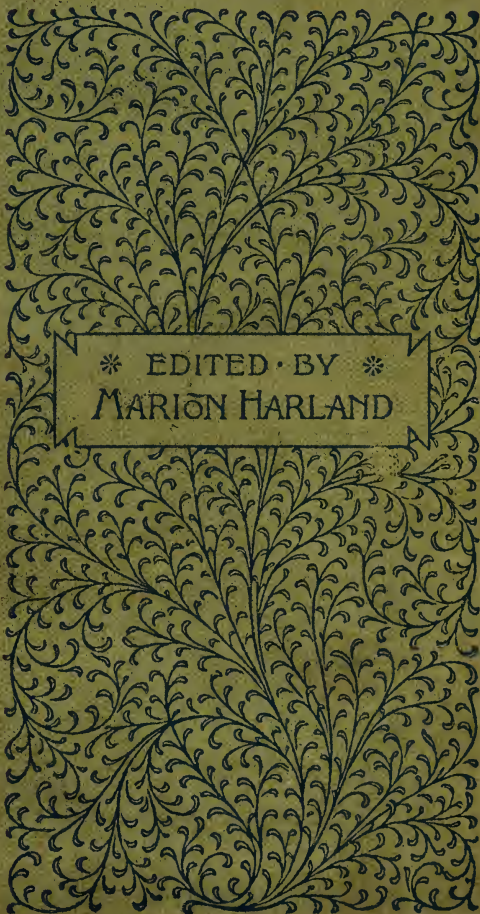
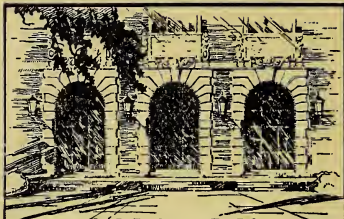


TALKS UPON
PRACTICAL
SUBJECTS



* EDITED BY *
MARION HARLAND





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“Health, Strength, Beauty—the Trinity of
Happiness”

TALKS

Upon Practical Subjects

EDITED BY MARION HARLAND

Second Edition—Two Hundred Thousand

NEW YORK AND CHICAGO
THE WARNER BROTHERS CO., PUBLISHERS

1895

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AN INTRODUCTORY WORD.

HAD not the title, "*The Houses We Live in*," been pre-empted, it would have been selected as aptly descriptive of the subjects treated of in these pages. The twelve chapters that make up our little book have to do with the Temple of the Human Body, GOD'S masterpiece of material creation, and, next to the soul it enshrines, the noblest study set for man.

The earnest thinkers who have contributed to this volume are, one and all, co-workers in the task of teaching their fellow-creatures how to care for these bodies wisely and well, and to make them fit for the indwelling of minds and souls that will outlive the clay tabernacles.

The design of those who have projected the "Talks" is to send into thousands of homes a manual that may awaken mothers and daughters to appreciation of the dignity and importance of physical culture, and supply easy and practical rules for carrying it on. The work is especially intended for the mighty middle class who are the heart of the nation,—the tremendous force upon which national prosperity and national life depend.

MARION HARLAND.

8 Ap 49 Mrs. M. S. Hetchum
g. Mrs. Milo S. Hetchum
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THE AIR WE BREATHE.

BY OLIVE THORNE MILLER.

WHETHER or not life is, after all, worth living, whether we take cheerful or gloomy views of the trend of human affairs, depends far more than is generally supposed upon the air we breathe.

That the air upon which we depend for the purification of our blood is of as much importance as the food which nourishes it, and that impure air is as injurious as impure food, it would hardly seem necessary, at this late day, to say. Yet, if we may judge by the constant practice of the majority of our neighbors, we are forced to conclude that the world in general is profoundly ignorant of the fact. So far from being less vital, the evidence seems to prove that it is more so. Else why were our grandmothers, in spite of unhygienic conditions and improper food, more robust than we? Is it not because they had fireplaces instead of heaters, and that the loose doors and windows, with the open chimney, produced a constant freshening and purifying of the air of their houses? I firmly believe it.

It has been found that the lungs and even the bones of birds who have lived in our houses contain

minute particles of carpet wool and other ingredients of house dust, so that dissection will decide whether a bird lived in a cage or in the open air. Does not this fact warn us that we also must, with every breath, draw in the fine atoms constantly floating in the air, worn off from the objects about us, which cannot possibly be a benefit to us?

Worse even than that, we take back into our lungs the used-up material they have thrown off. Consider for a moment what we do when we breathe. Omitting details and explanations, it is simply this: when we draw in a breath we carry to the lungs air, one ingredient of which is oxygen. The blood from the whole body, constantly coming to the lungs, absorbs the oxygen, and at the same time throws off impurities in the form of carbonic acid and minute quantities of animal matter, all of which we expel from the system with our exhaled breath. Now, carbonic acid is poison to us, and the animal matter is, in an unventilated room, deposited on the furniture and walls, where it decays and becomes a poison also. Is it not plain, then, that it is of the greatest importance to provide a way to carry off the exhaled breath, loaded with its impurities, and to supply its place with air full of oxygen?

I shall not offer you a scientific treatise. Science has been proclaiming these facts for years. What I desire is simply to point out some of the ways in which we defraud our blood of proper purification,

and, therefore, our bodies of health, for upon the condition of the blood depends the condition of the body nourished by it.

First, what provisions do we usually make for pure air in our living-rooms? We begin by building our houses as nearly as possible air-tight, and putting on window and door strips, if not double windows, to exclude every breath of air. Says a thoughtful writer on this subject: "Were houses much better constructed than they are, the inmates would in many cases be suffocated outright, as they often partially are, with the degree of perfection we have already attained."

Having thus effectually excluded pure air, we proceed to vitiate what we have shut in with us (and which in many houses is not changed, except by the momentary opening of a door, from one month's end to another) by our heating arrangements. In the country by great stoves which burn the air and often throw off a dangerous gas; in the city by furnaces or heaters of different sorts. Fireplaces, which would provide means of ventilation, are stopped up to prevent the escape of heat. As if this were not enough, we complete the work by lighting — in the evening — gas or lamps, which are worse than the heaters; and in such an atmosphere we and our children pass a large part of our lives.

When the danger is understood, a little thought and a little care will reduce these menaces to our

health to a minimum. To provide against the dry heat of stoves and furnaces, water should always be kept where it will evaporate. Furnaces usually have a reservoir which ought to be carefully supplied, and stoves should be furnished with an earthen, or china, or even glass dish, which is kept filled with water, either standing on the stove, or hung by a wire to some projecting knob or ornament. If filled when the dish is cold, subsequent heat will not break it. One who is at all sensitive can tell the moment the water reservoir is empty, by a "bad feeling in the head." Doubtless much of the headache from which women suffer is caused by this alone.

A complete change of air, which in a room constantly occupied should be made once or twice a day, is not difficult to arrange. First, that it may be fresh and sweet in the morning, ventilation should go on all night. A sash lowered from the top two or three inches and another raised the same distance from the bottom will let in no rain, and insure a delightful atmosphere in which to begin the day. The reason two openings are necessary is because ventilation consists of two operations, — bringing in of pure air, and driving out of the impure, — and this is more thoroughly accomplished by two openings, one of which is near the ceiling and the other near the floor. If the house is in a city, where open windows may be unsafe, the sashes may be secured in their position by small bolts into the window frame, and

the slight trouble and expense will be well repaid in improved health and spirits.

To change the air during the day, it is a good plan to open a window several inches at top and bottom, while the family is temporarily absent, at some meal, for instance. Half an hour will not only change the air, but the mental tone of the whole family.

When I think of the sleeping customs of many families, I am surprised that one of them is left alive. No doubt many have died from these very habits, though the truth may not be suspected. We should rise from healthful sleep refreshed, cheerful, and ready for our day's work. But many of us, on the contrary, open our eyes, tired, dull, headachy, gloomy, or irritable, and all-because of the air we have taken into our lungs all night. To begin with, bedrooms are usually furnished with wool carpets, and often with curtains which make the air stuffy and hold impurities which we must breathe. Frequently the air is already foul from the room having been used all day, yet we close windows and doors, and light a lamp or gas, which many of us burn all night. In the country where the refuse from our washstands, etc., is not at once carried off by pipes, we have in our close room uncovered receptacles, giving out a constant stream of impurities. Is it, then, any wonder that we rise unrefreshed? That we have muddy complexions and dull eyes, and are

forever dosing ourselves, or ruining our skins with cosmetics, trying to cover up the disastrous results of such abuses?

What are the reasons given, even by sensible persons, for shutting themselves up in air-tight boxes — poisoned boxes, we may well say — for one third of the twenty-four hours? I think they are comprised in these four: —

First: They fear the night air.

Second: They dislike the darkness.

Third: They fear a draught.

Fourth: They dread the cold.

In answer to the first and most frequently urged excuse, I will say that a great deal of nonsense has been written about “night air.” It may be that a particularly delicate person should protect herself against the dampness that is sometimes felt when the sun goes down, but the night air itself is a thousand times better to breathe than used-up air of the daytime. In Colorado, where thousands go every year for health, the choicest place to sleep is in the open air. Almost every house in that Mecca of consumptives,—Colorado Springs,—has its tent in the yard for sleeping, from June to November, and the invalids of the family claim the tent as their right, because of the benefit to their health. The air of Colorado is dry, but it is night air, nevertheless. How often, too, do we hear of persons who have been cured of lung diseases by retiring to the woods,

camping out, sleeping out of doors, and giving their abused lungs the healing there is in pure, fresh air.

A dislike of the darkness, which is the excuse for night lamps, would not be indulged for a moment, I am sure, if we realized what we were doing. A lighted lamp or jet of gas, like a living creature, absorbs oxygen, and throws off carbonic acid. Scientific experiments have proved that a human being uses up or vitiates every hour about five hundred cubic feet of air. So that in a room ten feet square, and the same high, one person will exhaust the oxygen and make the air unfit for breathing in just two hours. In a smaller or lower room, or with more than one inhabitant or a burning light, the air becomes foul in a proportionally shorter time.

The dread of draughts, which is the third apology for bad air, I regard as a serious menace to health and society, being the most widespread, and one which is, unfortunately, not confined to the ignorant. Into this fear we train our children systematically, although, of course, unconsciously. We curtain our cribs so that the unfortunate baby shall breathe its own breath again and again, sometimes even covering the infant's face while sleeping. How many times in cars and public places have I longed to snatch off the thick grenadine, the handkerchief, or the knitted woollen veil, and give the fresh air of heaven access to the suffering lungs! It is no cause for surprise that so many children die in their first year, when

we think of the impurities forced back into their lungs. It is a greater wonder that one survives.

Then we cultivate the fear of draughts, by first providing that the infant shall never feel a touch of the breeze, except on face and hands, and, when the child can understand, by forever dinning into its ears the terrible danger. There is a tendency in human nature to find what we look for. Physicians know well that a disease may be brought on by the expectation or fear of it, and doubtless it is far more often induced in that way than even they imagine. A woman whom I knew, having suffered some time with an unusual pain in one spot, sent for her physician, and told him she feared she had a cancer. After having the symptoms minutely described, he told her it was nonsense; she had not the first symptom of cancer. "Well, doctor," she said, "won't you tell me the symptoms of cancer, so I shall know if I do have one?" "Indeed, I will not," said he; "if I did, you'd have one well started before the end of the week."

That was an enlightened physician. I know a man of particularly sensitive temperament, who, by simply reading a medical treatise on disease, can bring upon himself all the symptoms. Being a man of sense, he does not make this sort of literature his daily diet; yet I know women who do.

We can cultivate our fear of a draught until we make everybody else uncomfortable, and until we

really do take cold from one. But even if we have brought ourselves into that unfortunate state we need not sleep in bad air. Windows arranged as already described, open a few inches at top and bottom, will change the air of a room without direct draught. If the room is small and the bed near the window, a screen, or even a chair with a shawl or blanket thrown over the back, will serve to keep the air from blowing over the bed.

Fear of cold, again, need not necessitate the inhalation of bad air. The room may be warmed by a furnace, or even a stove, if the air is changed as recommended, though sleep is vastly more refreshing in a cool room with blankets enough to ensure one against being chilled.

Right here let me say that persons sleeping on the popular brass or iron bedstead, with only a hair mattress on the woven wire bottom, who find it hard to keep warm in a cold room, will overcome the difficulty by laying paper between the mattress and the woven wire. It may be simply newspapers, renewed once a week or fortnight, as they become worn. No blanket or other covering will do so well as the newspaper, and that should be used only in a perfectly cold room when one has difficulty in keeping warm.

The ideal bedroom should have neither carpet nor woollen hanging. The floor should be of wood, with perhaps one or two small rugs, shaken every day; or the floor may be covered with matting with no

rugs. The bedding should be thoroughly aired every morning. The best way is for it to hang in the sun and wind for an hour or two, but if that is inconvenient, it should at least be spread open widely, and the sun and air be allowed to reach it and the uncovered mattress. The difference in feeling between a bed thus aired and one made up without it is wonderful.

There has been a great hue and cry about sewer gas in our city bedrooms, and many people, being frightened by it, have gone so far as to banish the convenient set-bowl with its unlimited and freshly drawn hot and cold water, and efficient drainage, and returned to the clumsy basin and ewer with its heavy lifting, its stale water, and standing slops.

There is not, in my opinion, the slightest need for this return to the inconvenient ways of our ancestors. If bedrooms are properly ventilated, and the supply of fresh air from the outside is unchecked, I am sure there will be no trouble from this source. I know a family, some of whom are delicate, who have lived in old houses with unhygienic plumbing, with set-bowls in every bedroom, yet because they were brought up to luxuriate in fresh air, to have windows at night open wide, from January to June and from June to January, have never suffered in the least from it.

I think it is *Puck* who defines a sleeping-car as a wheeled vehicle for the transportation of bad air

from one city to another, and I never ride in one that I do not see the justice of it, and wonder that every one who occupies a lower berth made up in the usual way is not smothered. Think how the porter prepares the box-like compartment; double windows, both shut; heavy shades drawn down; plush backs and seats piled with unaired mattresses and blankets, probably laden with the breath of countless predecessors; and the whole shut in with heavy woollen hangings. How *can* one breathe?

The safe way to ensure plenty of air without the much feared draught is to have the head toward the engine, and the window at the foot open a few inches, with the common window screen to keep out cinders. The motion of the train will force air in, drive it against the back of the seat at our feet, and not against the person. Upper berths are a shade better, because they cannot be shut up so closely, and a ventilator or two may be left open, though generally some slave to the fear of a draught will have them closed as tightly as possible.

Nor is it at night only that the air of our cars is bad. Perhaps nine-tenths of the passengers on our trains will ride all day in a car with fifty or sixty persons, with every window closed, and often a red-hot stove burning the air. Moreover, they will shiver and draw up their wraps when a perishing neighbor opens a window for a breath, or the conductor or train boy lets in a little air by opening a door.

Street-cars in our cities are as bad. If one of the opponents of "freshness" could for a moment stand at the door and get a whiff of the air that comes out of one of these packed vehicles, and realize the cause of its foulness, I'm sure he — or even she — would choose to stand on the platform, unpleasant as that is, to braving the horrors of that modern Calcutta Black Hole.

It is no wonder that headaches, and nervous prostration, and a thousand other nameless ills are killing off our women; no wonder that women's hospitals flourish, and that doctors get rich, and their wives blaze with diamonds; no wonder men have their second, third, fourth, and not seldom their fifth wife; no wonder young men — who keep their eyes open — dread to take a wife, because of the inevitable doctors' bills; no wonder a facetious writer of our day can say that his wife "is abroad, supporting a doctor"; no wonder we are a race of nervous, head-achy, miserable creatures, afraid of heaven's breath.

Such shall we be, so long as we insist on defrauding our lungs of their vital need, — fresh, pure air, — both night and day.

FOOD.

BY SARAH TYSON RORER.

ENOUGH, perhaps more than enough, has been said and written on the pernicious effects of a carelessly selected dietary, and still the world at large is in ignorance of the truth that the human creature's character and destiny are largely dependent upon what he eats, and when, and how. With changes of age and of climate, the marvellous mechanism we call "Nature" dictates variations in kinds and quantities of food.

Man has not only to complete and repair the structure which constitutes his body, but has also to create heat in a greater or less degree in accordance with the climate in which he lives. A wise combination of food is necessary to keep the machine in perfect working order. The rapidly growing infant, whose structure must be guided on wise and slender lines marked out before birth, whose organs must be condensed and solidified, and whose tissues are formed with remarkable rapidity, requires a milk diet. After the first year a mixed dietary should begin. Then, well-cooked wheaten flour, eggs, and a little meat may follow, and be increased by the addition of various simple foods; no sweets, save those

given by Nature, no hot breads, cakes, puddings, or pastries. Teach the growing child that eating and selecting his food is one of the pleasantest occupations of his life, and that to follow the dietary of a companion without questioning the suitability to himself is suicidal. Youth in the full vigor of life, having the rational outdoor exercise and the necessary amount of sleep, can and will, under the stimulus of a palate judiciously trained by parents and guardians, eat in quantity and variety sufficient to fill all the demands of his system. The quantity, by the way, is too often criticised by the unthinking, thus preventing the individual from taking his proper allowance at the table. A certain vacuum *must* be filled, and too often under such circumstances it is filled with trash. Here comes the harm. Let him eat. Nature's demands are great, and the surplus, if there be any, will be stored up as reserve force.

Food requirements vary with such wide limits in different individuals, with different occupations, and in different climates, that it becomes impossible to give a prescribed dietary. The person who takes abundant exercise, expending much energy, must have food in larger quantity and not in such an easily digested form as the one confined at the desk in an ill-ventilated, over-heated office or schoolroom. The former can take his full quantity of starchy foods and meats, and with a supply of oxygen can consolidate his frame and muscles and enable him to

resist many unseen evils which present themselves to the over-fed, over-fat, and inactive body. We must keep before us the principle that it is not the quantity of food received which nourishes the body, but the amount of food that can be digested and assimilated. All else is worse than waste whose presence clogs the delicate digestive organs, throwing them out of order. Nature teaches the healthy individual how to live, but our deviations from the laws of Nature so blunt our instincts that one can scarcely tell what Nature is. Thus tempted, the ignorant eater pleases his diseased palate, takes greater quantities than can be assimilated, and of too stimulating a nature, — too much meat, too little fruit and green vegetables, with an over-quantity of starchy foods. Men, as a class, eat too much of the albuminous foods; women too much sugar and starch, especially bread. Hence, men are prone to kidney trouble, women to corpulency and constipation.

The individual who devours rather than selects his food, can, during the first half of his life, especially if he is active, get on fairly well, but the latter half is entirely different. Even an over-quantity of food in the early part of life may be taken with impunity, and the surplus stored away as reserve force, but entirely different tactics must be observed after we cross the meridian. Energy is declining, and the unemployed materials, instead of packing away as a reserve force, clog the intestinal track and

form surplus fat; the individual becomes corpulent, heavy, and diseased. Occasionally one finds a person who does not have the power to store the fat. Then, in after life, if he keeps up his stimulating food, rheumatism, gout, kidney and liver troubles become his closest companions. While we take food in the proportions to suit each organ, and in such quantities as are required for the individual, the income is suitable to the outgo and the balance carefully guarded; peace and harmony prevail; the machine runs easily and quietly. Let us indulge in over-feeding, and the whole system is at once out of order. The stomach, being the hub upon which the machinery revolves, must be well greased and in good order.

For convenience we will divide our foods into three parts: proteids or albuminous foods, which are also known as nitrogenous substances; carbonaceous, the heat and force-giving foods, and the inorganic. The first named have for their basis albumen, fibrin, gelatin, gluten, and casein. The principal foods of this class are of animal origin, such as meats, eggs, and milk. But they also exist in the vegetable kingdom, as the gluten in wheat, legumin in peas, beans, and lentils. This class may be said to contain the constructing and repairing material for the tissues of the body. They are also supposed to furnish that from which come our digestive fluids.

The second class,—the carbonaceous,—are the

fuel foods, these being burned in all parts of the body, but principally in the muscles, to give energy and force and to keep up the temperature of the body. All work must be done by the energy produced by the burning of these foods.

The third class, the water and salts, are, of course, most necessary in proper amount. Water carries the food through the body and forms nearly two thirds of the weight. Drinking water should be fresh, and pure, and charged with air. Hot water, consequently, is insipid, having lost its gases in boiling. This fact should be remembered by those who have the care of children, especially where a slender food supply is necessary. In boiling the water, which is usually done to kill the germs, the minerals are deposited on the teakettle, instead of in the system for bone-making material. If a child has an abundance of good food, little harm may come, but to the underfed it is detrimental. We see, then, that pure water, as it forms three fourths of our weight, is of as great importance as pure food—I am of the opinion, of far greater. In country places, where there is an abundance of pure air and good food, typhoid has numerous victims, and is usually traced to the well, which, perhaps, is only a few feet beneath the surface, with a drain near by. Water under such circumstances is almost sure to be charged with injurious matter. It may be perfectly clear, and even without bad taste, and odorless, but nevertheless the germs

of disease are there, and in a particular season will spread death throughout a large territory. The poisonous germs of cholera and typhoid are contained in evacuations from the bowels of persons suffering from the disease. Now, if these be thrown out carelessly without proper disinfection, they filter through the earth, finding their way too often into streams and wells the water of which is used for drinking purposes. This will, of course, infect a whole community. In time of epidemic, all water should be boiled, cooled, and filtered for drinking purposes.

The atmosphere is the only gaseous food required by man, and it is necessary that the supply of oxygen be continuous. During the autumn, especially when the weather is becoming chilly, and before the time to change for heavier clothing, the majority of people sit in ill-ventilated rooms, thus laying the foundation for a winter of sickness.

For man's good being, then, we need good food, pure water, and pure air. The rational way of living for the town-dweller is to retire, as a rule, not later than half-past ten, sleep in a well-ventilated room, take one long nap, and at the end of that nap, instead of turning over, turn out of bed, take a tepid or cold bath—I should say tepid for women—and use a flesh brush or a towel until the skin is in a glow. Dress sensibly, loosely, and warmly, and then go to a well-lighted, well-ventilated breakfast-room, where a warm breakfast in winter or a cool one in

summer is in waiting. A saucer of well-cooked oatmeal, wheat granule (best and most wholesome when cooked twenty-four hours, not ten or fifteen minutes), cream or milk, as one chooses. Cream is best in winter, milk in summer. Then, if you like, a baked apple with a piece of toast or a "whole-wheat" gem, or a cup of coffee or cocoa made with water, not milk. In summer, I should take fruit first, then, perhaps, a cold cereal with sugar or milk. In winter cereal first, and fruit after. The person who has physical labor as well as mental may also add a soft-boiled egg or chop, or a broiled steak with a piece of bacon, but no two of these together. As a people, Americans eat too much meat.

Avoid drinking liquids at meals in large quantities, but take plenty of cold water (not iced) between meals. A glass of water as soon as you have taken your morning bath will frequently correct constipation, even in the chronic stage. Take time not only to masticate and swallow your breakfast, but to enjoy it and to converse as well. A bright companion in a warm breakfast-room in mid-winter warms you for the whole day. One cannot perform the same amount of labor, either mental or physical, or keep the body elastic and the muscles in good trim on a breakfast of hot cakes and syrups and fried foods in over quantities, washed down by a half pint of warm liquid, as if he had partaken of the breakfast mentioned just now.

Children are frequently allowed to remain in bed until ten minutes before schooltime, then to swallow their food whole, and start out on a cold morning for their day's work. Under such circumstances they will be nervous wrecks by the time they arrive at manhood, and are decrepit at middle age.

The noonday meal should be light, and of wholesome and easily digested food. Men who work out of doors in winter should take an abundance of heat-giving food. The fats rank first in order. Butter, cream, and olive oil may be used frequently with other foods. A person who cannot digest a teaspoonful of olive oil alone, or a piece of butter, can easily digest both when mingled with a salad, and accompanied by a bit of toast or water cracker.

The heavy meal of the day — call it “dinner” or “supper,” as you will — should be served at the close of the afternoon; for the farmer, I should say about five o'clock, for the town-dweller, from six to seven. No matter how simple, let it be the social occasion of the day, where family views are exchanged in the happiest manner, and all unpleasant things put aside. The brighter the conversation, the better the digestion. Soup should precede the dinner, even if it is little better than hot water, flavored. A tired person with a tired stomach certainly cannot with ease put solid food at the bottom of it and feel comfortable. A certain sense of satiety is felt at once, after which a scanty amount of food only can be taken. Thus a

person is frequently deceived by a feeling that his appetite is satisfied, when it is only because the overtired stomach has received too heavy a burden at first. Digestion under such circumstances is exceedingly slow, and headache will be the result the following morning. Warm beef or mutton soup will tone the stomach and excite the mucous lining and prepare it for the hearty meal that is to follow. A dinner would not be a dinner to me if it were robbed of soup and salad. Variety is of great importance. Two vegetables only should be served with a single course. In winter, when there is a scarcity of vegetables, perhaps one each day will be quite enough, allowing the salad to give us the green. This may be of lettuce, water-cress, cabbage, or celery. One or the other can be secured in almost every part of the United States. Then, for dry vegetables, one can have potatoes, hominy, rice, and we have the roots which are valuable as waste foods, such as carrots, turnips, and parsnips. In some of the climates we can have a greater variety, but it is better to eat such things as are in season in the locality in which you live. Proportion each meal from youth to middle age, — four times as much carbon as nitrogen. Years ago, when people did not live two years in one, they used five times as much carbon as nitrogen, but our active, nervous temperaments wear out the machine, so that almost constant repair is necessary. After the active part of life is

spent, say the first half of a century, different tactics must be enforced. Less energy remains, less power to convert food into good stock. A balance *now* is detrimental. The average individual at this time of life may feel that a greater amount of stimulating food is the all-important thing to keep up his declining strength. This is an error. Go back gradually to the point from which you started, and much better ends will be accomplished. Heavy dinners cannot be consumed with ease now, and if indulged in too often, the latter term of life will be a burden rather than a happy old age. At seventy, still greater care and curtailment are necessary. If you wish to add another term, a still smaller amount of food is required, — fruits and simple foods in moderate quantities. Public opinion is, I know, directly opposed to this. One feels that, as old age comes on, stimulants are necessary. But remember that Nature's demands are simple. Keep to the laws of health, that at eighty men may be found in good health, and with a fair amount of brain energy.

Do not insist that a glass of milk shall be added to the heavy meal. Milk alone is sufficient *food* in old age. Weak Ceylon or India teas are the best beverages, as milk is food, not beverage. Well-cooked cereals, light soups, a little meat and fish are the best dietary. Fish is especially adapted to old age, as it is easily masticated. If we would but live in a rational way from infancy to old age, following

out Nature's directions as indicated by the teeth, how much better we would be. As each tooth comes through, and drops out, it speaks to us a lesson too little heeded. The brainy man at eighty is muscular and rather spare. The man who is portly at fifty, as a rule, does not get far beyond that age. Mr. Gladstone is a monument of careful feeding. He has accomplished the full work of a lifetime, and still he has always found time to masticate each mouthful of starch food thirty times before swallowing it. He also takes time with his family for the social hour at each meal, and will probably sit in his chair at one hundred, with an active brain and without an ache or pain.

An old teacher, to whom I was consigned as a child, is still active and earning her support at eighty-nine. An invalid at twenty, she took up the study of diet and has followed Nature's laws to the present time, in consequence of which she has a sound mind in a sound body.

Nature, so kind in all her outlooks, has laid before us all these plans to enable us to be useful to the very end. Humphrey tells us "That under such circumstances we may and should burn the candle briskly at both ends, regarding the head or brain as one end, and the limbs or the locomotary agents as the other, but it should not burn too fast." It may be that in some persons an extra rate at one end is compensated for by a lower rate at the other. Some per-

sons, at least, seem to find that severe and continued brain work is incompatible with much leg work. We feel, however, directly to the contrary.

The time is near when a knowledge of the true science of living will be considered as important a part of our education as a knowledge of addition. It is my wish that these few words may lead on to such an end.

EXERCISE.

BY MARION HARLAND.

STAGNATION is death.

Action is life, and health, and growth.

Upon these two axioms hangs the law of exercise. The most robust physique relapses into feebleness if left to inertness. A feeble physique may be made robust by intelligent and continuous development of muscle and tissue.

These sound like didactic truisms, but the multiplied line upon line and precept upon precept of human science have not availed to make them a matter of practical belief with the majority of American women. The studies and exercises of the collegewoman in the gymnasium and the "physical culture" fad of the society woman have raised a dust between the eyes of many sensible women and the ugly fact that the woman of average education and provincial environment regards exertion as an evil and inactivity as a boon. To lie upon the sofa all day reading a novel was, as an indiscreet biographer tells us, the poet Gray's idea of heaven. We are not surprised after hearing it to read further that he died in an infirm middle age. We may be permitted to express disgust, if not surprise, that experience and the teachings of learned

physiologists have not made our countrywomen ashamed of cherishing the same ideal.

It is not a month since I heard the wife of an industrious mechanic say to an acquaintance of a daughter who had just married a rich man : —

“Thank heaven, she can just sit still from morning to night, and never turn a hand unless she has a mind to do it!”

The mother's tone and look begot a strong suspicion in my mind that the lucky young matron would improve to the full the privileges of her changed estate. In a few years she will probably read her title clear to fine ladyhood by employing a *masseuse* to excite sensibility in flaccid muscles and to brace prostrated nerves. Or, she will be registered among the converts to the Swedish movement cure, and devote one, two, or three hours a day to flexing by machinery joints that should have been kept supple through the commonest methods prescribed by Nature.

For one American woman who is injured by doing the housework of a family of ordinary size, fifty suffer for want of the reasonable amount of play of brawn and sinew. Our typical farmer's wife breaks down before her time, not because she leads a stirring life, but because the stirring is not according to knowledge. When we consider that for one girl who goes to college five hundred attend day schools and lodge in their own homes, and, when study-days are

over, take their part in making beds, sweeping, dusting, etc., it is strange that gymnasium laws and practice are not so much as hinted at to this great majority. The young gymnast has her loose blouse, her short skirt, and her easy shoes, and is prohibited from violent exertion directly after a hearty meal. Our girl at home — as her mother has done all *her* days — sweeps, washes dishes, turns mattresses, shakes blankets and rugs, and lends a brisk hand with the house-cleaning, arrayed in the print gown she put on upon leaving her bed in the morning. Beneath the close waist she wears an ill-fitting corset that works up over the lungs with every lift of the arms, and, as if she had an especial spite against the oppressed life-pump, she carefully closes the windows while plying broom and duster for fear of draughts, and to keep the dust (which Tyndal's disciples know to be "disease") from blowing about the room. As for waiting for food to be digested before plunging into the thick of the forenoon's "flying around," the thought is as foreign as that of the dignity of the labor put upon her by moderate circumstances.

Too much of the otherwise excellent advice given by specialists to the woman of our period on this subject of the vital necessity of exercise and the way to take it is on a par with the prescription of "*A season at Carlsbad*," left by a New York doctor brought in by a benevolent woman to see a German washerwoman confined to her chair by rheumatism.

The right formula is in the wrong place. A sick sinking of heart falls upon the anæmic sufferer who is "weak all over," yet has no confirmed disease, in reading of the benefits of the Delsarte method, if properly inculcated and followed out, and what blessed changes are wrought by daily friction, under skilled hands, of the whole body. She knows that regulation "methods" and electrical massage at two or five dollars an hour are as much out of her reach as if the recommendation were a daily bath in snow-water brought from the moon by lunar express. If we would help our sisters, we must take them as — and where — we find them; must teach them to make the best of materials laid to their hands. Stubble is not straw, but tolerable bricks have been made with it.

As a starting-point, let me, at the risk of drawing down upon my head the censure of the profession and of progressive non-professionals, declare my belief that such exercise as comes in the usual course of the every-day round of domestic tasks in an American home of the middle class will, if rightly managed, bring up the physical system to as fair a degree of perfection as the costly "courses" by which specialists are seeking to improve the human stock. Costume, training *secundum artem*, and the society of fellow-students in the noble art of self-improvement, make gymnasium work (for it *is* work, approximating labor), more dignified than the "com-

mon round" that develops exactly the same set of muscles and strengthens the same vital organs. As an obstinate utilitarian, I should for myself enjoy sweeping, bread-making, and other branches of manual labor that fall naturally in a woman's way, such as flower-gardening, poultry-tending, and active supervision of a well-kept house, more heartily than swinging dumb-bells and working a meaningless treadle for an hour at a time, first with one foot, then with the other, or tugging at intervals of fifteen minutes at a health-lift until the prescribed time is up. I was beguiled into "taking" the health-lift once for a month, and at the end of the course confessed myself to have been greatly profited by the mile-walk to and from the building in which the machine was kept. The process of the lift and the intermediate rest upon a lounge, hands folded, and eyes closed, was a bore but slightly mitigated by a sense of the absurdity of the treatment for a woman with her hands full of rational engagements, and nothing the matter with her body except a slight touch of "spring fever."

Work done with a settled purpose is always more satisfactory to the worker than routine for routine's sake. The exercise that accomplishes something we can see now and here has behind it moral stimulus. A walk to the post-office where one hopes to find an important letter; a ramble in March of two miles to the hills that were pink with trailing arbutus last

spring, or in autumn along the lane that late in September is royally fringed with blue gentian; a nutting frolic; a wrestle on a stormy afternoon with winds that tear up and down the streets you traverse on your way to take a cup of tea with a friend,— one and all, accomplish the end of the “constitutional” more fully than measured miles paced in mechanical obedience to formal regulations. A walk in agreeable company really helps the body—leaving the spirit out of the question—more than a solitary rush over the same distance and road.

The girl who should so far rise above the fusty traditions of the housewife as to wear the uniform of the gymnasium while sweeping halls, rooms, and stairs, and cleaning windows, scrupulous, all the while, to have abundance of fresh air to fill the lungs and redden the blood, adds to physical gain the consciousness of a world made cleaner, therefore, healthier, by her toil. Furthermore—and to this no true woman should be indifferent—she brings what is wrongfully considered menial occupation up to her level,—the level of quaint old Herbert—so much in advance of his generation—and his divinely comforting philosophy of the room swept “as for God’s laws.”

One of the severest lessons in peace-holding ever appointed unto me was when courtesy compelled me to hearken for an hour to an eloquent dissertation upon the ennobling influence of the Delsarte system

from the mistress of an apartment so disorderly and dirty that my self-respect suffered from sitting in it while she discoursed. In illustration of her apostle's teachings, she did some wonderful things with muscles and limbs as she talked. Every feat — as my slender knowledge of anatomical principles assured me — could have been achieved by muscles and vertebræ trained by regular practice of the homely arts of bread-kneading, bed-making, sweeping floors, and brushing down walls, together with much walking along country roads.

Bodily exercise, of whatever form, profiteth little unless it be pursued steadily. Flexion of the muscles, strenuously insisted upon by the teachers of gymnastics and callisthenics, is simply *keeping* thews and sinews supple and strong, thus making them capable of sustaining heavy weights and long strains. The woman who leads a sedentary life for six days, and on the seventh buckles on her armor, in the shape of a "walking-length" skirt and common-sense boots, for a tramp of three miles, defeats the end of her undertaking as effectually as did Byron when he tried to reduce his flesh by dieting for a month upon potatoes drenched with vinegar, then, driven desperate by animal hunger, gorged himself, anaconda-wise, at one mighty meal of fish, flesh, and fowl. The muscles are strained, not strengthened, by violent and intermittent exercise. A quarter-mile twice a day keeps them in better condition than

a four-mile walk taken once a fortnight. The earnest pedestrian, beginning with the quarter of a mile, will find that she can gradually extend her beat until the three and four mile stretch can be compassed without fatigue.

To insure regularity in this duty which each of us owes to the temple of her body, it must be rated at its full value, *i. e.*, that it is as essential to health and comfort as eating and sleeping. The formula, "fresh air and exercise," is worth more in maintaining the physical sanity of the household than all the drugs in the pharmacopœia, and it is gratifying to observe the increasing prominence given to it with the advance of medical science. The best that doctors can do — the wisest of them being judges — is to assist Nature. The best that each inmate of a body can do is to work so intelligently with Nature that she shall not require repairing.

Health cannot be maintained without *regular* exercise and plenty of it. Having dislodged the heresy that action is an evil, engraft upon conscience the tenet that inertia is never a boon except as it alternates with motion. It is the sleep of the laboring man which is sweet. There is no rest, strictly speaking, for the indolent. The bow that is never bent gets no good, as a bow, from straightening out.

A sensible by-law for every woman in tolerable health is not to be afraid to move. It is laziness — and slovenly laziness — to tip your chair sideways

and "make a long arm" to reach the fallen scissors or spool; to quote the easy-going wife's parrot-cry, "You are up and I am down," to excuse yourself for making others fetch and carry because you are comfortably settled with work, or to summon a busy servant to get a book from the next room or your handkerchief from an upper chamber. The woman who is not afraid of staircases will walk better, more lightly, and with greater ease to herself, no matter what her weight may be, than she who, without apology of physical infirmity, grumbles if everything needed for use and luxury is not upon one floor and within reach.

Having an errand at the house of a country seamstress, one bracing autumn day, I found her running the sewing-machine in a close room. "The air blew things about so, when the windows were open," and she "guessed that she must be thin-blooded, she was so chilly most days." She was sallow, stoop-shouldered, and flat-chested, although she declared herself to be in good health — "if it wasn't for nervous headaches."

"All sewing-women suffer with them," she said patiently. "If it wasn't for my tea, — good, green tea, hot and real strong, — three and four times a day, seems if I'd die sometimes, the pain is that bad!"

I had a packet of letters in my hand, and as I was leaving, the sight suggested a startling thought to her: —

“You’re never going to walk all the way to the post-office to mail them? Why, it’s a mile, at least!”

And when assured that the mile and back was but a trifle in my estimation:—

“Think of that, now! When I’ve lived here five years, and never thought of going to the office a-foot! I should be laid up for a week.”

A run, or even a saunter of half the distance every day, would have gone further toward routing the sewing-woman’s familiar demon than the gallons of stewed tea poured into the outraged stomach and conveyed by reluctant nerves and veins throughout her thin body. Such living is a continual borrowing from to-morrow, and pay-day must come soon or late, usually soon. Sedentary habits sap the springs of vitality more insidiously and almost as surely as liquor and opium. For, while our talk up to this point has been of the benefit received by the muscular system from exercise, the gain of nerve, blood, lungs, heart, and, most of all, the digestive organs,—cannot be exaggerated. The mysterious good we name “tone” comes to the body “to stay” through no other channel. The effect of tonic and stimulant is evanescent and uncertain. Brisk motion, demanding the co-operation of the whole body from brain to toe, wakes up the forces all along the line. The lungs expand to take in more air, and expel it the more freely for the settling into normal position of stomach and bowels.

An outspoken French master used to tell his classes that "the American school-girl *sits upon her stomach* much of the time, and, in consequence, has dyspepsia."

The blood is pumped more strongly through the veins; the channels to and from the brain are cleared by the steady play of the life-giving current; spleen and liver are aroused from torpor with results that have to do with the preservation of health, reason, and life itself.

Beauty, as a permanent possession, must co-exist with exercise of the right sort, taken conscientiously. The day of willowy shapes and Parian marble brows has gone by so long ago that even the country belle laughs at stories of her great-grandaunt's efforts to preserve the good looks that made her the belle of the township. How she champed slate-pencils and chalk to keep from growing vulgarly rosy, and ate pickles by the pound to reduce flesh, and slept in gloves, and wore on summer nights a tansy poultice to eradicate freckles, and never walked if she could help it, for fear of enlarging her pretty feet. That was the era of corset-lacing against the ends bound to the bedpost, because no maid had the finger-power to draw the strings hard enough to satisfy the wasp-waisted mistress; when eating was an unrefined performance for "lovely woman," who wore tight, high-heeled shoes, and bound her girdle a measured finger's length below the armpits and

right across the lungs. It was the "good old times" of low-necked gowns, and short sleeves, and no flannels, and no underskirts (to speak of), and alabaster complexions, and weekly bleedings, and oft-practised hysterical arts, and much reclining upon sofas, and floods of tears flowing as softly as sweet Afton, that had all seasons for their own, and so many other obsolete horrors — among them an average of but thirty years of mortal existence — that we shake ourselves loose from the enumeration as from a nightmare, with a shuddering, "We beseech Thee to spare us, good Lord!"

The maiden of that period aimed to grow like the lily, with never a thought of the swaying in the breeze, the rocking in the gale, the shower-baths, and sun-soakings, and the open air living that wrought the pale, proud princess of the garden into pure and stately bloom. A potato shoot in a bin would have been a fitter type of the fine lady of 1795. It is cause for national thanksgiving that we have broken asunder the bands and cast away from us the cords of the fashion of that time of ignorance.

Every variety of exercise that calls into healthful activity the various members and organs of the body has its value. It should go without saying that the business of the gymnasium, however scientifically adapted to the needs of the physical system, under-ranks motion in the free air of heaven that needs no artificial changing at stated intervals.

Perhaps horseback riding stands next to walking among the forms of outdoor exercise. Nathaniel Parker Willis, who held consumption at bay for twenty years by almost living in the saddle, maintained that walking causes the muscles and soft parts of the body to sag, while the equestrian constitutional upbears important organs and gives liberty to the muscles by supporting the dragging weight; in short, that the saddle "set him up." Other elements of gratification beyond those that attend exercise on foot enter into the enjoyment of a ride upon a well-gaited horse. The human love of mastery over the inferior creation, the affectionate sympathy quickly established between the rider and the intelligent steed, the rapid sweep through the air, the wider outlook from the height where he sits enthroned, contribute to make this method of locomotion one of the most delightful as well as beneficent known to man or woman.

Still, as every old woman knows, and every girl ought to be told, some maladies peculiar to her sex are developed from incipiency into activity by riding, particularly upon a trotting horse. Years of invalidism may follow indulgence in the graceful exercise at seasons when common prudence would forbid this form of exertion. The women whom we meet in our city parks and suburban roads, rising to the fulling-mill trot of "high steppers," remind me ludicrously of the dubious encomium passed by a

rustic upon a badly ballasted railway. He said, "The cars could bounce higher and 'light truer than any others he had ever travelled upon." The lofty bounce and true return to the saddle of our dashing girl equestrian involve an inevitable jolt, depending in violence upon the skill acquired by frequent practice. Even an agile and fearless rider must be well put together to endure unharmed ten miles of such thuds and rebounds.

The *fin de siècle* girl and her bicycle have hardly been acquainted long enough for the passage of correct judgment upon the consequence of the intimacy. If her frame be firmly knit, and the balance of her marvellous and exquisite tripartite organization be perfect, there is little danger, and there may be decided good in "wheel-work." From the imperfect statistics collected on the subject, it is apparent that a girl who has "a weak back" or the remotest tendency to hip-disease should not ride a bicycle. In like circumstances, horseback exercise should be practised in moderation and under medical advice.

Driving is the mildest variation of what Americans persist in including in the division of "riding." Foreigners ridicule a classification which, from their standpoint, would seem to be all margin. The solid fact remains that an engineer and a wheel do the driving of a railway train, while the passengers ride; also, that in a carriage he who holds the reins

drives, and those who occupy the vehicle with him ride.

So, for our présent use, driving means handling ribbons and whip. If the horses are spirited, the employment exercises arms and chest, besides pulling hard upon the back. If the animal in harness be the advertised "lady's horse," the expenditure of strength is reduced to a minimum. To the passive occupants of the chariot or rockaway, there is no question of exercise other than could be had in a rocking-chair upon a breezy veranda. They are merely enjoying an airing.

Yet the modern society dame poultices her conscience by making a matter of physical duty of her daily drive in park and boulevard. To secure it requires thought and management. Mary in the mill is not more a slave to the requirements of her position than Marie in the maelström of fashionable life. It is through an economic instinct that she sets aside two hours out of the twenty-four for exercising her horses and (as she fancies) her jaded self. The same sense of what she owes to her physique induces her to add to the list of her engagements so many hours of each week spent under the manipulation of the electrical *masseuse*. Benjamin Franklin was an American of the Americans when he begged to have grace said over the whole barrel. Our women would dispose of the obligation to keep the works of their undervalued bodies after the same

fashion. But with the best will in the world, and under the stimulus of the highest price, no professional "rubber" and no "movement cure" run by steam and charged with electricity can wind us up and keep us going for the term of years the rankest pessimist of us all would like to spend upon this terrestrial ball.

In the first manual of practical housewifery I had the honor of offering to my countrywomen, I laid down as a stringent rule, "Never stand when you can do your work as well while sitting."

Not the least trying accompaniment of our society woman's duties is the enforced standing at ball or crush for an entire evening. The cruel pull upon the muscles and the growing weight of organs, relaxing wearily as the minutes drag by, are torture that works disaster even upon a strong frame. To the weak, the risk is so serious that even the fiat of high-handed fashion does not excuse the daring (or moral cowardice) that takes it.

To recapitulate briefly the rules governing this important subject: —

Exercise is a duty and should be a pleasure. Since muscular growth and firmness depend upon it, nothing is a valid substitute for exercise of some sort.

Moderate exercise, taken daily, is better than violent and spasmodic.

The best results of exercise are secured through

some kind of occupation, but special forms may supplement the lack of stated employment. She who has no call to do housework must make occasions to develop those parts of the body which housework would keep in normal working condition.

Rubbing, massage, health-lifts, Swedish movement cures, and other artificial means of strengthening and stimulating the system, while valuable to invalids, are but a poor substitute for exercise to people of tolerably good health.

An extraordinary degree of determination and perseverance is requisite for the rich woman who tries to fill a place in the gay world and also to keep up the standard of physical sanity by active exercise, without which health is impossible. Each of us goes into the campaign of life at her own charges. Personal care of the temple of the body is as needful as that each individual should breathe for herself.

Standing is, in no sense and by no possible perversion of the word, exercise. On the contrary, it defeats the purpose of activity.

Exercise, then, to be wholly beneficial, must be "all around." That is, of a kind that will bring the whole system of muscles, nerves, veins, and arteries into healthful play. That which brings about an unnatural enlargement of one set of organs to the neglect of the rest encourages deformity instead of the symmetrical growth which is always true beauty.

THE NERVES.

BY LUCIEN C. WARNER, M. D.

THE nerves of the body are the medium through which the mind receives all impressions of external objects, and also through which it directs all bodily activity. Every sensation, whether of joy or sorrow, pleasure or pain, comes to us through the nervous system. It is thus that we recognize cold and heat, sound and silence, sunshine and shadow, light and darkness.

The center of the nervous system is the brain and spinal column. It is through the brain that the mind acts in all its varied and wonderful manifestations. The whole physical system is directly connected with the brain by means of the nerves which run like little cords to every part of the body. These nerves terminate in the skin and muscles, where they act as the sentinels stationed at the outposts to keep us informed of the conditions which surround us. But these sentinels have a double duty to perform; they not only bring to the mind information, but they carry back to the muscles orders for motion. A simple illustration will explain this action. If you put your hand in the fire, instantly the nerves carry to the brain the sensation of pain; as quick as

thought the brain sends back word to the hand to get out of the way. Thus we see that the nerves act like telegraph wires to connect the brain with every part of the body; but, unlike the telegraph wires, there is a double system of nerves, each with a distinct function; one the nerves of sensation, and the other the nerves of motion.

There are some nerves of motion that are not under the control of the mind, like the great-pneumogastric nerve, which runs from the brain to the throat, stomach, lungs, heart, and liver. These are organs whose activity is essential to life, and hence they are made independent of our control. They go on with their work while we are asleep the same as while we are awake, and never cease their activity until life itself is extinct.

The impressions which we receive from the special senses are brought to us through the nervous system. The sweet odor of the flowers, the delicious flavor of food, the beauty of form and color, the murmur of the ocean waves, the song of the birds, the sweet notes of the singer, and the ravishing harmony of the orchestra are recognized through the medium of the nerves. These nerves are susceptible of cultivation from education and close observation. The hunter recognizes sounds in the forest which are indistinguishable to other people. The blind develop the sense of both hearing and touch to a remarkable degree. The study of music cultivates an appreci-

ation of harmony and discord, which is not recognized by the ordinary hearer. The study of drawing and painting cultivates the love and appreciation of the beautiful, both in art and nature. The whole tendency of education is to increase the activity and acuteness of the nervous system. This brings greater capacity for enjoyment, but also greater capacity for pain. If the ear is trained to fine music, poor music and discords are a positive offence. The eye trained to appreciate the beautiful in art is pained by that which is crude and inharmonious. This principle holds true in every condition that surrounds us. Persons with delicate, sensitive nerves feel every discord of life, and are more likely to suffer from surroundings that are not in every way congenial and pleasant. The highly wrought nervous system is like a delicate piece of machinery, which works beautifully when the conditions are all favorable, but is frail and easily gets out of repair.

Good health requires that there should be a proper equilibrium between the nervous system and the physical system, between the body and the mind. Hence, diseases of other parts of the body often cause derangement of the nervous system. This is particularly true of dyspepsia and other diseases of the digestive organs, owing to their very close connection with the brain. A dyspeptic is almost always nervous and irritable. The same thing is also true of diseases of the reproductive organs ; in

fact, nervous symptoms are often more prominent than any symptoms of the local disease. In all cases where nervous trouble is consequent upon the disease of some other part of the body, relief must be sought in treatment of the special disease which is the cause of the trouble. If this is cured, great improvement may be expected in the nervous symptoms, although often these are the last to disappear.

Nervous diseases are frequently the result of heredity. "Like parents like child" is a proverb of almost universal application. Where one or both parents possess a highly nervous temperament the children are very likely to inherit the same tendency. In such cases special pains should be taken to maintain the health and develop the physical system of the child, while the mental training should be retarded rather than pushed forward. Such children usually have very bright minds and learn easily, so that they can quickly overtake their companions of the same age, even if they are not sent to school early.

In our artificial and highly cultivated society very many cases of nervous exhaustion are caused by excessive mental and nervous activity, especially when this is accompanied by lack of physical exercise. The tendency of education, refinement, and luxury is to develop the nervous system at the expense of the physical. Many girls break down in school by too close application to their studies. They are ambitious to be first in their classes, and they sacrifice in

extra preparation for the classroom the hours that should be devoted to recreation and exercise. The result is a nervous collapse which compels an abandonment of study or its suspension for several months. To the student and to all persons engaged in literary pursuits the hours of recreation should be just as sacred as the hours of study. If either is to be sacrificed, let it be the intellectual work, for that will only mean a little lower standard of scholarship, but to sacrifice exercise and recreation may mean ruined health, with all its attendant evils.

But the schoolgirl and the literary woman are not the only ones who are in danger of breaking down from too much drain upon the nervous forces. The woman of society often works harder, mentally and nervously, than the most studious scholar. Entertaining company is more exhausting than any college study or literary work, and many a society woman spends a day in bed with headache after every reception she gives. Brilliancy in conversation requires great activity of the mind, and I have usually observed that brilliant talkers and wits have frequent seasons of great depression. Thus it happens that many of those who are brilliant in society keep very little of that brilliancy for their own household.

Almost the whole life of the society woman is a drain upon the nervous system. In the morning there are letters to write, and, if she be engaged in benevolent work, committees to attend. In the

afternoon there are calls to make and shopping to attend to. In the evening there is the formal dinner party, the theatre, the opera, or the concert. This is not for a day, but for successive weeks. Engagements crowd so upon each other that it is an added burden to determine which to accept and which to refuse. With all of this there is scarcely any physical exercise to give the body proper tone and strength. The labor of the household is done by the servants. Walking becomes a lost art, and the carriage takes its place whenever she leaves the house.

Is it any wonder, under such conditions, that the nervous system breaks down, that headache is almost a daily companion, and that the nights give but little sleep to refresh the body and mind for the labors of the day? This condition, which is called nervousness, should be called nervelessness. It indicates, not strength, but weakness of the nervous system. The nerves no longer control the body, but are themselves controlled by every external impression. They are like a steersman who has lost control of his ship. It goes hither and thither wherever the winds, the waves, and the currents drive it.

Nervous exhaustion is more common among the women of America than among those of any other country. The reason of this may be in part due to climate and temperament, but the malady is, I believe, chiefly due to the more intense lives of Americans, and

to the general lack of physical exercise among our women. It is characteristic of Americans to do nothing by halves, but whatever they undertake they do with all their might. There is very little repose in our natures, but we are ever on the alert, seeking for something to keep our minds active.

Grief is a more serious tax upon the nervous system than pleasure, and more often leads to nervous exhaustion. In cases of bereavement the nervous system is sometimes so prostrated that many weeks of rest and change of scene are needed to restore the ordinary equilibrium of the body so that one can take up the regular duties of life. A somewhat similar effect is produced by the habit of borrowing trouble. Many persons keep themselves in a continuous state of excitement and unrest over troubles which have no existence except in their over-wrought imaginations.

The cure for nervous prostration is to be found, not in stimulants which would spur the exhausted nerves on to further activity, not in narcotics which would dull the aching head and compel sleep, but in entire change in the habits of life. There are limitations to human endurance which cannot be disregarded with impunity. When these limits are passed nature hangs out signals of distress. If we heed the signal we are safe, but if we ignore it we soon run upon rocks and quicksands from which there is no escape.

First in importance among the remedies for preventing or curing nervous diseases is physical exercise. Deficient exercise is almost universal among American women. The girl does not get one half the exercise demanded of the boy, but is early taught to devote to fancy work the time which the boy spends in out-of-door sports. There has been a great revival of many sports among the young men of America, until we now nearly approach the English in out-of-door exercise, but this revival has but slightly reached the young women of our land. A few play tennis, practise archery, ride on horseback, or use the bicycle, but the greater proportion still limit their exercise to a ride in an easy carriage or a walk of half a mile.

Good physical constitutions and strong nervous systems can never be built up in this way. Women, to be healthy, must have regular exercise. Those who do their own housework are as a class more healthy than those who keep servants. Among the peasant women of Europe who work in the fields with the men, nervous diseases are practically unknown. We rejoice that the greater prosperity of America does not require this drudgery of our women, but they need to get its equivalent in out-of-door exercise, if they would retain that strength of body and nervous system which is essential to the full enjoyment of life.

I need hardly say that women not accustomed to

exercise should begin with great care. Violent exercise at first might do great injury, but by commencing moderately and increasing the amount day by day as the strength increases, in a little time a walk of two or three miles, or a horseback ride of an hour can be taken each day without marked fatigue.

The medicines to be used in cases of nervous exhaustion are usually of secondary importance to the hygienic remedies which I have indicated, and these remedies should only be used under the direction of an intelligent and careful physician. The nervous trouble may be in part dependent upon constipation, indigestion, or some other form of internal disease, and if so the physician will direct his treatment to these special organs. Great caution should always be exercised in using remedies to act directly upon the nervous system, especially such as are designed to produce sleep or allay pain. No amount of temporary relief can compensate a person for the mental and physical degradation of the opium, the chloral, or the cocaine habit. There are emergencies when these remedies may properly be used for a very few days, but the physician who prescribes any of these drugs to be taken for several successive weeks does so at great risk of fastening upon his patient a habit from which he cannot break away.

The same is, in a measure, true as to the use of stimulants. Persons who are in a weak physical

condition as a result of old age, acute disease, or prolonged sickness, often derive great benefit from the temporary use of stimulants, but the person who uses wine or liquor to stimulate his nervous system to greater activity, or to deaden the sensibilities of grief or pain, is in imminent danger of contracting a habit which will afterwards enslave him.

There are, however, a few remedies which can be used to give relief to those nervously exhausted that are not liable to the danger attending opium, cocaine, or chloral. The most useful of these are perhaps the bromides, citrate of caffeine, and the coal-oil products, like phenacetine, antipyrine, and antifebrine. These will often bring quiet and repose to the excited, over-wrought nervous system, and they can be used without the danger of forming habits which cannot be broken off. The coal-oil products should, however, be used with caution, as their tendency is to weaken the action of the heart. One preparation made of a combination of bromide, citrate of caffeine, and acetanilid has proved so valuable in the relief of nervous headache that it is put up under the name of "Migrain" (headache pills). The formula is as follows :

Acetanilid	2 grains.
Camphor mono-bromated	1-2 ,,
Citrate of caffeine	1-2 ,,

Dose : one every hour until relieved, or until four

are taken. It will not relieve all cases of nervous headache, but will relieve a larger proportion of cases than any other remedy I have ever known.

Such remedies must be looked upon only as palliative, not as curative. The cure must come by improving the general health and by better attention to the laws of hygiene. Many of our so-called diseases are only kindly warnings that Nature is overworked, and we must call a halt for repairs, or the damage will soon be beyond remedy. If we could keep our bodies in good physical condition and not draw on our nervous system for activity beyond its capacity, nervous diseases would be unknown. Those who have inherited a highly organized nervous system, and those who by past habits or disease have acquired this condition, must realize the constant temptation to overwork, and must hold their powers in reserve if they would escape the penalty which Nature is ever ready to inflict for the transgression of her laws.

CONSTIPATION.

BY LOUISE FISKE BRYSON, M. D.

CONSTIPATION: its causes, results, and treatment.

Constipation is the commonest disorder the physician is called upon to treat. The causes are many. It may be the symptom of serious disease, or merely the result of carelessness and ignorance. Arising sometimes from a narrowing of the intestine due to previous illness, it may also have its origin in some unequal action of the muscular coat of the intestinal tract. Depressing mental states will also induce it. Idleness, sloth, over-eating, excessive tea-drinking, insufficient food, foul air, excesses in the use of alcohol and tobacco, defective ventilation, and overheated rooms are influential in its production. Swallowed stones and seeds of fruits, as those of cherries, plums, grapes, and certain berries, the husks of corn and oats, and such foreign substances as stick cinnamon, sawdust, sand, clay, and bits of slate-pencil will sometimes cause acute or chronic constipation with serious symptoms. Sedentary pursuits and constrained positions favor it. Writers, journalists, teachers, clerks, and seamstresses are especially subject to this disorder. Intellectual labor

entails muscular inactivity. It diverts energy to the nerve-centers, and causes constipation as well as indigestion. The habit of hurry incident to over-work is also a cause. Imperfect mastication of food, tight lacing, the action of certain metals (as lead), the presence of obesity, and various unnatural conditions of the digestive apparatus are also some of the many influences that favor it.

But perhaps the most important factor of all is the American habit of taking medicine. In case of indisposition, the first question in this country is: "What shall I take?" "What shall I do?" is left unasked. A superstition prevails that whenever the bowels do not move for a day or so, a cathartic is needed to remove from the system morbid material that would otherwise induce disease. Nothing could be more erroneous, if the person is healthy in other respects. The evils of constipation are great, but not so great as the evils of dosing. The cathartic habit exists as surely as the cocaine habit or the morphine habit. At first the harm arising from this practice is not apparent. In time, however, the intestinal and rectal muscles come to need some artificial stimulation in order to work at all, the forced activity caused by drugs having weakened their contractile power. The very condition for which such remedies are employed is thus intensified and rendered more difficult of cure. Tight lacing, imperfect ventilation, cherry pits, slate-pencils, etc., are bad, but purgatives are worse.

Constipation occurs most frequently in advanced life, when the tissues are less firm and elastic. Infants artificially fed are also subject to it. The poor children of the rich, who are not allowed to tumble around on the floor for fear they might bump their little heads, and who always have a nurse to carry them about, often lack muscular force to be anything but constipated. Their abdominal muscles get so little exercise that they cannot perform their office. Little children with marked tendencies to gout, rheumatism, scrofula, and other morbid constitutional states, are also its victims. Women suffer more than men, partly from neglect and carelessness, and partly from anatomical structure and physiological conditions. Pressure from periodically enlarged pelvic organs, from pregnancy, or from the products of pelvic inflammation, results in a greater or less degree of sluggishness in the muscular action that is necessary to proper and regular defecation.

In women the results of constipation are particularly disastrous. The bad habit predisposes to the development of piles and to uterine and ovarian congestion, to unnatural positions of the uterus and to prolapse of the ovaries, and to ovarian and other neuralgias. Intensely painful affections of the sciatic nerve are also caused in this way. It aggravates the symptoms of every pelvic disorder, partly by local congestion and partly by general deterioration of health, due to the absorption of poisons and con-

tamination of the blood, and to the loss of appetite and impairment of digestion. If waste material be not regularly thrown out, it undergoes putrefactive changes. Absorption from it then distributes poison all over the system. The various activities of the body are sluggishly performed, the brain is dull and slow, and digestion is necessarily impeded. The tongue is furred, there is a bad taste in the mouth on waking, and the breath is tainted and offensive. Life takes on a dark tinge, known as "the blues," and daily tasks are a burden. There are reflex pains and irritability, together with muscular weakness and fatigue. The eyes are often affected. There is a blur before them, and the sight is weak. Attacks of vertigo are common, and so also is sleeplessness. In children, constipation may induce convulsions and fevers through the poisons absorbed. A large proportion of the mental and physical ailments on the borderland of disease are due to inactivity of the bowels.

The most important agents in the treatment of constipation are bathing, diet, exercise, electricity, and massage. Hygienic measures should be tried first, for they alone are often successful. Exercise is the very best remedy, and a drug the worst of all.

The skin should receive special attention, and its care comes under the head of exercise and general tonic treatment. A potent factor in developing cutaneous activity is the bath. The most available

morning bath is the shower, the patient standing in hot water six or seven inches deep in the bathtub. This keeps the feet warm and prevents chill. If the shower is too severe, sponging the body with cold water while standing in hot water may be substituted. When there is no shower, the bather can use a small pitcher instead, dipping the cold water from a pail near by. If the spout is held over the back of the neck and the body bent a little forward, the water will fall over the spine and other parts in a gentle stream. At first the water can only be poured over a few times. In a few weeks it can be borne very cold for some minutes. This is called a cold effusion, and is a much attenuated form of the Charcot *douche*. Quick drying with soft towels and brisk rubbing with coarse ones should follow. If, for some good reason, the bath is omitted any morning, the entire body should be rubbed with coarse towels. Swimming is good, for it exercises every muscle of the body. A sea bath is taken in the purest air possible, where salt water adds to the stimulating effect that comes from buffeting with the waves, and where the direct rays of light are not without effect. For the weak three minutes are enough for a sea bath. With returning strength the time may be lengthened to ten minutes. A sea bath of fifteen minutes' duration presupposes good health.

Systematized muscular movements are of definite value in overcoming constipation. Standing on one

leg, first on the left, and then on the right, and swinging the other backward and forward from five to ten minutes, is excellent for this purpose. Alternately squatting down with the heels together and rising slowly, strengthens the abdominal muscles and improves the abdominal circulation. Creeping about on the hands and knees like a young child will force misplaced organs into their proper position and thus relieve pressure, reduce congestion, and equalize energy. Such exercises must be used moderately always, briefly at first, and the time be gradually lengthened. The bicycle is far better than horseback riding, on account of the superior position. As women never ride for speed, but only for health and pleasure, they are exempt from the injurious effects of bending forward. Bicycling is the best exercise ever yet invented for women. It is taken out of doors, it is interesting, it is the embodiment of freedom, and annihilates time and space. A combination of bicycle and common sense will do more to keep digestive functions in order than any compound known to the chemist.

Diet is of importance. Fruit is usually of benefit, particularly figs, berries, stewed prunes, and baked apples. An orange or a pear taken immediately on rising will sometimes act as a laxative. A glass of water will often do as well; and is best followed by another at eleven o'clock, at four, and one on retiring. Spinach, lettuce, tomatoes, salsify, and celery

are vegetables that are anti-constipative; and so also are brown-bread and molasses. A teaspoonful of unground flaxseed which has been macerated in water for some hours, given daily, is an effective French remedy. Articles known to disagree with one are best given up. A monotonous diet is sure to cause indigestion. Food should be varied from day to day.

Too great a variety at any one time is an æsthetic as well as a hygienic blunder. If meals have to be taken alone, the solace of a book may prevent too rapid and disconsolate eating.

Medicinal agents are sometimes a temporary necessity. Preparations containing rhubarb, soda, aloes, podophyllin, nux vomica, and strychnia are excellent. When there is general lack of tone, cod liver oil is required. Stout women and those with pendulous abdomens need for the muscles the support of a bandage. Glycerine, either in the form of a suppository or as a small injection, is very valuable. Half a teaspoonful of boric acid introduced into the rectum is an efficient remedy. Injections of tepid water containing soap, molasses, salt, inspissated ox-gall, or small quantities of turpentine or borax, are useful, and also injections of olive oil. The patient should lie down with the hips elevated, and the liquid should run slowly from a fountain syringe. When the rectum is irritable and sensitive, yet constipation marked, half a pint of strong coffee is a most soothing and efficacious injection.

Electricity is often successful, even in the most obstinate cases. The negative galvanic electrode is placed within the rectum and the positive pole upon the abdomen. The faradic current is of value in promoting a healthy tone in the abdominal muscles.

Massage of the abdomen is a measure that the sufferer can make use of without assistance. A metal ball weighing from three to six pounds is covered with cloth to prevent chilling of the skin. Then every morning it is rolled over the abdomen from five to ten minutes, starting low down on the right side, coming up in a straight line to the ribs and then going across the abdomen on a line above the navel, and afterward down the left side. This kind of massage may take several weeks or months to effect a cure. Excellent results from it are reported.

Special attention should be paid to preventing constipation, for prevention is easier than cure in every instance of physical disorder. Young children should be trained from their earliest years to regular habits of defecation. The best hour is directly after breakfast, or after the noonday meal. The attempt should be made daily at the appointed time, whether desire is felt or not, and fifteen minutes given to this duty. Persistent daily effort will be met eventually with success, provided exercise, diet, and all the rest that constitutes hygiene is faithfully considered. Perfect regularity is a doctrine that

should never cease to be preached. Beware of purgatives, which only make matters worse. Use reason in the regulation of conduct, and live out of doors as much as possible. Simplify domestic machinery, so that hurry is eliminated. Lead your own life, as far as possible, to insure the best functional activity of mind and body. Avoid notions in regard to food; eat everything if you can, but never too many different things at one meal. Pay strict attention to the skin, for water within and without will wash away much fatigue and mental depression. Try to sleep nine hours out of the twenty-four, and secure at any legitimate price some special personal recreation. Avoid heavy clothing and tight garments, which lessen muscular activity. Adopt the bicycle as a near and dear friend. Rely chiefly on electricity and massage in extremity. And thus the commonest disorder the physician is called upon to treat will finally disappear.

CORPULENCY AND LEANNESS.

BY LUCY HALL-BROWN, M. D.

IF all men and all women could be made to conform to a recognized normal standard of height, breadth, and weight, it would be a great triumph of science; the average sum of human life and human usefulness would no doubt be increased; dressmakers and tailors would no longer be driven to desperation in padding the lean and pinching the fat, and otherwise struggling to adjust their fabrics to the humps and hollows of hopelessly rotund or scraggy humanity.

If, by wishing alone, man could "add one cubit to his stature," or increase or decrease his *avoirdupois*, science might rest. We should all be pretty nearly of the same size; for where is a plump person who would not like to be thinner, a thin person who would not like to be plumper, or a short one who would not like to be taller?

Upon the whole, we are glad that the diversity is maintained, science and personal desire to the contrary.

We like to see the little, round, roly-poly man, with his clean bald head, bright eyes, and cheery voice; we like to see his tall, dignified, broad-should-

dered brother, and we cannot conceal our admiration of the straight, wiry, agile man, "thin as a Damascus blade," all nerve, and fire, and energy.

Not an inch of stature would we see added to the one, nor taken from the others; not an ounce of flesh would we have transferred.

The chubby maiden may bewail her five feet two inches, and sigh because she cannot wear plaid gowns and spreading furbelows; but, arrayed in the dainty costumes which belong to her, she divides the honors pretty evenly with her tall, willowy friend, and more than occasionally comes off with the lion's share.

Who would banish from our midst the matronly figures so suggestive of home, and comfort, and motherly love? A multitude of sylphs and fairies could not console us for their absence, nor fill their places in our hearts.

To be healthy and well favored, to have sound tissues, fed from pure and wholesome blood currents, is, after all, that which, of all God's blessings, is most to be desired, and any one thus fortunate may well laugh at a few pounds more or less of solid flesh.

The obese and the emaciated fall outside these happy bounds, and, whether so by their own fault or otherwise, they demand our aid and our sympathy.

A man or woman with a weak heart, feeble circulation, and flabby muscles, staggering under a mountain of useless adipose, is as far from health as the

querulous, irritable dyspeptic, with his vitiated blood and attenuated limbs.

Life insurance companies refuse to insure persons who are extremely corpulent or extremely thin. Most companies have a standard of weight, varying from one hundred and forty-five to one hundred and sixty pounds for a man of average height, and fifteen or twenty pounds above or below this standard is considered unsafe, or, as they term it, "a bad risk." Modifications of this rule are allowed where there is a family history of health and longevity, and the organs of the would-be-insured give no evidence of disease or embarrassment from the lack or the superabundance of flesh, and where the accumulation or the loss of it has been gradual.

Sudden and extreme increase or decrease in weight is always looked upon with grave suspicion, as indicating the onset of serious disease. In excessive leanness suddenly developed, and more especially where the habits of life of the individual would seem to favor corpulency, this evidence of malnutrition points to some fatal disorder.

Heredity is, no doubt, a powerful influence in many cases of corpulency and leanness (but the condition need not on this account become unduly developed if properly combated).

Habit and *occupation* are equally powerful. The lean, lantern-jawed New England farmer, wresting a scanty sustenance from among the rocks of his native

hills, who, as the witty Irishman has said, "must work himself to death to keep himself alive," is a product of his habit and environment. Whatever his fate, fatty deposits of any kind will never play a part in it. Neither could the raw-boned Western cowboy ever succeed in stowing away in his tendinous frame the wherewithal to make him aldermanic in proportions, and well it is for his poor mustang that such is the case.

Great mental activity, physical restlessness, or muscular exercise, carried to an extreme, are almost always associated with a lean body.

The comfortable and well-to-do, with no great ambitions or worries, are apt to grow stout, especially as years advance with them. Sedentary habits also favor corpulency.

Sitting at the table of one of our great summer hotels, I watched the diners as they passed in and out. From the slowly moving procession it was easy to select the unexercised and overfed as they laboriously tugged their unwieldy bodies to chairs which creaked under their weight, and then proceeded to gorge themselves with every fattening combination which the bill of fare offered. Surely their "god is their belly" and "Allah is great!" was my mental comment.

That people attain to such extreme degrees of obesity is, in the greater number of cases, their own fault. It is, as a rule, an easy matter to prevent or

reduce extreme corpulency; a fact which the corpulent would do well to heed.

Very fleshy people do not endure strain of any kind so well as those of medium weight. They are more easily fatigued. They more readily succumb to acute disease; or, in other words, they have less vital resistance. They are more liable to accidents. They recover less readily from accidents. They are less favorable subjects for surgical operations. Their average of life is less.

To reduce the flesh where the vital organs are in a comparative state of health, it is only necessary to take more muscular exercise and maintain a suitable diet. With the reduction of flesh in this manner will ensue a corresponding toning up of the system.

That a good deal of self-denial and determination will be required upon the part of the patient is true; in the beginning, at least, he should not be allowed to be tempted by the sight or odor of food of which he may not partake. Two meals daily, of which lean meat forms the chief portion; a very limited amount of starchy food, and no sugar; plenty of hot water an hour before meals, and one cup of tea without milk or sugar at each mealtime will form the general plan of the dietary. No beer or alcohol of any kind should be taken.

For exercise, have a large leather ball suspended from the ceiling, and punch it vigorously morning

and evening, sponging off with cold water afterward. Exercise particular muscles by voluntary effort — especially the abdominal. Walk slowly up and down stairs several times daily. Walk in the open air, gradually extending the distance. Ride a bicycle one or two hours daily. Do not take naps in the daytime. Rise early and don't forget the exercise and the cold sponge. Turkish and Russian baths are also very helpful for those so situated that they can avail themselves of them.

For more serious conditions of corpulency, especially where the circulatory organs have become markedly involved, a *régime* carefully prescribed by the physician and strictly carried out by the patient is necessary.

Among the most effective of the so-called "methods" are those of Banting, Erbstein, and Oertel. The author of the Banting method reduced himself from 202 to 150 pounds in one year.

The essential principles of this method are: limitation of the amount of fluid taken to one and three fourths pints in the twenty-four hours; exclusion of sugars and fats from the dietary; but two ounces of bread; and, altogether, but twenty-one to twenty-seven ounces of solid food allowed *per diem*.

The essential difference between this method and that of Erbstein is that the latter permits the use of fats, believing that fats produce a feeling of satiety, and so less food is demanded by the appetite. The

fault in these two methods is that they reduce the patient's strength too much.

Oertel's method commends itself as being the most rational. The foundation principle is the persistent enforcement of exercise. Very corpulent people soon lose muscular tone, and the heart muscle is among those earliest affected; it is liable to suffer further by fatty deposits actually displacing the muscular tissue, thus rendering the heart-walls weak and enfeebling their action. Also, masses of fat may accumulate about the heart, crowding upon and embarrassing the poor organ till it finally gives up an altogether hopeless struggle, strikes work, and all is over.

Professor Oertel's aim is to strengthen the heart's action by persistent exercise, dispose of the excess of fat by the same means, to prevent new formation of it by abstaining from fat-building foods and drinks, and to substitute normal muscular tissue by the use of a more liberal amount of albuminous food than is allowed in the first-named methods; a steady increase of muscular power and general vitality, as well as decrease in adipose tissue, is secured by this plan of treatment.

Alcoholic stimulants are forbidden in *all* methods as they favor fatty degeneration.

Where fatty degeneration of the heart or other vital organs has reached an advanced stage, great care must be observed in prescribing exercise, or in

any change of diet which might weaken the patient. It were better had he been wise in time, and the condition never been established.

As a rule, it is easier to reduce the flesh of a corpulent person than it is to increase that of one who is distinctively lean in habit. Where there has been loss of flesh from nervous exhaustion, worry, dyspepsia, or insufficiency of food, the case is otherwise. Removal of the cause of the emaciation, rest, massage, oil inunctions, and plenty of fattening ingredients in the diet will cause a rapid return of the lost weight.

Where the condition is one of grave malnutrition, or serious wasting disease, a temporary amelioration may be secured by careful attention to the diet; and, in any event, it should always be regarded as one of the most valuable accessories to whatever line of treatment is adopted, as it not only aids directly in the cure, but it sustains the patient while the disease is being subdued. Even where recovery is impossible life is lengthened and made much more comfortable by it.

The Weir-Mitchell plan of absolute rest and isolation, passive exercise, and forced feeding is often very successful in restoring flesh and vitality to the patient.

While the stature to which man shall attain seems the result of some law or laws which we have not as yet mastered, the amount of flesh which he shall deport is very largely a matter of choice. That a

time will come when stature, as well as breadth, shall be largely controlled; possibly by bone-making foods, manipulation, and exercise, there is not much doubt. Indeed, the superior height of so many of the young women of to-day is conclusive evidence that some influence is at work to produce a result so obvious. That "the tall girl is the fashion" is not the work of chance. Whether or not the secret can be captured and put in harness is the question for the future to answer.

CARE OF THE SKIN, HANDS, FEET, AND HAIR.

BY CHRISTINE TERHUNE HERRICK.

THE woman who desires to be attractive cannot neglect the general care of her skin. It is not enough to bestow attention upon those portions which are displayed to public view. No amount of treatment expended upon the face in the way of sponging, massage, unguents, etc., can produce a clear complexion and a healthy color if the skin upon the rest of the body fails to receive its due share of such stimulus to healthy action as is given by bathing and rubbing.

The chief function of the skin is to co-operate with the kidneys in eliminating refuse fluid from the body. To accomplish this adequately, the pores must be kept open and in healthy action. All secretions that would clog them and impede the free passage of perspiration must be removed, and completely. And, since the perspiration itself contains certain impurities, this should not be allowed to remain upon the surface until it becomes offensive.

The most effectual agent in keeping the body extremely clean is, of course, the Turkish bath, in which the first step is to induce a copious flow of

perspiration by placing the patient in a very hot room. After this, she is submitted to a vigorous massage that removes all the dried cuticle and other effete matter from the pores. A hot bath, supplemented, if the patient desires, by a cold plunge or spray and another massage concludes the cleansing process, and after the period of rest that is an essential part of the programme, the bather feels that for once in her life, at least, she is thoroughly clean.

While Turkish baths may not be within the reach of every one, cleanliness is, although at the price of more trouble than some people seem willing to bestow. A daily bath, in some form, is indispensable. There are people who find a "tub bath" every day refreshing and strengthening; while many declare it enervating. It is as dangerous to dogmatize upon the frequency of the plunge as it is to dictate whether the water in which it is to be taken shall be hot or cold. These are questions which each bather must settle by her own experience. Upon one point, however, it is safe to be positive. The skin cannot be properly cleansed by the application of *cold* water, of which the instantaneous effect is to close the pores and thus confine the impurities they contain. The bather who desires the tonic effect of the cold water should precede the plunge *douche* by a bath in warm water that will bring to the surface the secretions lurking in the pores.

The devotees of the hot plunge bath, who declare that it stimulates and refreshes, are prone to think that it is difficult to secure complete cleanliness without the aid of a big tub. Undoubtedly a "tubbing" is the easiest way of cleansing the skin, but the same result can be obtained with a smaller supply of hot water, if it is seconded by a sponge or a wash-cloth. A bathing mitten of Turkish toweling is excellent for this purpose. The whole body should be well scrubbed, and the soap, which must be freely used, is quickly removed by a second rapid application of either tepid or cool water.

The bath has not done its full service unless it is concluded by a vigorous rubbing with a rough towel, the rougher the better when it is used upon an adult's skin. This not only absorbs moisture, but by drawing the blood to the surface produces what is known as "a healthy glow," and encourages the skin to action.

Even a regular daily bath is not sufficient, in certain cases, to remove the unpleasant odor of perspiration with which some people are afflicted. Those who suffer thus should endeavor to neutralize it by bathing twice a day in hot weather, and by adding to the bath a small amount of household ammonia or powdered borax. Oatmeal bags, or bran bags, or bags of almond meal are also admirable for the bath, and can be procured from most druggists. There are a few toilet waters that are agreeable addi-

tions to the bath, but they should be avoided by all those who are troubled with offensive perspiration. The mingling of the odor of this with the perfume that has been used to disguise it is peculiarly disagreeable.

A very fair imitation of a Turkish bath can be achieved at home. The bather produces the drenching perspiration that is the first step in the process by seating herself in a cane-bottomed chair under which is a pan of boiling water over a lighted alcohol lamp, and muffling herself in a blanket that is large enough to enfold both her and the chair. Ten or fifteen minutes of such steaming is usually enough to cause copious perspiration. A sponging off in hot water, accompanied by hard rubbing, follows this, and then another sponging with cold water. The vigorous use of a Turkish towel is the last act of the bath, and after this the bather is quite content to put on a wrapper and lie down to rest for half an hour.

Massage materially aids the action of the skin, which is strengthened and toned up by the pinching, kneading, and rubbing to which it is subjected by an accomplished *masseuse*. Under her skilled hand, there will appear on the skin which the patient fondly imagined was clean, rolls of dead cuticle and particles of matter she is blushing forced to describe as *dirt*.

A word concerning the soap that is used in bath-

ing. Never buy cheap soaps! This is a point in which persons who have any regard for their skins cannot afford to economize. It does not come within the province of the writer to recommend any one brand of soap. There are many excellent varieties, both American and imported. A simple test for a toilet soap is to put *a little* of it in the water with which the eyes are bathed. Any soap which causes healthy eyes to smart is said by experts to contain too much alkali to be beneficial to the skin. Whatever the soap, it should always be washed completely from the skin after bathing, before the towel is applied.

CARE OF THE FACE.

It is seldom advisable to wash the face more than once a day. Where one has been subjected to the dust of travelling, a cloth or sponge slightly dampened with water or pure cologne will remove all soil quite as readily as one drenching wet. Especially after exposure to the sun or wind should a ruthless application of water to the face be avoided.

In washing the face, use either the hand or a fine sponge or cloth. When soap or almond meal is employed, rinse it off carefully, and then dry the face gently with a soft towel, "dabbing," rather than rubbing it. Wipe *up*, to avoid wrinkles.

There is a popular prejudice that the face can be made clean by soap and water alone. This fallacy will be instantly corrected for any woman who, after

washing her face in the approved manner, will anoint it with cold cream, rubbing this in well, and then wipe it off with a piece of fine white flannel. The grime that the unguent brings away with it will be a revelation to her. After this, she may wash the face with tepid water, and dry it with a soft cloth. Such a treatment as this, taken once or twice a week at bedtime, will prove beneficial to the skin. When used before retiring, a second and lighter application of cold cream, put on after wiping with the flannel and allowed to remain until morning, will soften and whiten the skin. Only the best quality of cold cream should be purchased.

Face-steaming, indulged in sparingly and discreetly, is excellent. The professional face-steamer will not only submit the patient's face to a jet of medicated steam, after treating it with cold cream, as described above, but will also massage or manipulate the skin in such a fashion as to exercise the muscles and stimulate the blood vessels. The face may be steamed at home by holding it over a funnel placed in the spout of a boiling teakettle or by bending it over a pan of boiling water. In either case a large towel should be thrown over the patient's head, in order to prevent the escape of the steam at the sides. This steaming should always be preceded by an application of cold cream and rubbing with soft flannel. As the face should be held over the hot water for from ten to twenty minutes, the process is fatiguing. When

it is over the skin may be dried and gently kneaded with the fingers. If the treatment is taken oftener than once a month, it is said to make the flesh of the face flabby and induce wrinkles. These blemishes are best avoided by a serenity that shuns such tricks of feature as grimaces, frowns, etc. A cold *douche* at bedtime and again on rising is said to be helpful in preventing wrinkles.

There are other facial blemishes which are more easily remedied, as "blackheads," which can often be removed by a rough towel after face-steaming, or by holding against the affected spot a cloth wrung out in hot water until the skin is softened; freckles, which may be faded, at least, by touching them twice a day with lemon-juice or buttermilk, or with scraped horseradish and milk mixed in the proportion of a tablespoonful of the former to a teacupful of the latter. Moth-patches and pimples are usually the result of physical disorders which demand a physician's attention, and moles and birthmarks should also be submitted to specialists, and not trifled with by amateurs.

CARE OF THE HANDS.

Nothing contributes more to the beauty of the hands than well-tended nails. The skin should be kept pushed down or trimmed away from the base of the nail, and the nail itself must be cut or filed away at the upper corners, that it may not spread

the finger-tip. The nail should be no longer than the finger, and rounded, rather than pointed in the similitude of a claw. A competent manicure will make even stubby nails look less unattractive, but her treatment must be supplemented by home care. Hang-nails should be removed as soon as they appear by the help of a keen knife or sharp nail-scissors. They should *never* be bitten or pulled off. For ruining the shape, texture, and color of the nails, the trick of nibbling them can be unqualifiedly endorsed. This habit, so unwholesome in itself and unpleasant to others, can often be checked by a course of manicuring. Occasionally it is caused by improper cutting of the nails, producing a discomfort that leads children and even adults to bite the nail where it irritates the skin. Manicuring not only prevents the formation of hang-nails, which are a temptation to the individual, but also so emphasizes the proper care of the nails as to act as a check to the person in biting them.

After washing the hands with a good toilet soap or with almond-meal, drying them, and anointing them with some such preparation as frostilla or glycerine mixed in equal parts with lemon-juice, or bay rum, or rose-water, the skin should be pushed down from the base of the nail with a small, blunt instrument. For this the manicure uses an orange-wood stick. Once a day the nails should be polished with powder and one of the buffers made for this

purpose, and once or twice a week a little rose paste may be applied to them before the polishing. After this, the hands should be washed and the nails scrubbed with a brush to remove the paste and powder. A dry polish with a buffer will complete the good work.

Old loose gloves should be worn while at her work by the woman who digs in her garden or does her own housework. The finger tips may be cut from those she wears when washing dishes. For chapped or roughened hands cold cream or mutton tallow may be used at night, or cream and vinegar mixed in equal parts, although there will be little trouble in this line for the woman who always washes her hands by the directions given above.

CARE OF THE FEET.

Unless one can find a shoe that is an absolutely perfect fit, it is almost impossible to avoid corns. Even the wearer of the common-sense shoe occasionally requires the aid of the chiropodist, but she suffers far less than the woman who is a martyr to high heels and pointed toes. The former should never be worn except upon a house-slipper, and the patron of the narrow toe should take care to buy a shoe enough longer than her usual size to allow her toes sufficient space. A cheap shoe is a wretched investment, whether one views it from the point of shape, comfort, or true economy.

The dainty, thin-soled shoe should be reserved for the house or the carriage. For the street there should be low heels and a sole thick enough to protect the foot from bruise or dampness. A light rubber worn in bad weather not only protects the health, but preserves the shoe by securing it from the cracking and stretching that are more injurious than the actual wetting.

A bath in hot water containing sea-salt is soothing to weary or swollen feet, and for the latter is also recommended water in which has been boiled a handful of wood-ashes, straining this out before putting in the feet. A little borax added to warm water is excellent for perspiring feet, and these should be powdered with lycopodium after bathing.

A competent chiropodist is the best remedy for corns. No one can hope to cure them without removing their cause, but they may be relieved by the use of a Japanese corn-file or pumice stone. The knife should be used with great caution by the domestic practitioner. Relief is sometimes given by a corn-plaster with a hole in the middle, and both for corns and bunions, applications of lanoline are recommended.

CARE OF THE HAIR.

The best hairbrush is one with rather stiff bristles ; the best comb, one containing only coarse teeth that will disentangle the hair without breaking it or drag-

ging it out by the roots. A brush with wire bristles should not be used.

The woman with oily hair will probably wish to wash it oftener than once a month, although that is really often enough for "a wet shampoo." A dry shampoo may be taken every fortnight. A good wash for the hair is made by mixing the yolk of an egg in a cupful of water. After cleansing the scalp with this, the head and hair should be well rinsed in pure water. Borax and ammonia are also cleansing, and may be used in the proportion of a teaspoonful of each to a large basin of warm water. The hair should be well rinsed from this, and the rinsing process receive especial care when soap, liquid or solid, has been used on the hair. Carelessness in this regard will leave the hair unpleasantly sticky to the touch. A little alcohol rubbed about the roots of the hair after a shampoo will prevent cold, and the hair must always be dried completely before it is put up. Either heat or a fan may be used for drying.

Dandruff should not be removed with a fine comb, as this irritates the scalp and increases the trouble it is intended to remedy. The dandruff may be loosened by rubbing with the fingers or by a stiff brush. Lemon juice rubbed on the scalp will sometimes remove dandruff.

It might seem needless to speak a word of warning against hair dyes, were it not that so many women use them. The best argument against them is ridi-

cule. They are seldom so well put on as to fail to attract notice; they give endless trouble, for they must be constantly renewed, and they always convey an idea of the wearer's affectation and vanity.

Sage tea, whisky and quinine, and eucalyptus are all recommended for the hair and scalp. Frequent and vigorous brushing is said to stimulate the scalp and to promote growth of hair.

CARE OF THE TEETH.

BY M. CHAS. GOTTSCHALDT, M. D., D.D.S.

THERE is nothing more beautiful than a perfect human form. Every part of it, and especially the face, has had its praises sung in poetry and fiction. A perfect form means perfect health, and perfect health can only be maintained by care of every individual part of the economy.

A beautiful set of teeth is much admired, and justly so, for without it an otherwise charming face loses its attraction.

The care of the teeth must begin with the temporary or milk teeth, if you would have a perfect, permanent set. Unfortunately, the temporary teeth are looked upon by many people as an introduction to the pains and ills of life to follow, and, consequently, premature decay, instead of being watched and guarded against, is hailed as a friend that helps to rid the child of an enemy.

Twenty teeth comprise the first set, and the order of their eruption is about as follows:—

Lower centrals from the 5th to 7th month.

“ laterals “ “ 6th “ 9th “

“ first molars from the 10th to 14th month.

Lower canines from the 14th to 18th month.

“ second molars from the 20th to 36th month.

The upper teeth follow in the same order, but a few weeks later.

The greatest mortality among infants occurs during the period of dentition, and, while it would be folly to ascribe every occurrence of fever, loss of sleep, restlessness, vomiting, diarrhœa, loss of appetite, convulsions, etc., to teething, it is, nevertheless, true that it furnishes its quota of causes. Other and most important changes take place in the child's organization during this period, and close attention to food, absolute cleanliness, and pure air are indispensable.

“ Drooling,” an increased flow of saliva, is generally the first sign of a coming tooth. The child puts its finger or anything else it can get hold of into its mouth, and bites on it; the gum becomes swollen and hot. If the disturbance continues, the flow of saliva ceases, the mouth becomes dry and hot, restlessness and loss of sleep and appetite ensue, constipation or diarrhœa follow, and, frequently, convulsions, ending in death.

The incisors, the name of the upper and lower front teeth, as a rule, give very little trouble, unless several should make their appearance at once, and even then the friction exerted by the child in biting on ivory rings, etc., will, in most cases, suffice to bring them to the surface. But the canines and

molars, by reason of their shape, very often need and should have other help.

Lancing the gum is not a painful operation, and when properly performed gives almost instant relief. In performing this operation, it is not sufficient to scratch the gum, but a free cut down to the coming tooth should be made. The bleeding which follows this operation is generally very slight; sometimes a little alum or tannic acid will be required to stop it, but in no case is it beyond control.

The temporary teeth are intended to do service for from four to nine years, and from their first appearance till they are replaced by their successors, systematic care must be bestowed upon them. At first, this is, perhaps, best accomplished by the use of a soft linen cloth, wiping both teeth and gum. When the child begins to take solid food this no longer suffices, and a small, soft toothbrush must be substituted. For a tooth-powder, precipitated chalk, to which a few drops of oil of wintergreen or rose have been added, is all sufficient at this stage; dip the brush in warm water, sprinkle some of the powder on it, and brush the teeth up and down, not horizontally, taking care not to hurt the child. When stains appear on the teeth they can easily be removed with an orange-wood stick carrying a little finely pulverized pumice moistened with glycerine.

The reason for brushing the teeth up and down and not across is obvious. The food lodges between

the teeth, and by brushing horizontally, as is commonly done, the bristles jump from one tooth to the other, but fail to reach in between the spaces. Draw the brush across the backs of your fingers, and you will note that the bristles will not go into the spaces ; move it up and down, and the bristles will naturally seek the spaces.

Dentition being completed, the child should now begin to visit the dentist. Small defects in the enamel on the grinding surfaces of the molars very often exist, and when this is the case decay soon makes its appearance. To correct these defects is a comparatively easy matter when taken in time, whereas, if allowed to go until the decay exposes a considerable part of the dentine or reaches the pulp (nerve), it will give pain to the child and trouble to the dentist, and the result will not be nearly as satisfactory.

Between the fifth and sixth years four more teeth make their appearance just back of the second molar in each jaw. These are generally held to be first teeth, because "my child has never lost a tooth." This is a grave error.

The sixth year molar is the first tooth of the permanent set and the largest one. To allow this tooth to be lost by decay is to rob the child of the best grinder, and is sowing the seed for an irregularity which will cost time, pain, and money to correct. If through neglect the usefulness of this tooth has been

permanently destroyed, extraction should be resorted to before the second molar makes its appearance.

The next teeth of the permanent set to make their appearance are the incisors (front teeth). The temporary teeth in most cases become loose and fall out, or become dislodged by very little effort, and the permanent ones come into place, but not straight (regular). This, however, need not cause any anxiety, as nature will generally correct this in a year or so. If, however, the temporary teeth should not loosen and the permanent ones show inclination to come up beside them, it becomes necessary to extract the first teeth. Here is where many parents and dentists make fatal mistakes and lay the foundation for an ill-cared-for set of teeth. The child is told that it will be taken to the dentist "just to have its teeth examined."

"Open your mouth wide! I will not hurt you one bit," and the next instant the tooth and the child's confidence are gone. Do you, my dear reader, trust a person that wilfully deceives you? and if not, would you expect more from your child? A child has reason and a right to know what part it has to play in anything concerning its comfort. Tell the child that the old tooth must come out, or the new one will come in crooked; that it will hurt to do this, but will not be as painful as the process of straightening a crooked tooth. Secure the child's consent to the operation, not by force, but by

reason, and your child will give you very little trouble about its teeth afterward and will respect the dentist, instead of despising him.

Instruct the child how to care for its teeth; supply it with a soft toothbrush and make it a rule to have it used the first thing after rising, and the last thing before retiring, if not after each meal. The following mouth-wash will be found beneficial and pleasant. Lime-water, one pint; cologne, a teaspoonful; shake; take of this a dessertspoonful, and add to a glass of warm water, and wash the mouth thoroughly with it. Warm water, as near the temperature of the mouth as possible, should always be used; it is a better solvent than cold water and feels far more agreeable to the mouth. The use of floss silk by children should not be encouraged; the little good that is accomplished with it in the way of removing particles of food from between the teeth is more than counterbalanced by the harm done to the gums. Food between the teeth that cannot be dislodged by the brush and tongue can easily and without harm to the gum be removed with a Japanese toothpick, which is made of hard wood, is small, and does not splinter or break easily.

Little need be said of filling materials for the temporary teeth. A competent dentist will select that which is best calculated to prevent further decay and be comfortable to the little patient. For the grinding surfaces of the molars amalgam gen-

erally answers best ; for the front teeth, either gutta percha or cement, and for a large and sensitive cavity, cement and chloro-percha mixed together will do best service.

Eruption of permanent teeth. The permanent set contains 32 teeth, and the order of their eruption is about as follows : —

First molars	5th to 6th year.
Central incisors	6 8
Lateral	7 9
First bicuspid	9 10
Second	10 12
Canines	11 12
Second molars	12 13
Third molars (wisdom teeth),	16 60

If the temporary set has received proper care there will be very little trouble about the second dentition ; if, however, one or more teeth were prematurely lost, irregularities will invariably follow. To select the proper time for the correction of this condition is of the utmost importance. Remember, however, that nature, when intelligently aided, will do a great deal towards undoing man's blunders. As no two conditions are alike, no rules can be laid down to guide the parent ; select a competent dentist and be guided by his advice. Irregularities inherited from the parents require early interference, because nature

will do nothing towards correcting such a condition; nor is it sufficient to straighten these teeth and then stop, for they will in most cases return to their former position. A suitable retaining apparatus must be worn till the teeth are firmly fixed in their new position.

Thorough mastication and insalivation of the food are essential to proper digestion and assimilation. To punch a few holes in a piece of meat and then send it down to the stomach is extending a hearty invitation to dyspepsia. To keep the teeth in good condition it is necessary to keep them clean, and to do this properly a suitable brush and powder are essential.

A toothbrush should not be too large nor too stiff of bristle. It is also to be remembered that the proper employment of a toothbrush does not require the exercise of the same amount of muscle as the scrubbing of a floor. The hard deposits of salivary calculus which gather about the necks and along the labial and palatal walls of neglected teeth, must be got rid of by other means. They require the attention of the dentist.

But cleaning the teeth and having them filled is not sufficient to keep them in good condition. If you fail to exercise your brain and muscles they waste, and teeth are no exception to this rule. The conclusion that if exercise is good more exercise is better must, however, not be formed, and cracking nuts,

straightening pins, biting off thread, and the like are strictly to be avoided.

By exercise is meant that properly prepared food should be thoroughly masticated and when conditions permit, both sides of the jaws should alternately be used. It may be news to many to learn that fully eighty per cent. of the people employ the left side only. Denied their legitimate function, the teeth on the unused side accumulate tartar, the gums become irritated and painful, and soon the brush is religiously kept from that side. The result is easily foreseen.

Hot biscuits, pies, pastry, white bread made from flour from which all the sustaining substance has been eliminated, lemons and ice-water may be gratifying to the palate, but are injurious to both health and teeth.

The following or any other good tooth-powder should be used at least once a day : —

℞

Cretæ precipit.

Pulv. orris rad $\frac{\text{ʒi}}{\text{ʒi}}$ ʒii

“ sacch. alba. ʒi

“ Cast. sap. alba. ʒiv.

Ole. gaultheriæ a. g. s.

M.

Mouth-washes are useful when indicated. The commercial article, consisting mainly of alcohol, soap,

water, coloring, and flavoring materials, may be pleasant, but cannot be said to do a great deal, if any good. If the saliva is acid in reaction, lime-water, as previously mentioned, precipitated chalk, or Phillips' milk of magnesia should be used. This may be done two or three times a day, but particularly before retiring. It is not difficult to determine whether the saliva is acid, alkaline, or neutral. Procure from your druggist a few strips of red and blue litmus paper (to preserve which keep in a well-corked bottle), place a blue strip between the lip and gum, allowing it to rest one or two minutes; if on withdrawing, little red dots appear on it, or if the strip has turned completely — as will be the case if the saliva is strongly acid — lime-water, etc., are indicated. If the red strip turns blue, the saliva is alkaline, and if neither red nor blue are changed, the saliva is neutral.

Listerine is with many a favored wash, but it must not be supposed that it can take the place of powder. Sore gums caused by an artificial plate may be relieved by: —

℞ Tannate glycer ʒi
 aq. dest. ʒi
 M.

For offensive breath.

℞ Potass permang gr. x
 aq. dest. ʒii
 M.

A good general mouth-wash which is both soothing, cleansing, and healing, is the following: —

R

Chlor. potass ʒii

Acid carbolic ʒi

Glycer ʒi

Alcoholis ʒii

Cognæ ʒi

M.

s. Shake and take one teaspoonful in a glass of warm water.

In connection with this, lime-water, as previously mentioned, or Phillips' milk of magnesia should be used before retiring. Visit the dentist at least twice during the year, so if any decay makes its appearance it can be arrested by polishing or suitable filling. As regards the materials to be employed for filling, the dentist must be the judge. The texture and position of the tooth and the location of the cavity have to be taken into consideration in selecting the proper filling material. Should accident or decay remove one half or more of the crown, the pulp, if still alive, should be destroyed and removed, the root carefully filled and a crown placed on it. From the second bicuspid back, crowns made entirely of gold should be used, because they are strongest and protect the root best; for any tooth anterior to the second bicus-

pid use either a combination gold and porcelain crown or one composed entirely of porcelain.

When decay or accident has destroyed the life of the pulp, an abscess generally follows, and if not properly attended to may lead to necrosis of the bone and loss of several teeth or a bad scar on the face. The tooth should be opened, the dead pulp removed, the canal thoroughly cleansed, disinfected, and filled to the apex with oxychlorid of zinc or some preparation of gutta percha. The cavity in the crown can then be filled with some suitable material.

Decay, though responsible for the loss of a great many teeth, is by no means the only, nor the most potent cause. Before the age of twenty-five years decay holds the first place as a cause, but after that time diseased gums claim the greater number of victims. Unfortunately space does not permit more than a mere mention of this subject. Diseased gums are caused by local irritants, such as poorly fitting plates, crowns, wedges, ligatures, the too rigorous use of stiff toothbrushes, tooth-powders containing charcoal or pumice, tooth-washes having irritating ingredients, or from accumulated tartar, etc. The cause recognized and removed, together with a soothing wash, will prove all-sufficient for a cure. If caused by medicine, the physician's attention must be called to it. If due to systemic causes, as is the case in *pyorrhœa alveolaris*, both internal as well as local means have to be employed.

Another class of sore gums which cannot be traced to any of the above causes is that known as pyorrhœa alveolaris (meaning a flow of pus from the tooth socket). Our present knowledge on the subject leads us to believe that systemic causes underlie this condition. The gums become sore, bleed easily, and on slight pressure a drop of pus may be seen coming from between the tooth and gum. The breath becomes offensive, and if the disease is not checked the gums recede, the tooth loosens and becomes painful on pressure, and finally drops out.

SLEEP AND DREAMS.

BY GRACE PECKHAM-MURRAY, M. D.

THE difficulty of telling just what life is is the difficulty of telling what sleep is. We all experience it, and know what it is, but why it is who can say? Hippocrates and the ancients thought that sleep was caused by the increase of the blood in the brain. About thirty years ago, an English doctor had a patient whose skull had been injured, and a portion of the brain became visible. He found that the brain became pale when the patient was sleeping. He then made elaborate experiments on animals and found the same result. That was the beginning of a great deal of experimenting with reference to sleep. Chemical theories were advanced: there was too much oxygen, or too little, or poisonous substances had accumulated; others said that sleep was occasioned by the fall of temperature, and very many other ingenious theories were advanced to account for the phenomenon of sleep. Brown-Sequard says it can be attributed to none of these causes, since a person can be hypnotized and put to sleep before there is a chance for the blood to flow to or from the brain; before there is a chance for the chemical changes to occur; before

there is a chance for the lowering of the temperature; so he contents himself by saying that it is an "inhibition of cerebral faculties." One has said that "death is a cessation of the functions of life, while sleep is a suspension of the functions of life." Whatever the cause, it is sure that this suspension of functioning which takes place periodically in every individual is a necessity, and doubtless has its origin in the necessity of repair of waste in the organs of the system which cannot be attained when there is continuous activity. However it is, we must all sleep, the same as we must eat and drink, or we cannot live. It is estimated that the longest time that a man can live without sleep is three weeks; his reason has fled long before then.

The amount of sleep required by the individual varies greatly. The infant sleeps nearly all the time, the child should sleep half of the time, the adolescent a third of the time, the adult seven hours, more or less, according to the individual need, which varies greatly according to individual idiosyncrasy and habit.

The time of sleep is also another question. The chief factor in the process of going to sleep is the shutting out of sights; this is done more easily at night, and so we sleep in the night; then, too, is the silence, which prevents the disturbance of the auditory nerve. Edison is reported as saying that man got into the habit of sleeping at night, because in the olden time when there were no lights he could

not see to do anything ; therefore there was nothing left for him but to sleep. The belief is popular that the night sleep is the most beneficial, but the miners, who work constantly in the mines with so many hours on and so many hours off, regardless of day or night, sleep just as well as if their time of repose were constantly in the night. The system must have its period of rest once in so often. If the amount of sleep necessary for the individual is obtained, it makes no difference, in my opinion, at what time in the twenty-four hours it is taken. Sleep is so much a matter of habit that if it is not taken with regularity at stated intervals it may not come when bidden, and insomnia may result.

It is easy enough to understand what occasions dreams. They are the ungoverned activity of the brain. Some writers contend that there is never sleep without dreams. Dreamless slumber would imply an entire suspension of the psychical functioning of the brain. Descartes has said : "*Je pense, donc je suis.*" If one should not think, then he would cease to exist, according to this philosophy. Bain, in his "Physical Basis of the Brain," claims that for every impression that has been or is to be received in the brain there is a corresponding nervous cell, and an impression once received is forever stored up in the brain. In our sleep these cells are called into activity by some suggestion from without or from within, and a whole train of connected cir-

cumstances occurs. Years ago, I began to study the relation of dreams to disease. Since that time a large number of books have been written on this subject, but I never wrote mine, for I found that the relation between diseased conditions and dreams existed only on the widest grounds, and suggested nothing more definite than that found in all states. Much reading of the literature on this subject confirms my views. A pain, a pressure, a sensation in any part of the body turns brain activity in that direction, and there results a dream plainly traceable to it. The illustrations are so numerous and familiar that it is hardly worth while to cite them.

If the wind blows upon one in sleep it arouses a dream of sailing in the wind, or travelling swiftly, or as many possibilities of dreams as you can think of while you read this. So with heat, so with noises, so with perfumes, and these dreams are apt to be shaped by the last thoughts that have impressed the brain in its waking moments.

One does not fully realize the power of the brain to work during sleep,—the unconscious cerebration. The brain assorts impressions and arranges them. A celebrated pianist, who always played in public, without notes, once told me that the difficult and complicated piece of music which she had been trying to commit to memory in the evening became fixed in her brain while she was asleep, and in the morning she found that she had learned it perfectly, never to for-

get it. The mathematician solves his problem while asleep and unconscious that his mind is working.

A nightmare is a dream occasioned by impeded respiration, caused by a weight upon the chest, a pressure upon the diaphragm of a stomach filled with gas or undigested food; the person cannot breathe, and the alarming dream results.

The most mysterious and interesting of all the states of sleep is somnambulism. It will be easily understood if one remembers that the somnambulist is not only one who dreams, but one who has power to move and to execute the ideas and suggestions of his dreams. The marvellous part of somnambulism is the fact that the senses are so acute in the sleeping state that the somnambulist can avoid objects which would impede his progress, and balance himself in perilous places with a nicety and precision of which he would not be capable in the waking state.

Is it unhealthy to dream? Dreams signify a sleep that is not profound. The trouble in estimating the influence of dreams on the sleep of the individual is in computing the length of time they occupy. One can dream, it would seem to be interminably, when in reality the amount of time occupied in dreaming is comparatively insignificant. It has already been intimated that there is no essential relationship between dreams and disease. If a person who is accustomed to dream rarely begins to dream, and is consciously disturbed by it, attention should

be paid to the circumstance. It shows that the person is becoming nervous, and some light sedative should be taken at night, or a change should be made in the habits of diet and exercise. Somnambulism represents an excited state of the brain, which does not yield to the soothing influence of sleep. The danger is from awakening suddenly in a perilous place or position, which would result in an accident. The somnambulist should apply to the physician for quieting medicines and nerve-tonics. The remedy for nightmare is so well known that it needs only to be referred to: that of controlling the diet and any temporary condition which would impede respiration.

Two conditions in relation to sleep are abnormal,—drowsiness, or narcolepsy, and insomnia.

Drowsiness in excess is not a usual disease; still it does occur in some nervous states, in malarial troubles, and in people whose blood is poor (ænemic), while insomnia is one of the most common of complaints.

The causes of insomnia are numerous,—weakness from debilitating disease, nervous states, as neurasthenia and insanity, gout, too frequent use of stimulants, but far out-balancing and out-reaching all the other causes are worry and overwork. It is the universal experience of doctors that most patients who complain of sleeplessness sleep much better than they think they do. The proof of it is in the fact

of their comparative health. Some people are what Dr. Wier-Mitchell calls somnomaniacs. They watch themselves and their symptoms in such a way as to preclude sleep.

Sleeplessness is a perverse habit, as some one has said, "the result of years, perhaps generations of misuse of the body and brain." One must, therefore, overcome the perverse habit with the habit of sleepiness. A great deal can be accomplished by regular hours, regular diet, regular exercise, together with the expectancy of sleep, and cessation of hurry, worry, and overwork.

The medicines which are used as sleep-producers are many, but they should be used, if at all, with care, and under the guidance and direction of a physician. The modern remedies, antipyrine, paraldehyde, phenacetine, sulphonal, besides a host of other remedies advertised and recommended composed of these, with the addition of bromides and chloral hydrates, opium, and morphine, act by depressing the nervous force, and are far more dangerous than a few sleepless nights. I have seen a number of patients who have been sufferers from these drugs who have formed habits of taking them which have undermined the patients' health, making them physical and mental wrecks, and giving them heart troubles which must shorten their lives. In most cases which I have seen, the drugs have been taken upon the recommendation and insistence of

friends, who little realize how much trouble they are responsible for. It should be the invariable rule that no person should recommend any medicine to another without medical knowledge. No one but a doctor knows the trouble that arises from this well-meant and universal custom. If you are too sleepless to get on without drugs, go to a physician; your case needs attention, but do not be too much afraid of a few sleepless nights.

In natural sleep the eyes are closed and the sight becomes sealed; next is lost the sense of touch, then tasting and smelling; the last sentinel to yield the watch is hearing, and the first to be aroused. In wooing sleep, this should be remembered. Cover the ears so that they will not hear noises. It is only the clockmaker who cannot sleep without the noise of his clocks, or the miller who sighs for the continual whirring of his wheel.

Sometimes persons do not sleep because they are exhausted from the lack of food. In such cases a little food or a glass of milk may be taken upon retiring. Persons troubled with insomnia should give special attention to the manner in which they spend their evenings. Exciting reading or conversation and anything which causes mental activity should be avoided, especially such subjects or occupations as are likely to cause trouble or worry. By close observation a person can soon learn what occupations for the evening are favorable for sleep and

what unfavorable, and can regulate his conduct accordingly.

A great sleep-producer is the warm bath taken before retiring, remaining in it twenty minutes. This should not be repeated too frequently, as it will cause debility.

Learn to control your thoughts upon seeking slumber; instead of planning work for the next day and going through the exciting events of the day that is past, think of that which is delightful and pleasant. As sleep is the cessation of mental activity, and insomnia is due to over-activity of the brain, try to exhaust this over-activity on something monotonous and difficult of attention. On this principle, counting has been used, and trying to number a flock of imaginary sheep as they go over an imaginary wall. A very good mental sedative of this kind is to recall a distant journey which you have taken. Begin at the beginning and go over it, trying to bring back the minutest details. You can produce a kind of self-hypnotism by relaxing your body completely, and rolling up the eyeballs, and converging vision towards the nose, as if trying to look at something above and near it.

Electricity is a good sedative, but it must be the constant current, and not the faradic, or buzzing current; with the positive pole placed at the base of the neck, while the negative is placed at the base of the spine. The current should be so gentle as

to be scarcely felt, and be used twenty minutes before retiring. Few people have the battery, but one can be hired, and a physician can tell you how to use it. It is a good tonic as well as sleep-producer. A mustard paste applied on the nape of the neck until the skin is slightly reddened is useful as an equalizer of circulation which will bring sleep.

To sum up, then, try everything but drugs for your sleeplessness. If you need them go to a physician. Try fixing your thoughts in all the little ways that you have ever heard of. Use baths, electricity, exercise, tire out the muscles. Pay attention to the stomach, that it is not overloaded or empty. Be *determined that you will sleep*, with a restful, and not a militant determination.

Your sleeping-room should be moderately cool, not cold, the air fresh; do not be afraid of pure night air. Sleep on the bed that pleases you most. It is a matter of habit and individual preference whether you have a soft bed or a hard bed. You would better get used to a hard bed, and then you will be the better prepared for travelling. The covering should be warm and light. The pillow should be soft and not too large. Soft, so that it can be moulded to meet your requisites, and rather small, because the head should be low: It is better for the circulation and will keep the back straight to sleep on a low pillow. You may come to prefer no pillow at all, which would be well. A bolster will become an anachronism after awhile.

CLOTHING.

BY IRA DE VER WARNER, M. D.

THE subject of healthful clothing should receive the careful attention of every woman who regards health as the greatest blessing bestowed upon mankind. To clothe the body properly, so as not to interfere with the functions of vital organs, and at the same time to protect the outside of the body from external influences, is not an easy problem, and yet it can be done without making a "guy" of the woman, or violating any of the severe mandates of fashion. Many of the health reformers have from time to time instigated a crusade against existing fashions, but their demands have been so radical that few have had the moral courage to adopt them, and these few have soon returned to their first love. There is no probability that woman will materially change her present style of dress for many years to come, nor is there any valid reason why she should. For hundreds of years civilized women have dressed practically as they do to-day. Fashions change in minor details, but the general style of dress for women remains unchanged.

Great advancements have been made in many features of clothing during the past fifty years, and

the intelligent woman of to-day is dressed far better than her grandmother and great-grandmother.

The principal object of clothing is to preserve an even temperature of the body to protect it against changes in the temperature of the external air. One of the most common causes of illness we have in this country is a cold resulting from suddenly checking the perspiration of the body. A cold is often regarded as of slight consequence, but it is the forerunner of many serious diseases; catarrh, bronchitis, sore throat, tonsilitis, consumption, asthma, rheumatism, and many other diseases that might be mentioned are often precipitated by a common cold. No one thing can help more to prevent colds than proper clothing. The skin is one of the great eliminating organs of the body. Nearly one half of all the fluids we take into the body pass off through the skin. If it becomes chilled or deranged in any manner, the whole body is affected, and the weakest part is attacked by the disease. It is important, then, that the skin be kept as near a uniform temperature as possible. Nothing will do this so well as clothing made of pure wool worn next to the skin. Wool is porous and filled with cells containing air which help to preserve an even temperature of the body, and in this way prevent the skin from becoming suddenly chilled when going from a heated to a cold room, or when exposed to draughts of air. Persons who are young and vigorous and have a surplus of

vitality may endure these sudden changes without great risk, but all persons who have any weak organ or are deficient in vitality should wear flannel or woollen next to the skin summer and winter. The underclothing is of far more importance to the health than the outer clothing. If the skin be properly clothed and protected, the wearer's own fancy and taste can be indulged in the selection of outer garments.

One great objection to woollen undergarments is the tendency to shrink and "full up" when washed. We can but admit that this is a serious obstacle, but this can be obviated to a large extent by careful washing. The following rules for washing, furnished by a celebrated cloth manufacturer, have been thoroughly tested, and after long experience have been found to be excellent.

First. Put the garments in clean, warm suds (taking care that the water is not too hot), and to about four gallons of water add two tablespoonfuls of the best liquid ammonia, which will at once remove all grease and perspiration. *Second.* Avoid rubbing. *Third.* Wash out quickly, drawing the garment through the hand, and after lightly wringing, pass them through two separate quantities of lukewarm water. *Fourth.* Dry immediately, and, if possible, in the open air. Washing out quickly is particularly advised, as it prevents shrinking.

Silk has often been recommended as equal to flan-

nel for underwear, but long experience has proved the fallacy of the belief. Next to wool, silk is without doubt the best material. Cotton has the third place, and the last in the line is linen, which is least desirable of all.

For one whose skin is very sensitive, a compromise can be made by wearing garments made of a mixture of silk and wool, but the more wool the better. Very excellent underwear may also be made by mixing twenty or thirty per cent. of cotton with the wool; it shrinks less and answers nearly every purpose of all wool, but the greater cheapness of cotton is a temptation to the unprincipled manufacturer. The only guarantee the public can have is to buy goods of well-established brands. Much of the underwear in the market claiming to be wool is nine tenths cotton, and the little wool it does contain is of a short staple and inferior quality. A garment made of long staple wool, like the Australian, is less liable to shrinkage than the short staple, which must be carded with that of better quality to be used. But such garments are much more expensive and a luxury. It is hoped that the time will soon come when the masses will be given better garments at a reasonable price, and that cheap, shoddy goods will be a thing of the past.

Without doubt the best constructed undergarment for a woman to wear, whether made of silk or wool, is the union or "combination" underwear where

vest and drawers are made in one piece, covering the body from the extremities to the neck with a single garment. No one who has not worn this article of underwear can know the comfort derived from it.

No clothing should be left on at night which has been worn during the daytime; and the day clothing should be thoroughly aired by night, and the night clothing by day. Many women will find the soft woollen garments at night very valuable; they ward off colds, and enable one to sleep in a well-ventilated room with less danger of exposure.

It is a fortunate thing for women that light flannel undershirts have taken the place of the heavy padded quilts once so generally worn; they are not only much lighter and more comfortable, but are really warmer and a greater protection against changes of temperature. It is not weight of clothing that gives warmth and protection, but the nature of the material. In this climate, where the thermometer notes changes of forty degrees in twenty-four hours, a severe test is laid upon one's vitality, but if properly clothed we can protect ourselves so that the danger will be reduced to the minimum. Many who have the means and little else to do but spend the time migrating from one country to another and from place to place, in search of genial suns and healthful climes, might find health at their own door if clothed properly and allowed to breathe the pure air that they so carefully exclude from their own

overheated and ill-ventilated houses. Clothe yourself properly, then you may safely breathe the air that you meet, whatever the elements or season.

While the body needs to be well guarded by suitable clothing, the head and neck need but slight protection. As far as health is concerned, if we all went bareheaded, we would be as well off, except that it is prudent to protect the head against the extreme cold in winter, and from the rays of the sun in summer.

A woman seldom takes cold except in bitterly cold weather by exposing the head, unless she be already delicate or feeble. The head should be kept cool and the feet warm. The custom with women of muffling the neck in thick furs and other warm material is injurious, and helps to produce colds rather than prevent them. The neck is thus given a Turkish bath, and when the muffling is removed the throat is chilled. Even persons who have a tendency to sore throat, quinsy, and tonsilitis would better let the pure air play around the neck, except in stinging cold weather, and then the wraps should be removed at once on entering a room. One of Brown-Sequard's favorite prescriptions for weak and debilitated throats was to force upon the neck and throat a stream of cold air by means of a bellows. Why not let nature do this, and do away with the bellows?

The habit of wearing fur garments over the outer clothing in railroad cars, theatres, halls, or any

indoor place is extremely bad, as it overheats the body and places the wearer in a veritable sweating-box. Such wraps should be worn only in driving in extremely cold weather, and should not be used habitually as outer garments. Woollen or silk is far preferable for ordinary use. Dressing too warmly may be as injurious as not to wear enough covering. No inflexible rule can be given, but a woman should adapt her dress to the weather of each day. It is not safe to travel without having underwear, as well as other clothing, of different weights to meet any condition. When the air is soft and mild, whatever the season of the year, a woman does not need to dress as she would for a winter blizzard. Good judgment and common sense will decide in the matter.

If there is any one command more than another that I should like the privilege of enjoining upon the people of the United States, young and old, male, and female, which would, I believe, contribute most to the health and happiness of mankind, it would be this — “*Wear woollens!*” Light, thin, and soft in summer, warm and comfortable in winter. Begin right; protect the skin with proper clothing, then satisfy your own fancy and taste as to what you wear outside of this.

HOW SHALL WE CLOTH THE WAIST?

How shall we clothe the waist? No part of the body has been the cause of more controversy than

that to which this question refers. Reformers have sprung up all over the country periodically for the past sixty years, claiming that all the ills and difficulties that feminine flesh is heir to have arisen from the wearing of corsets. And yet, with all this agitation, the fact still remains that seventy-five per cent of the women of civilized countries wear corsets, and the rest usually wear corsets, only under other names. Will any dress reformer explain to me the difference between a corset that is called a corset and a waist that is theoretically made with cords, but which really contains steels in front, sides, and back that are quite as heavy and rigid as a properly constructed corset? The reformer appeases her conscience by having the so-called waist buttoned in front, but at the same time places a heavy steel in a casing just behind it.

The dress waist with its stiff whalebones and steels is in every respect the equivalent of a corset, except that it is not usually as soft and pliable and does not conform as accurately to the natural contour of the body. If a woman is determined to lace she can do it as effectively with a waist or with the bodice of a dress as with a corset; or she can do it without either by wearing her skirt bands fastened tightly around her waist, and thereby girding the body so as to interfere with the free circulation of the blood, and at the same time dragging down the natural organs out of their normal places. Is it not

possible that what is needed is to reform the corset rather than to substitute for it other styles of "waist compressors" which are open to even greater objections? Sensible women (and to-day these are legion) do not lace tightly; and if a corset is properly constructed so as to fit every part of the body and not to press upon any one organ more than another, it is a source of comfort and not torture. The corset furnishes the foundation for proper dressing. No woman wishes to look like a shapeless dowdy. To obtain a smooth and artistic fitting dress waist she must have the proper foundation to build on, and nothing furnishes this better than a light, smoothly fitting corset that conforms to every line of the body. Every dressmaker understands this fact; and if her customer will not wear a corset she proceeds to convert the dress waist into a corset with bones, steels, and padding, until it gives the requisite support to prevent wrinkling. The time was when this was done with pieces of stiff hickory wood which encased the waist like an armor plate. At one time, also, corsets were made in the same manner; some even were stiffened with heavy steel or wooden "splints," as our grandmothers called them. These corsets had no opening in front, and required the assistance of an athlete to lace them up in the back, at the same time compressing the ribs, diaphragm, liver, and other organs so as to bring the figure to the required shape of the self-constituted artist. All this (hap-

pily for this generation and the next) is past history, and the women of to-day no longer practise such self-torture. And, yet, among a few the tirade against the corset goes on as though we were still living in the times of our foremothers.

Women will wear corsets; they always have, and they always will. We may as well consider this a settled fact. There are good and sufficient reasons why they are a necessity to the women who dress as civilized women have for the past two hundred years. If you were to change the dress of woman radically, they might be dispensed with; but this is not our province. Fashion dictates what a woman shall wear, and her demands will be complied with; it is our duty to adapt garments to the wants of women.

Here is our maxim: A perfectly fitting corset is the foundation for artistic dressing. This does not imply that the corset should be worn so tight as to contract the waist to an abnormally small size. True beauty combines symmetry with proportion. Broad shoulders and prominent hips, combined with an abnormally small, wasp-like waist, present a figure that is a monstrosity. If such a waist is natural the woman should take the necessary means to develop and correct it, and bring it to the proper proportions of the rest of the body. An abnormally small foot on a large body is no mark of beauty, but, rather, otherwise. The same rule holds true regarding the waist.

The French women are admitted to be the best dressed in the world, even the middle classes. It is not the richness and costliness of the materials that attract one, but perfect harmony in coloring and symmetry of form. Hence, among fashionable women French corsets have been in great demand, but do you know that not a single French corset ever finds its way to the counter of an American merchant? The French corsets sold in America are made especially for the American market, and to please the taste of American buyers. If you buy a corset at a shop in France, you get the French shape. The French women would not wear those that are sold here. They are not their ideal. I have visited their factories in France, and they show you the American room where nothing but corsets for the American trade is made.

The French woman has learned that a dress can be long waisted without the corset itself being of undue length, a fact the American woman has not yet learned. The French woman has learned that the best and most desirable material for a corset is fine soft coutil, while the American woman prefers the more showy but less durable satteen. The real French corsets are short both above and below the waist line, but no sacrifice is made to the long, trim waist effect, which so many ladies desire. These are facts which many American women have yet to learn, but they are learning them slowly.

Another advantage the French makers have had until recent years is that their corsets are mostly made to order, and thus are fitted to living models, instead of being fitted to rigid figures of wood or plaster of Paris. The makers fit them to the women who are to wear them, and in so doing have corrected many defects. Americans are quick-witted and apt, and to-day the same methods are adopted in America, and no corset is placed upon the market until it has been several times tested upon the living model of the exact figure it is designed to fit. The advancement in corset-making which has been made in this country during the past eight years is something marvellous, and we do not hesitate to declare that corsets of equal workmanship and as good fitting as the best "French make" are made in this country by several manufacturers and put upon the market at a less price than the foreign. This statement could not have been made fifteen years ago; but many of the improvements in corset-making are carried from this country to others, and are rapidly adopted by them.

Many misfits in corsets arise from the ignorance of the women who buy. Either from a lack of knowledge or a desire to look like some figure they admire, but do not possess, they buy corsets that were never made for them and will never fit them. If a woman who is short and stout buys a corset made for a tall, slim figure, it cannot possibly fit her, but it will fit the woman for whom it was made. This is a point

women must study carefully in selecting their corsets. The maker who studies to fit his customers carefully and properly makes a variety of shapes and patterns to fit every variety of figure, differing not only in the length of waist, but in hip and bust measurements. For instance: A short, stout, matronly woman buys a long-waisted corset, made for a tall figure with large hips and bust measurements. She attempts to get into this corset; in doing so she crowds down the liver and intestines; they must go somewhere, and so they are forced below the long waist line of the corset, giving an unnatural and undue prominence to the stomach. Add to this the natural settling down of the whole body, with the shoulders thrown abnormally back to maintain the center of gravity, and we have a figure that to the average observer is anything but artistic, and yet one that is met with every day in fashionable society. All this can be avoided by a properly constructed corset, made short in the waist line, but long in front, going well over the hips and stomach, so as to confine the figure and give support and symmetry to the whole body.

This is but a single illustration of what really fitting a corset to the figure means. The desirable figure so longed for and sought after can be obtained without destroying or deforming any part of the body.

Another common fault is that women often buy a corset one or two numbers smaller than will fit them

properly. You can readily see that if a corset is left open five or six inches in the back the whole design is spoiled and it cannot fit properly. The natural fulness designed to go over the hips is thrown in front of them, where fulness is not needed; the fulness back of the hips is on the side; the shoulder blade is not properly supported, and the entire plan of the maker is thwarted. It does not fit; if she wears it, it will not give her ease and comfort, neither will it wear as long as it should, for a corset must fit to wear properly. She condemns the corset and the maker. As well might a man try to wear a coat made for a person two or three sizes smaller.

A corset when first tried on should be left open from one to one and one half inches in the back; after wearing a few days it should not stretch more than one half inch; then it will be open from one to two inches in the back.

Few women know how to lace a corset properly. When first tried on it is better to have the help of an intelligent assistant. Many ladies are in the habit of beginning the lacing from the bottom, leaving the corset well open at the top. This practice is wrong, and is not necessary if the corset is of the proper proportions.

In preparing to try on a new corset, first lace the corset loosely from top to bottom. In inserting the lacings at the waist line, pass them through two consecutive eyelets on the same side, thus making a loop

in the lacing. Then put on the corset and draw it up first at the waist line to the required tightness by means of these loops. In this way the smallest part of the corset will find the smallest part of the waist, and it will settle into its natural position. Then tighten the lacing from the waist to the bottom, and lastly from the waist to the top, until the whole corset conforms properly to the contour of the body. Corsets that become crooked are often made so by improper lacing. Too great pains cannot be observed in properly lacing and fitting the corset when it is new. Never tie the lacing around the body; it is sure to ruin the best corset and is also the worst form of tight lacing.

A perfectly fitting corset should not hurt at any one point, but should fit smoothly and easily upon the whole figure. The front and side steels can be bent as the wearer wishes until they conform to the lines of the body and are easy. The upper part of the corset should never press upon the bosom, but rather hold it up and give support. Many a woman has destroyed the swell of the bosom by the pressure of an ill-constructed and badly fitting corset. This is one of the great advantages of the Coraline Health Corset and accounts for the very large sale of it in this country; the bosom pads prevent pressure, give a perfect figure, and at the same time promote development. For stout and fleshy women they are an additional support, giving a long waist effect and trim figure.

What material is best for corsets? The French woman answered this question long ago. The material they use more than all others is fine, soft coutil, which is light and more durable than any other. The American woman has preferred satteen, simply because it looks better, but the very process of making it smooth and glossy has destroyed some of the wearing qualities. A good cotton jean will outwear any satteen, and make a better corset, but, because it does not look as well in the shop window, the buyer, ignorant of this fact, selects the satteen. Another great advantage of coutil is that its peculiarly woven web renders it more elastic, allowing it to conform to the lines of the body.

The best corset can be ruined if not properly fitted and properly cared for. Many a woman injures a good one by wearing it loose and her waist bands tight. This will effectively girdle the best corset and destroy it in a very short time. She then condemns it, but she is the one to be condemned for not knowing how to wear it. If the important garment is worn very loose, the bands must be worn loose. It is a good practice on taking it off at night to carefully roll it up and leave it thus until morning. Women who perspire freely will find it better to have two corsets, wearing them on alternate days.

A woman handles carefully her new bonnet, and straightens out the creases and folds of her evening dress, and hangs her wrap away on a stretcher,

but allows her corset to shift for itself, and yet the corset deserves more care than any other garment.

The best stiffener for corsets are coraline and whalebone. Coraline has the advantage of whalebone in being lighter, though not quite as stiff. It is made by binding together with strong thread a species of Mexican fibre which resembles a heavy, long bristle. This is then made flat and tempered, and is absolutely unbreakable and indestructible.

The next best material is the black horn of the buffalo from India, which has long been used as a substitute for whalebone, and is supposed by many women to be real whalebone. When new and fresh it has good wearing qualities, but when a year or two old, whether used or not, it becomes brittle and breaks like a dry bone, which it really is. This is the real cause of so many broken bones in corsets.

Never buy a corset boned with steel or reed. The steel is sure to rust and break, and is liable to curl up on the end when it does break, and it may make an ugly wound. Reed is nothing more than a woody strip that gives an appearance to a corset, but really has no value.

Never buy a corset that has been blocked or molded over a steam form and all the stretch taken out of it. As well might a woman have her gloves stretched on some other hand than her own. The natural elasticity in the corset is just what is needed to make it conform nicely to her own figure.

If you are easy on corsets always buy the lightest you can get. It will be the most comfortable. It may not wear as long as a heavy corset, neither will a light, thin kid glove wear as long as a buckskin, yet you buy the kid. The woman who is hard on corsets must be contented to buy those containing more bones and steels, and consequently heavier, but she has no alternative.

A good whalebone corset made of fine, light coutil cannot be made and sold for less than five dollars per pair. Coraline, while costing more than horn, is much less expensive than whalebone. A good corset in coraline can be sold at from one to four dollars, according to the materials used in construction.

It has seemed to me that a few facts like these will aid ladies materially in buying and selecting this necessary but much abused article of dress.

THE FEET.

THE proper clothing for the feet demands more attention than it generally receives. The health and comfort of the whole body are intimately connected with the condition of the feet. The blood should be allowed to circulate without restriction in these extremities, which are farthest from the heart, and for this reason are more likely to suffer from tardy circulation than any other portion of the body. Headache, lassitude, and nervousness often have their origin in cold feet. If they are folded and

crowded into tightly fitting shoes, and the ankles bound by tight gaiters, or by snugly laced or buttoned boots, the veins and arteries are compressed and the free circulation from the heart is prevented. Under these conditions the feet are damp with cold perspiration, and the whole body is made to suffer from the abused members that are robbed of a free supply of pure blood. Add to this corns, bunions, ingrowing toe nails, and various other accompaniments that combine to make up the fashionable dainty foot, and you have not the thing of beauty, the human foot as designed by Nature, but rather a proper subject for the pathological museum.

How many women who are proud of their hands, adorned with costly gems, who like an excuse to remove a daintily fitting glove that they may display them, would dare to apply the same rule to their feet! What monstrosities would be revealed! Toes over-riding, five occupying the space of three; the soles of the feet folded together, with bunions, callouses, corns, and other excrescences!

How many women realize that beauty is not made up entirely of a fair complexion and symmetrical features, but that grace of carriage is as essential as any other requisite to comeliness? Notice the gait of any woman whose feet are crowded into shoes one or two sizes too small, and still further crippled by raising the heel two inches higher than the toes, trying to balance herself on the diminutive extremity

of her pointed heel. With this toggery she saunters out for a walk in the fresh air because advised by her physician to take exercise. Compare her movements with that of the little girl six or eight years old who has not been "fashionized"; see her trip along with light, elastic step, the acme of grace and ease. I have often watched these angels of life and beauty in their graceful because natural movements, and wondered if the time would ever come when they would be allowed to grow to womanhood unmarred by Fashion's blighting hand.

A shoe to fit properly should not be so tight as to restrict the foot, nor so loose as to allow it to slip and slide upon the foot and thus chafe and irritate it. The proper way to measure the foot for a shoe is to place the foot upon a piece of paper, allowing the weight of the body to rest upon the foot; then with a pencil to mark the outline of the latter upon the paper. This is the pattern for the bottom of the shoe, and is the only form of shoe that will allow you ease and comfort in walking. Many of the best shoemakers now adopt this form of measurement in making shoes to order. If space is allowed for the sole of a foot, you can do as you like with the rest of the shoe. It may be long and pointed, or turned up like a skate, or it may be square or round at the toes according to individual taste.

A low-cut, soft shoe will be found more suitable for the house and for warm weather, as it gives free

play to the ankle, and lessens the perspiration of the foot. The heel should be low and broad, or no heel at all for indoor wear. If a high shoe is worn it is better to have the upper part made of cloth, as it gives freer play to the ankle and does not cause, like leather, perspiration of the feet. Persons suffering from cold feet should wear woollen stockings; in fact, they are a better foot covering for all people in cold weather. Silk or cotton may be worn in summer. The stockings should always be held up by a stocking supporter, as garters bound about the leg interfere with the circulation. It is also much better to attach the hose supporter to the corset than to a separate belt around the body.

Rubbers may be worn when necessary to keep the feet dry, but it is best to avoid the use of them when possible, as they prevent evaporation, and so increase the moisture of the feet from perspiration. Sandals are less objectionable than rubbers that cover the instep. The best walking boot for damp weather should have a layer of thin cork between the outer and inner sole to keep out the dampness. A good heavy sole will be found easier to walk in, for all persons, than a light, thin sole; but the uppers can be made as fine and as light as you desire.

Sound and shapely feet should be the rule, and not the exception, and they can be secured by following the advice we have given.

THE ART OF DRESS.

BY ANNIE JENNESS-MILLER.

COMPARATIVELY few women have fine taste in dress. Proof of this is afforded by the indifference with which most women accept, one after another, changing fashions without regard to individual characteristics.

To dress well is an art, often no more difficult in the technical sense for the woman of limited means than for one who need not consider the cost of what she wears. To be able to spend money lavishly upon dress is not an unmitigated blessing to those of crude and uncultured art instincts, because unlimited control of money may produce no more desirable results than the stamp of vulgar exaggeration.

Above all other considerations, to gain the reputation of "a well-dressed woman," one must understand individual requirements. To emphasize the best tints of the complexion, the depths of the eyes, and glints and tones in the hair, one must study harmony in colors with no less care than the artist bestows upon the paints upon the palette when he creates a masterpiece.

To dress well one must understand first principles. There are many considerations that should enter into

the purchase of attire, whether it be elaborate or simple. In choosing fabrics, height, size, and the character of bodily movements, whether lithe and delicate, stately or heavy, must be considered. For color and general style, age, complexion, eyes and hair, social station, and occasion for wear enter into judicious selection.

There is not a defect of body that the cunning artist in dress cannot soften, not an excellence that may not be accentuated by ingeniously considered effects of fabric, combination, general design, tints, and tones. Such artistic knowledge, however, like the technique of any art, must be acquired by patient study. A musician, painter, or sculptor learns the working principles of art by close application to details. Yet, superior as the noble human subject is to all other creations, the laws governing human expression are neglected because of an ignorant tradition that good taste in dress and natural grace of movement are special endowments.

It is true that some women seem to possess instinct for color and combination in dress, just as children show aptitude for the fine arts. Self-evident talent for music, sculpture, or painting is never, however, regarded as a reason for refusing opportunity for artistic culture, but rather as the justification for careful training, and dress will not reach the dignity of a fine art until similar common-sense views prevail concerning the principles of form, color, combination, and expression in detail.

Dress, in general, as exemplified by the masses, remains a chaos of crude imitations of original ideals put forth by cunning fashion-inventors, who give no thought to improvement in dress, but only to the question of how to manipulate alterations in shape and style so as to require constant change upon the part of followers. The plan is commercial, not artistic. It is true that good workmanship, beautiful fabrics, and delicacy of touch often give Parisian designs, however grotesque in form, *chic*, and even an elegant appearance, which, however, the woman who attempts to copy the original in cheap materials by the aid of unskilled workmanship does not achieve; and it is this fact that renders the mass of women utterly inelegant when not positively vulgar in dress.

Neither does the woman who acquires possession of the well-constructed original fare, altogether, better in most instances, for the women who buy ready-made Parisian models are often people of means, but without taste, and utter incongruity between the wearer and the thing worn is never more glaring than when money has been spent without stint.

The well-dressed woman has her dress made for her *in every detail*, and, whether it costs much or little, it just suits her and brings out her best points. One can, if she understand the art, dress well on a limited income. For this reason the art of dress should, in my judgment, be part of a woman's necessary education.

I have no sympathy with the theory that the higher a woman's intellectual development the less thought she will give to dress. All one-sided education should be deplored. The better a woman's intellectual and æsthetic culture, the more exquisite her artistic perception, and the more certain that false tones will offend her sensibilities. A slovenly, badly dressed woman produces the unpleasant effect upon a cultured mind that a false note in music causes, and the day has passed when the critical will accept higher mental attainments as explanation of lack of æsthetic culture and love of refinement in dress.

False notes in fashion are just beginning to be understood and resisted, because of increasing mental and æsthetic development, and the future will see more, not less, attention paid to dress. Woman's education will in the future embrace ideals of bodily development consistent with anatomical and physiological laws, and the human body will, in consequence, become the supreme point of decoration and expression in the cultivated and artistic sense.

With general diffusion of knowledge concerning the body and its capacity for expression, attention will be given to individual characteristics. Thus will be inaugurated the beginning of the higher art of dress *versus* arbitrary fashions.

To dress well one must dress with no more regard to fashionable traditions than is justified by manifest

individual peculiarities. For example, certain seasons proclaim a *furor* for certain "loud" colors, and, according to fashion's behest, nearly all women wear these colors, although the result may be destructive of natural beauty of tinting. Delicacy and harmony, the positive tests of beauty, are thus sacrificed to novelty. While our general color ideals rise no higher than novelty, there is a dawning conception in the minds of a few concerning the fascination that resides in subtlety and complexity of coloring that argues well for the future. I believe that the next decade will see a decided increase in the number of women who will choose the colors of clothing for purely personal and artistic reasons, without regard to fashion's dictation.

There are a few colors exactly suited to individual requirements that should become fixed and permanent in each woman's wardrobe. These colors should be chosen because they tone down defects or accentuate natural brilliancy of complexion, render the eyes expressive, and blend well with the tints of the hair. Choice of colors depending, therefore, upon natural characteristics rather than upon arbitrary fashion, the woman whose income is limited is set upon equal footing with her wealthy sister by knowledge of first principles of color combination, because there are few tints that can be found among costly fabrics that are not reproduced with considerable skill in inexpensive textiles, especially in those made from

fine wool; while the advantage in artistic dress is decidedly with the woman whose income is limited when she possesses color knowledge to which the other is a stranger.

To understand exactly what colors to wear is the first step toward becoming a well-dressed woman, and a most important step toward true economy in dress. The woman who changes the color of her gown, and all the accessories of the toilet to match, with every change in fashion, dresses expensively, because there are many different articles that will outwear a single gown. If, upon the contrary, a woman chooses a few colors for life-wear, every article purchased may be planned far enough in advance to be procured of the best quality, selected for long years of probable usefulness. With such artistic selection no article will become *passé*.

Study of color in detail will give the key to the best possible effects in dress; therefore, generalization in such an article as this must be more or less unsatisfactory. It is, however, safe to say that the color of the eyes and hair may be reproduced with good effect with most women.

Violent contrasts are nearly always vulgar; subtle blending, artistic. The "Titian's beauty," a woman of deep auburn and copper tints of hair, with suggestions of the same color in complexion and eyes, is always at her best in copper-tinted fabrics. The woman of nut-brown hair and eyes is lovely in

golden brown that suggests the glints in both, while no color suits her better for evening wear than the rose that glows in her cheeks under strong excitement. The "bilious," yellow-complexioned woman can wear certain shades of golden green better than any others, as the stronger hues of her dress tone down defects of skin. The same woman clothed in black becomes livid, colorless, expressionless, and seems old beyond her actual years.

In choosing fabrics, in order to be well dressed, one should always remember that rich velvets, silks, and costly fabrics are no more suited to street wear than are expensive and showy jewels. The woman of limited social opportunities requires beautiful coloring in attire as much as her sister who rules in the social world, but she does not require the elegance of showiness to be a well-dressed woman. One who has no other place in which to wear costly satins, brocades, laces, and jewels save the public streets has no use for such things, and should indulge in none of them. On the contrary, she should devote her best taste to securing appropriate woollens and cloths for street attire, in the exact shade, texture, and weight that will accentuate natural coloring, general style, carriage, and expression of body; and, above all, must spend her money judiciously for the very best workmanship.

There is no truth concerning tasteful and appropriate dress that I feel more keenly in connection

with street attire than that of the impossibility of getting effect and elegance from poor workmanship. A woman would far better purchase but one street dress a year and have that made over good linings by a first-class tailor than to own a half dozen inferior street suits that are the work of indifferent dressmakers.

One should never leave the choice of material, color, or style to a tailor, but the grace of curved lines, the cut, and workmanship, and pressing, require the mechanical skill of a first-class workman. Tailors are educated to do this work carefully and consistently, and until there is an absolute change in general design for all street attire, I favor, at least, one carefully made tailor street dress yearly as an expenditure in keeping with good taste and economy in dress.

For this dress there should be boots, gloves, and hat to match, to be worn with no other costume, as the well-dressed woman always suggests careful attention to details. Shabby gloves or half-worn shoes with a fresh street dress are enough to destroy the reputation of being "a well-dressed woman." Nor does economy demand such careless association if expenditures be well and wisely planned.

For evening home wear, I favor a decided attempt at light, delicate, and picturesque dress. Although one may not be "in society" in any exacting sense, most women have friends who may drop in for an

evening chat, and it costs no more to have one's evening dress of a well-chosen, light, and attractive fabric, picturesquely made, than to be sombrely attired, while the gain in spirit, and even manners, is wonderful.

To illustrate, the inexpensive challies, crêpe cloths, nun's veilings, and even less expensive cotton fabrics may be so well chosen by a woman of taste, and so artistically designed to bring out expression of body and face, that one will become an exquisite household picture to the eyes of the husband or other masculine members of the family, returned from a day's toil. It is much easier for a man to forget courtesy and to adopt a brusque and irritating tone with an unattractively than with a daintily and becomingly dressed woman; yet the latter style of attire does not necessarily argue large expense. In fact, all of my studies lead me to the conclusion that art in dress is more a matter of educated taste in color selection, in line, drapery, form, utility, and suitability than a question of expense. I believe that woman's dress in the future will be designed with reference to the wearer's personality, the immediate use to which it will be put, and, above all, with regard for eternal consistencies.

HOW TO LIVE LONG AND WELL.

BY MARION HARLAND.

WHY, in view of the acknowledged similitude of bud, and blossom, and fruit bearing to the several stages of human life, — infancy, youth, and maturity, — we should ignore the fact that the last stage is not only the most beneficent, but the most enduring of all, is not easy to decide upon any known principle of reasoning.

The climacteric of a healthy man's life falls between fifty and fifty-six years of age; of a healthy woman's, between forty-three and forty-seven — sometimes even later. There are in every generation instances of women who have become the mothers at fifty of healthy, well-developed children. If she has lived wisely, with a just regard to the laws of physical, mental, and moral health, this "turn" or "change of life" often leaves a woman stronger than she was in youth. Pith and sap are exchanged for solidly grained timber.

A matron consulted an eminent doctor — independent of thought and speech, and a shrewd judge of human nature — with regard to distressing headaches from which she had suffered for several months.

“I suppose there is nothing unnatural in the attacks,” she remarked; “I am forty-five years old, and may consider myself henceforward as upon the downward slope of life.”

After three weeks' study of the case, the physician gave his opinion: —

“You tell me that you are forty-five years old. The statement is, no doubt, founded upon the record in the family Bible, which record rests upon the testimony of others than yourself. Treat it as hearsay evidence, and wait for positive proof before acting upon it. After careful examination of your constitution, I pronounce you just thirty-five years of age. After this, rate yourself ten years younger than you have been made to believe that you are — and *behave accordingly*. All people who have lived a certain number of winters and summers are not of the same age. Your headaches are the effect of malaria, and can be cured without making an old woman of you before your time.”

His patient is now sixty, and passes for fifty even among those who know her well. It is a saying with her friends that she will never grow old, so sensible has been her obedience to the advice to “*behave accordingly*.” Her daily constitutional is taken in all weathers, except in driving rainstorms. I met her last week, gaily breasting a “nor'wester,” laden with snow — “so dry it could hurt nobody,” she declared laughingly, her eyes as bright and

cheeks as rosy as they were at sixteen. Her daily bath is followed by ten minutes of gentle gymnastic exercises, "to keep her joints supple"; her diet is regulated by knowledge of constitutional idiosyncrasies and of what is wholesome and strengthening; she gets plenty of sleep, and is conscientious in the matter of recreation.

Other women there are, and not a few, who are older by years than the family Bible declares them to be. Heredity — cruel as the grave in which lie those who bequeathed the blight — has entailed upon them the consequences of others' sins or misfortunes, or youthful errors or illnesses have weakened bodily force. Heredity is strong, but environment and a judicious use of conservative measures are more potent. The first step toward counteracting an inherited bias in such a case is a thorough knowledge of the danger and the possible means of escape, or at least relief. It is a pity that in the diligent search into old deeds, letters, town-ship, and church and State, papers for evidence that may enrol us among the Daughters of the Revolution and Colonial Dames, we have not unearthed data of diseases and excesses that might put us on our guard against what usually falls upon the victim like a thief in the night. Medical examiners of life insurance companies give us significant hints in this direction. Each of us should reckon up her own risks and shape her course by the conclusions gained

during the calculation. If, there be a weak point in her constitution, ignorance is, at best, a besotted sort of bliss. The sooner she finds it out and uses preventive measures, the better for herself and the generation that is to follow her.

It is a duty to keep well. It is a duty to live so well as to live long and to pass on longevity with health to our children's children. With all the sense and nonsense that have been talked of the survival of the fittest, able thinkers are prone to leave out of the question the truth that it is not always the strongest children who survive the weakest, and that men and women who at forty are semi-invalided in the opinion of friends and physicians, often regain a fair degree of health and live to an old age. The clue to this one of the "Enigmas of Life" is almost invariably to be found in the fact that the unsound point of each constitution has been discovered, acknowledged, and systematically defended.

A man of forty-five had been considered for fifteen years a hopeless dyspeptic, and was supposed to be dying of a painful gastric affection. The physicians did not conceal from him their belief that he had but a few days to live.

"Then," said the patient, "I must take my case into my own hands. James!" to his servant, "bring my horse around to the door!"

He was lifted into the saddle and held there by the groom while he rode a quarter of a mile. On the

following day the excursion was repeated, and so on for three weeks, until the dyspeptic was convalescent. In like independence of spirit, he made a careful study of the food best adapted to the peculiarities of his digestive organs, and kept steadily to the dietary formulated in obedience to this self-knowledge. He died in a useful, placid old age at *ninety-three*, retaining his intellectual faculties to the last, and never remitting the daily horseback exercise until three months before his death.

A woman of forty, who had suffered for two years from hemorrhages of the lungs, cough, night-sweats, and other symptoms of consumption, lay under sentence of death pronounced by three physicians.

“I don’t believe it,” she told her husband dauntlessly; “I have reserves of vitality they do not suspect. Give me a chance and I will get well in spite of doctors.”

After a two years’ foreign tour, the consumptive came home, well and bright, but with a tender spot at the apex of the right lung where an abscess had healed.

“Then I must thicken the armor over it,” said the whilom patient. “I must never let myself have a cough; prevent colds by all means in my power, and keep the rest of the body strong enough to reinforce the weak point if necessary.”

That was twenty years ago. She is still alive, active and apparently in robust health, but she never

forgets that she has a vulnerable point, and never lowers her guard.

As a rule of wide and close application, the man or woman who would live long must have some specific purpose in life. It is proverbial that ninety out of every hundred men who are thrown out of, or voluntarily give up, active business after they are sixty years of age soon sink into imbecility or die. So well established is this fact that to the retired ex-partner is often allotted some nominal employment which deludes him into the fancy that he is still a personage of importance in the firm.

It would be well if affectionate ingenuity were as ready to beguile the elderly woman out of the persuasion that her period of usefulness is over — and forever. The black shadow of this belief falls very early in her day of action and consequence.

The observation or experience of many women who read this will bear me out in the assertion that the decade separating fifty from sixty is often a dreary level. The active cares of the nursery are demitted; "the boys are taking care of themselves;" the girls in college, or boarding-school, or out in the gay world. Now and then a daughter is married and away. For the first time since she stood at the altar the wife finds herself comparatively at leisure. Between two seasons, to borrow a mercantile phrase, she "takes account of stock." She has lost the good looks and vivacity of youth; she cannot yet

subside into the placidity of age that finds a harbor in the armchair, and in the footstool a lift above the wash of the waves of domestic worries.

“I am like a milch cow that has gone dry!” said a woman of sixty to me, driven into coarseness by bitterness of soul. “And the prejudices of a Christian land are against fattening me for beef.”

Said another, “A woman of fifty, whose children are grown and settled in life, has no place in the world. Up to that age she may be said to live upon her income. After that she draws upon the principal. Her children may be dutiful and affectionate, but *she* knows, and so do they, that she goes upon her past reputation.”

I was forty-five years of age before it came to me (I am sure nobody ever suggested it) that one ought to find at the top of the hill a fair plateau, with a fine view on clear days of the Delectable Mountains, where she might dwell in busy content for many years. We dishonor our Maker and ourselves when we climb the heights, only to totter dizzily upon a sharp comb, and then begin to *roll* down the precipice on the other side.

This is false economy and false religion. Among the blunders which have brought it about, I place: — The failure of the woman who assumes the cares of house and family to “keep herself up” in mind, body, and estate. Instead of bringing her work up to her, she has settled down to the level of her work

— or, rather, the level on which other women have put it. She has not made fresh air for speech and thought a sacred duty.

In narrowing the world for herself, she has circumscribed it for her children in her own mind. Their relations to herself and home have absorbed her thoughts and energies. In imagination, she follows them no further than the edge of the nest, or, at farthest, to the nearest twig. If her daughter gets a husband, and her boy “a good situation,” she has done her best for them. Sympathy and counsel for the Beyond, which is a terra incognita to her, are of the vaguest kind. To be helpful, the mother must not be a specialist, but what is known as “an all around woman.”

Comparatively few women love learning so well for learning's sake as to keep the intellectual muscles in play during the years when domestic cares press heavily. When, by and by, leisure renders mental labor practicable, and love makes it expedient, study is hardship. Memory has rusted in the joints, and thought will not return to the long disused habit of application to a given subject. Solid reading lies heavily upon the mental stomach. In short, “mother is too old to be put to school.”

Moreover, and here comes the hugest stumbling block, *why* should she learn anything at her time of life?

Her cry is : —

“ Ah, why
Should life all labor be ?
Let us alone! Time driveth onward fast,
And in a little while our lips are dumb.
Let us alone!”

There does come a time in the human pilgrimage when toil in mid-ocean may be lawfully exchanged for rest in the dry dock ; when one may croon : —

“ There is no joy but calm,”

with an easy conscience toward God and man. But give to a woman tolerable health, and that time should lie on the thither side of four score. “ Old age,” says an eminent writer upon physiology, “ begins normally at seventy or eighty, prematurely at fifty, or even thirty.”

It is, then, a matter of choice at what point the downward course commences. The best proof of this is that dotage and desuetude come sooner to the idle than to the busy. Activity begets activity.

What should be the long season of natural ripening is one of gentle processes, of healthful pauses, careful conservation of forces and steadfast purpose.

Which suggests another cause of early decay : —

We do not know how to accommodate ourselves to the conditions of ripe age. There is one glory of youth, and another glory of middle age, and another glory of declining years ; and each differs from the

other in glory, as do the planets from the fixed stars and the sun from the moon.

My plea, in this paper, is for this middle ground between puerility and senility, and for permission to abide therein. It is better to be a well-preserved elderly person than to look at best like a damaged young one. Having taken the position, let us *fill* it. There is meaning in the longer sight that grows upon us with years. We see further and judge more correctly than we did thirty years back. The short-sighted and the ignorant need us. In this persuasion we should husband our resources and calculate aright our reserves of strength. We do not run up and down stairs now, but we are more useful when we get there. We turn off less work, but it is of a better quality. We have settled upon our lees, and are ready to rack off clear wine.

Provided always that we have never allowed ourselves to leave out of sight the comforting truth that we have a place, and an honorable one, to fill. From first to last the thing to be feared is *rust*. Our juniors, perhaps, hold us so precious that they would wrap us, figuratively, in cotton wool and lay us upon a safe shelf. We avoid the calamitous distinction by keeping bright and busy. If we forget ourselves in the weal of others, time will forget us.

A wise writer tells us that, "Even old age should be animated by a purpose. An aim is antiseptic ;

it resists the invasion of decay. There is no such anodyne for the ills and pains of life as the absorption of the attention in worthy objects."

We recall in this connection Mary Somerville's last book, written and published at ninety, and Maria Mitchell's beneficently busy old age. Goethe began the study of a new language at eighty; our own Holmes, the most lovely and genial of autocrats, renewed his youth and ours "over the tea cups"; Whittier carried down to an honored grave the story of fruit in old age already told by Bryant and Longfellow.

"When the people in the streets ceased to turn to look after me I knew that all was over," said the handsomest woman in France. Ninon de l'Enclos, without a tithe of Récamier's beauty, retained her sceptre until eighty. We read, with a smile that is not all wonder, of her coquettish reserve of a favorable answer to a lover, that the coveted "yes" might be a pleasant surprise to him on her *seventieth* birthday. At seventy-five, delightful Mrs. Delany invented the art of making paper mosaic flowers, and completed in eight years one thousand plants.

Busy, contented, happy, and honored to the last day of her eighty-eight years, she has left us a precious commentary upon the beneficial effects of a life filled to the full with various useful and ennobling pursuits. She who fears to work after

reaching maturity, and thus abridge the term of her mortal existence, cannot consult a more suggestive and pleasing memoir of one who dreaded neither work nor death.

A charming biographical work of later date is *The Story of Two Noble Lives*, by Augustus J. C. Hare. While dealing mainly with the lives of two sisters, — Countess Canning, whose husband was viceroy of India during the Sepoy mutiny, and her sister, the Marchioness of Waterford, — Mr. Hare talks much incidentally of a Grandmamma Hardwicke, “a beautiful old lady, graceful and gracious,” at ninety-five; of her daughter, Lady Mexborough, who, when seventy-six, amazed one of her mother’s visitors by running upstairs, and calling out “Mamma!”; of another daughter, Lady Stuart de Rothesay, energetic and delightful at seventy-seven; of Lady Louisa Stuart, “who retained to her ninety-fourth year the charm of conversational vivacity for which she had been remarkable in her youth;” and of “old, *old* Lady Salisbury, who fell over a great chest which looked as if it must kill her, and was half affronted at being picked up.”

“No wonder,” adds the lively letter-writer who records the reminiscence, “when at eighty she was so proud of her activity that she talked of ‘vaulting into bed’!”

Lady Waterford, who outlived her mother and sister, was surprised at seventy-three by the approach

of the dark angel. She "had thought to live to seventy-seven, as her mother did," and head, heart, and hands were full of work she had hoped to finish.

"It is like some great ship sailing into harbor and into smooth water," wrote an observer of her last days. She was in her forty-ninth year when Watts and Burne-Jones urged her to paint one of her designs on a sufficient scale and with a degree of completeness which should satisfy posterity that she was "an artist as great as Venice ever knew." The partial list of her drawings and water-colors fills twelve pages of the memoirs.

One closes the volume with a wholesome conviction of the privileges and opportunities of age. Wholesome, because the knowledge of what these women dared and did in the afternoon of life strengthens the hands that hang down and the knees that grow feeble as elderly people count up the many years that have passed over their heads, and reflect how few probably remain to them.

In further refutation of the vulgar theory that intellectual work weakens the bodily powers and shortens life, we may remind ourselves that Goethe died at eighty-two; Thomas Jefferson, at eighty-three, and the first John Adams upon the same day, at ninety; John Newton, at eighty-four; that Peter Cooper lived to be ninety-two, John Jacob Astor to be eighty-four; that Von Moltke saw his

ninety-first birthday, and David Dudley Field his ninetieth, and Thomas Carlyle weathered dyspepsia and a peppery temper that was a trial to his friends and killed his wife — up to his eighty-sixth year.

The list might be spun out to the extreme limit of this article and leave unmentioned hundreds who have “held their own” among the world’s workers until the term set by the ignorant and thoughtless as the “period of human usefulness” is far in the past.

There is *no* fixed period to human usefulness until the Giver of life and every other good and perfect thing calls a halt! Work in itself never killed anybody. When performed to the accompaniment of nervous worry, and in blind disregard of even the animal instincts that prescribe healthful food taken quietly and regularly, and sleep, rest, and recreation, Work, which is a blessing, degenerates into Labor, which is a curse.

Rust is more hurtful in mature life than labor itself. Make a specific occupation for your time and energies if none is laid ready to your hand, and choose it for yourself. Mature age is the season for hobbies. Each of us has one in her mind, which she has never had time to mount or perhaps the means to buy and stable.

Invest in a “specialty” if you would keep off wrinkles and blue-devils. Bugs, bees, botany, even

bedquilts,—if worked diligently and intelligently,—serve the purpose of vigorous plashing in waters infested by sharks. They frighten off things for which useless old people are the natural prey.

It is not possible that the matchless economy of the Universe should halt in respect to the noblest and best beloved of God's creations. The man who is destined to live until eighty should not have spent half of that period in learning how to play his part in the world, another quarter in carrying out God's designs in and for him, and the remaining quarter as a cumberer of the ground he has brought to fertility and value. Such waste of time, strength, and accumulated capital would be cried out upon as wretched mismanagement, were the scheme of man's devising.

I submit, as the conclusion of this talk upon what I would make a Practical Subject for every reader:—

First: That youth and the early stages of maturity are seasons of preparation for the more prolonged, and what should be more productive, period of human life, and that, regarded as such, they should be wisely employed in making ready and seeding the soil against harvest time.

Second: That it is the duty of every human being to have a just comprehension of the opportunities and purpose of each era of existence and to receive the same as a trust from Him to Whom account must be given.

Finally, that definite employment, observance of sanitary conditions, practical and loving sympathy with our fellow-men, and cheerful trust in Him Who has appointed to each his work and wages are the best means of lifting the slur of "decadence" from what should be natural and beautiful RIPENING.

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