THE Herald of Health

FOR THE HEALING OF THE PEOPLE

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Sanitarium Bath and Treatment Rooms,
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India's National Efficiency

The Editor

We hear and read much these days about the conservation of national efficiency and the ability of self government, which has caused us to look into the question from a medical standpoint, with the following conclusions:—

The conditions on which national efficiency depends may be classified under three heads: Those relating to physical environment; those relating to social environment, and those relating to human qualities. Under the first head comes the problem of the conservation of land, forests, minerals, and water. The second comprises social questions, whether political, economic, or religious. The third covers the study of the characteristics of man himself, physical, mental, and moral. The first two are being amply discussed by the daily press; we shall, therefore, deal only with the third head, the physical effiiciency and measure of life of the Indian people.

By a study of the great nations of the past, we learn that as long as the physical powers of the individual units comprising the nation were kept at a high state of efficiency, the nation went on conquering, and to conquer; but with the decrease of physical powers, there was also a decrease of national efficiency. Therefore, to reach high national aspirations it is essential to begin by conserving and developing the physical powers of each individual unit.

The average length of life attained by each nation is dependent upon conditions that definitely influence the well-being of each individual, and these, taken collectively, determine national efficiency; therefore, the following table of modern duration of life taken from Professor Irving Fisher's report on "National Vitality" will give an accurate comparison of efficiency among the leading nations:—

	Males.	Females.
Sweden,	50. 9	53. 6
Denmark,	50. 2	53. 2
France,	45. 7	49. 1
England and Wales,	44. 1	47. 7
United States,	44. 1	46. 6
Italy,	42. 8	43. 1
Prussia,	41. 0	44. 5
India,	23. 0	24. 0

This comparative table shows that the average length of life in the leading countries of the world varies considerably. It also shows that India's physical, and consequent national, efficiency is only half that of the European nations. Certainly, this is a matter for serious consideration as to cause and remedy.

Professor Fisher's report shows further that the European nations have increased their length of life during the last century about fifteen years; whilst in India, during the same period, the length of life has remained unchanged. This increase of life has been brought about by the intelligent application of modern laws of hygiene and eugenics, and offers only a sugges-

tion of what is possible for the future. This same progress in life expectancy and efficiency is possible for India, but can be attained only by changing present conditions and practices whether based on social or religious conceptions, which are responsible for India's unfavourable comparison with other nations. Anything that opposes man's development can not be of the truth.

Much of the disease and premature death from which India suffers is preventable; but there must be a close co-operation between Government and people. To accomplish this desirable end, an active educational propaganda must be conducted by literature and lectures, and through a practical working example in the form of a clean, sanitary municipality which is so health promoting as to command the attention of the entire nation. Laws should be adapted to existing circumstances regarding the purity of food and water.

Persons who through ignorance or indifference have no regard for their own health or the slightest interest in the way their carelessness may affect others should be required to take a course that will not constitute them a menace to the community. It would be well to consider the example of several states in America in regard to unsexing the confirmed criminals, idiots, and other degenerates. A public opinion must be aroused that will only countenance marriage when based upon physical, mental, and moral efficiency.

Drugs containing cocaine, opium, and alcohol should be restricted to medical use only.

In the schools much can be done for the next generation by suitable instruction in matters of hygiene and true temperance in its broadest sense.

Public health is a national asset of the greatest value; and if India is to take her place in the onward march of modern progress and enterprise, men of strong physique and vigorous powers are demanded as never before; for the nation that can put into the field of its multitudinous industries the greatest number of healthy, strong men, capable of doing and enduring the work and stress, is sure to be the leading nation in the great race that is now on.

The Cure of Constipation

CHRONIC constipation is one of the most prevalent forms of disease, and the multitude of evils arising therefrom is but little recognized. The autointoxication, or systematic poisoning, which results from the absorption of putrifying matters retained in the bowels for an abnormal length of time, is manifested in diseases of the liver, anaemia through the destruction of the blood cells, neurasthenia or nervous prostration, and various forms of degeneration of the nerves, headache, yellow or dingy skin, giddiness, shortness of breath, itching, eruptions of skin, broken sleep, rise of temperature resembling malaria, asthma, coated tongue, bad breath, foul smelling stools, brown colouration of eyelids, swelling of eyelids on awakening in the morning, dryness and brittleness of the hair, nails soft and brittle with transverse notches indicating acute attacks of toxemia, hemorrhoids, rapid pulse, sensations of coldness in extremities, and high blood pressure.

From this enumeration, it is apparent that the poisons produced in the colon by putrefaction of foods are capable of giving rise to an enormous variety of symptoms of a disagreeable character, and may lead to fatal effects. Metchnikoff has shown that the long continued action of these poisons brings the body to a state that renders it a prey to the scavenger germs of the colon, which set up degenerative changes in the various organs. Constipation is the mother of a countless host of ailments, and of bodily distress of every sort.

It is evident that one who wishes to live long and well will prevent intestinal autointoxication by keeping the alimentary canal clean by right living.

Causes of Constipation

This condition is largely the result of errors in diet and lack of exercise. There are certain foods which are particularly constipating in their tendency; as the imperfectly cooked breakfast cereals, new bread, and hot scones so largely consumed. These pasty foods are swallowed without mastication and become compacted together in hard, firm masses, which are not easily gotten rid of. Tea and coffee contain tannin and other constituents which conduce to constipation. Mustard, pepper, pepper sauce, and all sorts of irritating condiments, cause congestion of the mucous membrane, and very obstinate constipation. In addition to these are over-eating, a meat diet, alcohol, irregular habits of attending to the call of nature, sedentary life, weakness of the abdominal muscles, tumours, strictures of the colon, and insufficient water drinking. The excessive use of drugs and patent medicine is a prolific cause of constipation.

TREATMENT

Nearly all cases are curable with the exception of those due to stricture or morbid growths of the intestines. First, all known causes must be removed. Most remarkable effects may be produced by careful regulation of the diet. In the place of pastry and imperfectly cooked cereal dishes, use thoroughly dextrinized cereal products; as Toasted Wheat Flakes, Granose, or Granola. Most vegetables, but especially greens, such as spinach, have the effect of stimulating the activities of the bowels. The excessive use of vegetables and their combination with fruits, sweets, or milk must be avoided; as it produces fermentation, over-distention, and permanent dilatation, with loss of power to contract upon its contents. Fats are laxative in their effects: nuts and nut foods which are very rich in fats are especially good. Most sweet substances have a laxative effect. Fruits, and especially acid fruits, and stewed prunes or figs are highly stimulating to intestinal activity.

Water drinking is exceedingly useful in those cases in which constipation is due to unusual hardness or dryness of fecal matter; about six glasses a day should be taken. Experiments show that carbonated water is absorbed much more quickly than plain water. In this class of cases, the daily use of one half to one ounce of Agag-agar is of benefit. Massage along the course of the colon before rising each morning. Have a regular time for going to stool whether the indication is present or not. The crouching position, as when a vessel is used, is sometimes of advantage, and massage along the left side of the colon at that time is

especially helpful. The food should be such as to leave considerable residue in the intestine. Sour milk, buttermilk, and yoghourt preparations are recommended at mealtimes, at bedtime, and within an hour before meals. A small amount of olive oil taken with each meal may be sufficient to produce daily movements. In very chronic cases, olive oil injections, to be retained, given just before retiring, are very satisfactory. At first give every night; later every other night, and so gradually lengthen the interval until they are no longer necessary. Abdominal exercises and electrical applications are helpful when the constipation is due to weak abdominal muscles, which is often the case.

The Effects of a Meat Diet on Character

MAN is like a polyp. He subsists upon what he is able to absorb from his environment. He takes in various substances, and transforms them into himself. Out of the various fats and starches of his food, he makes human energy, storing up any surplus or fat for further use. Out of the various proteins or albumins which he swallows, animal and vegetable, he makes the human albumin which the blood carries to every cell and tissue, and out of which the body is built, nourished and repaired.

This process of converting insentient, and miscellaneous foodstuffs into living, thinking, acting human being is a veritable transfiguration. Nothing in all human knowledge is more wonderful or more inexplicable from a physical or chemical standpoint than the fact that the simple food,—the bread, apples, potatoes which we eat to-day —is walking around and talking tomorrow.

It is evident, however, that the character of the walking and the talking must he more or less dependent upon the character of the foodstuffs out of which it is made. Our very thoughts and impulses are born of what we eat. Nutrition is thus the fundamental thing in human experience. To control nutrition means the control of all vital processes, the moulding and modifying of all human impulses.

Liebig, the greatest German chemist of the last century, recognized this, and tells of an interesting observation which proved it. In the museum at Giesen was kept a bear, the keepers of which had discovered the influence of diet upon character. They amused themselves and the public by changing the character of the animal at will. On a vegetable diet it was peaceful and playful as a kitten. On a diet of meat it became so ferocious that care was needful to prevent its doing damage. Liebig also observed that hogs fed on a diet of flesh became so savage that they sometimes would actually attack their herders.

The explanation of this influence of a flesh diet upon the character is found in the following statement by Gautier, the greatest living authority upon diet:—

"On a flesh diet these toxic bodies (urea, uric acid, ammoniacal salts, etc,) accumulate and acidify the blood, excite the heart, intoxicate the subject, disturb the functions of the skin, lungs, liver or kidneys."

Here is the secret fully laid bare. A meat diet "intoxicates" the subject. An intoxicated man behaves differently from a man who is not intoxicated.

The larger the amount of intoxicant which a man swallows, the deeper is his intoxication. The character of his intoxication depends upon the nature of the intoxicant, and in a measure upon the peculiarities or idiosyncrasies of the subject. But no intoxicated man, whatever the nature or the amount of the intoxicant, can be regarded as a normal man.

If more evidence were needed than the repulsive appearance and the inhuman and abhorrent procedures necessary in the preparation of flesh foods, this testimony as to its intoxicating character should be sufficient to settle the question of its adaptability to human sustenance. A diet which "disturbs the functions of the skin, lungs, liver, and kidneys" certainly cannot be a desirable source of nutriment. A true food, a wholesome nutriment, must be a substance which supports the bodily functions, which reinvigorates the wasted energies, not one which disturbs and intoxicates.

Scientific evidence against the savage practice of slaying to eat has accumulated to such an extent that it seems high time for the intelligent citizen to revise his bill of fare.—*Selected.*

Keeping Well Without a Doctor

SAID a physician long ago: "If we would all learn how to breathe properly, to live in the fresh air day and night, to bathe daily, and to drink eight glasses of clear water every day, two before breakfast, two during the morning, two during the afternoon and two before going to bed, the doctors would be out of business. In these things lie health: only they are so cheap, so easy to be had, that we do not place the right value on their wonderful properties."

We must, first of all, then, believe that a person cannot take too much fresh air, by day or by night. That means that we must empty the lungs of foul air as many times a day as we can. Whenever we are in the clear, open air we must pucker up the lips into a small hole as though we were going to whistle, blowing out the breath thoroughly and letting the intake look after itself. A rubber ball, when you squeeze it and then let it go, will fill up immediately with new air, so the lungs will immediately fill up again by simply blowing out the contained air.

Learn to Breathe Intelligently

To expand the chest and breathe deeply is the first rule. The next is to keep out in "the open" as much as circumstances will permit, and to allow, at any cost, the fresh air constantly in our rooms and houses, and in the places where we work, never entirely shutting it out of any room. At night lower the windows generously, not an inch or two, but all the way down, letting in plenty of out-door air, remembering always that you cannot let in too much fresh air!

All this will seem plausible and worth trying to many people during favourable weather. Unfortunately, to most of us, rain, or any sort of inclement weather, means dampness and consequent danger. This theory is also fallacious. So strongly rooted and deep seated has it become, however, that it will take a long time to upset it. We forget that the air is always purer when it rains or snows, that the very moisture that we dread is beneficial because it absorbs any dust that may be floating in the air,

If you doubt this, fill a cup with rain-water some time and look at it through a microscope, or melt a cupful of snow, and the truth will be revealed to you. It does us absolutely no harm to go out in the wet, provided we are well shod and well clothed. And if we happen to get wet, we must keep in motion until we get a chance to change our clothes and shoes and stockings. This is the only precaution we must observe. Yet thousands of intelligent people cannot shake off this old-fashioned, deep-rooted fallacy that fresh air and cold water are dangerous of themselves. The danger is in an improper mode of life which renders us oversusceptible to what does not hurt vigorous people.

Colds Come from Over Eating,

from allowing the pores of the skin to become clogged up, and the eliminative functions to be choked. If we eat moderately and use plenty of water inside and out, we shall avoid nine-tenths of our "common colds." Wash inside and out: that is a rule to live by. Many of us wash out-side all right enough, but the equally important rule to wash ourselves inside rarely occurs to us. Here is where pure, clear water comes in, and if your water supply is in doubt, buy some pure, good water. It will be one of the best investments you ever made for your health. Directly upon rising, drink at least two large glasses of water, cold or warm, as you prefer. Many people do this and stop there. But that is not enough. See to it that during the morning between the hours of ten and twelve you drink two more glasses, provided you lunch or dine at one: if you eat at twelve, drink the two glasses between nine and eleven. Theoretically, you should not drink for an hour before or until an hour after eating. Never drink anything at all with your meals. Then, in the afternoon between two and four or five o'clock drink two more glasses of water, and two more just before you retire. You would thus have consumed eight glasses of water during the day, which quantity every man, woman, or child should drink—not less. Then the system will be well flushed out and kept clean.

Seize Upon Every Chance

to keep out in the open air. If your work is confining, and you can do no more, stick your head out of a window as many times a day as you can, and give the lungs a good blowing out in the way I have indicated. Walk instead of riding whenever you can, whether you feel like it or not. On all occassions, walk, exercise, play; do something in the open if it is only to sit in the sun and take a sun-bath. There are few things better for you. Whenever you can, sleep in the open. This is not only for tuberculosis patients: it is good for us all. But let us get one point correctly fixed in our minds: that the greatest tonic that God has given us is the fresh air, whether it be cold or warm, rainy or sunny, snowy or murky. It is always healthful, and the finest element that we can take into our systems.

"God sent his creatures light and air
And water open to the skies.
Man locks him in a stifling lair,
And wonders why his brother dies."

RATIONAL TREATMENT IN THE HOME

Conducted by Dr. Ruth Merritt-Miller

Sponge Baths and Friction

TIME was when fresh air and water, two of the most necessary remedial agents, were excluded as far as possible from the sick room; and, even now, there are many who consider it dangerous to bathe the body with water during an illness.

While it is true that baths, carelessly given, may prove injurious to a patient, there are but few cases where their use will not prove greatly beneficial if properly administered.

When we think of the many millions of eliminative glands located in the skin, and understand the importance of their work, which, far from being lessened, is increased by the presence of disease, we must conclude that it is not only reasonable, but imperative, that they are at least given a chance to do their best. If the poisons eliminated by them are allowed to remain on the surface of the body, these glands will in time become so clogged that they will be unable to do their part in the elimination of poisons from the body.

Water bathing is the safest and most satisfactory method of removing these excretions, and it stimulates all the important functions of the skin at the same time. The following are some of the baths which may be given safely and with good results to bed-ridden patients:—

The Soap Wash

The soap wash should be given at least once a week, and in most infectious diseases, especially during the scaling stage of eruptive diseases, it should be daily employed. Even in pneumonia, bronchitis, and similar diseases, the soap wash may be given: but every precaution must be taken to avoid chilling the patient. The temperature of the room should be at least 65° F., and no draft should be allowed to strike the patient at any time.

The articles required for this treatment are a basin of warm water, a basin of cool water, two small towels, two or three large towels, and a cake of some good toilet soap, or, in infectious diseases, a disinfectant soap.

Remove the patient's clothing and cover him well. First wash and dry the face and neck. Then bare one arm, and slip one of the large towels under it to protect the bedding. Wring one of the small towels from the warm water, apply the soap, and with short quick strokes sponge the arm. Then wring the towel from the warm water again and repeat the sponging without the soap. Now wring the other small towel from the cool water, and briskly sponge arm with it. Wrap the dry towel about the arm as soon as the sponging is completed, and dry with friction applied over the towel. Then remove the towel, rub the arm with the hand to be sure that it is thoroughly dry, and cover at

once. Treat the other arm in the same way. Leaving both arms well covered, expose the chest and abdomen; protect the bedding with the towels, and proceed with the bath in the manner described for the arm. One leg at a time should then be flexed and a large towel slipped under it to protect the bedding, and be in place for drying the leg after the wash has been given. The patient should then be placed on the face as nearly as possible and the back washed.

Care must be taken to have the patient's feet warm before beginning the treatment. It is always safe to place a warm bag to the feet during the treatment.

Every movement must be brisk, and the entire bath should not take longer than fifteen or twenty minutes. Only a small part of the body should be exposed at one time, and no part should be left exposed longer than is absolutely necessary.

Wet Hand Rub

After the bath, the patient should be clothed, covered well, and allowed to rest, and to enjoy the refreshing effects of the bath.

The Cold Sponge

The cold, cool, tepid, and hot sponge baths are given in the same way. The cold sponge is given with water from 40° to 60° F. A mitt of coarse mohair is more effective than a towel for giving this bath as the friction caused by the cloth aids in bringing about a good reaction. The rubbing should be brisk and vigorous enough to cause a redness in the skin. The cold friction bath is often used in fevers, but should never be given if the patient is very weak or the skin cold and blue. In these cases, the short hot sponge is a better treatment. It is given in the same way with water at a temperature of from 130°-140° F.

The cold friction bath is a splendid tonic treatment. If the patient is feeble and nervous, and objects to the cold applications the wet hand rub may be substituted for the cold sponge bath, and good results obtained. The hands of the attendant should be dipped in the cold water and then rubbed briskly over the patient.

The Tepid Sponge

The tepid sponge with water at 85°-95° F. will be found very helpful in mild febrile cases, and very soothing to nervous patients. Witch Hazel added to the water increases the soothing effect of this bath. A small amount of water should be used. No sponge or towel is needed; as the water is applied with the hands only.

A Dinner Menu

TOMATO BISQUE
STUFFED CUCUMBER
MINT JELLY
BROWNED NEW POTATOES
FRESH SPINACH
FLOATING ISLAND PUDDING
FRUIT

Tomato Bisque

3 cupfuls strained tomato juice,
2 teaspoonfuls pea-nut butter,
½ teaspoonful salt,
1 tablespoonful butter,
1 small onion,
1 bay leaf,
1 sprig of parsley.

Brown the chopped onion in the butter and add to the boiling tomato juice; add the other ingredients and boil ten minutes.

Stuffed Cucumbers

Pare and cut three good sized cucumbers into halves. Scrape out the seeds, and fill with the following mixture:—

1 cupful bread crumbs,
1 cupful chopped nuts,
1 egg,
⅔ teaspoonful salt,
A little parsley.

Mix all together and fill the cucumbers. Put two halves together; tie them carefully, and brush the outside with melted butter or olive oil. Bake until brown. Then pour in the pan two cupfuls of strained tomatoes, or four fresh tomatoes chopped, and one tablespoonful of butter. Cook all together for one hour slowly. Dish the cucumbers, carefully remove the string, and strain the sauce over the cucumbers. Serve hot.

Mint Jelly

⅓ cupful lemon juice,
⅓ cupful sugar,
1 small bunch fresh mint,
⅛ ounce of China grass cooked in
1¼ cupfuls boiling water.

Wash the mint; crush, and soak it in the lemon juice two hours. Strain the cooked gelatin (China grass) and add the sugar, then pour into this the strained lemon juice and mint. Mould, and serve with nut roasts or protose.

Browned New Potatoes

Wash and scrape the skins off six good sized potatoes, and put on to boil until tender. Place in a baking dish and sprinkle with salt and one tablespoonful of chopped onion. Brush with four tablespoonfuls of butter, and bake until a rich brown.

Fresh Spinach

Spinach is rarely cooked well. Greatest care should be taken to remove every trace of sand. To clean spinach, cut off the roots and break the leaves apart, putting the leaves into a large pan of water. Wash them well through several waters until perfectly free from sand; then put to cook in a granite saucepan, adding no water, as there is sufficient on the leaves. Cook gently, turning the spinach over several times. Twenty minutes are generally required to cook them tender. Add the salt and butter when the spinach is ready to be served.

Floating Island

1¼ cupfuls milk.
3 eggs.
½ teaspoonful vanilla.
1 heaping teaspoonful cornflour.

Separate the whites from the yolks and beat to a stiff froth. Bring the milk to the boil, add the sugar and the braided cornflour. Cook for five minutes, and slowly beat in the yolks. Remove from the fire and add the beaten whites and vanilla.

Nuts as Food

PROF. M. E. JAFFA, who holds the chair of nutrition in the University of California, believes that the time when nuts were considered as a luxury, or as something to be eaten at odd times, is rapidly passing. He says:—

The increased demand for nuts is due in the main to two causes; namely, a better appreciation of their appetizing qualities, and the numerous ways in which they form a palatable addition to the diet of the average family; and, secondly, to their use by the vegetarians and persons of similar belief who use nuts, and more particularly the peanut, as a substitute for meat and other nitrogenous and fatty foods.

Even a cursory examination of the journals devoted to cookery and other branches of home economics, and of the various books which are published on the subject will show the fairly general use of nuts for making soaps, for stuffing poultry, for nut-butters, nut salads, cakes, salted nuts, and other dishes; and, indeed, several volumes devoted exclusively to nut cookery have been published.

Many special nut foods, such as malted nuts, meat substitutes, etc., have been devised and extensively advertised by the manufacturers for general use in the diet and for the special needs of vegetarians and fruitarians. The peanut plays a very important part in their composition.

The edible part of nuts is generally, the writer goes on to say, a highly concentrated food, containing little water. The quantity of starch is also small, and the mineral matter relatively large. Nuts have a reputation for indigestibility; but this is due to insufficient mastication and to the fact that they are usually eaten when not needed, as after a hearty meal or late at night. We read:—

Too much stress cannot be laid on the necessity of thorough mastication of nuts. The experiment with fruit and nut diets in general indicate that nut protien is as easily digested as protein from bread and milk.

Nuts may be readily used as staple articles of diet. In general, the nuts rich in protein and fat should be used in combination with carbohydrate foods; as bread, fruit, green vegetables, etc., while such nuts as the chestnut, which do not contain much protein or fat but are rich in carbohydrates, may be properly combined with milk and cream, eggs, and other foods containing protein and fat.

Since nuts are relished by most persons, are nutritious, and may be readily used by themselves and in various palatable combinations as an integral part of the diet, they have a legitimate place in the menu. Those who, for any reason, wish to live on vegetable foods and dairy products or any form of vegetarian or fruitarian diet will almost inevitably look to nuts, particularly such as the peanut, for a considerable portion of their total nutritive material. A fruit and nut diet may be arranged to furnish sufficient protein, mainly from nuts, to satisfy the requirements of the body.

Dr. Hutchinson in his standard work on dietetics says: "Nuts are very high in nutritive value. Bulk for bulk, indeed, dry nuts are amongst the most nutritive foods which we possess." Their general composition is roughly as follows:—

Water	4	to 5	per	cent.
Proteid	15	„ 20	„	„
Fat	50	„ 60	„	„
Carbohydrates	9	„ 12	„	„
Cellulose	3	„ 5	„	„
Mineral matter	1	„	„	„

The Home

Doctor Bentley's Physical Culture For Girls

It is necessary for most persons to undo previously acquired habits to form new ones and to build up various parts; for there cannot be real health without proper training and education of the whole system. Strong legs are one of the essentials. Standing correctly—this means the weight of the upper part of the body has been centered by the action of the hip joints, and the weight of the whole body is on the balls of the feet—raise the heels from the floor, and rise on the balls of the feet; uplift the whole body to the greatest height possible, then slowly bend the knees, thus carrying the body to the low sitting position. Without stopping the motion, push on the balls of the feet, unbend the knees, and rise slowly to the standing position. Ten seconds of time should be consumed in going to the floor, and ten seconds should elapse while rising. Repeat this twice, being careful not to interrupt the continuity of the movement; then rest.

Any one can rise up and go down quickly. It does not take any skill, nor will any great amount of controlled strength be attained if the pupil move rapidly. The power to keep the weight on the balls of the feet and to bend the knees slowly without bending the neck or tipping the body will be the measure of the strength and control gained. It will be a good plan to imagine a pail of water on the head. The body must be so slowly and carefully carried up and down that not a drop of the water is spilled. We are to learn to use only the parts necessary in the accomplishment of whatever we attempt. Tipping the head and upsetting the water cannot help the action of the legs. In fact, if the weight of the body loses its balance, and control of the legs and feet is lost, they are not being made to do the work that will result in the real gain of power and endurance. The legs must be strengthened and accustomed to carry the weight properly. We must get so used to centering the weight on the balls of the feet that we will become unconscious of any effort. The exercise may take weeks of practice, and when real skill and command are attained, it should take a whole minute to go to the floor and a minute to come up, thus consuming four times sixty seconds to do the exercise twice, and this without disturbing the continuity of the movement. When able to do this, the daily exercise may be dropped. Reserve power and strength have been gained, and it will be necessary to test the legs only a few times each week in order to keep them in proper tone.

Many persons allow the body to sag down, thus causing the chest to become hollow and depressed and the back bent and rounded. It is especially necessary not to let the muscles sag and collapse; neither dare we hold them up by tension. They must be strengthened by mental control and physical action. Example: Standing

correctly, slowly bend the body over the right side as far as possible, making the waist muscles do the work; very slowly, by the power of the waist muscles, lift the body to the normal position; raise the chest as high as you can, then slowly bend to the left side; by strength of the waist muscles, slowly rise again to the greatest upliftment of the chest. Keep the movement up continuously,—that is, without interruption—till you have done it very slowly five times. Do this exercise twice each day; that will be ten bendings of each side of the body. Increase this number to thirty times as the strength to do so develops.

This exercise will not be attended by the proper results,—that is, the muscles which naturally hold the body to the normal will not gain strength—unless the pupil carefully and absolutely adheres to directions. The power to lift the body must come from the muscles at and just above the waist line. The muscles must be so strengthened that the body can always be erect without any effort mentally or physically.

The ribs and bony framework of the trunk are usually sunken down when muscles are lacking in elasticity. To have an erect, healthy body, the bones must be helped to assume the normal position, and muscles and ligaments must be strengthened. Standing correctly, rise on the balls of the feet; raise the arms to the level of the shoulders, turn the palms backwards and push ten times with all the strength possible, making very little movement with the hands. Make the chest come forward, and the back flatten. If much movement is made with the arms and hands, there will not be any specific effort on the back or chest, and the exercise will prove to be almost useless.

Rise on the balls of the feet to full height, extend the arms down directly in front of the legs. Do not raise or move the arms. With the palms push down with all possible strength; at the same time stretch up the chest as high as you can, feeling the stretching and upliftment from the very tips of the toes through the whole body. Do not push down with the hands and lift up the shoulders, mistaking the movement of the shoulders for stretching and uplifting. Let the shoulders be entirely at rest except as they are carried up by the raising of the whole body. It is important that the instructions to stretch up and lift the chest, feeling the pull from the feet through the whole body, be implicitly obeyed. Lifting the shoulders will defeat the purpose of the exercise. Push ten times without changing the position of the hands; then rest. Repeat twice a day. This is not an easy exercise; if done correctly it is quite vigorous, and it is one of the best to lift up and expand the chest externally and to develop and flatten the back. Many persons who are hollow in the middle and on each side of the spine will find that this exercise fills up the hollow places and helps the muscles to gain tone. All the organs in the body will be lifted up nearer to the normal than they have been for some time. The blood vessels and nerves whose space and action have been impinged have a chance to carry out their normal tendencies.

There should be a general feeling of upliftment of mind and body. This effect must be put into practice in the every-day life so that some benefit may be gathered during such times as it is impracticable to take the exercises. For instance; if it is not feas-

ible to stop and take exercise while out on the street, you can keep hold of the thought, feeling, and act of uplift-ment. This is one of the many examples of correct use aiding us to gain and retain strength.

If the number of exercises to be taken and the number of times directed to take them be counted, it may appear that much time is consumed; but, remember, we are now preparing for a purpose. When once the body is thoroughly alive, when all the muscles and parts are properly developed and under the individual's control, then reserve force and strength will be stored up for use in emergency. Very little exercising, if it be continuous, will be sufficient to keep us in health and insure endurance.

The Cold Bath a Tonic

A cold application to the skin is one of the best general physiological tonics. The cold first causes the blood-vessels to contract; this is followed by a vigorous reaction, and the skin becomes red due to an exhilarated blood circulation. This increased circulation is not limited to the skin only but is shared by every organ and structure. An increased active circulation means increased nutrition, increased resistive power against disease and disease germs as illustrated by the following experience:—

Surgeon McGregor, formerly superintendent surgeon of the English army in Egypt, makes a very interesting observation concerning the value of the cold full bath. While he was in charge of the "Blues," a famous old regiment, then located at Canterbury, an epidemic of typhus fever generally complicated with pneumonia, broke out. The disease developed so rapidly that in a short time one-fifth of his regiment were on the sick list, and there were thirty-three cases of fever, with daily accessions to the number. At this juncture it occured to McGregor, a disciple of Currie, who was familiar with the use of the bath in the treatment of cases of fever, that the cold bath might be used for prophylactic as well as curative purposes. Accordingly, to use his own words, "about the 12th, at my earnest recommendation, all the regiment out of the hospital were marched three times a day to the riverside, and every man was made to bathe. The good effects of this were speedily manifest, the number of new fever cases decreased daily, and those that did appear wore a milder aspect. Many, indeed, yielded to the common treatment; in some cases an emetic, and in others the cold bath, at once cut short the disease. We lost no cases in October. Indeed, it was evident to all that after the general bathing of the regiment, the contagion was stopped; the few cases that occurred after this were stripped of all the alarming and dangerous symptoms with which the disease broke out. In all, there were sixty cases of fever, occurring from July to October 21st, on which day the last case appeared. We lost six of this number."

The immunity evidently conferred by the tri-daily bath was certainly more than a coincidence. It would seem eminently reasonable to suppose that if the cold bath aids recovery by stimulating the vital forces and increasing the vital resistance, and to such a decree that the patient already

thoroughly infected with the disease is brought to a safe recovery, the application of the same measures before the contraction of the disease ought so to fortify the system as to enable it successfully to withstand the influence of the infectious element to which the malady owes its origin. The principles involved in this suggestion are worthy of thoughtful consideration. If the principle holds in relation to a single malady, it is equally sound in relation to all others which depend upon either infection or any other external cause; of course, excepting accidents.

A Step Beyond Suicide

To most people, we think the subject of race suicide is about half-way between a bore and a joke. Here, however, is a statement by the secretary of the New York Milk Committee which may impart some serious interest to it: "Although we have no accurate figures as to the number of babies born annually in the United States, a conservative estimate would be two and a half millions, of which certainly fifteen per cent, or three hundred and seventy-five thousand, perish during their first year. In 1908, in New York City, 16,230 infants died during the first year." How much better than an increase of ten per cent in the birth rate would be a decrease of fifty per cent in this shocking death rate. Such a decrease, in all likelihood, is not impossible.

Mr. Phillips reproduces a French chart, gruesomely known among child specialists as the Eiffel Tower. This chart shows the death rate among bottle-fed infants. During winter and spring months, the line undulates like the profile map of a moderately hilly country, but at July it shoots upward in a big and almost perpendicular leap. The outline, indeed, at once recalls the towering object from which the chart is named. This enormous excess of midsummer mortality, be it understood, is confined to bottle-fed infants. Among those fed at the breast, the mortality in summer increases relatively only a little. As a matter of fact, scientific experience everywhere shows that the bottle as an instrument of destruction is far more potent than the Prohibitionists say.—*Selected.*

Singing Develops the Lungs

Singing, by the exercise given to the lungs, abdominal muscles, and the diaphragm, as a result of deep inspiration of air, may be made of great value not only in lung development and in the prevention and cure of disease of the lungs, but by encouraging, through the abdominal and pelvic organs, a free flow of blood; thus internal congestion of these organs may be prevented. I believe singing if properly executed will be found to be one of the most important therapeutic and hygienic measures that can be employed in the prevention and the cure of tuberculosis, as well as other diseases arising from internal congestion.—*Selected.*

"Better to hunt in fields for health unbought,
Than fee the doctor for a nauseous draught;
The wise for cure on exercise depend;
God never made his work for man to mend."
—*John Dryden.*

The Facts Plainly Stated

THE fact that beer produces body weight is no evidence that it is a food; for morphine, phosphorus, and other deadly poisons do the same. These poisons interfere with normal cell activity, which results in a retention of waste material and fatty degeneration of the tissues. Professor Von Bunge says: "Of all alcoholic drinks, beer is the most injurious." While it produces a species of degeneration of all the organs of the body, it chiefly affects the heart, the liver, and the kidneys.

Any physician who cares to take the time will tell you that the beer drinker seems incapable of recovering from mild disorders and injuries not usually regarded as of a grave character. Pneumonia, pleurisy, fevers, etc., seem to have a first mortgage on him, which they foreclose remorselessly at an early opportunity. When a beer drinker gets into trouble, it seems almost as if you have to re-create the man before you can do anything for him.

Alcohol diminishes cell activity, and causes fatty degeneration of the heart and other tissues; in appearance, therefore, the user of alcohol may be a picture of health, but in reality he is a degenerate. He has an abundance of flesh, but it is of an inferior quality. The lowered vitality of his tissues renders him incapable of resisting germ diseases. If he does not die of heart disease or apoplexy, he is almost certain to succumb when stricken down with pneumonia, cholera, or other germ diseases. Cirrhosis of the liver, a condition in which the liver cells are gradually destroyed and replaced by an overgrowth of connective tissue, frequently results from the irritation produced by alcohol.

Children begotten by drinking parents are usually weaklings and defective in both mind and body. Mortality among such in infancy is great. If they survive infancy and reach the age of youth, they are apt to succumb to tuberculosis. Weakened heredity from drinking parents is one cause of the prevalence of this disease among our youth.

The degeneration evinced by the declining birth-rate, which in most of the European countries made necessary the appointment of commissions to investigate its causes, may be attributed partly to the free use of alcoholic beverages; for the more temperate Mongolians and Mohammedans, instead of having a diminished birth-rate, as is the case in America and in European countries, show a constantly increasing birth rate. Degeneracy among them is not nearly so marked; and the diseases which prevail in America and Europe, such as, heart disease, pneumonia, cerebral hemorrhages, and heat-stroke, are very uncommon among them.

THERE'S many a trouble
Would break like a bubble,
And into the waters of Lethe depart,
Did we not rehearse it,
And tenderly nurse it,
And give it a permanent place in the heart.

There's many a sorrow
Would vanish tomorrow
Were we but willing to furnish the wings;
But, sadly intruding,
And quietly brooding,
It hatches all sorts of horrible things.

—*Phillips Brooks.*

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The Sanitarium System of Health Training

1. **Nerve Training.**—Weak and unsteady nerves, by proper feeding, graduated thermic and electrical applications, and suitable baths, are enabled to re-accumulate their lost store of energy and thus regain their tone, balance, and fitness, for the duties demanded of them.

2. **Muscle Training.**—Weak and feeble muscles, which have degenerated under the influence of sedentary life or a crushing burden of worry and care, by carefully graded exercises and suitable manual Swedish movements, become energized, tense, and active.

3. **Heart Training.**—The heart is the most important muscle of the body, and is always weak in chronic invalids, often dangerously feeble. Even in cases of dropsy, the Sanitarium System affords aid to the tired and feeble heart pump, and by a special course of training it may be rendered able to resume its duties for many a year.

4. **Lung Training.**—The diaphragm, that wonderful muscle, working incessantly from birth to death, is not only an air pump, but a blood pump, a lymph pump, a bile pump, and may even be said to be a stomach pump, for it does actually assist in removing the digested food from the stomach. In sedentary men and invalid women, the diaphragm is weak. It is suffering from air starvation and blood stagnation. By special chest gymnastics, the diaphragm may be strengthened and the breathing capacity greatly increased.

5. **Stomach Training.**—Prof. Pawlow, of St. Petersburg, has shown that the stomach may be especially trained to digest certain articles of food. The dietary of the Sanitarium constitutes a veritable stomach training school, where stomachs that secrete too much acid can be trained to moderation, while slow stomachs may be urged to quickened activity. The same systematic, persevering methods are able to rejuvenate the liver.

6. **Skin Training.**—By means of daily cold baths and other hydriatic procedures, the pale anaemic skin of the invalid is made to glow with health, the circulation is quickened, the glands are caused to normally functionate, and the likelihood of "taking cold" is greatly decreased.

7. **Tissue Activity.**—The varied treatments embraced within the Sanitarium System when skillfully employed are capable of profoundly influencing the circulation of the blood, and through this means the entire metabolism of the body. Every cell of the body is rejuvenated as the result of these vigorous and powerful procedures.

8. **Increased Resistance to Disease.**—The sum total of this work of health training as outlined in the Sanitarium practice is to lift the individual to a higher physical plane and to enormously increase his powers of resistance against disease.

9. **Mental and Moral Therapeutics** are not overlooked in the "Sanitarium System." Temperance and self-control are everywhere taught. The peace of mind that comes from having a conscience void of offence toward God and man is regarded as one of the essentials to the enjoyment of full and complete physical health.

A Recipe for a Day

Take a little dash of water cold,
And a little leaven of prayer,
And a little bit of morning gold,
Dissolved in the morning air.

Add to your meal some merriment,
And a thought for kith and kin,
And then, as your prime ingredient,
A plenty of work thrown in.

And spice it all with the essence of love,
And a little whiff of play;
Let the wise old book, and a glance above,
Complete the well-made day.

—*Amos R. Wells.*

Two Mistakes We Make

There are two mistakes we are liable to make with regard to disease. A certain class of patients, with a certain mental and nervous make-up, are inclined to consider every little insignificant symptom serious. Such patients worry themselves into actual sickness But there are many who are not willing to take warning from the first indications of real organic disease, in time to prevent further damage. One man thinks every pain in the back means kidney disease. But the man who really has beginning kidney disease has no startling symptom to mark it, and often he is not willing to submit to an examination, for he does not want to learn anything about himself that might worry him; so he goes through the period when a proper course might effect a cure, and only in the last stages of the disease, when he can no longer help knowing something is the matter with him, will he consent to do anything for it. O, yes, before that he many consent to take a little medicine; but change his habits—not till it is too late.

"Better have a busy man's health, than a rich man's idle wealth."

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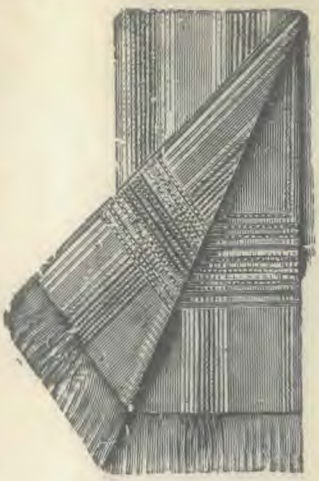

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