesh

shut up in that way would soon become extremely offensive and nauseous.

What happens to this animal flesh outside the body, happens also inside the body. Three men out in Colorado some time ago went out for a bear hunt. They killed a big bear, made a camp, and gormandized for a couple of days, gorging themselves just as a bear might if he caught a man and sat down to eat him. At the end of that time they were all taken sick, one died, and the other two came very near death. They ate so much of this dead bear that they were not able to disinfect it, and they were poisoned by decomposing flesh.

It is improper diet that causes disease of the colon. When food is taken in excessive quantity and the fecal matters are retained until they decay, the consequence is catarrh of the colon, inflammation of the colon, colic pains, and dilatation of the colon. All these disorders are due to wrong diet, and can be cured by correcting the diet.

J. H. K.





HOW TO PLAN THE WINTER WALK

What To Wear and What To Take Along on a Jaunt through the Country in Midwinter

BY WALTER QUACKENBUSH

(Article and Illustrations reproduced by special permission from the Travel Magazine.)

THAT winter has its beauties no less entitled to renown than those of spring, summer, or autumn can be easily demonstrated to the doubting, provided they can be induced to cease hugging the stove and come out into the open. Mountain, field, river, brook, and lake all have their individual beauty then as in the summer, although sleeping under a blanket of snow two feet thick, which, while covering one beauty, lends another to the countryside.

Two things only are essential: A little nerve and good warm clothes supplemented by proper foot covering. With these things, those who make a trip through the country on foot when it is snow-covered will have much to enjoy, and its remembrances will linger pleasantly in their minds long afterward.

Any old suit of warm clothing will go to make up the principal part of the outfit; a sweater or good, heavy woolen shirt, and last, but not least, a pair of lumberman's socks. These are of heavy wool, come about half way to the knee,

are extremely warm, and shed the snow much better than canvas or leather leg-



With this kind of rig one can stand the coldest weather that is likely to come in our latitude

gings. As for rubber boots, they are altogether too cumbersome for walking, and tire the walker long before the journey is well begun. About the best kind of foot covering is the high, moose-hide, tanned moccasin; for in these the foot has just enough play to be comfortable and warm, incased in the woolen sock, which, if necessary, can be worn over a pair of cotton ones, to prevent the irritation sometimes experienced where the skin comes in contact with rough wool. Strong shoes with ordinary rubbers will do. Mittens are the best protection for the hands, and a cap with a back piece to pull well down over the ears, when desired, tops off all that is necessary to complete the outfit. With this kind of rig one can stand the coldest weather that is likely to come in our latitude, even in the worst winters.

There are many beautiful trips close to almost any city, but to get the true beauty of the country in winter time one should get out of the beaten path. Thirty or forty miles' ride on a railroad in any direction usually brings one to a good starting-point. Then, in the little baggage room of the wayside station, the suitcase containing the tramping rig can be opened up, and the necessary change made, leaving behind the "city" togs to be donned at the end of the return journey.

Seldom, however, on a journey of this kind can one depend upon securing a good hot dinner at some farmhouse, and cold food is unattractive. Therefore, a light camp outfit of cooking utensils is desirable. When these provisions are placed in a light canvas pack, the whole thing will not weigh over ten pounds, so that with the additional weight of a camera, which is always useful, the traveler, even if alone, will not be overburdened. When

two or more go together, the luggage can be easily distributed. Thus equipped, with pack straps and belts reasonably tight, you are ready.

A road map is a most excellent thing to carry along, for without it you are liable to go astray, thereby losing time in getting to the objective point, which ordinarily should not be over five or six miles distant, because walking through untracked snow is not as easy as on beaten roads, and with the return journey of the same distance, ten or twelve miles will be about all the average traveler should attempt.

I shall never forget my first trip of this kind. In the woods and fields the soft, dry snow was three feet deep, as there had recently been a very heavy fall. We got off the train at a small station about fifty miles north of New York shortly before ten in the morning, and after making the requisite changes in clothing, arranging packs, and getting out the camera, we were ready for the journey.

Our way led us through a big patch of woods which was absolutely track-



Our way led through a patch of wood, trackless and seemingly far from civilization

less, and seemingly as far from civilization as man had ever been. On the far side of this woods nestled the lake, which was our objective point, and already our appetites were so keen that we seemed to smell the dinner cooking. Not a sound broke the silence except the crunch of the snow crust, deep under this later fall. The top layer of two feet had fallen the day before, and through it we easily walked as through a bank of feathers.

The lake stretched away between two hills looking like a vast, marble floor. We hustled for standing dead-wood, and soon the fire cracked and blazed,

and we prepared the dinner. The kettle full of hot soup was tipped over during the process, but that was only a temporary disappointment, and another supply was soon ready.

Seated on a fallen tree we rested a while, and then took some pictures. Early in the afternoon we started back for the railroad, reached the station in good time to change our clothes and make the evening train for home. Not in the least tired, we experienced that exhilaration of the spirits that can be had by no other means than a journey through the snow on a day when the air is crisp and clear.

The Patient Potter

“The potter stood at his daily work,
 One patient foot on the ground;
 The other with never slackening speed,
 Turning his swift wheel round.
 Silent we stood beside him there,
 Watching the restless knee,
 Till my friend said low, in pitying voice,
 ‘How tired his foot must be.’

“The potter never paused in his work,
 Shaping the wondrous thing;
 ’Twas only a common flower-pot,
 But perfect in fashioning.
 Slowly he raised his patient eyes
 With homely truth inspired;
 ‘No, ma’am; it isn’t the foot that kicks,
 The one that stands gets tired.’”



HOW THE BODY RESISTS DISEASE

A Description of the Conflict Constantly Going On between the Life Forces and Destructive Agents

BY WILLIAM S. SADLER, M. D.

THE human organism is the scene of a constant struggle between the physical life forces and ten thousand agents of disease and destruction which constantly surround the body and jeopardize the physical health. The body resists these manifold agencies of disease and death by means of its "vital resistance."

In the beginning, when man came from the hand of his Maker, he was mightier than the microbe, but through thousands of years of physical transgression and consequent degeneration, we have come to the place where the germ is sometimes greater than the man; and disease is generally the result of the body's defeat at the hands of these microscopic destroyers.

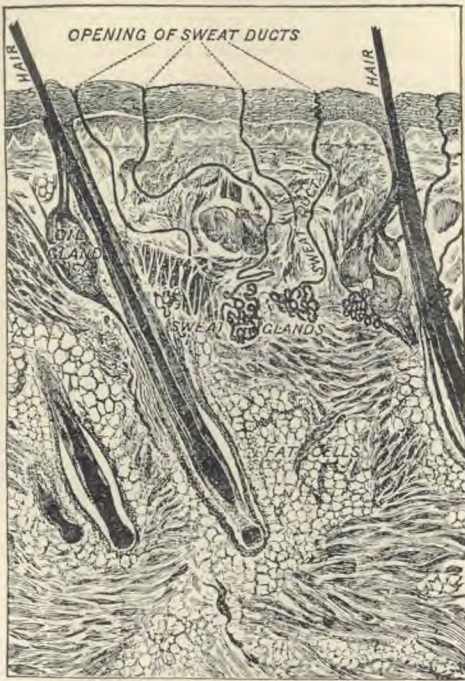
Germs are not attracted to healthy people. It is only when a man is sick that he offers inducements for microbes to prey upon him. Disease is only contagious to a weakened organism. A prominent infidel once said that if he had made this world, he would have made health "catching," and not disease. But this is just what God did. Health abounds in the very air we breathe and

in the movement of every muscle and fiber of the physical man, while disease is only secured by persistent transgression and by constantly lowering the "vital resistance."

In the first place, the body is surrounded by a germ-proof covering,—the skin. When the skin is healthy, it is impenetrable to germs. Likewise, the eighty square feet of mucous membrane lining the digestive tract is also germ-proof when normal and healthy. So it



Pus Germs



Sweat Glands

appears that from within and without Nature has erected an efficient barricade against the entry of disease germs.

Likewise, all the fluids and secretions of the body are more or less germicidal. The saliva, being alkaline, discourages the growth of germs requiring an acid medium. The normal gastric juice of a healthy stomach is a sure germ-killer. In the early part of digestion, lactic acid is present, and there soon appears the powerful hydrochloric acid, which is a most efficient germicide.

The bile and intestinal juices are not destructive to all kinds of germs. The colon bacillus and some others will grow in the presence of these alkaline fluids, and are constantly found in the intestinal tract.

The living healthy tissues of the body are all more or less germicidal; that is, they are endowed with certain protective properties against germs and disease. This is true of many of the

other special secretions, like those found in the eye and elsewhere in the body, when they are normal.

The blood and lymph, the two great circulating fluids of the body, are likewise germicidal. In normal conditions of health, and special conditions of disease, there may be found various substances in the blood which can destroy germs.

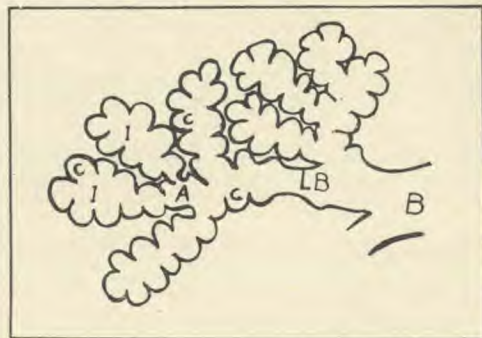
It would seem that an all-wise Creator, in designing the body, had made provision for every imaginable emergency. It certainly is a privilege as well as duty to study these divinely ordained means of life defense, in order that we may refrain from in the least impairing them, and also that we may know how to more intelligently and efficiently cooperate with Nature in her wonderful and incessant struggle to maintain life and health.

We will now take up systematically the means by which the physical organism defends itself against disease.

1. BY ELIMINATION OF GERMS AND THEIR POISONS

When germs invade the human body, the organism at once sets about in an earnest and united manner to unload the destroyers. This work of eliminating disease germs and their toxins, is conducted by four different channels:

(a) *The Bowels.*—When the gastrointestinal tract is infested by microbes,



Diagrammatic Representation of the Termination of a Bronchial Tube



Glands of the Stomach

they are eliminated in large numbers by the bowels, and it is claimed that in some instances germs may even be thrown out into the intestine in an effort to free the system of their presence. This is why it is necessary to thoroughly disinfect the fecal discharges of persons suffering from infectious diseases, especially such diseases as typhoid fever, dysentery, cholera, etc., so as to avoid the unnecessary spread of the disease.

Germ poisons are likewise eliminated by the bowels, and this explains why diarrhea is often present in many diseases. Poisons are eliminated through the mucous membrane of the bowels, setting up a catarrhal process, just as they are through the mucous membrane of the nose when one has a cold.

(b) *The Kidneys*.—The kidneys likewise take part in the elimination of dis-

ease germs. In many diseases they are found quite constantly in the urine, as in typhoid fever, and the same care should be taken to disinfect the urine in this disease, just as thoroughly as the bowel discharges. Many toxins

from disease germs are also eliminated through the urine after being extracted from the blood by the kidneys.

(c) *The Skin*.—In conditions of some severe infectious disease, germs may be found in the skin, being eliminated by means of the sweat glands, etc. This is true of some parts of the body in typhoid fever. For this and other reasons, great care should be taken to keep the skin clean and active. In all forms of disease, the skin should be kept healthy by maintaining a constant circulation of the blood by means of suitable bathing, etc.

(d) *The Lungs*.—While the germs themselves are probably not bodily eliminated by the lungs, large quantities of poison are thrown off from the body in disease along with the normal poisons of respiration.

TREATMENT FOR DIARRHEA

For loose condition of the bowels, diarrhea, or dysentery, hot applications should not be made, but cold applications, which will cause contraction of the blood-vessels. In the case of a child suffering terribly with summer complaint, cloths wrung out of cold water placed over the bowels, and changed just as soon as they get warm, relieved the pain completely in an hour or two, and saved the child's life.

When there is such a condition in an older person, a cold sitz bath is a good remedy. The water should be at 70° and gradually cooled down until 60° is reached. Wonderful relief is sometimes obtained from this source.

Cold water may sometimes be used internally by means of the enema. In a very bad case of dysentery, water at 40° introduced into the body afforded relief at once, and the patient made a quick recovery.

How To Heat a Home

PROPER heating is by no means so simple a matter as may be supposed by those who have given the matter no special attention. A properly heated building is as rarely to be found

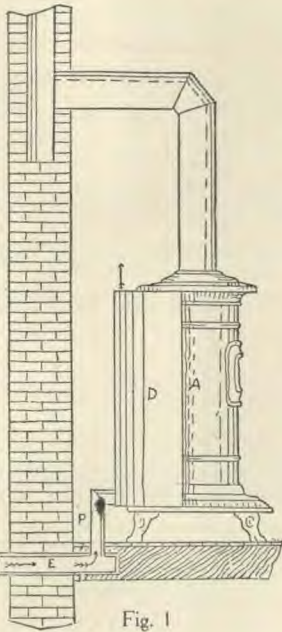


Fig. 1

as one which is efficiently ventilated. Heating by stoves is the method in most common use, and as ordinarily employed, is the most unhealthful, with the exception of the method of heating by means of steam pipes placed in rooms and not regularly supplied with fresh

air. The stove simply heats the same air over and over, providing no fresh air. For ordinary use in dwelling-houses of any considerable size, the furnace is undoubtedly the most healthful and economical means of heating. It should be mentioned, however, that a furnace is useless without efficient means of ventilation. Air can not be made to enter a room unless space is made for it by the removal of air. A plan which is sometimes employed, and which has been highly recommended by those who have tried it, is the following: The furnace is placed in the cellar, from which the supply of air is taken. A hot-air duct leads to the room or rooms to

be heated, and another register is put in the same room, at a distance from the hot-air register, through which the cold air of the room may be taken back to the cellar, and thence to the furnace. By this arrangement, the same air is made to travel round and round, and a very great economy in fuel is secured. But such as this is the very worst possible, and can not be too strongly condemned. Air supply for a furnace should come direct from outdoors, and the same should be said of stoves arranged after the methods shown in the accompanying cuts.

Fig. 1 shows how a common stove, A, by the addition of a sheet-iron jacket, D, which communicates with the open air through a pipe, P, and a wooden box, E, passing beneath the floor through the foundation wall, may be made to supply warm, fresh air to a room almost as efficiently as a furnace.

Fig. 2. This is a similar arrangement applied to a box-stove. Any kind of stove may be arranged in the same manner. If preferred, the stove may be located in the basement, and completely enclosed by the jacket, when it becomes practically a furnace. When thus arranged, a pipe

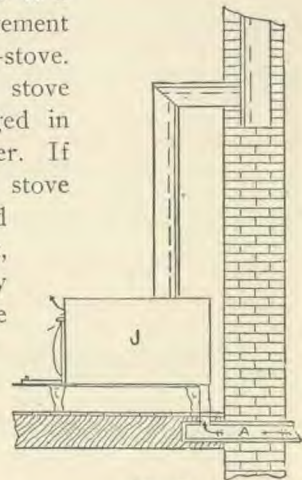


Fig 2

of ample size should lead from the top of the jacket to a register in the floor of the room to be heated. With a good-sized stove thus arranged, two or three

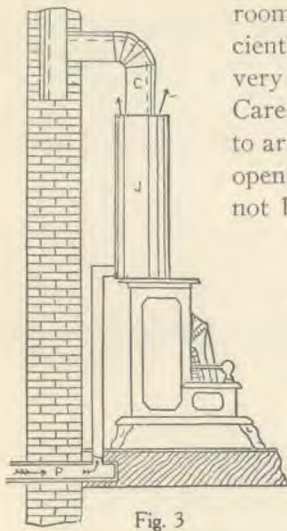


Fig. 3

rooms may be sufficiently heated even in very cold weather. Care must be taken to arrange the fresh-air opening so that it will not be prevented from operating efficiently by adverse winds.

Fig. 3 shows how the same principle may be applied in a jacket about a stovepipe. It should, of

course, be recollected that none of these methods are effective unless some means is provided by which foul air may escape from the room.

Fig. 4 shows how a chimney may be so constructed as to operate both as a ventilator and a smoke flue. D represents the smoke flue; A, B, and C, the ventilating flues, which are separated from the smoke flue by a brick or sheet-iron partition, which is heated by the

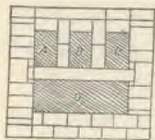


Fig. 4

smoke and hot gases in the smoke flue, and thus secures a draft in the ventilating flues. The same result may be secured by carrying the smoke off by means of a pipe or stack carried up through the center of the chimney, by means of which the air inside the chimney will be heated, and an excellent draft secured. All that remains to be done is to connect each room to be ventilated with the chimney by means of a duct of proper size, which should open at the floor of the room. If two stories are to be ventilated, the chimney space may be divided



Fig. 5

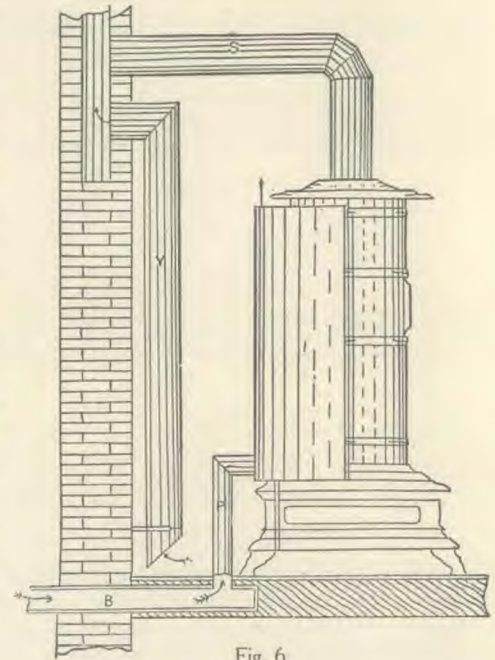


Fig. 6

by a partition, as shown in Fig. 5,—C, chimney; P, pipe in center. One side should be used for the lower, and the other for the upper story.

Fig. 6 illustrates a means by which a constant supply of warm, pure air may be obtained, and efficient ventilation secured by simple and inexpensive means which are applicable to any house. The arrangement of the jacket and fresh-air pipe is the same as shown in Fig. 1. In addition is seen pipe V, which starts near the floor behind the stove, and is con-

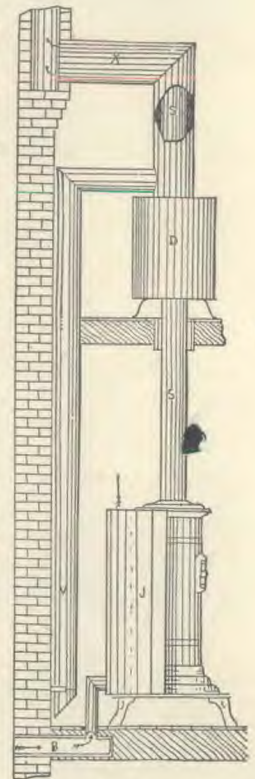


Fig. 7

nected with the chimney just below the entrance of the smoke pipe into the chimney. This arrangement gives perfect satisfaction when the chimney is large and the draft strong and constant. It can not be relied upon when the draft is deficient, as it will diminish the draft of the stove so as to cause smoke to enter the room.

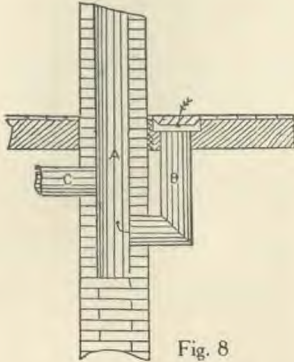


Fig. 8

Fig. 7 shows an ingenious method of having two rooms and ventilating one of them by utilizing the heat of the stovepipe in the second story to create a draft, thus ventilating the room below. It will be observed that only the lower room is supplied with fresh air. This defect might be remedied by a small register in the floor of the upper

room just over the stove of the lower room. Ventilation for the upper room, with such an arrangement as this, must be provided in some other way.

Fig. 8 shows how a room may be ventilated by taking the air down through a register in the floor through a pipe, B, to the chimney flue, A. It will be observed that the opening of the ventilation pipe is below the opening of the smoke pipe from the furnace. If the ventilation pipe were to enter the chimney above the smoke pipe, smoke would enter the room above. Both of the arrangements last described and illustrated by Figs. 7 and 8 require a very strong draft.

In constructing a dwelling-house with reference to health in the matter of heating and ventilating, we know of no better plan than to provide an improved form of furnace as a means of supplying warm, pure air, and a grate for every room or suite of rooms as a means of ventilation. In very cold weather, the draft in open grates without fires will be sufficiently strong to secure ample ventilation, if the flues are in inside walls; but in spring and fall, a little fire will often be needed to create a draft in the grate flue.

Friends, in this world of hurry, and work, and sudden end,
 If a thought comes quick of doing a kindness to a friend,
 Do it that very minute! Don't put it off, don't wait;
 What's the use of doing a kindness if you do it a day too late?

—A. C. Morgan.



RIGHT AND WRONG WAYS OF DOING THINGS



THE CHILDREN'S COOKING CLASS

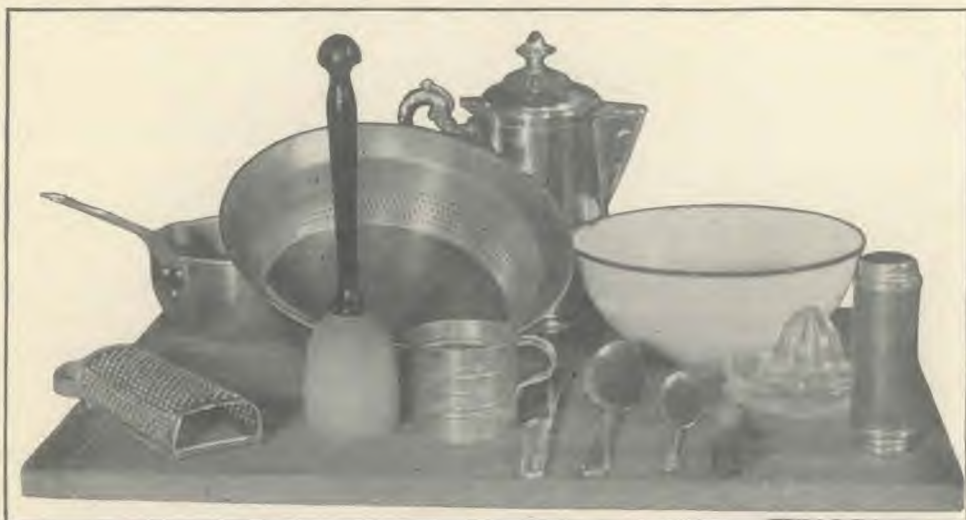
Conducted by LENNA FRANCES COOPER

DEAR CHILDREN OF THE GOOD HEALTH FAMILY:—

Here we are at the beginning of another new year, surrounded by the pleasures of winter, and enjoying the crispness of the winter air. This is a time when most of us make new resolutions and new plans for the coming year. Now I have a plan to tell you about. We are going to have a cooking class for the children, and all the children who read GOOD HEALTH are invited to join it. The recipes will be very easy, and full directions will be given in GOOD HEALTH, but if any boy or girl has any difficulty with them and will write me enclosing a stamp for reply, I will be glad to give them my personal attention. I will also be glad to hear from any of the boys or girls who try these recipes.

The first lesson will be about those foods which contain a large amount of water, such as soups and drinks. Water is a very necessary part of our food, because our bodies are about three-fourths water. Grown people use about four and one-half pints of water in the body daily. Of course, this must be replaced either by the water we drink or that which we take as part of our food. Almost all of our foods, even those which seem quite dry, contain some water. About one-half of this amount is taken with the food, and the rest, or about two pints, should be taken as a drink. Of course, children do not need to take quite as much as this, but all of us ought to form the habit of drinking freely. Sometimes people prefer to take their water flavored, and this is called a beverage. This may be fruit juice, which is water flavored by nature, or it may be water flavored with some grain preparation as Noko, or some other cereal coffee, or it may be tea, coffee, or chocolate, but I hope that none of the GOOD HEALTH children ever drink any of these three; for they contain substances which will make you nervous, cross, and irritable, and will impair your digestion. You may not see these effects when you first begin, but after a time they can not help but injure you. When you take liquid foods, they should be taken either at breakfast or at luncheon, or when you take a lighter meal. It is not well to take a lot of liquid at a big dinner. When there is soup for dinner, you ought to take only a small dish of it.

Now we are ready to begin our cooking. There is one thing which you will all need, and that is a half-pint measuring cup which is divided into four parts, or fourths, on the front part of the cup, and into three parts, or thirds, on the back part of the cup. You may need to have your mammas show you these lines the first time. The success of your work will depend more upon the accuracy of your measurements than upon any other one thing, so I shall tell you just how to measure. I hope you will all practice measuring as often as you have opportunity in order to become expert at it. All measurements are made *level*, unless otherwise stated. To measure a cupful of a dry substance, the cup is filled as full as you can fill it. Then with the knife drawn across the top, push off all above the edges, so that the top of the cup is left perfectly level. To measure a spoonful of anything dry, fill the spoon, then with



The Needed Utensils

your knife push off all that remains above the level. In using butter, or nut soup stock, or anything of a similar nature, press the solid material into the spoon until the spoon is filled, and then scrape off all that remains above the level spoonful, as you will see in the picture. To *divide* spoonfuls of material, level it off, then with the knife divide the spoonful down through the center, and push off the half that is not needed. To make further division, push off with the knife that part which is not needed, as you will see in the photograph. Measure spoonfuls of liquid by dipping the spoon into the liquid and taking all the spoon will hold. In measuring part of a cupful, be sure that the liquid comes to the center of the ring around the cup.

The utensils which you will need for this lesson you will see in the picture, and are as follows:—

Measuring Cup.
Teaspoon.
Tablespoon.
Bowl.

Silver Knife.
Paring Knife.
Sauce Pan.
Grater.
Potato Masher.

Lemon Drill.
Coffee Pot.
Coffee Percolator or Sack.
Colander.

NUT FRENCH SOUP.

Two Cups of Water.
 2 Tablespoons Nut Soup Stock.
 $\frac{1}{2}$ Teaspoonful Sage.
 $\frac{1}{2}$ Small Onion.

One Cup Tomato Juice.
 One Bay Leaf.
 $\frac{1}{2}$ Teaspoonful Thyme.
 $\frac{3}{4}$ Teaspoonful Salt.



Dividing Butter

To obtain one cup of tomato juice, put one and one-fourth cups of canned tomato through a colander, which is a pan with many small openings so that food may be pushed through it with a potato masher, leaving the seeds and coarse substances. To the water add the tomato juice and nut soup stock, and put it on the fire to cook. Then measure the sage and thyme. Tie them with the bay leaf in a cheese-cloth, and put into the liquid to steep. Add the salt and the grated onion to the liquid. The bay leaf, sage, thyme, onion, and salt are simply flavorings. Cook slowly for about forty-five minutes. There should be two cupfuls when finished. If there is not this much, add enough water to make two cupfuls. Soup should always be served hot.

NO KO.

Five Tablespoonfuls Noko.

Four Cups Boiling Water.

Put the Noko into the percolator, or tie it in a clean cloth and add to the boiling water. Let boil for twenty minutes or more. Serve with sugar or cream if desired.

POTATO SOUP.

2 Cups Sliced Potatoes.
 2 Cups Boiling Water.
 1 Cup Milk.

1 Cup Cream.
 1 Teaspoonful Salt.
 1 Tablespoonful Butter.

Pare and slice enough potatoes to make two cupfuls. Cook them in two cupfuls of boiling water. When tender, rub through the colander. Return to the fire and add one cup of sweet milk, one cup of cream, one teaspoonful of salt, and one tablespoonful butter. Reheat to the boiling point, and serve hot. If desired, a slice of onion may be cooked in the liquid to give flavor.

SANITAS COCOA.

Six Teaspoonfuls of Sanitas Cocoa.
Two Tablespoonfuls Sugar.
Two Tablespoonfuls of Cold Water.

One-half Cup Cream.
One Cup of Sweet Milk.
One-half Cup Hot Water.



Dividing Flour

Mix the cocoa and sugar in a saucepan with the cold water. Let cook until thick and smooth, being careful to stir all the time to prevent burning. Then add the remaining liquids, and let come to the boiling point.

VEGETABLE SOUP.

One-half Cup Potatoes.
One-half Cup Carrots.
Two Cups Tomato Juice.
One-half Teaspoonful Thyme.
One-half Cup Turnips.
One Medium Sized Onion.
Eight Cups Water.
Two Tablespoonfuls Butter.

Pare the potatoes, carrots, and turnips, and cut into small cubes, as you see in the picture. Add these to the boiling water. Add the

tomato juice. Prepare the same way as for the nut French soup. Grate the onion, and put all on to cook. Tie the thyme in a piece of cheese-cloth, and let steep in the liquid. Cook for two hours or until tender. Then add the butter, and serve.

FRUIT PUNCH.

One Cup Grape Juice.
Juice of Three Oranges.
Four Cups Water.

Juice of Three Lemons.
One-half Cup Sugar.

Cut the oranges and lemons in halves, and extract the juice by means of the lemon drill. Strain the juice so that it will be perfectly clear. Add this to the unfermented grape juice, which may be obtained at any drug store. Add this, with the sugar, to the water. Stir well to dissolve the sugar. Place in an ice-chest to chill.



The Vegetables Prepared for Soup

HOW TO UNLOAD THE LIVER

A Simple Plan Which Is More Effective and Less Injurious Than the Use of Salts

Many persons habitually take every two or three weeks a dose of salts, calomel, or some other loosening medicine for the purpose of unloading the portal circulation to relieve a sluggish liver. The real trouble in these cases is not with the liver, and is not likely to be permanently helped by the means employed. Indeed, in the end the difficulty will be aggravated. The real trouble is the decomposition of fecal matters in the colon, flooding the system with poisons which overwhelm the liver with work. The liver and other abdominal organs are in these cases overflowed with stagnated blood, and temporary relief is obtained by the copious discharge of serum into the intestine, which produces the loose stools following a dose of laxative medicine. But this is an expensive way of relieving the condition. A purgative produces its effects by irritating the mucous

membrane and lessening its resistance. It also robs the blood of a large quantity of important nutrient material. The effect of a laxative is always weakening. Digestion is disturbed, and all the vital functions more or less perturbed. Better results may be obtained by an exceedingly simple method, which consists simply in deep breathing. With the chest held as high as possible, drawing in the abdominal muscles, take a very deep breath. Breathe out without allowing the chest to drop. Repeat ten or fifteen times. After resting a few moments, repeat the exercise. Every time a deep breath is taken in this way, the liver and all the abdominal organs are compressed between the diaphragm and the tense abdominal muscles, and thus emptied of their blood. It is thus possible to unload the portal circulation in one or two minutes even more completely than can be done with a cathartic, and without the loss of anything useful to the body. The habit of sitting and walking with the chest high and breathing deeply is a most effective means of helping a sluggish liver, and preventing stagnation in the bowels.



A NOTABLE SALTLESS EXPEDITION

Lewis and Clarke a Hundred Years Ago Demonstrated Salt a Non-Essential Article of Diet

ONE hundred years ago the Lewis and Clarke expedition to the Northwest demonstrated the fact that white men as well as Indians can not only live but can enjoy most excellent health and endure great hardships and privations when wholly deprived of salt as an article of diet. The narrator who tells the story of this interesting expedition calls special attention to the fact that members of the expedition, after living a year without salt, were astonishingly free from disease, that their blood seemed to be in remarkably fine condition as shown by the fact that wounds and bruises healed in an incredibly short space of time. The same was observed among the Indians, who had never known the use of salt, a fact which was true of the North American Indian tribes generally until within very recent times, and since the Civil War.

A new example of a similar sort is recorded in the account given by Otto Norden-skjold, leader of the Swedish Antarctic Expedition. The expedition was expected to return in one year, but owing to the crushing of their ship they were compelled to spend the second winter in that most inhospitable clime, exposed to terrific gales for more than half the winter months, with the wind blowing with terrific violence, and a temperature of 30° to 40° below zero. Their supplies of sugar, salt, and tobacco were for many months entirely exhausted.

Nevertheless they remained in good health. Not one died of disease.

The time-honored notion that salt is an article of diet essential to human life and health is rapidly losing its standing among scientific men. Observations are being made by medical men all over the world which show the falsity of this belief. Indeed, there is strong ground for the belief that the free use of salt is a predisposing cause of Bright's disease, arteriosclerosis, or hardening of the arteries, premature old age, cirrhosis of the liver, dropsy, apoplexy, and numerous disorders of degeneration.

Some years ago an eminent European physician made the discovery that in patients suffering from dropsy with Bright's disease, the complete withdrawal of chloride of sodium from the diet often resulted in the rapid and complete disappearance of the dropsy. In one case, the experiment of withdrawing and returning salt was repeated seven times in succession, and with the result each time that the dropsy returned with the salt and disappeared with its withdrawal. The writer has repeatedly made similar observations.

The fact has finally been recognized that the first indication of failure of the kidneys is their inability to excrete chloride of sodium. This is, in fact, recognized as a cause of dropsy. The system, being unable to get rid of the chloride of sodium

which is being taken in with the food, forces it out into the tissues in order to get it out of the blood. This is why the dropsy disappears quickly when salt is omitted from the dietary.

It would seem that no further argument is necessary to convince intelligent men and women that chloride of sodium is a substance capable of doing much mischief, and that its use is unnecessary, and should at least be restricted to a very minute amount. It is, in fact, surprising how easily one can accustom himself to the disuse of salt. One of the most eminent chemists in the United States, a professor in a great university, said to the writer not long ago, "I never add salt to my food."

Said the writer, "Do you eat baked or boiled potatoes, eggs, and similar foods without salt?"

"Certainly," was the reply. "Our foods naturally contain all the mineral substances necessary for the use of the body."

The writer has demonstrated this by living for years without salt. There are many primitive tribes of human beings who never taste salt, and who have lived from time immemorial without it.

It is really amazing how many artificial necessities civilization has created, and how many useless and harmful burdens custom has heaped upon us.

GOOD ADVICE FOR THE DOG

Rules Laid Down for Canine Health Which Might Well Be Followed by the Dog's Master

A writer in *Country Life in America* who has had a large experience in the care of dogs, contributed to a recent number of that excellent magazine an article entitled, "The Care of the Home Dog," from which we extract the following paragraphs:—

"To begin with, remember this, that a dog digests its food very slowly, and should never have more than two meals a day when in health. For a house-dog that gets little exercise one meal is sufficient.

The food should be plain, wholesome, and nutritious. Above all things, if you wish to keep your dog in health, avoid preserves and sweetmeats of all kinds, hot toast, tea, and the like.

"Feed your dog regularly. If you give him one meal a day, let it be at midday; if two, morning and evening, and always at the same hour.

"Let the animal eat until he is satisfied, for if he is fed regularly you need have no fear that he will gorge.

"If your pet is to be kept in the house, he will require very little meat—a small piece every third day with a bone to gnaw on. A bone is a great aid to digestion and keeps the teeth in good condition. Give bread soaked in meat gravy, biscuit soaked in milk, oatmeal, rice, or potatoes, and once or twice a week, green vegetables. Scraps of beef, mutton, etc., from the table are all that is needed in the way of meats. It is all nonsense to buy horse meat, paunch, entrails, and other things of this kind, except where a large number of dogs are kept. Avoid giving liver.

"Dog biscuit is good for a change. Many owners feed fish now and then to their dogs, but we have had dogs that such food always caused to suffer from skin disease.

"Let your dog have water as often as he wants it.

"As to feeding puppies, there is quite a disagreement among experts, but this advice will be found to be good, as every expert will agree. Do not give meat until four or five months old, and then introduce it into the feed gradually. When the pup comes from its mother, give it bread soaked in milk; grind up biscuit fine and soak it in milk; boil oatmeal or barley for an hour and feed this, and now and then a little mashed potato. Do not salt the food, for salt to a dog is almost as great a poison as it is to a chicken.

"Give your dog regular exercise. Do not take him out for an airing at the end of a chain—that is not exercise. Turn him loose and let him run. Either exercise before feeding or some time afterward, for

exercise on a full stomach is likely to cause fits. . . .

"Follow these directions, and your dog will keep in good health. Remember that if your kennel is not clean and dry and cheerful, and if your dog is pampered and overfed, he will be likely to have distemper."

The above advice is very excellent. Any dog that is enabled to follow the advice given will undoubtedly remain in excellent canine health, and enjoy as great a degree of longevity as is natural for canines; but how about the dog's master? Is it possible that the master can enjoy good health while doing the very opposite of all the things suggested for the dog? Every one of the rules laid down for canine health is as appropriate for the dog's master as for the dog; and if carefully followed will be just as certain to insure good health for a man as for a mastiff.

The writer of the article above referred to errs only in one small point—the dog does not require meat whether he lives indoors or outdoors. The dog does not need meat any more than it needs salt. Neither does a man need salt any more than does a dog. As a matter of fact, there is no animal which requires salt. When will men and women begin to give themselves as good care as they give their dogs?

FLETCHERISM STILL AHEAD

Principle of Perfect Mastication Again Triumphs After Exhaustive Tests By
Yale Students

THE principle of health and temperance that lies hidden in the complete mastication and insalivation of all food taken, continues to bear triumphantly every test that is applied to it.

That principle discovered by Mr. Horace Fletcher, simply stated, is, that, All in the dietary that is not water is food, and must be chewed and thoroughly insalivated.

Of course, milk, soup, or other liquid

taken, needs not to be chewed as long as bread, nuts, and other dry food must be; but they are foods and must be chewed as really, even if not so long, as dry foods.

At Yale University there have been made the most exhaustive tests of this principle. About two years ago Professor Chittenden, Director of Sheffield Scientific School, conducted a series of experiments in test of the principle as it relates to "Physiological Economy in Nutrition." As published in the official report these tests demonstrate as to *health*, that—

"Body-weight (when once adjusted to the new level), health, strength, mental and physical vigor, and endurance, can be maintained with at least one-half of the proteid food ordinarily consumed—a kind of physiological economy, which, if once entered upon intelligently, entails no hardships, but brings with it an actual betterment of the physical condition of the body. It holds out the promise of greater physical strength, increased endurance, greater freedom from fatigue, and a condition of well-being that is full of suggestion for the betterment of health."

And as to *temperance*, the experiments demonstrate that—

"Physiological economy in nutrition means temperance, and not prohibition. It means full freedom of choice in the selection of food. It is not cereal diet nor vegetarianism, but it is the judicious application of scientific truth to the art of living, in which man is called upon to apply to himself that same care and judgment in the protection of his bodily machinery that he applies to the mechanical products of his skill and creative power."

The purport of the statement that this principle applied "means temperance and not prohibition," is that under the reign and guidance of the principle there is no necessity of excluding anything by prohibitory rule or direction: the principle itself excludes those things which are injurious, and even those things that are of inferior value as foods. It absolutely excludes all manner of strong drinks. Under the application of the principle it is found impossible to use whisky, wine, beer, or

the like; because when any of these is chewed it becomes repulsive. And as to foods themselves, it is demonstrated that it is only the very best of foods, in every respect, that will stand the test and continue palatable and desirable, under the principle; all but the very best being gradually but certainly eliminated.

The present year another exhaustive series of experiments was conducted in test of the principle. This was also at Yale, but in a separate department entirely; and the test was for a purpose distinct from the previous one. This test was conducted by Prof. Irving Fisher, head of the department of "Political Economy," and was "to discover whether attention to slow eating and the enjoyment of food would affect the *working powers* of individuals." The results of the test were announced October 4, in the *Yale Alumni Weekly*. From this report we extract the following:—

"These experiments were made with nine Yale students based on previous experiments by Director Russell H. Chittenden of the Sheffield Scientific School. The experiments began in January and lasted four and a half months. The men improved fifty per cent in endurance during the first half of the experiments. The second half showed as marked improvement as the first, and at the end of the experiment the men were able to do double the amount of physical work, as shown by gymnasium contests, that they were capable of in January. This increase in working power is ascribed by Professor Fisher entirely to dietetic causes.

CHANGE IN DIET NATURAL.

"The first endurance tests, taken in January, followed the Christmas vacation, when the men had been resting and were in especially good condition, while the final test was made at the end of a long term of college work. The men led sedentary lives and took no more exercise than they had been accustomed to before the experiment began. Professor Fisher says the *change in diet was not brought about by any prescription*, but was *entirely natural*, the changes being due merely to the fact that the men masticated their food more thoroughly than previously.

"During the first half there was thorough mastication of food, with attention

to taste and enjoyment of food, and not to the mere mechanical act of mastication or implicit obedience to appetite. *The men ate nothing which they did not choose of their own free will.* Nothing was set before them except as ordered by them. In order to enable them to choose properly, a wide range of choice was provided. Meats were available three times a day, but it was found by thorough mastication the men gradually *lost their desire for meat* and substituted cereals, fruits, and nuts, so at the end of the first half of the experiment their daily consumption of meat was little more than half its original amount.

"During the second part of the experiment the men continued the two dietetic rules mentioned and added a third—namely, when the appetite is in doubt as to its choice of foods, the benefit of the doubt was given to non-flesh foods and other foods low in 'proteid.' In June it was found the men had decreased their consumption of flesh foods to one-sixth of the original amount of their 'proteid' brought down to the level advocated by Professor Chittenden.

"One of the nine men failed to improve in endurance. He was the least faithful of the nine in following out the dietetic rules."

ABOUT WINTER PRURITIS

An Easily Adopted Remedy for Skin Irritation Commonly Experienced in the Cold Season

Many elderly people, and persons whose skins are naturally hypersensitive, suffer greatly from burning, smarting, and tingling sensations of the skin in the winter season. The difficulty is likely to be worse in very cold, dry weather. There is no eruption unless the skin is irritated by scratching. Rubbing affords little or no relief, but only serves to aggravate the difficulty. The best relief will be found by the application of hot water,—a very hot spray, or immersing the parts in water as hot as can be borne. An excellent method is the following:—

Draw into a full-bath-tub five or six inches of water, making the temperature

106 degrees. Sit down in this with the limbs extended. Rub the limbs and arms—the parts chiefly affected—taking care not to irritate the skin. After a minute step out of the bath, and raise the temperature to 110 degrees. Enter the bath again and repeat the rubbing as before for one minute. Then raise the temperature to 112 or 114 degrees, and continue the rubbing for another minute.

The effect of the bath may be continued by the application of a lotion consisting of—

Carbolic acid	2 parts
Rose water	10 parts
Alcohol	88 parts

The lotion should be rubbed thoroughly on the affected parts and allowed to dry.

ANOTHER "RACE SUICIDE"

Ignorance As Fully Responsible for Race Destruction As Any Other Factor

A writer in a contemporary magazine offers a pertinent thought on "race suicide," about which there is so much written in these days. The expression "race suicide" is used to refer only to the failure to bring children into the world. Nothing is thought about the race destruction that comes through the deaths of children as the result of the ignorance of mothers; nothing of the lessening of the vigor of the race through undue taxation of the strength of mothers. If the government was awake to the real issues of life, it

would recognize mothers as the greatest wealth of the nation, and would recognize it as wiser economy to so care for the mothers that their health, vigor, and happiness would be insured than to care only for the wrecks of humanity that come through the ignorance, overwork, and illness of uncared-for mothers.

POISON FOR BANQUETERS

New Cases of Meat Poisoning Reported in the Newspapers

According to the Oakland (Cal.) *Herald*, Chief of Police Wilson and wife, with twelve other guests at a banquet, were made seriously ill by eating potted veal. The symptoms of poisoning appeared a short time after the meal, showing the cause to be ptomaines present in the veal. The newspapers are reporting such cases every day of poisoning from canned salmon, smoked fish, sausage, long-kept game, and other dead bodies of various sorts in an advanced stage of decomposition.

It is noticeable that these reports of poisoning all relate to the use of meats of some sort. No one hears of serious poisoning from the use of bread, even though it may be a little stale, or from the use of potatoes, or any other vegetable with the possible exception of mushrooms, most of which are naturally poisonous and were never intended to be used as food.

Those who have gotten rid of the meat appetite by return to nature in diet need have no anxiety of injury from ptomain poisoning.





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 to 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.]

10,419. Hubbard Squashes—Nosebleed—Gastric Digestion—Cottage Cheese.—B.

M. D., Iowa: "1. What proportion of starch and proteids do hubbard squashes or winter squashes contain? 2. Whenever I have a bilious headache, I have bleeding from the nose, ears, and lungs from a place once broken open in the bronchus. How can this be avoided and the danger of infection minimized? 3. What will stimulate gastric digestion? I eat two meals daily, sleep outdoors, take a cold plunge with fine reaction on arising, exercise afterwards, employ breathing exercises on retiring, eat at 12:00 A. M. and 6:30 P. M., drink a glass of cold water half an hour before meals. I am on a uric-acid-free diet, and do no sedentary work. 4. Would two heaping tablespoonfuls of cottage cheese be an insufficient ration of nitrogenous food for the above regimen, and would not the walls of the blood-vessels be less liable to rupture if more proteids could be digested?"

"(In justice to my regimen must add that I feel well, never tire, endure heat and cold and external pain remarkably. I sleep but seven hours at best; am twenty pounds below normal weight for my height. On account of inability to digest starches, eat starches in small amounts. I eat pan-peptogen with benefit before meals, not after.)"

Ans.—1. 1.6 calories proteid, 1.3 calories fat, 10.5 calories carbohydrate; or a total of 13.4 calories per ounce.

2. One may avoid bilious headaches by a low proteid diet. This means avoidance of meat of all kinds, including fish and fowl, cheese, milk, and the moderate use of eggs. The legumes should be served in the form of purée, the hulls being removed by passing through a colander before serving. All foods should be very thoroughly masticated. The

colon should be cleansed daily if necessary. The absorption of toxic matters from putrefying alimentary residue in the colon is a frequent cause of headache.

3. Chew your food well. Eat little at night time. Take a light breakfast, making the midday meal the hearty meal of the day. The use of malt honey, bees' honey, maltol, pan-peptogen, fruits, and other peptogenic foods will stimulate gastric digestion.

4. Ordinary foods contain a sufficient amount of proteid. Even the potato has sufficient of this element. It is only necessary to use cottage cheese or other proteid food-stuffs to balance such foods as fruit, malt honey, and other carbohydrates. The use of too much proteid is a universal dietetic error. You should increase the amount of carbohydrates, especially in the form of malt honey or bees' honey. Well-dextrinized cereals, such as corn flakes, with two ounces of malt honey three times a day, will hardly fail to produce a gain in flesh.

10,420. Catarrh—Cubeb—Peppermint, Wintergreen, and Menthol—Sore Eyelids.

—C. L. M., Ohio: "1. What should be done for catarrh of the head? Of the stomach? 2. Are 'cubeb berries' a good remedy for catarrh? If so, how should they be used? 3. Does peppermint, wintergreen, or menthol dry up the lungs? 4. What is a good mouth wash? What is good for sore eyelids, probably caused by catarrh or painting, as that is my trade?"

Ans.—1. Training the skin by means of cold baths, outdoor life, and sleeping in the open air, will enable the patient to avoid

colds, and thus relieve the catarrh. If possible, have the nose examined by a specialist. Catarrh of the stomach requires careful attention to diet. Meat of all kinds, including fish and fowl, should be avoided, also cheese, all fried foods and condiments, and generally milk. The diet should consist of fruits, legumes,—preferably hulled by passing through a colander before serving,—baked potatoes, rice,—browned before boiling,—well-chewed nuts and nut foods, and the various flake preparations and cereals. Cream, butter, and eggs should be used. In very bad cases lavage of the stomach is necessary for removal of mucus. Improvement of the general health by outdoor life, exercise, and a careful dietary will accomplish in cases of catarrh of the stomach more than local treatment alone.

2. The remedy named sometimes gives temporary relief, but it is not really curative.

3. No.

4. Pure water, or cinnamon water, consisting of ten drops of cinnamon essence in half a glass of water.

5. Bathe the eyes with very hot water two or three times a day. Consult an oculist.

10,421. Nut Butter, Breakfast Toast, Home Meal Scones, and Fresh Fruit.—G. A. R., South Australia: "1. Please advise the quantity of these foods to give the required calories per individual per diem."

Ans.—It is impossible to calculate a ration without knowing the ingredients and the exact amounts of each ingredient in each recipe. If you will send us your recipe for the Home Meal Scones, and specify which fruits are used, we will be glad to calculate the quantities.

10,422. Eating Too Slowly.—C. L. R., Illinois: "I notice a pamphlet on the harm of eating too slowly, and wish to ask if such a thing is possible."

Ans.—One should not eat so slowly as to occupy the whole time in mastication. Every morsel of food should be reduced to a semi-liquid state before it is swallowed.

10,423. Paralysis from Fright—Atrophy.—A. G., Pennsylvania: "My little girl at the age of two and one-half years was badly frightened. At night she became delirious, and thirty-six hours afterward she was entirely paralyzed. In the last year she has greatly improved. Paralysis now affects only the left arm. What suggestion or advice regarding this case can you give?"

Ans.—You should place the patient in a sanitarium where she can receive the benefit of the best surgical skill and health training.

10,424. The Vegetarian's Pulse—Temperature.—J. McK., South India: "1. Should not the pulse of the vegetarian be less rapid than that of the meat eater? 2. Should the temperature not be lower?"

Ans.—1. Yes.

2. No. One who lives on a normal diet should have a normal temperature.

10,425. Insomnia—Tobacco Chewing—Cottolene—Catarrh—Pimples—Hair Tonic.—W. R. W., California: "1. What causes insomnia in a strong, healthy man who works in the field all day? Would chewing tobacco cause it? What are the bad effects or symptoms of chewing tobacco? 2. Is cottolene pure? If not, what can you recommend? 3. Can catarrh of the nose and throat be cured? What is the treatment? 4. What causes pimples on the face of a girl sixteen years old? 5. Is it safe to use a hair tonic containing sugar of lead?"

Ans.—1. There are many causes of insomnia. A frequent cause in advanced years is high blood-pressure. The use of tobacco is a cause of high blood-pressure, and hence may cause insomnia. Chewing tobacco produces premature old age, weak heart, indigestion, and a very foul breath.

2. Cottolene is claimed by the manufacturers to consist of nothing but the refined oil of cottolene. This is probably true, as it would be hard to find any cheaper oil with which to adulterate that of the cotton seed. The best sources of fat are good sterilized butter made from cow's milk, and butter made from nuts.

3. Yes. Cases of this sort require the services of a good specialist.

4. Lowered vital resistance, probably due to the absorption of products of decomposition of undigested foodstuffs in the colon.

5. No.

10,426. To Increase Weight—Calloused Feet, etc.—F. T., New York: "1. I am 53 years of age; height six feet three inches; weight 156 pounds; seemingly in good condition; of active, nervous temperament. Would there be any advantage in increasing in weight? 2. State means of prevention or palliation of calloused balls of feet. 3. Why do some people appear pallid or white on extremely cold days?"

Ans.—1. The normal weight of a person 6 ft. 3 in. in height is 181 pounds. At 53 years of age the weight might even be ten or fifteen pounds more with no disadvantage. Some persons, however, are constitutionally lean. In such cases no improvement of health will result in a very considerable increase of flesh.

2. Remove pressure from the affected part by wearing underneath the foot a pad of felt, or several thicknesses of leather with an opening to receive the calloused part.

3. Because of contraction of the blood-vessels.

10,427. Sleeplessness.—W. D., California: "Is there anything I can take internally to aid my sleep, which is interrupted frequently, owing to bladder and kidney trouble? I have trouble in getting to sleep, once being awakened. I do not want to take drugs if any simple remedy can be taken. I am a vegetarian eighty-six years old, and in general enjoy excellent health."

Ans.—No, there is no drug which can be used for producing sleep the effects of which will not be damaging. Some excellent remedies for producing sleep are the neutral bath, the moist abdominal bandage, hot foot bath, and warm applications to the legs and spine. Be sure that the colon is thoroughly emptied daily.

10,428. Uric Acid—Gall-Stones—Pork—Vegetarianism and the Bible—"The Stuffed Club."—A. G., Chicago: "1. According to Haig, the combustion of the body is regulated by the amount of uric acid con-

tained in the system. Is not this an error, uric acid being a by-product of cellular activity. 2. Gall-stones being a symptom of constitutional derangement caused by dietetic errors, how can an operation remove the cause? 3. Why will not a correct diet cause the gall-stones to disintegrate? 4. If it is true that pork takes four hours to digest and six hours to leave the small intestine, why does not its 'staying quality' make it a valuable food for the hard manual laborer? 5. Why do vegetarians quote the Bible in bolstering their logic when all other branches of science leave the Bible out of the question? 6. Are you acquainted with the teaching of 'The Stuffed Club'?"

Ans.—1. Uric acid is certainly a great disturber of nearly all vital processes. Many maladies can be traced to its presence in the body in abnormal amount. It is certainly one of the causes of auto-intoxication, and hence may be responsible for many forms of vital disturbance.

2. Gall-stones are not altogether due to dietetic errors. They are the result of disease of the gall-bladder and bile ducts. An operation for removal of gall-stones will not prevent the subsequent recurrence of other stones, although experience shows that such

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¶ 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

Lambert Pharmacal Company, St. Louis, U. S. A.

recurrence is extremely rare. In some cases removal of the gall-bladder is necessary.

3. The nature of gall-stones is such that when once formed they are just as much foreign bodies as though they were composed of iron, sandstone, or quartz.

4. Food hard to digest is no advantage to the laboring man. Such food requires a considerable extra expenditure of energy for which it gives no adequate return, and thus detracts from the energy available for work. The laboring man requires not food hard to digest, but food which is easily digested.

5. The Bible certainly is entitled to respect, not only as the Christian authority in ethics and morals, but as the oldest authentic history and the book of all others which gives a consistent account of the early beginnings of the race. A movement which has for its purpose the promotion of the welfare of man can not afford to leave the Bible out.

6. No.

10,429. Ptomaine Poisoning—Pasteurized Milk.—H. A. S., Minnesota: "1. What causing conditions favorable for ptomaine poisoning in canned goods? 2. Does pasteurizing (not sterilizing) milk free it from germ life?"

Ans.—1. Conditions favorable for ptomaine poisoning in canned goods are beginning of decomposition of meat before it is canned and insufficient sterilization.

2. No.

10,430. Chronic Chilliness—Nervousness—Stomach Trouble.—J. F., Canada: "What would you recommend for susceptibility to chilliness from the slightest draft or contact with anything cold?"

Ans.—A very short hot bath followed by a cold bath or vigorous rubbing with ice. This should be followed by an oil rub; that is, the entire skin should be rubbed with the hands lubricated with oil or cocoa butter.

10,431. Catarrh—Consumption, etc.—M. B. R., Michigan: "1. Is catarrh in any stage or of any kind contagious? 2. Does it often terminate in consumption, as the patent medicine ads. aver? 3. Is it necessary to have the dishes used by one having catarrhal cough with quite profuse expectoration washed separately? 4. How long should handkerchiefs and cloths used by one thus affected soak in bichloride of mercury? 5. Is 1-1000 sufficiently strong? 6. How long should they be boiled afterwards? 7. What diet should be followed in such a case? I use practically no tea, coffee, or pork, and but little meat of any kind. 8. What can be done to prevent red pimply blotches on the cheeks?"

Ans.—1. Yes. All catarrhs are probably more or less contagious. A few catarrhs are very decidedly so.

2. No.

3. No. The dishes should be exposed to the action of boiling water.

4. An hour.

5. Yes. ✓

6. Half an hour.

7. Avoid the use of meats, employ a diet containing no excess of proteids, but a sufficient number of calories to secure a gain in flesh.

8. Bathe the cheeks with very hot water two or three times a day. Adopt a simple natural diet, avoiding meats of all kinds, tea, coffee, or condiments, and unsterilized butter.

10,432. Nervous Symptoms—Dizziness—Dilatation of the Stomach.—N. J., New York: "1. Is dizziness a common complaint, and is it dangerous? 2. Is it often caused by intestinal indigestion and auto-intoxication, and is a cure in such cases likely? 3. In a neurasthenic patient may these symptoms be felt in an exaggerated form and would mental effort effect a cure?"

Ans.—1. Yes. Dizziness is very often due to indigestion. In elderly people, however, dizziness is not infrequently one of the premature symptoms of arteriosclerosis, or hardening of the arteries. It is a symptom which should receive prompt attention, no matter what the cause may be.

2. Yes. Washing the colon is an excellent remedy.

3. Yes.

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The adulteration of foods is not the only adulteration which is a menace to the public health. The *Scientific American* issues warning against the use of "adulterated leather" on account of its injurious consequences. In order to supply the weight necessary to make cheap and inferior leather pass as first-quality material, it is weighted with glucose and barium, which gives it the peculiar quality of absorbing moisture freely and retaining it in an extreme degree. The consequence is that a boot so treated is actually never dry; for even in the driest weather the natural moisture of the foot collects upon the inner sole, and renders such footwear dangerous.



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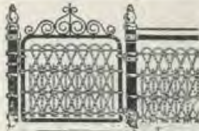
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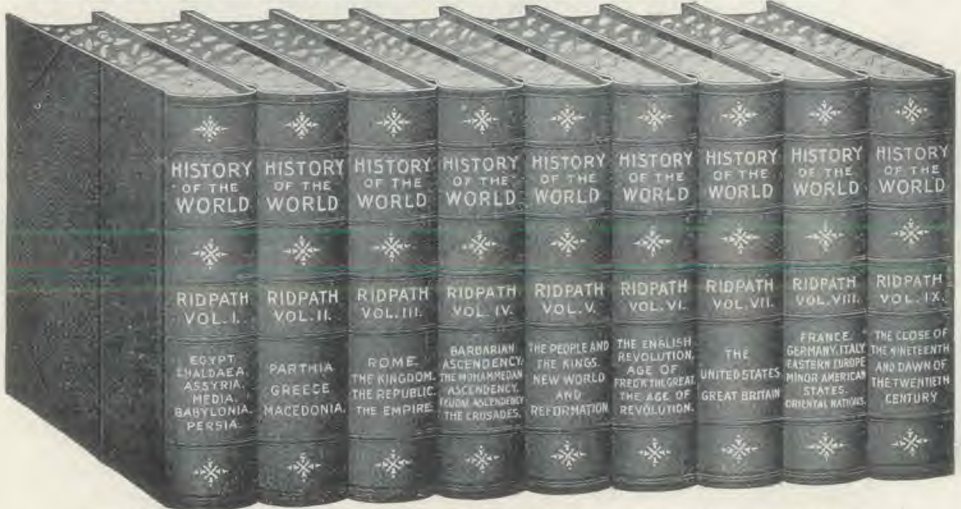
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THE absorbing outdoor life; the sun parlors, spacious lobbies, tropical covered gardens and inviting foyers; the rest hours; the baths; skilled attendants and trained nurses; the chef with his delicious dietetic food calories; the fascinating dining-room overlooking fifty miles of the "Picturesque Peninsula;" the gymnasium and swimming pools, with instructors; the medical and surgical equipment with thirty attending physicians; the body culture; massage, Swedish and vibration movements; the pure water; the open-air treatment; the entertaining guests; the never-tiring educational, religious and amusement features; the spirit of good cheer and hopefulness that pervades everything.

All these, at The Sanitarium, constitute what has been called a great University of Health, to teach and illustrate the principles of right living, to assist invalids and the physically inefficient in lifting themselves up to normal activity and enjoyment; to correct false habits and teach true food values and to demonstrate that health, like disease, comes gradually by processes of growth and change.

The Sanitarium is incorporated under the statutes of Michigan as an undenominational, philanthropic enterprise.

Dispensaries and other medical facilities are provided for the poor.

Rates vary to meet practically all conditions.

November is one of the best months to be at the Sanitarium, both for health and enjoyment.

A Book of Views and descriptive literature will be mailed gladly. Address, Box 21,

THE SANITARIUM, Battle Creek, Michigan, U. S. A.





FOOD VALUE
of
Highland Brand
EVAPORATED
MILK



In substitute feeding of infants **food value** is a most important consideration. The "vital element" is produced by the elaboration of food having the proper and uniform consistency. Children who do not show vitality are poorly nourished. Dairy milk is seldom uniform in composition and it is difficult to secure an approximately uniform average up to the minimum requirements.

Highland Evaporated Milk offers the following uniform analysis:

Water	Fat	Milk Sugar	Protein	Ash
68.75	8.75	11.85	9	1.65

It is simply full-cream cow's milk obtained from many herds and is of uniform and excellent composition. It is reduced in volume nearly two and one-half times through a peculiar sterilizing process. This is based on scientific principles and is safe, exact and beneficial to the digestibility of the protein. Sufficient quantity for clinical tests sent on request.

HELVETIA MILK CONDENSING CO., Highland, Ill.