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GENERAL ARTICLES.

ENLARGEMENT OF THE STOMACH AND ITS CAUSES.

BY A. J. SANDERSON, M. D.

DILATATION of the stomach in its severest forms is not a very common disease. These cases are easily recognized by the characteristic pain and daily vomiting, which occurs several hours after eating, the vomited material being composed of large masses of decomposed food—all the contents of the previous meal, and usually most of what has been eaten during the last twenty-four hours.

The more moderate forms of enlargement of the stomach are very common, and their symptoms are in proportion to the extent of the trouble.

It is always complicated by more or less of the distressing symptoms of dyspepsia, of which it is often the accompaniment if not the cause.

The standard by which we measure the capacity of the stomach is not a constant one, because the organ varies in size and shape as much as or more than do the hands, face, or other members of the body. Professor Von Ziemssen made careful experiments to determine the size and shape of the stomach in normal cases. The largest one experimented upon held fifty-six fluid ounces, while the smallest one held only eight fluid ounces. These extremes are exceptional, still the normal stomach varies greatly in size. On an average it is calculated that three pints is the full capacity, but from these experiments we can readily determine that we could not diagnose enlargement of

the stomach absolutely from the size, because a small stomach may be very much dilated, and still not be larger than a normal stomach in another individual.

Enlargements of the stomach have been classified in various ways. We might speak of them as simple relaxation of the stomach, coming from debility of the muscular coats, and actual dilatation, where the muscles are stretched beyond their natural power of relaxation.

The causes of enlargement of the stomach are usually spoken of in two classes: First, those which may obstruct the passage of the food into the duodenum; and, second, weakening or destruction of the forces which normally cause the food to pass from the stomach. In the first class we usually find thickening of the walls of the stomach about the pylorus, the result of some serious catarrhal or inflammatory trouble; or we may find a contraction which comes as the result of ulceration. Cancer, or other growths in the stomach walls situated at this point, are also causes. Polypi, or soft pedunculated tumors, sometimes grow near this point, and fall into the opening, thus acting as a valve, closing the outlet. Then we may have tumors, or other bodies pressing from the outside upon the alimentary canal at this point. Any of these will so obstruct the onward flow of the contents of the stomach that the walls, by the overwork and fruitless effort which they have to make to overcome it, gradually become dilated. Some cases have been reported as resulting from a movable kidney which pressed against the canal at

this point. Ewald tells of a case of movable kidney in a woman who, being accustomed to wearing a tight corset, suffered from this condition of the stomach. The corset was removed, and at once the trouble ceased, there being no longer the pressure brought to bear which caused the kidney to press against the duodenum at this point. Severe pressure about the waist might cause other organs (especially a misplaced liver) to be pressed against the stomach, and so create an obstruction.

In all these classes of cases the trouble is very serious, especially when there is permanent narrowing of the pyloric opening, as it admits of very little hope of a permanent cure.

The other class of causes, which arise from deficiency of the muscular power, is more frequent, and also more hopeful, as it is usually possible to so nearly restore the weakened muscles to a normal condition that their function can be performed. The weakening of the muscular tone of the stomach may be brought about in many ways. It is often the result of other disease, such as anæmia, and all troubles that cause defective nutrition. It is especially apt to occur after a long run of fever, or after *la grippe*, particularly that type which affects the digestive organs. The excessive tension of the walls of the stomach, brought about by overloading the organ with immoderate quantities of food or liquids, is also a common factor which gives rise to this weakness of the muscular walls. The stomach, like all the organs of the body, has reserve capacity, and when it is filled to the utmost, the muscles are unable to cope with the abnormal quantity, hence they become weakened, and repeated efforts of this kind will very soon cause a greater or less amount of dilatation. Large amounts of liquids taken as a beverage, or to relieve thirst in hot weather, act in the same way. The continued and regular drinking of hot water has a tendency to weaken the motor power of the stomach, especially in those cases where the absorption is very slow.

Cases of gastric catarrh which have arisen from other causes also have a certain tendency to create relaxation of the walls. The substances which are produced by fermentation, lessen the irritability of the nerves of the mucous membrane, thereby diminishing muscular tone and destroying peristalsis. This is the same effect that catarrh of the larynx has upon the vocal cords—by bringing about a certain amount of paresis upon the nerves, the muscular power is correspondingly diminished, and

the voice weakened. In this way also the use of alcoholic liquors, tea, coffee, and all abnormal stimulants, has a tendency to lessen the responsive power of the nerves, and thus the muscular activities are diminished. Mathieu and others call attention to the effect of obstinate constipation upon the stomach. The diminished peristalsis of the lower portion of the alimentary canal brings about the same condition in the upper part, and thus the stomach is affected and the walls weakened.

Lastly, we might mention anything which interferes with the natural movement of the upper portion of the abdomen, or lower chest. The movement of the diaphragm is important to the peristalsis, or muscular movements of the organs below.

The fundus of the stomach, being situated in the conical diaphragm, is acted upon by every movement of that muscle. Fault in respiration, therefore, means a fault in the digestion, largely interfering with the muscular work of the stomach, and thus becoming a potent factor in gastric enlargement. With these facts it is scarcely necessary to mention the injustice to one's self of wearing tight clothing about the waist, such as will interfere with these muscular movements, much less any wearing apparel that will in any way constrict the body at a part that is so vital to health.

ALCOHOL AS DISCUSSED BY MEDICAL MEN.

WE are recently in receipt of extracts from the Marlborough, N. Z., *Express*, reporting the discussion which took place at the Medical Congress of New Zealand. It is encouraging to note that in the different countries the temperance question is coming more to a scientific basis, and is being discussed in medical societies by those men who are capable of giving it the truest observation.

Papers upon the subject were read by Dr. Springthorpe, lecturer on hygiene to the University of Melbourne, and Dr. Chapple, of Wellington. The latter gave a very good summary of the effects of alcohol upon the different parts of the system, and the constitution of the individual who is addicted to its use. We quote as follows from his paper:—

1. Alcohol is a poisonous drug, whose special action in the body is a brain cell paralyzant, de-

stroying these cells in the inverse order of their development.

2. Alcohol disturbs the circulation, leading to a loss of body temperature and an accumulation of waste products in the blood, accompanied by great depression and muscular weakness.

3. Alcohol tends to produce in all, proportionate to the quantity taken, cirrhotic diseases of all the tissues and organs of the body.

4. Alcohol tends to produce an irresistible craving for itself.

5. Alcohol predisposes to all infectious and many organic diseases.

6. Alcohol diminishes the chances of recovery in those attacked with any disease other than those resulting from its use.

7. Alcohol increases the sick rate and shortens life.

8. Alcohol predisposes to consumption and all tubercular diseases.

9. Alcohol increases lunacy and crime.

10. Alcohol is absolutely unnecessary to health.

11. Alcohol promotes hemorrhage and does not check it.

12. Alcohol adds no muscular strength to the body; at most, it encourages the expenditure of its force in the shortest possible time.

The effects enumerated above are surely those which every true observer has noted in those who have given themselves to the excessive use of alcoholic drinks. The effect upon the nerves is, as stated, in the inverse order of their development, and the last developed are the higher nerve centers—those of the mind, and those which have charge over the subordinate centers of the body. Thus it tears down that which is highest and noblest in man. Besides this it lessens the vitality of the system and destroys the fortifications against disease, leaving the system unprotected against the various germ diseases that are so common.

Dr. Springthorpe spoke especially of the use of alcohol being caused by more or less irresistible craving for some stimulo-sedative; and while some find temporary satisfaction in the use of alcohol, others take to the use of hasheesh, opium, tea, or some other narcotic. This he claims is due to the fact that people are not perfectly well, and that the ordinary environments of life are not healthy. But how much better it would be for a man, instead of taking up the use of some poison to make himself happier, or to render himself more insensible to the misfortune with which most human life is

surrounded, for the person to endeavor to supply in a true way the deficiency which comes from imperfect health and unfortunate environment. The natural tendency of the organism is toward health, and while we may not, in the absolute sense of the word, expect to obtain it perfectly, yet by wisely living for it, we can surely attain a standard that will give more permanent satisfaction than can possibly come from any stimulo-sedative. Environments, it is true, are often unfortunate, but they are to a greater or less extent amenable to careful efforts for adjustment; we can do much to make the atmosphere in which we live, and also the physical conditions upon which we depend; hence to improve our environment and to adjust ourselves to it is a far more healthful way of obtaining that which life craves.

The discussion which followed the reading of the papers in the Congress was to the effect that the moderate use of alcoholic stimulants in adult life were not harmful; but none could bring forth any evidence that it accomplished any good. Many bore no positive testimony against its moderate use, doubtless because they themselves partook of it more or less. Dr. Mason said that he enjoyed a glass of beer, and thought it did him good, but added that (from a physiological standpoint) there was no question but that the teetotalers had the "best end of the stick."

While possibly it has not been proven that the mild use of alcoholic beverages is a source of immediate or permanent injury, yet total abstinence has every argument in its favor. Alcohol is not a food, and merely gratifies some unsatisfied craving, and always tends to produce an irresistible craving for itself. Even its continued moderate use has a tendency to develop gastric disorders and cirrhotic conditions of the liver.

We are glad to see these questions discussed from a scientific standpoint, and trust that it may go on until society shall be educated and the standard raised against the use of alcohol.

"FATIGUE is the result of the accumulation within the muscle of the poisonous products of work; the muscle is rested when these products are removed."

"TEACH your children that the habit of looking at the bright side of things is worth more than a thousand a year."

BATHS AND BATHING.

BY J. H. EGBERT, M. D.

BATHING the body with water is a custom as ancient as man himself; moreover, systematic methods of bathing were undoubtedly instituted in the earliest times. The Jewish and oriental religions—both ancient and modern—enjoin frequent ablutions as a necessary part of the ceremonials of their creeds, thus, without doubt, largely contributing to the health and well-being of their devout disciples by securing that attention to personal cleanliness so essential to personal and public health—particularly in warm climates.

The great need of frequent bathing for the maintaining of personal cleanliness, as well as the value of baths for the preservation of health and the relief of certain bodily disorders, can be rendered apparent to all intelligent persons by a brief reference to a few important bodily functions. The refuse resulting from the perpetual tissue waste of the body finds egress through the different excretory organs with which the system is supplied. Of these organs the skin is by no means the least important. The chief excretory constituents of the skin are the sweat glands and oil or sebaceous glands, and both of these are constantly engaged in removing from the body the effete products of combustion. The sweat glands are twisted and coiled-up tubes, occupying the true skin and the layer of tissue beneath. They open upon the surface by means of numerous almost invisible apertures called pores. It is estimated that there are on the average nearly 3,000 sweat glands, with corresponding pores, to every square inch of the skin upon the human body, and that the total length of all these hair-like tubes in the skin of an ordinary man is about twenty-eight miles. The effect of checking the action of this vast glandular system by stopping up its drainage tubes can readily be imagined, and has been demonstrated upon dogs by the cruel and rapidly fatal process of coating them with varnish after cutting off the hair. Although, even with very filthy persons, the accumulation upon the surface of the body is not likely to become as dense as a coat of varnish, still, unless by proper bathing we remove from the surface of our bodies the coating of foreign particles, which it gathers from the air; the oily material poured out by the oil glands of the skin; the solid deposits which accumulate from the evaporation of per-

spiration, and the epithelial cells which peel off from the outer layer of the skin itself—unless we effect the removal of these deposits at frequent intervals, the excretory function of the skin becomes impaired, and a corresponding amount of the work of tissue purification and the regulating of the quality and volume of the blood, is thrown upon certain internal organs—as the kidneys and intestines—and should these be weak, or already overtasked, serious systemic disturbances may quickly ensue.

Again, the local irritation of the integument by dirt, worn-out epithelial scales, the deposits of perspirations and exuded oily matter, is frequently sufficient to occasion local skin diseases, and certainly courts the lodgment of the animal and vegetable parasites which not infrequently make their abode upon the surface of the body.

These are some very obvious reasons why it is incumbent upon all—old and young, rich and poor—to purify and cleanse the skin by frequent ablutions of the entire surface, thus contributing to their general health and comfort. But baths have not only a hygienic value, but a remedial as well.

Water applied to the surface of the body acts in two particular ways, to wit: by its own specific effect as a liquid and by its temperature. Thus, as a liquid it cleanses and softens the integument, while in virtue of its temperature it exerts a direct modifying effect upon the caloric of the body. According, then, to the object in view, regard must be given to the temperature of the bath as well as to the duration and manner of taking it. When our bath is above the normal bodily temperature (98° Fahr.) it is either a hot or a vapor bath; when between 98° and 80° Fahr., a warm bath; between 80° and 65° Fahr., a tepid bath; and between 65° and 32° Fahr., a cold bath.

In a subsequent issue we will notice the comparative value of these different baths, both as hygienic and therapeutic measures.—*Dietetic and Hygienic Gazette*.

NEVER lose an opportunity of seeing anything beautiful. Beauty is God's own handwriting,—a wayside sacrament. Welcome it in every face, every fair skin, every fair flower, and thank him for it who is the Fountain of Loveliness, and drink it in earnestly with your eyes; it is a charmed draft of blessing."—*Ruskin*.

OUTDOOR WALKING.

WALKING is the natural method of locomotion; all others are artificial, and, to some extent, productive of evil somewhere, or in some way catering to the debility of the human race. This mode of progression was given to man in his first estate, and only with the development of man's desire to outdo his neighbor has come in the modern nerve-destroying method of getting about the world.

In the good old days, before nervous exhaustion became the natural inheritance of the human race, men lived nearer to nature. They walked over the world, and came in contact with good old mother earth. Perhaps they did not pry into nature's secrets as we do now, but they certainly did know more intimately the hills and valleys, the trees and flowers. It did not burst upon them in a tangled, confused mass, but it unfolded little by little, and they were able to take it in. They became intimately acquainted with at least some portion of our earth. Perhaps it was only a small portion, but they knew what they knew. If they traveled to the next village, they could give an account of what lay between. To them the earth was large, and they found ever new joys in discovering something they had missed before.

Those things we know best, with which we are the most familiar, are the best appreciated. Now, suppose we should really learn for ourselves to know our corner of the universe, I am sure it would make us more contented with our own small place.

It is a natural instinct to progress, to move toward something beyond, and we do not find fault with that. It is the *how* we do it that is the trouble. We are so dependent upon wheels for locomotion, and so seldom hold our legs to their duty. We are in such a hurry that even the lightning express seems hardly fast enough. We live in a whirl and a zipp. As Thackeray expressed it, "Nowadays we don't travel; we arrive." It is said that true pleasure is derived from expectation, not realization. What an immense amount of enjoyment the human family have missed, granting that philosophers are correct in the foregoing conclusion; for if it is true, it is applicable to walking, as to other pleasures! That person who is blessed with a good pair of legs, and knows their value and use, is wise and independent. Walking is not only wise, independent, and elevating, it is

also agreeable and healthful. Our characteristic impatience and the fury of modern competition have introduced into it some harmful and undesirable features which must be overcome in order to realize all that walking means.

See a good walker step out: head up, chest up, the arms swinging freely; with the gentle motion comes an exhilaration that he never knows who has not tasted the delights of a walk in the free country air. Oh, what a freedom! One's own feet upon the broad expanse of mother earth. The lungs expand, and instinctively one stretches and grows in trying to realize that all this beautiful world was made for us to enjoy. Why, yes, no matter who claims the title to the land which produces the beauty, a good pair of legs and a pair of eyes make the whole thing yours to enjoy. The whole atmosphere is yours, too. It flows rhythmically in and out, and unites us with the sky. Every hill and valley gently opens to us its individual charm, and each flower and tree unfolds for us its peculiar beauty. Every insect, animal, and bird teaches us something of its secret life, which shuns the flying monster that whisks its tail of cars across the continent.

No matter whether we walk one mile or five miles, it takes us just so far back to nature, and we gain instruction at every step. No one doubts the healthfulness of walking. That warm glow which pervades the whole body, the result of the merry dance of the blood to every capillary, means that the body has gained new vitality. The heart works to its full limit, but is not crowded. The little ducts in the skin pour out their moisture and open wide to take in of the life and purity around them. After such a treat, how splendid the dinner! And a wrinkle here and there in the bed loses its power to annoy, for that healthy, tired feeling means sound sleep.

The necessity hardest to procure is time, and the benefits to be derived indicate the wisdom of taking that. The next necessity is a good-soled, broad-heeled, familiar pair of shoes. Then dress the whole body in woolen, so that it will be safe for you to stop and rest. Now step out freely with a good swing; keep the chest well up, so that the weight is over the balls of the feet. Straighten the knees. Most people only do that with an effort. They stand habitually with the knees bent. A little practice will make it right.

Breathe deep and strong.

Do not hurry. Measure your full stride, but do

not go beyond it. Do not try to walk more than four miles an hour for a beginning; perhaps by and by you can do more. Walk until you are tired, then stop. If you go beyond this point, you will lose much that you before gained.

As you walk, keep the knees as straight as you can conveniently. This will make it necessary to rise on the ball of the foot behind, thus acquiring a springy, light step. Let the legs do the walking. Poise the body on the hips, and allow it to be carried forward with the legs.

Again, don't hurry. If you are in too big a hurry to walk, run. That is the sensible thing to do; but don't try to combine the two.

At the rate of four miles an hour, a healthy man ought soon to be able to accomplish twenty-five miles a day without undue fatigue. Of course much more may be done, but that is a good beginning.

Americans walk less than any other people, and the pinched, anxious, starved faces show it.—*Set.*

BREAD.

BY MRS. S. K. SCHRAM.

A NOTED author tells us that "it is a religious duty for every girl and woman to learn at once to make good, sweet, light bread. Don't neglect to teach your children how to cook. In so doing you impart to them principles which they must have in their religious education. Skill is required to make good, light bread (either fermented or unfermented). There is religion in good cooking, and I question the religion of that class who are too ignorant or too careless to learn to cook."

"Fine flour bread can not impart to the system the nourishment that will be found in the unbolted flour bread. Most breads are rendered unfit for the system by wrong methods of cooking. We see sallow complexions and growing dyspeptics wherever we go. When we sit at the table and eat the food cooked in the same manner that it has been for months and perhaps years, we wonder that those persons are alive. Bread and biscuit are made yellow with saleratus. This resort to saleratus was to save a little care; in consequence of forgetfulness the bread is often allowed to become sour before baking, and to remedy the evil a large portion of saleratus is added, which only makes it totally unfit for the stomach. Some

plead, 'I can not make good bread or gems unless I use soda or saleratus.' You surely can if you will become a scholar and learn. The well-being of our families should inspire us with ambition to learn how to cook and eat."

After considering the above facts, we must come to the conclusion that the bread we eat, the materials of which it is made, and *how* to make it, are very important questions. There are two principal classes of bread, the fermented and the unfermented—the latter being in two forms, the *batter* and *dough* breads. In this article we will briefly consider the dough bread, giving several recipes.

Unfermented dough breads, made light without the use of chemicals, are the most desirable, in some respects, of all the breads, if they are well made. They have not the appearance of lightness which the batter breads have, although they are light, but are more dry, and much more friable. All material used should be of the best quality, and the colder they are the lighter will be the bread, since the lightness of the bread depends not only upon the amount of air incorporated, but also upon how much it will expand.

The flour and liquid could be measured out and placed on ice, or in a cool, clean place overnight; then in the morning, by the time the oven is of the right temperature, the sticks, rolls, or crisps could be ready for baking. Success will surely crown the efforts of all if they will observe closely the following points: Always have good flour and good liquid; be particular to measure accurately; and, above all, exercise care and painstaking. Everything should be in readiness before you begin to put the ingredients together. This means all things measured and at hand, the oven the proper temperature, and the materials as cold as possible. Flour should always be sifted before measuring.

To make breakfast rolls, use three slightly heaping cups of whole wheat or graham flour, and one cup of whole milk or thin cream. Stir the liquid into the flour slowly, mixing it well with the flour as fast as poured in. When all the liquid has been added, gather the fragments of dough together and knead for from eight to ten minutes, or until perfectly smooth and elastic. When all kneaded, divide into three portions and roll over and over in the hands until a long roll about an inch in diameter is formed. Cut into pieces two or three inches in length, giving each portion a little roll

with the hand to form a smooth end. Place on a perforated sheet made for that purpose, or upon the grate of the oven, which has previously been taken from the oven and cooled. Bake in a moderately quick oven for fifty or sixty minutes. Rolls should not be allowed to stand after being formed, unless it be on ice. When they are baked, spread on the table to cool, as they should not be heaped up so as to steam.

Sticks may be made the same as breakfast rolls, only when ready to form, roll the dough much smaller, about one-half inch in diameter, and cut into three or four inch lengths. Bake the same as rolls for about fifteen or twenty minutes. Sticks are better for breakfast, as it takes less time to bake them.

FRUIT ROLLS.—Prepare the dough the same as for breakfast rolls. When ready to form into rolls, knead into the dough one-half cup of seedless raisins, or dates stoned and chopped quite fine. Form into rolls as usual, and bake.

NUT ROLLS.—Three cups of wholewheat flour, three-fourths of a cup of cold water or skimmed milk, one-half cup nut meal, or any nuts chopped fine. Prepare, form, knead, and bake the same as for other rolls. These are very nice.

OLIVE OIL BREAD.—Three cups sifted graham flour, three-fourths cup cold water or milk, two tablespoonfuls of olive oil, a small pinch of salt. Prepare the same as above. If water is used for liquid, the rolls should be kneaded at least fifteen or twenty minutes.

ICE AND DRINKING WATER.

ICE, unless artificially frozen from distilled or thoroughly filtered water, should not be put into drink, the drink should be put into the ice, with the sides of a bottle or other receptacle between. Of course, if it is practicable to filter the ice-water, that amounts to the same thing. Dr. T. Mitchell Prudden, who has given probably as much investigation to this subject as any man that ever lived, writes at length of artificial and natural ice, in *Harper's Magazine* for August, and has this to say of the sources from which a large proportion of all natural ice supplies are derived:—

“Sewage-polluted water is not fit for men to drink, without purification, no matter how fast and far the river runs, or how wide the lake into which the sewage drains. With the size of the lake and

the volume of the river [increased], the chances of harm decrease, of course, but they stay chances still, where none need to be. New York takes extraordinary pains, or at least spends enormous sums of money, in keeping its sanitary conditions good. And yet this great, wealthy, and seemingly intelligent community goes on year after year polluting its own excellent water with the frozen filth of a great sewage-polluted river [the Hudson]. One may even see citizens of this metropolis, keenly alive to the advantages of cleanliness, and insisting on the use of *distilled* water at their tables, yet calmly plump into their glasses of pure water the frozen sewage of the upper Hudson from the vicinage of Albany and Troy.

“We know that typhoid fever is nearly always present in Troy and Albany during the ice-harvesting season. We know that the waste from the victims of this disease is cast into the Hudson River. We know that the typhoid germ resists freezing and long-continued cold; and yet between seven and eight hundred thousand tons of ice are cut from the Hudson in average years within twelve miles of Albany, largely for the refreshment of New Yorkers. The householder can have no positive assurance that his supply will not be from the polluted Hudson.”—*Sanitary Era*.

A CURE FOR THE BLUES.

TAKE one ounce of the *spirits of resolution*, an equal proportion of the *oil of good conscience*; infuse into these a tablespoonful of the *salts of patience*, and add thereto a few sprigs of *others' woes*, which grow extensively in the garden of life. Gather also a handful of the *blossoms of hope*, sweeten these with the *balm of providence*, and, if possible, procure a few drops of *genuine friendship*, but be careful of counterfeits in the ingredients of self-interest, which grows spontaneously; the least admixture of it with the above would spoil the composition. Reduce the whole to an electuary by a proper proportion of *content*; flavor with the essence of *good judgment*, and regulate the quantity according to the virulence of the disease.

Having tried the above recipe, I know it to be an infallible cure.

“BAD temper is its own scourge. Few things are bitterer than to feel bitter. A man's venom poisons himself more than his victim.”

CHOICE OF FOOD AND WHEN TO EAT IT.

(Concluded.)

[Extract from parlor talks given by A. J. Sanderson, M. D., at the sanitarium.]

In the place of this painstaking cooking it is common to use condiments and a large percentage of flesh meats. Raw meats are more highly organized and more closely allied to digested products than are uncooked vegetables and grains. Because of this and of its stimulating nature, it may, when even poorly prepared, be used by the digestive organs where carelessly cooked grains and vegetables and raw fruits will not yield so good digested products. However, comparing a diet composed largely of flesh meats with that which is made up of a good variety of well-cooked vegetables, grains, and fruits, we find that the latter is often better suited for the healthful development of the body.

For these and many other reasons we believe that a carefully selected diet, excluding meat, will, if properly cooked and combined, be better adapted to the needs of the system than one which includes meat. These principles may not apply in the experience of many, and while there are some who can not get the best nourishment without the use of meat, others would, if the diet should be carefully, wisely, and properly cooked.

After selecting the food, the time and manner of its being eaten is of importance. Among the various nations of the earth we find the number of meals per day to vary from two to seven, according to custom. The experience of these various peoples leads them to think that their method of living is correct, and, although mankind generally suffers from faults of nutrition, yet it is hardly ever attributed to the manner of eating which has become the custom.

Regularity is the first essential, and whether a person eats two or three meals a day, or even more, much better results will be obtained by taking them at regular intervals and in about the same quantity, than otherwise. The time and number of meals a day should be based upon the time used in the digestive processes, and the quantity of food which is needed by the system. Both of these conditions vary to a considerable degree, and are influenced by many things. A person who has been accustomed to eating very heartily may perhaps receive no more nourishment than a person under like circumstances who

has been accustomed to eating much less. The difference is doubtless in the education which the digestive organs have received, and, while this must be recognized in determining the quantity of food that is needed, yet people who eat often and excessively must use caution against taxing the digestive organs and clogging the system.

Again, the person's occupation and manner of life have much to do with the nutrition of the body, and to receive proper nourishment these must all be regulated somewhat with reference to the amount of food used and the time when it is taken, and *vice versa*. The digestive processes of the body require considerable time. Mouth digestion requires at least one hour, as it continues until the stomach fluid becomes acid, and gastric digestion begins. The time required for the gastric juice to digest its portion of the food will average from four to five hours. We have several times demonstrated in quite a variety of cases, which, as far as known, had normal digestion, that there was more or less of the food remaining in the stomach upon examination by washing five hours after the meal. Hence we conclude that mouth and stomach work are completed in about six hours from the time the food is eaten.

After this the intestinal digestion has to be completed, the food absorbed and taken into the liver, and the various changes wrought upon it which are produced by the activity of the liver cells. While these processes may vary in point of time somewhat, they can not be healthfully completed under six or seven hours, and probably longer. The liver then stores up the carbonaceous material, and gives it out to the blood as it is needed in the nourishment of the system.

Allowing this time for digestion, it would be impossible to eat three full meals a day without crowding the digestive organs, and as the food is dealt out to the body for nutrition so gradually, rather than in a mass at the time of digestion, the body does not require a continued process of digestion. It would seem that nature intended it to go on at intervals, and so has provided resources for storing it up for steady use in the process of nutrition.

From these physiological facts we may conclude that two meals a day will provide all the nourishment that is needed by the system under ordinary circumstances, and, if any other food is taken, it should not be more than a light luncheon.

The time of day when the meals can be best

used varies with the individual's habits and practices. The heaviest work of the day should not be done just following the taking of the heartiest meal, as it is not in the best economy of nature to have the nervous energies divided between two most active processes. Especially should this be recognized by those whose work is largely mental.

Meals should also be taken so that the active processes of digestion should not go on during sleep. If the dinner is to be the heaviest meal of the day, it should follow the time when the most active work of the day is completed. Doubtless for this reason the practice of having dinner in the evening has come into use. But this custom has another evil, which is probably a greater disadvantage to the system, as it brings the work of digestion into the hours of sleep, unless the individual does not retire for five or six hours after he has taken his dinner. It would be far better to bring the heaviest part of the work in the early part of the day, having the dinner later, at least six hours after breakfast. If a luncheon is used, it should be taken early in the evening, at least three hours before retiring.

PHYSICAL EFFECT OF MENTAL CONDITIONS.

BY DR. C. H. HUGHES.

GREAT brain and nerve strain, as in insanity, brittles the bones; grief and fright blanch the face and hair; fear paralyzes the heart, depresses temperature, causes excessive and clammy perspiration; anxiety arrests secretion and shrivels the skin; remorse wastes away the body; anger flushes the face and so fills the brain with blood that its vessels burst and the victims fall with apoplexy; shame flushes the cheek, slows the heart and respiration; sorrow shows itself in tears; love and good fortune brighten the countenance and quicken the step and pulse and lift up the form, while adversity and remorse sadden the face, slow the pulse, bend the form, and depress the bodily movements. These things, and many needless to mention, show us the potency of mental influence, through its proper natural channels, on the movements of the organism. We can not deny them in regard to the stomach. On the contrary, as we see the systole of the heart arrested by emotion, so we see digestion stayed by disagreeable and depressing thought. Mental force, through psychological media, per-

vades the body, and the stomach is not exempt from its invigorating or depressing influence over its physiologic functions. All this has considerable bearing upon the insurable condition of an applicant.—*General Practitioner.*

INCIPIENT INSANITY.

THERE are few really sane persons living; and many who finally slip over the banks and become hopelessly insane, might have escaped this fearful calamity if the proper course had been taken. The only successful treatment lies first in the training of the child; secondly, in quiet, regular habits of living, and, lastly, studiously eschewing that slayer of men and minds,—tormenting worry. A calm, abiding trust in Him who has said, "Be anxious for nothing, but let your requests be made known unto God," is the great shield offered freely to all; and in this day, when men and women are falling on every hand, none can afford to be without it.

Dr. McLain Hamilton, a specialist of note upon insanity, says upon this subject:—

"Many a man stands upon the brink of that chasm which it is worse than death to cross, and, though a few words may save them now, all the doctors of the world may not be able to bring them back after they have passed over. What I want to say, in the hope that it may do some good, relates to the early stages of such cases, the symptoms of the malady when it is just beginning to take hold and may be shaken off. If I were speaking in the strictest scientific language, I should deny that a person can be wholly sound except upon a single point, but the appearance is there. Such men and women are by no means rare. Their lunacy is of so subtle a nature as to defy detection for years, though they may be hopelessly mad. Take, for instance, the case of a man who labored under the delusion that he could not go above Fifty-ninth Street without some harm coming on him. Three or four years ago he was going up town and was near that street when suddenly the feeling came over him that he could go no further. He yielded to it and went home. Some fatalistic idea came over him that a penalty would have fallen upon him if he had continued. He brooded upon it till the absurd idea had complete possession of him. Of course there must have been something in his makeup to predispose him to this madness, but by proper care it could have been warded off.

"After awhile he came to me. He can talk as rationally on general subjects as I can; in fact, he talks rationally about his lunacy, admitting that it is all folly and nonsense. Hoping to break him of it, I took him in a carriage, and we drove up to Fifty-ninth Street. He begged me not to cross it, and cried like a baby. I ordered the coachman to go on, and the unfortunate monomaniac went into violent hysterics—so violent, in fact, that I gave up the experiment and decided that nothing could be done in that way. Now it is just as bad with a ferry-boat, so much so that another physician had a fearful time trying to make the man cross the East River. For all that, the man is still sane to all appearances, and you might associate with him for a year without finding out that anything was the matter. The only thing to be done in such a case is to take the man into the country, where there will be no Fifty-ninth Street and no ferry. Let him lead a systematic life, with regular occupation and duties. The point is that he should have begun such treatment the moment that his delusion appeared.

"The moral of it all is, Never harbor delusions in your mind; for, however trifling, they may grow to undue proportions and make a life miserable that should have been joyous."

SITTING ERECT.

VERY many persons in taking a seat use the edge of it only, with the result that in a very short time they seem to be doubling up, the head bending forward over the chest. The easiest method of sitting erect and in a graceful position is to occupy the chair in such a way that the lowest part of the spine, or backbone, touches the back of the seat; then, by causing the shoulders also to touch the back, the whole body is erect, and maintains itself, not only without an effort, but with a feeling of support, relief, and rest, and that, too, without any appreciable effort. Any position maintained by the aid of a brace is forced, and is secured by an injury done to some other part, which has not only to support itself, but aid in supporting parts not intended, hence must in time itself need aid from other sources; and thus the mischief goes on.—*Selected.*

"It is sometimes very painful to do one's duty, but never so painful as not to have done it."

THE WHEEL OF FORTUNE.

WE look for the wheel of fortune,
In its revolutions slow,
To bring us the many blessings
We hope for here below.
We trust that it may bring us
Some garnered store of wealth,
And with it the greater blessing
Of never-failing health.

We stand and watch its turnings
With eager, anxious eye;
And we smile as something we've longed for
Is slowly rolling nigh.
It comes; and we reach out quickly,
To take it as if by force;
But 'tis carried far beyond us
In the wheel's unceasing course.

So often these disappointments
Are mingled with our lot;
But that blessing—hope—that is in us
Lives on, and heeds them not;
And e'en as the coveted treasure
Eludes us and passes away,
We give ourselves the assurance,—
'Twill be ours at a future day.

Indeed, 'tis a precious blessing
That hope should thus live on,
And keep the spirit from sinking
When everything else is gone;
But I wonder how long in our blindness
We yet will refuse to learn.
That time may not hold for us
The things for which we yearn.

But, having learned this lesson,
Bitter though it may seem,
A joy will come to the learner,
And peace will reign supreme,
If he fix his expectations
On things eternally sure,
And cherish within his bosom
The hope that shall endure.

—F. J. Greenwood.

"LIKE a beautiful flower full of color, but without scent, are the fine but fruitless words of him who does not act accordingly."

SEEK the sunlight, is the advice of all present-day hygienists. Patients on the sunny side of the hospital ward recover soonest. The person who always walks on the sunny side of the street outlives his shade-seeking brother by many years. Sleep in rooms where the sun has shed its rays all day. Bask in the sun all you can, and you will seldom need medicine or the services of a physician.—*Pub. Health Magazine.*

Mother's Helper

CONDUCTED BY HARRIET S. MAXSON, M. D.

SWEDISH LULLABY.

LIGHT and rosy be thy slumbers,
Rocked upon thy mother's breast;
She can lull thee with her numbers,
To the cradled heaven of rest.
In her heart is love revolving,
Like the planets or the moon;
Hopes and pleasures fondly solving,
Keeping every thought in tune.
When thy look her care inviteth,
All the mother turns to thee,
And her inmost life delighteth,
Drinking from thy cup of glee.
O'er thee now her spirit bendeth,
Child of promise, cherished well;
With thine own her being blendeth,
Hallow'd by affection's spell.

—As sung by Jenny Lind, the Swedish Nightingale.

The above is the first of a series of lullabys which will appear in succeeding numbers of the PACIFIC HEALTH JOURNAL.

FORWARDNESS.

AMONG the many disagreeable traits which appear during the course of development of the average American child, forwardness is not the most uncommon. How to avoid the occurrence of this unpleasant element of character, and how to treat it successfully, may profitably engage our attention for a time. As applied to individuals, in a bad sense, forwardness implies impertinent action, interference by word or action not consistent with the age, position, or relation of the person or persons interfered with.

In studying the subject we need to discern carefully between acts which are the expression of this element of the child's character, and those which are prompted by another and most desirable trait—that of frankness. The one is to be suppressed, the other fostered. Though so widely different in their typical manifestation, so closely do they resemble each other at times that it is difficult to

tell where one ends and the other begins. Indeed, unless the one be wisely treated, it may develop into the other.

Let us examine for a moment some of the incentives hidden in the heart of the child, which cause him to appear bold, or make him really so, also any external influences which tend to this end.

First, it may be simply his energetic, enthusiastic spirit, not a conscious desire to meddle in other people's business, but an inordinate desire to help on in the thing in hand. A real healthful desire to be helpful, with a lack of the sense of propriety, will often lead the most well meaning and kindest hearted to deeds most unkind and boorish. It may be purely a spirit of inquisitiveness, another expression of that tendency to question which is implanted of God in every child's heart for its own good; for without it how could a child accomplish that vast field of learning which it must compass during the first few years of its life?

It may be a desire to "show off," whether the result is good or ill to itself; or it may be the child's love of approbation which leads him to be intrusive. Whatever the incentive, it seems to us, that careful study and thoughtful management, administered in tenderest love, can bring results of good to the child.

In the first instance, no parent who has at heart the future happiness and success of her child, could wish to take from him his energetic spirit—in other words, would dare to break, or even curb, his enthusiasm. Such a course would be fatal; but in tenderness, and with patient, persistent, loving effort, let her gently but firmly direct the rebounding energies of her young hopeful in the right channels.

In the second case, it seems to us that only careful teaching is necessary. Let every mother study carefully for herself the common courtesies of life,

until she herself lives in them; then, if she have the love and confidence of her child, she will quickly bring him to search for himself propriety of action. Right here lurks a danger. It is possible to make your little one feel so belittled that a sense of being in the way will follow him all through life, not only causing him great discomfort, but, by destroying his self-composure, making him self-conscious, and greatly hampering him in his social relations.

Let parents learn to consider their children as individuals, and born with certain inalienable rights, which at no age can safely be denied them. We must not expect our little ones to learn their lessons at a single sitting; the instruction in precept and example must be repeated again and again and again. No mother can afford to falter at her task, and any Christian mother who remembers how tenderly and how patiently her heavenly Father has led her over and over the same ground, in order that she might learn some one lesson, gain some small point in character building, will never weary of giving the same instruction many, many times, and will study ways and means to make the lessons most effective. We have often considered how we can give practical lessons in play with our little ones. No play with mama is better enjoyed by children than "going visiting." Here is afforded an opportunity to teach propriety of action in the presence of older people, and make the lesson more impressive by yourself taking the child's part, permitting him to act in your stead as instructor. And here we would urge again upon all parents the duty of studying carefully for themselves the laws of common courtesy.

We have said that forwardness may be purely the result of what it always seems to be,—a desire to "show off,"—and here we must stop and consider carefully and with candor toward our child. Is this desire to show off inborn, or is it the legitimate result of our own influence? We can understand that there may be inherited traits of disposition which would favor the development of this spirit, but we question if they would thus manifest themselves without the aid of example or precept. The cooing babe quickly understands the proud look in the face of the proud parent as she presents him to her admiring friends. He may not understand the meaning of the words, but he quickly comprehends the language of the voice. If her instruction along this line should cease here, we could not blame the child for manifesting the natural results of her

course; but, alas! how often, on the contrary, these lessons in "showing off" are continued all through, not infancy alone, but childhood as well. And even when reproving in the child the manifestation of our own teaching, we clinch the nail of our instruction by another lesson in the same line.

The mother, in calling her three-year-old son from his deafening drum-beating in the presence of visitors, says to him, "Show the lady how quiet you can keep." Approbateness in a limited degree, and controlled by lofty motives, may be a desirable trait in a child. Certainly our all-wise Father would not use this incentive to holy living except it would rebound in good. Yet too greatly developed it weakens character, covers nobler motives, and becomes a vice. It is a trait, however, which serves as a mighty weapon in the hands of a parent; and when present in a child's disposition, it is a temptation to use it largely. When thus used, however, the evil results are quickly seen; and one way in which that evil is seen is in apparent forwardness. An inordinate desire to be praised perhaps is the most frequent cause of this fault; and in nearly all cases, we believe, if the previous management be carefully studied, we will find that this has been the motive power most largely used in the management of the parent. When this is the case, seek means of stimulating to right conduct other than the child's own virtues, and the forward child will become modest.

It requires great skill, sometimes, to direct a spirited horse safely down the narrow mountain pass, or the shooting yacht between the treacherous rocks of the shallows; but it takes far greater skill to direct in just the right way a young life, in which is kindled a flame destined to burn in future years, giving light to guide many feet.

H. S. M.

"LEAST said soonest mended"—and soonest mended, least to mend.

"HE who hesitates is lost," and he who hesitates not might better never have been found.

"ARTIFICIAL flowers were invented by Italian nuns. They were first used to decorate altars and shrines."

"HARVEY LAWTON says that a baby is a "new wave on the ocean of life." Mrs. Lawton, perhaps, thinks that a fresh squall would express it better."

THE HEALTHY CHILD.

THE first act of the baby is to cry. This, however, is not an expression of pain nor yet of discomfort, although it well might be, for its sudden change of surroundings is certainly not conducive to comfort. The cry, however, is purely physiological, and is nature's way of expanding the lungs most forcibly. The character of the cry is significant, however. It should be clear and full, and any deviation from this character may indicate disease.

The act of breathing in the new-born is quite regular during sleep, but very irregular when the child is awake. This irregularity continues throughout its first year. The respiration is alike abdominal in both boys and girls. At birth the average rate of breathing is about forty-four. After the first three weeks it varies from twenty-five to thirty-five. The rate gradually lessens from this time to the age of eighteen, when it should be about sixteen. At the age of four it will be about twenty-five.

The pulse also is very irregular in childhood, and is influenced in a marked degree by very slight causes. This instability is most marked in very young children. The table that follows is given in "The Care of the Baby" as the normal pulse rate at different ages:—

At birth.....	130 to 150 per minute
1st month.....	120 to 140 "
1 to 6 months.....	about 130 "
6 months to one year.....	about 120 "
1 to 2 years.....	110 to 120 "
2 to 4 years.....	110 "
6 years.....	100 "
8 years.....	88 "
14 years.....	87 "
Adult life.....	72 "

The temperature, like the pulse, is easily influenced. A very high temperature in a young child need not indicate a serious illness. Nevertheless, the occurrence of fever is never without cause even in a young child, and the appearance of the same is reason for apprehension and an earnest search for the cause. Every mother should possess a clinical thermometer, and learn how to use it. The normal temperature of a baby fluctuates somewhat during the first few days, but after the first week is the same as that of the adult, ranging from ninety-eight to ninety-nine.

The bowels of the new-born, if not evacuated during birth, should be soon after, certainly during

the first twenty-four hours. The first passage is a sticky, greenish, blackish substance known as *meconium*. This continues for two or three days, gradually growing lighter in color. Soon, if the child is nourished from its mother's breast, the discharge from the bowels assumes a canary yellow color. It is homogenous, and about the consistency of thick cream, having very little odor, and that not particularly unpleasant. The number of stools may vary from two, or three to six per day. Even more may not be considered an indication of disease so long as they are normal in character.

The urine in young children should be colorless and almost odorless. It is passed in comparatively large quantities, since the diet is wholly liquid. The bladder in the new-born babe should empty itself six or ten times a day at least. Often in the normal child this is done every hour. Later the frequency is diminished. While the urine should be entirely unirritating, it is necessary that the wet napkin should be at once removed, else the softening of the skin by the constant exposure to moisture will induce chafing.

It is important for us to understand the normal growth of the child, for, although the early helplessness of our darlings is so charming to us, its natural unfolding is even more so. By growth is meant, not only increase in size and weight, but development intellectually as well. It has been stated that the mind of the new-born is little more than a perfect blank. But it is not long before the interesting change begins. With astonishing rapidity the brain cells develop. By the time the child is a month old, it will be capable of showing pleasure by smiling, but usually does not laugh aloud until six months old. At the age of three months, or sometimes sooner, it will watch bright objects and make efforts at grasping them, although it has no idea of distance. At five or six months it will recognize friends other than its mother. The sounds made by babies before they are two years old are, with rare exceptions, purely accidental. By the time it is ten or twelve months old, it will be able to repeat the familiar words, "papa" and "mama." At the age of two the baby will usually be able to repeat short sentences.

As a rule the baby will not be able to sit alone before it is six months old. At seven or eight months it will begin to creep or crawl. If expert in creeping, the baby will likely not try to walk as early as it otherwise would. Some children begin to walk as early as ten months old, but a normal

child does not attempt it before it is fifteen or eighteen months old.

All children should have gained control of bowels and bladder by the time they are two years old. A great deal, however, depends upon training. Many children have no need for the diaper at a much earlier age than this.

It is observed that a new-born babe normally loses weight the first week of its independent existence. After this time the average increase is two-thirds of an ounce daily during the first month, and an ounce daily during the second month. At the end of four months it should have doubled its original weight, while at the end of the first year it should have trebled its original weight. As to its increase in length, it is interesting to note that the average increase the first three or four months is one inch a month, and after that one-half inch each month.

The new-born are unable to shed tears, though the grief be ever so genuine. It is generally not until they are three or four months of age that tears are secreted to flow down the face. The gums of the new-born consist of thin, smooth, but firm ridges of light pink color. After some months these become fuller and broader, until finally the teeth appear. The lower central incisors usually appear first, at about seven months of age, although often in healthy children they do not appear until several months later. If, however, dentition is delayed after twelve or fourteen months, it is probable that the child is not receiving sufficient bone-making material in its food, and may suffer in its development in other respects as well. Such delay may call for an investigation of the diet.

After the lower front teeth, the upper four front teeth appear after a delay of three or four months. After another pause of from three to six weeks, the third group of teeth appear, consisting of four anterior molars, two above and two below, and two lower side front teeth. The eye and stomach teeth do not appear until the child is nearly two years old. The first set of teeth are twenty in number; the second, or permanent set, number thirty-two.

H. S. M.

TRY IT.—It is said that hard water may be rendered soft and pure by merely boiling a vial or small bottle in a kettle of the water. Lime and other impurities will be found adhering to the bottle. Will some of our friends who have to use hard water try this, and report?

THE ADMINISTRATION OF OPIATES TO INFANTS.

BY JOHN DORNING, M. D.

OCCASIONALLY the maternal world is startled by a newspaper account of an infant's death from an overdose of opium. But, sad to relate, the impression is never profound enough to be productive of any very beneficial results, for mothers and nurses continue to administer paregoric, cordials, and the like, as of yore. The extent of this pernicious practice, particularly among the poorer classes of society, is simply amazing, and is perhaps apparent only to medical men. And of one hundred mothers whom I questioned on the subject at my clinic, a short time ago, over sixty gave their babies opiates in one form or another. This will give the reader an idea of the prevalence of the habit.

WHAT IS AN OPIATE?

To many of these mothers the meaning of the word "opiate" was not very clear. One loquacious little woman believed "an opiate to be some kind of a poisonous drug," but she "never gave her baby anything like that; all that baby got when he cried too much was some 'Godfrey's cordial.'" When informed that her favorite cordial contained opium she became horror-stricken, and gave her protégé a shake or two by way of assuring herself that he still survived.

An opiate, then, is any medicine that contains opium or any of its derivatives, as morphine or codeine, and has the power of inducing sleep or repose.

HOW OPIATES ARE ADMINISTERED.

Nearly every one knows that laudanum and paregoric are preparations of opium. The former is the tincture of opium and contains forty grains of opium to the ounce. Paregoric is the camphorated tincture of opium, and has a strength of two grains of opium to the ounce. Either preparation kept in a bottle that is not tightly corked will, by evaporation of the alcohol, become stronger with age. While some mothers have the temerity to give laudanum to their infants, the majority of those addicted to the practice of giving opiates use the less potent compound, paregoric. But the amount of the drug given in either of these forms is small when compared with the quantity administered under some other and perhaps less obnoxious name. I refer to the vast number of nostrums

that are advertised and sold as "cordials," "elixirs," "soothing syrups," "sedative drops," "carminatives," "anodynes," "diarrhea mixtures," "embrocations," "cough syrups," etc.

It is often the case that the mother who "would not for the world" give her baby paregoric is beguiled by a very sympathetic and assuring advertisement in the back of a periodical into using some patented compound of opium. The particular nostrum mentioned may lay claim to being the "mother's true friend"—tempting bait to the credulous parent. It is said to make "teething easy." This touches a responsive chord in the mother's heart, for the process of dentition is a *bête noire* to most parents. It promises to "relieve colic, check diarrhea, cure coughs, insure restless infants sound and refreshing sleep." The soundness of the sleep those who have used it can generally vouch for. And, finally, it is "warranted perfectly pure and harmless." What more can the fond parent desire than the manifold blessings to be derived from the use of this magic liquid?

Some of these nostrums contain a laxative to counteract the constipating effects of the opium. There are a few soothing mixtures that are said to contain neither opium nor morphine. This may be true. Still, the veracity of the over-ambitious manufacturer is not always above suspicion.

WHY OPIATES ARE GIVEN.

Sleeplessness in an infant is always distressing to the anxious mother or annoying to the impatient nurse, and the most available means is generally sought for relieving this condition. Judging from the readiness with which the paregoric or cordial bottle is brought into requisition by some mothers, it is evident that the possibility of there being a removable cause of the existing trouble never occurs to them. There seems to be a sense of satisfaction in having the cry hushed and the eyelids closed, whether the real condition be sleep, stupor, or coma.

Diarrhea in the summer and coughs in the winter are frequently treated with some opiate mixture obtained from the drug store, until the little patient becomes alarmingly narcotized. The doctor is then summoned, because the affection has, in the parent's estimation, "gone to the brain." The mother would promptly resent the accusation that she had been poisoning her baby.

In some nurseries, when the infant attains that age when the teeth should begin to appear, the

counsel of the wise old women who have raised children of their own, or that of the druggist, is sought in regard to the best means of facilitating this process. One will expiate on the virtues of a teething ring, another will advise rubbing the gums with laudanum, while the erudite apothecary will trot out a bottle of Dr. Nockemoff's teething syrup, warranted to soften the gums and render teething such a pleasure that children will bewail the termination of the process.

A poor mother will dose her baby to prevent the neighbors being annoyed by his crying, while she goes out to earn a pittance for the maintenance of her family. A gay and frivolous parent will now and then drug her infant to the verge of coma rather than deny herself the pleasures of the social world. Some trusty nurses carry a vial of laudanum or paregoric in their pockets for use in case baby should be guilty of creating a disturbance at the little *coterie* in the park.

SUSCEPTIBILITY OF CHILDREN TO THE OPIUM POISON.

It is a well-recognized fact that children are very susceptible to the poisonous effects of opium, more so than is the case with almost any other drug. Then, again, there are idiosyncrasies and diseased conditions which render the most insignificant doses dangerous to life. Physicians are always extremely cautious in prescribing opium for young children. But a few months ago I saw a six months' infant so profoundly narcotized by six drops of paregoric, given by the mother for an attack of colic, that its life hung in the balance for fifteen hours. One drop of laudanum given to a baby a day old and a few drops of paregoric administered to a nine months' infant, have been known to prove fatal.

ACTION OF OPIUM.

The symptoms following the administration of opium vary somewhat according to the dose and idiosyncrasy of the subject. Ordinarily, in children a moderate dose (that is, a moderate dose for a child) exerts a quieting influence, inducing a peculiar dreamy condition which gradually passes into sleep, varying from a light and dreamful slumber to a deep stupor. On awakening, no unpleasant effects may be experienced, but very often there is a state of depression, as shown by languor, headache, nausea, or even vomiting, which may last for some hours. As the effects of the drug wear off, there may be nervous twitching of the

muscles, itching of the skin, particularly around the nose, so that that organ is rubbed vigorously for relief. Hives sometimes appear on the skin. The sensibility of the bladder is blunted, giving rise to difficulty in urinating. There is a temporary paralysis of the muscular coat of the stomach and bowels, with a diminution of their secretions, thereby causing indigestion and constipation.

When large doses are given, sleep comes on, quickly followed by coma. The pupils are strongly contracted; the face is suffused, often quite blue; the pulse is full, slow, and strong, the skin generally dry and warm, the respiration slow and deep. In fatal cases a state of collapse supervenes, in which the patient quietly ceases to breathe.

ADMONITION TO MOTHERS.

In view of the dangers incident to the use of opium among infants, parents should never, under any circumstances, assume the responsibility of prescribing the drug for their little ones. The very fact that physicians, who are familiar with the use of drugs, are so careful in the use of opium among their baby patients, should be sufficient warning for mothers, who know little or nothing about the action of poisons, not to meddle with it at all. Opiates will stifle the harassing cry and cause the eyelids to droop; and perhaps an occasional smile may flit over the placid countenance, but it is not "tired nature's sweet restorer." It is an artificial sleep, a mere manifestation of the operation of a poison on the nerve centers. It must not be forgotten that there is a cause for everything, even for a baby's crying. If the mother fails to unearth the cause of her baby's sufferings, the family physician will no doubt be able to do it for her. In the case of restless, peevish, and crying infants, the food, the clothing, the habits, and the general health should be investigated. Improper feeding—this will embrace too frequent nursing or feeding, poor quality of breast milk, and improper artificial food—is the principal cause of derangements of the digestive organs, and, secondarily, may induce some form of malnutrition, as rickets. Children suffering with rickets are prone to attacks of bronchitis and bowel trouble. They are often restless and fretful. The symptoms of rickets are very often attributed to "teething." It is about time that mothers learned that "teething" is not accountable for all the ills of infancy, and that quack nostrums do not "soften the gums" and "facilitate" this process. This subject, however, will be discussed

in a future article. In conclusion, if the diet, clothing, and general hygiene of children receive proper care, there will be no necessity for the employment of opiates in the nursery.—*Babyhood.*

LESSONS IN NATURE FOR LITTLE ONES.

LAST month we learned how the flowers are made to develop the seeds from which other plants and other flowers shall grow. But the seeds are not all that is left after the wind has blown away the pretty colored leaves of the flowers. Before this JOURNAL reaches the homes of my readers, many trees and plants in California will be in bloom. I wonder how many of my little child readers will go with me and my little ones and watch some of the flowers? Let us go into the garden to find the most beautiful rose. We will tie a string about the stem, so that no one will pluck it, and we will not forget which one we have chosen. Then we will go into the orchard and watch the blooming peach and pear trees. We will tie a string about some of the stems of the trees also, and then we will visit them day by day, and watch the beautiful flowers until they have faded and dropped to pieces. I wonder if anything will be left upon the stem. Yes; in each one we will see a little green or reddish swelling. What do you suppose is in these swellings? "Seeds," I hear you say. Yes, I think so too; they are "seed cups." Now let us watch them day by day and week by week until they have ripened. Shall I tell you what I think we shall find? The swelling on the rose tree will grow red after a while, and then it will be ripe; and if we pick it and cut it open, we shall find it crowded with seeds. But the covering over them is thin and hard and dry, and fit for nothing but to protect the seeds. This is not true of all seed cups.

How will it be with the peach blossom? We will watch it. We will see it grow, and grow, and grow, until, along in July sometime, the green color will begin to change, and it will get very red on one cheek, and the rest of it will be yellow. It will look so nice we will want to pull it from the tree; but no, we must not until it is quite soft; then we can examine it, and we shall find that this seed cup has carefully covered the seed and cared for it. But at the same time it has grown into a large, juicy peach itself. The dear Father, who made all things, knows that his children love nice,

juicy things to eat, so he planned that the tiny seed cup in the peach tree should grow and grow, and its walls should become thick and sweet and juicy for us. This we call fruit.

We are to watch the seed cup on the pear tree also, and we shall see that the walls to the seed cup become very, very thick, while the tiny seeds are hid safely away in the center. If planted and cared for after the rest of the pear has furnished us a good meal, they will grow, and become trees, to bear the same kind of fruit again. H. S. M.

FORGETFULNESS.

MANY look upon forgetfulness as a great misfortune, and truly it is when one can not keep in memory the essential things of every-day life. Still forgetfulness is a virtue when exercised in the right way. The following list of things to be forgotten are a sample of what it is best not to remember. Not only would life be happier and healthier without these memories, but the function of memory would be much more acute for the service it was designed to render in life:—

If you would increase your happiness and prolong your life, forget your neighbor's faults. Forget all the slander you have ever heard. Forget the temptations. Forget the faultfinding, and give little thought to the cause which provoked it. Forget the peculiarities of your friends, and only remember the good points which make you fond of them. Forget all personal quarrels or histories you may have heard by accident, and which, if repeated, would seem a thousand times worse than they are. Blot out as far as possible all the disagreeables of life; they will come, but will only grow larger when you remember them, and the constant thought of the acts of meanness, or, worse still, malice, will only tend to make you more familiar with them. Obliterate everything disagreeable from yesterday, start out with a clean sheet to-day, and write upon it for sweet memory's sake only those things which are lovely and lovable.—*Ind. School Gem.*

"MOTHERS, do you ever let your baby amuse himself with a large sheet of manilla paper? A newspaper, if an old one, will answer. Baby will rattle it, scratch on it, pull it, and play with it for a long time before growing restless."

THE FAMILY DOCTOR.

WHEN I git to musin' deeply
 'Bout them times what used to be,
 An' the swellin' tide o' memory
 Comes a-sweepin' over me,
 Then among the wrecks o' long ago
 That's driftin' on the crags,
 I can see our fam'ly doctor
 With his leather saddle-bags,
 With his crown so bare an' shiny
 An' his whiskers white as snow,
 With his nose jest like a piney
 That's beginnin' fer to blow—
 Fer he painted it with somethin'
 From his bottles 'r his kags,
 That he alluz carried with 'im
 In his rusty saddle-bags.

When the whoopin'-cough was ragin'
 'R the measles was aroun',
 Then he'd mount his rhubarb pony
 An' go trottin' out o' town,
 With his saddle-skirts a-floppin'
 An' his laigin's all in rags,
 An' the roots an' herbs a stuffin'
 Out his pussy saddle-bags.
 Then when mam was down with fever
 An' we thought that she'd die,
 That ol' feller didn't leave 'er,
 An' he never shut an eye;
 But he set there like a pilot
 Fer to keep 'er from the snags,
 An' he brought 'er through the raffle
 With his musty saddle-bags.

I can see 'im with his glasses
 Set a-straddle of his nose,
 With his broad-rimmed, lopy beaver,
 An' his loose, ol'-fashioned clo'es;
 I can see 'im tyin' at the gate
 The laziest o' nags,
 An' come puffin' up the pathway
 With his heavy saddle-bags.
 But he started on his travels,
 Many, many years ago,
 Fer the place where life unravels
 An' dividin' waters flow;
 So I hope he will reach the haven
 Where no anchor ever drags,
 An' land at last in heaven
 With his shinin' saddle-bags.

—Selected.

"Do the mothers know that an old linen handkerchief rubbed with sweet oil, lard, or goose grease, and lightly peppered with mustard, may be put on the most delicate skin without blistering it? It relieves congestion, causes a grateful warmth, and equalizes the circulation. Try it."

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DIPHTHERIA AND ANTITOXIN.

DIPHTHERIA is one of the most dreaded diseases, more prevalent, as a rule, in the colder climates, and incident to changing seasons and variations of moisture. Many epidemics of diphtheria carry with them a high rate of mortality, often the majority of those first attacked succumbing to the disease, and later on grows milder, so that most of those attacked recover.

The etiology and treatment of diphtheria have been studied with a great deal of care for many years, and yet it seemed impossible to check its ravages until the scientific study of the various morbid germs has revealed to the medical profession facts in reference to diphtheria which it is hoped will cause some stay in the ravages of this most dreaded disease.

The serum treatment for various germ diseases has certainly evolved the fact that nature has normally provided herself with a means to render most of these diseases harmless to the normal individual. In other words, there is a vital element produced in almost every individual, that is supposed to attack and render harmless most of the morbid germs that swarm along the pathway of man; and as a rule we think it will be safe to say that it is only when men become unfortunately weakened and vitiated that these morbid germ germardizers are able to make inroads upon the system.

Then the question might be asked, Why is it that the vigorous, apparently healthy, rosy-cheeked

children are so often attacked, and so succumb to the influences and ravages of the diphtheritic germ? In answer let us say that the diphtheritic germ has long been known to be a specific germ, the nature and action of which is now partially understood, and also that there is a specific element developed in the serum of most individuals designed especially to act upon this particular germ. It has been found that as a rule those individuals in the blood of whom is developed this ferment are immune and quite safe from diphtheritic disease. Several specialists in children's diseases in New York City have been making critical examination of the serum of a large number of young babes, and then older children, and also those that are matured, with a view of ascertaining how large a percentage of individuals are fortified against diphtheria on account of this wise provision of nature. It was ascertained, in the examination of infants from birth to six months of age, that this particular ferment, with scarcely an exception, was always present, which renders children of this age almost altogether free from this disease. In older children, ranging in age from about the teething time all through the years when children's diseases are most common, it was ascertained that eighty-three per cent had this particular ferment, which was named antitoxin, most of whom had a sufficient amount to render them free from diphtheritic disease. It was also noticed, as a clinical experience, that some of those who had a less amount were subject to modified forms of diphtheria. It was ascertained, also, than in a much larger per cent of adults was found this antitoxin element.

In the light of the above facts it has been only a secondary step to develop this specific element, antitoxin, and inject it hypodermically into those who were suffering with diphtheria. Many who have been thus experimenting for a long time, set forth the utility of the treatment in the highest terms, and seem to corroborate their statements with well-authenticated cases in clinical experience. In fact, we think it is safe to say that the time has come when we can recognize the antitoxin as an antidote of real merit in diphtheria. Many of the cases recorded were well advanced, with membrane

covering a good share of the throat and fauces, when the antitoxin was injected. As a rule the graver symptoms would give way in a few hours, and many of the cases that were considered hopeless were revived and saved.

It is to be hoped that further experience with the ferment will place it decidedly beyond the experimental stage, and that physicians will have at hand the wherewith to successfully combat this and similar scourges.

MEDICAL WORK IN INDIA.

IN reading reports of the Calcutta Medical Society, we note a growing tendency to raise the standard of medical work in India. Special efforts are being made whereby the natives may receive superior medical aid. Dr. Dutt read a paper on "A Few Practical Hints on the Dieting of Native Sick and Invalids." The paper was quite lengthy, and an interesting discussion followed, on the important subject of dietetics as related to the sick. It is interesting to notice the increased attention that is being given to these important questions in the treatment of disease. The patient needs treatment, oftentimes, more than the disease; and the nutrition is always of first importance. S.

QUERIES.

11. WILL you be kind enough to advise me as to the proper diet for a badly dilated stomach? L. C.

It is often the case that more depends upon getting the stomach to act than upon any particular regulations of diet, in dilated stomach. Stomachs are too often inert, and become dilated because of the lack of tone and action in the stomach, rather than because of errors in diet; however, the latter should always be considered. Outdoor exercise, manipulation of the stomach daily, tepid compresses over the stomach and bowels at night, cold sponge baths in the morning if the individual reacts well, should be among the first things to do for any kind of chronic stomach inactivity. The system generally must be improved before we can expect permanent results in sustaining good stomach action. It is fortunate in these dilated stomachs that the stomach comprises in length and surface only a very small portion of the working surface of the alimentary canal, and hence the

query should be, What food will my alimentary canal appropriate? As far as the stomach is concerned, it should be given in smaller quantities, and the oftener. An inert stomach will not take care of the coarsest vegetables, strongly acid fruits, nor cold foods, to the best advantage. Oftentimes it is a good thing, in pronounced cases, to live for a little time entirely upon milk, if that is taken well. Well-cooked grains, if palatable, with cream, preferably without sugar, are always to be recommended. Some cooked fruits are generally well borne.

12. CAN any one belonging to the gouty diathesis eat acid fruits, as lemons, etc., to advantage? L. C.

Gouty diathesis depends so much upon the products of semi-oxidation in the system, and semi-oxidation in turn depends upon so many other things, that it would be impossible to lay down any definite rule in gouty diathesis. Clinical experience shows that acid fruits are borne well in some cases, while the contrary is true in others. If in gouty diathesis there is a desire to take acid fruits, it should be gratified, unless experience has proven otherwise.

13. A FRIEND of mine is very much troubled with her spine. She has heard that the electropoise is of great benefit in that trouble, and would like your opinion as to the value of the instrument. L. C.

The electropoise, like many other devices, is an invention with a view simply to profit. We have had the pleasure of analyzing the electropoise a number of times, and have heard much in its praise from those who are continually trying something new. The elements of the instrument will admit of a very slight electrical current. This electricity that is generated is not in any feature different from that generated from other and larger batteries, and is worth no more than the common run of electric belts that have been sold in a myriad forms, all of which do not furnish enough electricity to be of any benefit from a medical standpoint. In medical electricity, the great feature of utility is its quantity, and the great lack of the electric belts and the electropoise in this feature, does not admit of their receiving a moment's favorable consideration.

"SLEEP and rest abundantly. Sleep is nature's benediction. 'Work like a man, but do not be worked to death.'"



LIFE'S LESSONS.

LET me record what life has taught me
 In the lapse of its five and forty years;
 Evil and good those years have brought me,
 Sunshine of gladness, rain of tears.
 Its flowers are faded, its wine is spilled,
 Alike are vanished and unfulfilled
 Its noblest hopes and its darkest fears.

I have learnt that life is a hopeless tangle,
 That we waste our pains if we seek the clew;
 That words will clash and opinions jangle,
 Till we reach the kingdom where all is true;
 That neither preacher, nor priest, nor friend
 Can help a soul to its journey's end,
 Or clear the maze it must struggle through.

I have learnt that our wisdom and skill and knowledge
 Are the efforts of children here below
 On the lowest benches of Truth's great college,
 To guess at what grown-up angels know:
 As the child to the child of four,
 Is the sage to the fool; and our highest lore
 Is the lore of the babe that begins to grow.

I have learnt that the best and wisest nature
 Is the child-like, simple, ungifted one
 That is content to be God's small creature,
 And ask no questions of star or sun:
 That runs the race that is set before it
 By the common daylight shining o'er it,
 And waits for more till the race is run.

I have learnt that the commonest gifts and graces
 Are the best and noblest when all is said;
 That peace and kindness on homely faces
 Are a glow from heaven directly shed;
 That the devil, disguised as an angel of light,
 Has much to do with the soaring flight
 Of the restless heart and the seething head.

I have learnt that genius is partly fever,
 Raving delusion, and morbid dream;
 That the healthy nature is wise, not clever,
 Knows the things that are from the things that seem,
 Loves and works and has little to say,
 Will feel next year as it feels to-day,
 Nor is slow of thought, as we idly deem.

I have learnt that our wild and weak emotions
 Are not worth a place in tale or song;
 That we need not trust our sublimest notions,
 For they are sure not to last us long;
 That the best we can do is to hold our peace,
 And love our neighbor, and wait release,
 With a helpful hand, a silent tongue.

I have learnt that a friend who is worth the having
 Is a friend who may hurt you now and then;
 Will turn to ice at your sickly craving
 For sympathy, uttered by word or pen;
 Will pull you with brave, rough hands away
 From the altars you build to your gods of clay,
 And break them down lest you kneel again.

I have learnt that pleasure is far more pleasant
 When it grows from some common and costless thing,
 That is offered alike to prince and peasant,
 Than from such as our wealth or our toil may bring;
 That we ought to play with the playthings given
 For his children's use, by our Lord in heaven,
 Which never wear out, nor fail, nor sting;

That the toys we make for our own diversion
 Are dangerous things, that will cost us dear;
 We are proud of the taste that is all perversion,
 Till it turns to loathing, as life grows sere;
 And then, God help us if we are left,
 Of all our illusions and joys bereft,
 To a flowerless autumn, cold and drear.

But the happiest lesson my life has taught me,
 The one that my heart has learned the best,

And which contentment and peace have brought me,
 Through disappointment and sore unrest,
 Is to love and rejoice in, more and more,
 The treasures of Nature's boundless store,
 The innocent things which God hath blest.

Oh, how I thank my God for making
 This joy in his works a part of me,
 So that my heart in its sorest aching
 Can be glad in the gladness of bird and bee,
 Can turn to look at a fern or flower,
 Soothed in its darkest and saddest hour,
 When a human touch would be agony!

O faithful Nature! as life declineth,
 She grows more dear to this soul of mine;
 A purer light on her sweet face shineth,
 A glory deathless, a stamp divine;
 The trees of earth seem more fair than ever,
 As I think of the tree by the heavenly river,
 And spirit and sense the joy combine.

The passionate glow of the sweet spring season
 Comes warm to my heart as in days of old;
 Its beauty is dear for a purer reason,
 And dearer it grows as the days unfold;
 Mountain and meadow, and herb and tree,
 Are the truest of all true things to me,
 And the best of their story is not yet told.

For if thou, O Framers of souls, hast made me
 Glad thro' thy works, as, indeed, thou hast,
 If this gladness and hope has ne'er betrayed me,
 But is stronger now than in bright day past,
 Hast thou not taught me to understand
 A part of the joy of the promised land?
 And wilt thou not lead me there at last?

—Belgravia.

SELF-RELIANCE.

BY MRS. A. J. SANDERSON.

"AN inevitable struggle between the individual and the several powers that go to make up his individuality, begins in every child at his very birth, and continues so long as life continues. On the outcome of this struggle depends the ultimate character of him who struggles. It is to him bondage or mastery, defeat or triumph, failure or success, as a result of the battling that can not be evaded." The question arises in the mind of the parent: How shall I best aid or direct my child in this struggle? Shall it be by yielding to his wishes, or by avoiding those emergencies which cross his desires? If we take the position that the child's natural bent is good, and all the evil he may have is that which he receives by association with evil, then we would answer these queries pos-

itively; for it is true that to deny the child what he wishes may arouse within him a spirit of resistance and wilfulness. On the contrary, if we believe the child to have inherited some wrong tendencies from his parents, or perhaps from his grandparents, we have little doubt that those traits will reveal themselves, and, if uncorrected, will strengthen and become habits.

The power of habit is the strongest power, perhaps, which governs humanity. It is simply repeated action. The careful watching of the keys practiced at first by the pianist that he may properly direct his fingers, soon becomes necessary, as the fingers, after having taken the same position many times, need no conscious direction of the mind, but do the work mechanically. The pupil in school who has occupied one seat for some time will, without thinking, return to the same place after he has begun to occupy another.

But if habit be so powerful, why can not the child be trained to good as well as to evil? We know he can. A temptation of any kind may come to us, and if resisted it will not seem as strong the next time; but if yielded to the first time, we will yield to it more readily the next.

But when we meet this wilfulness in the child, what shall we do? Shall we "break the will," so that the child's individuality is lost, or shall we feel that strength of determination is a noble characteristic if used in the right direction? Our all-wise Father recognizes in us each, who are but "children of a larger growth," the same will or determination. *He* does not *break* our wills; instead, he leaves us always free to choose for ourselves what we *will*. It is true he does all he can to direct us into the right path, and *that* we should do with our children. Christ said, "I, if I be lifted up, will *draw* all men unto me." Also, he represents himself as going before, that his sheep may follow. Just so our children can be more easily led than driven. We may point out the two ways before them, and all, or nearly all, will choose the good, the true, and the beautiful, rather than the wrong. "But," says one, "my child has already acquired habits of disobedience and wilfulness; how shall I deal with him?" Deal kindly, but firmly. Let him understand that father or mother never requires anything of him that is not for his good. And then let him also understand that whenever they make a request, he is to obey. Teach him to do right because it is right. Put obedience on the ground where the Lord places

it,—“Children, obey your parents; . . . for *this is right.*”

Perhaps the question arises, In what way does obedience relate to self-reliance? It is the very corner-stone upon which self-reliance is built. No character can be strong that has not learned to obey, and it requires a strong character to be self-reliant. In times of war men are tested. Those who are courageous, who can decide instantly upon the wisest course to pursue, and who can think for others, are the men who are placed in responsible positions. But where have they received these traits of character? Certainly not on the field of battle, when brought face to face with the foe. These are the principles of a lifelong teaching, begun at the mother's knee, and continued under that sterner and more persevering teacher—Experience.

A man to be successful in life, that is, to achieve *true* success—which of course means a preparation for the life to come—must possess a self-reliant character. Parents have the first privilege in the training of their children; they may teach them to depend upon themselves; and thus they may find within themselves the resources they will need in after life. Or, they may allow them to depend upon some one else, and when they meet the world, they must learn these lessons by bitter disappointment and failure. So it is no kindness to our children to wait upon them when they can just as well do it for themselves, to choose for them when they should have to depend upon their own judgment, or to yield to their wishes rather than to make them cross or unhappy, when we see that it would be better for them to learn that it is not always best that they have what they wish. We should reason with our children. They can often be led to see that father's or mother's way is best, and will choose it for themselves. Children can understand much more than we are apt to think, and they are reasonable beings.

We are not to be disheartened at the magnitude of such an undertaking. To the parent who sees the end from the beginning there is no such word as fail. Froebel is said to have taken off his hat to each little child he met, bowing, he said, not to the child, but to his possibilities.

When Christ consented to give his life for fallen man, he did not pay so great a price for what man was—he was a sinner and a rebel against the government of God—but he saw what he could make of him, and was satisfied to pay the cost.

We are not to feel that our children are perfect, nor should we expect them to be. But in the life of Christ we have the perfect pattern, and as we look continually at the child Jesus, we are to bend untiring energies toward fashioning our children likewise. It is the highest privilege ever given to mortals to train human souls for Christ's kingdom.

Upon the mother, whether justly or from force of circumstances, falls nearly all the training of the child. Is it not a glorious privilege, as well as a great responsibility, resting upon us as mothers? And where shall we gain the wisdom needed to comprehend and faithfully discharge our trust?—From Him who has said, “If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not; *and it shall be given him.*”

THE TRUE IDEAL.

BY IDA M. POCH.

THE accomplishment of every result, the achievement of every success, is but the reaching to something beyond, the ideal toward which each individual strives. This is necessary, most essential; for in no direction do we seek farther or higher than our ideal. This is a recognized factor in the educational work, no matter what is the object, be it moral, mental, or physical upbuilding. We will say, then, there is no achievement without a point toward which our eyes turn as the Mecca of our ambitions. True, we see many who accomplish little, and do not rise very high, and some even seem to be working downward rather than up; and this is perhaps because you measure their progress toward *your* ideal rather than their own.

Our world is full of wrong standards, perverted minds, to whom truth is error and error truth. How, then, shall we be sure that we are advancing toward the light rather than into the denser darkness? In the moral, mental, and no less the physical world, there is a fixed standard which the existing laws of all the realm of nature uphold as perfect. That ideal, then, which most nearly harmonizes with all the requirements of the laws of nature, most nearly approaches the true. If this truth conflicts with your standard of perfection and mine, shall we change truth into error, or seek to turn upside down all that the Creator pronounced good? Shall we not, rather, quietly turn from error and humbly follow truth, whether it be

in regard to moral, mental, or physical law? Our national government has set up a standard of true citizenship, and it makes laws to guide us toward this ideal; and the strong arm of civil law is laid upon us in punishment if we disregard its teaching. Every citizen of this commonwealth is compelled to attain to the standard of right between man and man as set forth in the law of the land, if he would be unhindered in his pursuit of life and happiness.

It is not possible nor advisable thus to protect our bodily health and well-being from the injustice and abuse to which we daily subject those faithful servants, our own bodies. Yet there is a law, unwritten, perhaps, which holds up before us the physical standard of human perfection of well-being. Though this law is unwritten, and though disregard of it is not always swiftly followed with punishment, know that it is only delayed, and is none the less sure to come. When this law lays its hand upon you or your unfortunate posterity, to answer to its charges, it will demand to the uttermost farthing, though life itself must be the price. So because we do not see the immediate results of our transgressions, let us not suppose that we can set aside these mandates with impunity.

The ideal of physical human perfection is governed by laws which have their origin with those that govern the moral ideal, and their transgression is no less sin.

If we remember that the human form is divine, and that the laws which govern our physical being are of divine origin, we must conclude that physical health is not so far removed from our moral well-being, for the body is the machine through which and by which the mind and heart, or, perhaps, our higher nature, expresses itself. This being true, can we mutilate and deface, or in any way degrade, "God's masterpiece," and hope to stand before him blameless?—Surely not. It is our sacred duty to preserve our bodily form as it has pleased our Creator to make it, that it may be in smooth and harmonious working condition. Thus may we find health, and health is an essential in true beauty.

The Creator was satisfied with his work, and pronounced it good. What more perfect pattern could he have chosen to reproduce in the human form than his own person? For we are told that he made man in his own image. And when he bestowed his own likeness upon man, he gave him

also laws to govern the working of this wonderful mechanism. If we use the machine according to this law, well and good; it renders us good service; if not, the consequences are sure. True, long misuse has made weak points here and there, for which you and I, perhaps, are not responsible; but let that be an additional reason for keeping just these bodies—yours and mine—in as good condition as possible.

Let us consider, then, the ideal human body, and the principles upon which it is constructed, and no doubt we shall discover some of the laws, which will be as landmarks to keep us in the path of physical rectitude.

First we find a bony framework, upon which is built the superstructure of muscle. All this is inclosed in a smooth, velvety case, which adds not only to the beauty, but to our comfort. The internal equipments and arrangements of this wonderful structure present the utmost completeness and perfect adaptability to the intended use. We find that the whole is governed by one main center, with various subordinate local centers. The remotest and minutest corner of this ideal workshop is in connection with the center of control by means of those little but mighty nerves. Thus is established a perfect sympathetic system, and if one member suffers, all the other members suffer with it. Each department in this manufactory of thoughts and actions affords a large field of profitable study, into which we may not even peep for lack of time and space.

(Continued in May number.)

DON'T LIVE AMONG YESTERDAY'S TROUBLES.

BY BRUNAR V. HUGATE.

"POOR Mrs. Jones!" sighed my hostess, as she reëntered her cozy parlor after bidding good-by to a neighbor whom she had accompanied into the hall; "if she could only be free from troubles and vexations for six months, I believe she would get well. But she has so many worries! I must try to find time to cheer her up a little."

Grandma Thompson looked up at the speaker with an amused air. "Well, daughter, what can you do for her? She had no fresh, living, real trouble to tell about, had she? I'm sure I have heard that same tiresome list of grievances over

and over again. There was the old story of the feud with her next-door neighbor about the chickens; the way Ike has of wearing out his clothes; Mr. Jones' refusal to build a new house; her 'symptoms,' and the lack of feeling for her sufferings that she finds in her family. It seems to me that her talk, like her house, has an odor of stale things. I think of it every time I go over there; the ghosts of meals eaten long ago fill every room, just as the remembrance of past doings and happenings fill her mind."

"That is true," said my hostess musingly. "I have often wanted, when I have called upon her, to throw up the windows and set a current of fresh air flowing through the house. Perhaps it is a current of fresh ideas and interests through her life that she needs. This morbid dwelling upon unpleasant things is enough to make a well person sick. But, Alice," she continued, turning to her sister, who was reading in an alcove, "there was one omission in her usual list of woes. Perhaps it was out of deference to you that she did not, as usual, bemoan the amazing inefficiency of Ike's teachers. Since he has been promoted to your room, let us hope that she has lost that grievance."

"She was kind, I'm sure," replied Alice, laughing. "I always vanish when Mrs. Jones comes if I can with any show of politeness. I try to keep my own vexations out of sight, and I do not wish to hear those of others unless I have some definite hope of relieving them."

"That is a good rule," was Grandma Thompson's comment. "It would be better for us all if we could forget those things which are depressing and annoying except when duty compels us to correct some mistake. Let each day be a new day. If we are to meet sorrow, why should we carry a double burden? If our new day brings a chance of pleasure, why should we lose it by keeping old worries in mind?"

"I had a lesson on that point once when I was teaching in B.," said Alice. "The weather had been beautiful all the week, and I had been longing unspeakably for a day in the country. We had had a long spell of cloudy, rainy weather previously. I determined that when Sunday came, I would make the most of it, and I planned a long drive among the lovely hills and valleys surrounding B. I started out early with another teacher, and in the fresh morning air, with the inspiration of the romantic scenery, it seemed pos-

sible to free myself from every thought of care, past or to come. But my companion chose to take that opportunity to tell me her trials—how stupid Tommy S. was, how stubborn Sammy D., and how her per cent of tardiness had been increased for the month by one little ne'er-do-well, upon whom threats, entreaties, and punishments had no lasting effect.

"It was useless to try to divert her attention to the beauty that surrounded us. After a few moments her thoughts would return to their habitual channels. And she wouldn't even keep still! If she had only let me think my thoughts in peace, I would have been grateful, but she craved sympathy too strongly for that. As I afterward looked back upon the day with a sense of disappointment, I realized how absolutely people may confine themselves to one narrow track, and become as poverty stricken in feeling and thought as if life had for them no good thing."

"Look up, and not down,
Forward, not back,"

quoted grandma. "It is simply a matter of habit. Once give way to a complaining spirit, and it becomes easy to allow it full play. Cheerfulness may be cultivated, as well as its opposite. Some of the most cheery people that I ever met have endured greater trials than have fallen to Mrs. Jones' lot, but they have preserved a wholesome serenity through everything. I believe that it is a good thing to resolutely shake off every disturbing emotion,—discontent, fear, anger,—and keep the spirit calm and free from irritation."

"It is difficult," said my hostess.

"Not so difficult as to endure the constant nervous strain of the other way," answered Grandma Thompson, smiling.—*Union Signal*.

W O R R Y.

It is doubtless true that no one human experience enters so largely into the causation of disease as does the habit of worry. Dr. J. R. Miller, in his most helpful little book, "The Every-day of Life," gives us a very vivid picture of the influence of worry upon man's spiritual life. It is our observation in dealing with many sick bodies that the influence upon the physical being is not less baneful or less permanent. The effect upon the health may be manifested in general nervousness—a condition almost universal in this hurrying age and in

this bustling America—or it may assume forms far more serious. Worry is the incipient stage of insanity in a large proportion of cases. It is equally true that peace of mind is most pronounced in its influence in restoration and maintenance of health.

“What are the secrets of this peace? How is it to be gotten? St. Paul gives the answer in two very definite counsels. The first is, ‘In nothing be anxious.’ Anxiety is worry. We can not help having things in life that would naturally make us anxious. Yet, come what may, we are not to be so.

“There are reasons for this counsel. Worry does no good. It changes nothing. Worrying over a disappointment does not give us the thing we wanted. Worrying about the weather does not make it cold or warm, cloudy or sunny. Worrying over a loss does not give us back the thing we prized. Our Lord reminds us of the uselessness of worry when he says that by being anxious about our stature we can not make ourselves any taller.

“Anxiety enfeebles and wastes one’s strength. One day’s worry exhausts a person more than a whole week of quiet, peaceful work. It is worry, not overwork, as a rule, that kills people. Worry keeps the brain excited, the blood feverish, the heart working wildly, the nerves quivering, the whole machinery of the life in unnatural tension; and it is no wonder then that people break down.

“Anxiety mars one’s work. Nobody can do the best work when fevered by worry. One may rush, and always be in great haste, and may talk about being busy, fuming and sweating as if he were doing ten men’s duties, and yet some quiet person alongside, who is moving leisurely and without anxious haste, is probably accomplishing twice as much and better. Fluster unfits one for good work.

“Anxiety irritates and frets one. A sweet spirit is an essential feature of every beautiful life. Ungoverned temper is not only unchristian, but is also most unlovely. There may be a difference of taste concerning many matters. What one thinks very beautiful in dress or manner another may condemn. But no one thinks bad temper lovely. Yet worry leads to irritability, makes one censorious, querulous, of a complaining, repining spirit. One can not have a uniformly sweet spirit, patient, gentle, amiable, without peace in the heart. Peace makes the face lovely, even in homeliness. It curbs the tongue, that it shall speak no hasty, ill-advised, impatient words. It gives dignity to all the movements. Anxiety spoils many a disposition and writes lines of unrest and care upon

many a face which ought to keep lovely to old age.

“Then, anxiety is sin. It is not a mere unhappy thing that wastes the strength, mars the work, and hurts the temper; it is also distrust of God. We say we believe in the love of God, and then we worry over what he sends—the circumstances he appoints for us, the tasks he sets for us, the place he assigns us, the path in which he leads us, the way he deals with us. Worry is sin.

“Hence we are to set it down as a positive rule that we are never to be anxious. There are no exceptions. We are not to say that our case is peculiar; that even Job would be impatient if he had our trials; that even Moses would lose his temper if he had our provocations; or that even St. Paul would worry if he had our cares. This law has no exceptions. ‘In nothing be anxious.’

“What then shall we do with the things that would naturally worry us? St. Paul tells us, ‘In nothing be anxious; but in everything by prayer and supplication, with thanksgiving, let your requests be made known unto God.’ That is, instead of being fretted and distracted over the things which we can not control, we are to put them out of our own hands into God’s, by specific power, and leave them there. No human wisdom can explain the mysteries of life. No human hand can take the strange complication of life’s events and so adjust them that they will make beauty and happiness. But there is One to whom life’s mysteries are open and clear. There is no confusion in this world as God’s eye looks upon events. What is keen trial to us to-day, he sees resulting in blessing and good a little while hence. The thousand apparently tangled circumstances and events amid which our life is moving, are to him threads with which perfect loveliness is woven.

“Just be still, though tempests break;
To know he never would forsake
The heart he made to be his own;
To know he is not King alone,
But Father—infinite in care
Of every waif that breathes the air—
If this be mine, how light the weight
I bear through changing time’s estate!

“Just to be still and murmur not;
To know he never yet forgot
The child he led; to-morrow’s care
To lay on him—my Guide—to bear;
To see the sunlight of to-day,
Nor sigh that it may fade away—
If this my part, my days shall be
Forecasts of immortality.”

—Selected.

TO PRESERVE BEAUTY.

WOMEN who wish to preserve their youthful appearance and to avoid those talebearers of age, wrinkles, should pay attention to their mode of taking rest. In the first place, the soft, downy pillows which seem to woo repose by their inviting appearance should be strictly avoided; and a round, long hair pillow, placed under the nape of the neck, after the fashion of the little wooden blocks used by the Japanese women, should be employed. These blocks are hollowed out to fit exactly the nape of the neck, so that the elaborate head-dress of the Japanese girls may not be disturbed, for it is not an easy matter to arrange the smooth bands of hair which form the chief ornament of a Japanese woman's toilet, and they are seldom taken down.

A correct position of the body in sleeping should also be observed, and the most perfect rest is obtained by lying on the back. Care should be taken to have the chest slightly raised and the shoulder blades flattened against the back. The hair pillow then placed under the neck will throw the head slightly back, raising the chin, and thereby giving needed rest to the muscles of the face, particularly those around the mouth and eyes, and the formation of lines under the chin will be lessened. It is a very bad habit to sleep with the mouth open, as it not only stretches the muscles at the side of the mouth, but is also extremely bad for the teeth when the slightest acidity of the stomach prevails.

Of course as the face reflects the emotions of the mind, those muscles which are most frequently used leave, in becoming relaxed, ineffacable lines. It is well, therefore, if one must have wrinkles to take care that they shall be pleasant ones. The habit of wrinkling the forehead is a very common fault. Some people can not talk without distorting the face in the most horrible manner, thinking that this gives greater emphasis to what they are saying. This is a mistake, and it would be well if those people could have a mirror suspended before them for one day, so that they would become aware how greatly they detract from their appearance by so doing.

We find that people of a phlegmatic temperament retain their youth longer than those of a nervous, excitable disposition. Do not hurry or worry, and thereby allow that ugly little scowl to become fixed between your eyebrows. Things taken quietly will soon arrange themselves. Cul-

tivate, therefore, repose of mind and manner. Eat regularly and not too much.

Bathe every day, and change the garment next the skin very frequently.

Take plenty of outdoor exercise.

Wash the face with hot water and pure palm oil soap at night; rinse with cold water, to restore a healthy tone to the skin.

Bathe the neck and shoulders occasionally with alcohol to keep the flesh firm and hard, also the arms.

Do not wear the same veil very long, as the dust settles in it and will injure the complexion.

Try to preserve a happy, contented disposition, and you will be beautiful, even though an old woman.—*Selected.*

CULTURE IN THE HOME.

BY PROF. F. H. GIDDINGS.

WEALTH has brought many forms of luxury, including foreign travel, for which Americans have developed a passion. Contact with the art and the refinements of the Old World has created at last a genuine desire for culture for its own sake, and this desire has grown so rapidly, and has made itself felt in so many subtle ways, that, without any one's being quite aware of what was happening, a new conception of education has silently displaced the notions of twenty years ago. The business man no less than the professional man now sees that education is to have henceforth a tremendous practical importance. He sees that in the purely theoretical researches of the laboratory are laid the foundations of all the practical arts that must hereafter depend upon an exceedingly refined knowledge of physics and of biology. He sees that the pleasures of life will soon be exhausted for his family and for himself unless their intellectual and moral resources are replenished from the inexhaustible streams of literature, philosophy and art. He is beginning to see that the redemption of our national and municipal governments from the control of greed and corruption can be accomplished only by the unselfish efforts of men who are willing to make some personal sacrifice for the public good, and he already knows, as the result of much observation, that there is a close connection between this particular kind of patriotism and that sort of culture which is fed by historical studies.—*Good Housekeeping.*

THE SENSIBLE YOUNG WOMAN.

THE following portrayal of the ideal young woman is taken from an address delivered in Boston by Rev. Smith Baker, D. D. It describes in a nutshell the most desirable traits of character, and ought to be an inspiration to every young woman who reads it:—

“Common sense is solidness without stupidity, cheerfulness without weakness, reserve without bashfulness, cordiality without boldness, modesty without timidity, generosity without prodigality, economy without meanness, self-respect without egotism, firmness without harshness, earnestness without impulsiveness, spirituality without morbidness.

“One of the finest compliments that can be spoken of a young woman is that she is sensible. While we can not define common sense completely, we can mention its characteristics. First, the sensible young woman gladly takes advice from older and wiser people. Secondly, she is self-reliant, whether the daughter of wealth or of poverty. She so prepares herself for life that if left alone in the world she has nothing to fear. This self-reliance becomes a protection and a dignity to her character. The question which the world is now asking about young women is not of her wealth, her culture, or her personal beauty, but what she can do. Never before, in the history of the world, was the opportunity of self-reliance so open to the young woman. A young woman has a right to fit herself to do any honorable thing she can do. The sensible young woman finds a way so that she is independent in life's battle.

“Thirdly, the sensible young woman is brave. Women do not lack courage in the great emergencies of life. But it is in the little things that the test of courage comes. It is the fineness of the thread that makes the richness of the garment. Bravery in the little things is heroic. Woman is endowed by her Creator with a love for the beautiful, and here is room for her heroism. Not only in avoiding extravagance, which is always inartistic, but being contented with simplicity and neatness; in being superior to the dictates of fashion. There are many young women who would brave the coldest midnight, or face great physical peril, from love of father, but who have not courage to go to church with a bonnet out of style. It takes more heroism for a young woman to wear last year's cloak to church than to walk ten miles alone in the darkest night. But the sensible young woman is

not ashamed of dressing within her means.

“Fourthly, the sensible young woman is calm. What we want and do not need makes life unhappy. The sensible young woman calmly endures and makes the best of everything. She laughs at difficulty, and chokes back her fears. Again, the sensible young woman yields to her spiritual nature. Her best thoughts lead to Christ. Infidelity and sin in young women seem worse than they do in a young man.”

WHEN SHOULD GIRLS MARRY?

A GIRL should marry when she is capable of understanding and fulfilling the duties of a true wife and thorough housekeeper, and never before. No matter how old she may be, if she is not capable of managing a house in every department of it, she is not old enough to get married. When she promises to take the position of wife and homemaker, the man who holds her promise has every right to suppose that she knows herself competent to fulfill it. If she proves to be incompetent or unwilling, he has good reason to consider himself cheated. No matter how plain the home may be, if it is in accordance with the husband's means, and he finds it neatly kept, and the meals (no matter how simple) served from shining dishes and clean table linen, that husband will leave his home with loving words and thoughts, and look ahead with eagerness to the time when he can return. Let a young woman play the piano and acquire every accomplishment within her power, the more the better, for every one will be that much more power to be used in making a happy home. At the same time if she can not go to the kitchen if necessary and cheerfully prepare just as good a meal as any one could, with the same material, and serve it neatly after it is prepared, she had better defer her marriage until she learns. If girls would thoroughly fit themselves for the position of intelligent housekeepers before they marry, there would be fewer discontented, unhappy wives and more happy homes.—*Woman's Health Journal.*

“ASSOCIATE with healthy people. Health is contagious as well as disease.”

“REMEMBER that clear water is not necessarily pure water any more than cold air is always pure air.”

THE PERFECT MAN.

THE perfect man must ever be an ideal rather than a reality, for in the environments of this life perfection can not be gained. That ideal is of a full, rounded, and complete character, with no faculty dwarfed, and all held in abeyance to the highest.

An Apollo in physical development, with every artery and vein bounding with pure and healthful blood, is a perfect man physically. In intellect, the composite of all great thinkers would make a perfect man intellectually; he must not be, however, narrowed to any special field of thought, but have all provinces for his kingdom. In moral force and spiritual strength the human mind can form no adequate conception of the perfect man.

The Greeks, by centuries of training, brought the physical form to a high degree of perfection. The religious training of the middle ages scorned the body as sinful and unclean, and left it a wrecked heritage. For us remains the task of blending all departments of man's nature into one perfect being, and it does not appear just yet what this being will be. This much is certain, he ought to transcend any theory we are able at present to conceive. Correct thinking depends on physical health, and that depends on correct living. Morality and religion begin with the food that yields the energy by which they are manifested.

The perfect man is the embodiment of love in a broad sense, and as the sun throws out its rays continually, yet receiving no return, that love gives of itself, asking no recompense.—*Hudson Tuttle.*

OUR OPPORTUNITY.

MAN must work. That seems to be a democratic privilege enjoyed by the majority of us. The Garden of Eden is the spot where this great discovery was made, and its application has been continuous ever since. But whether he shall work as master or slave is an individual question. The man who heavily, dully, mechanically follows a routine so many hours a day, finds toil a heavy taskmaster; but he who infuses his spirit into it, who takes pride in a perfect performance, who constantly seeks to improve himself, to develop and apply new ideas, finds his work a most congenial companion. And since achievement is the only satisfactory and lasting good, since the law of

human nature is evolutionary and progressive, and since our failure to recognize and accept this truth, leads to restlessness and discontent, let us make the most of our opportunities. Work intelligently, observe carefully. There is no one field of activity broader than that of medicine. There are so many unsolved problems lying around to whet the intellect upon. Do not be overwhelmed by the lethargy of routine. Make work your servant, not your master.—*Medical Brief.*

ARE MICROBES NECESSARY?

WE quote the following from a London scientific contemporary: "It has long been known that many kinds of bacteria normally present in the intestines aid in the digestion of food, chiefly acting as ferments, altering food material into substances that can be absorbed by the cells of the intestine. Dr. J. Kijanizin, of the University of Kieff, gives in a recent number of the *Archives de Biologie*, the remarkable result of a series of investigations he has made upon the influence of sterilized air. He devised an apparatus in which small animals could be kept for a number of days, while the air they breathed and the food they ate were supplied, as far as possible, in an absolutely sterilized condition. Although it was not possible to be certain that the food contained no bacteria, it was certain that the air supplied them had been quite freed from microbes, for a gelatin plate, placed in the current, remained without colonies all through the experiments. The animals were weighed before and after the experiments, and their excreta during the experiments were analyzed. Parallel experiments in which all the conditions but the sterilization were identical, were made.

"The experiments seemed to show: First, that there was a remarkable decrease in the assimilation of nitrogenous matter when the air and food were deprived of micro-organisms. No doubt the reason of the decrease was that these micro-organisms aid in the decomposition and peptonizing of the nitrogenous matter in the intestine. Were it possible to remove all the micro-organisms from the intestine before the beginning of the experiment, the author thinks that the decrease in the assimilation of nitrogen would be still greater.

"A second result was that the animals lost weight more quickly under the sterilized conditions than under normal conditions."

RETREAT NOTES

—Mr. Newkirk, of St. Helena, has returned to spend a short time.

—During the past few weeks Mrs. A. F. Coffin and Mrs. Barrett, of Oakland, have enjoyed a short stay at the sanitarium.

—Mr. J. F. Welty and wife, of Riverside, have been with us for several weeks, and have enjoyed the change from the southern to the northern part of the state.

—Albert Lonsburgh, of San Francisco, is spending a few weeks with us, and is rapidly recovering the strength lost during a serious illness from which he has recently suffered.

—Mrs. C. A. Clark, who has for a long time been engaged in missionary work with her relatives in Japan, is enjoying quiet rest and the invigorating treatment at the sanitarium.

—Mr. Ackerman recently made a trip to the city, which is evidence that he is still improving, though it be but slowly. We note with pleasure that Mrs. Ackerman is regaining her full strength after the long illness through which she has passed.

—Many who have been waiting for the return of Dr. Maxson will be pleased to know that he is again at his post. Dr. Maxson has been spending some months in the east in study, and returns to give the institution the advantage of his labors.

—Among our guests at the present time we notice Mrs. W. Frear, of Honolulu, who is in company with Mrs. Dillingham; Miss Isabella Mitchell, of Oakland; Mrs. Howard, of Sacramento; Mr. Crane, of Reno, Nev.; Mr. Storla, of South Dakota, and Mr. Wilson, of San Francisco.

—We are glad to report that Miss Matilda Johnson, our trained administrator of the Swedish movement system, has returned to her work after a prolonged vacation. Her experienced service adds greatly to the efficacy of this important line of treatment, the benefits of which have been greatly appreciated by our guests.

—Mrs. Eloesser, of San Francisco, has recently come to make a somewhat extended stay at the sanitarium. The change, rest, and treatment she is receiving are doing her good, after a long illness from which she has suffered at her home in the city. Her friends frequently come to spend a few days with her, which is making her stay seem still more like home.

—We are pleased to number among our family again Mr. and Mrs. H. Heynemann, of San Francisco, who were with

us for a time last year. In the few days that have elapsed since their arrival, Mr. Heynemann has experienced some relief from the constant suffering he has had to endure from his affliction. It is to be hoped that he may derive considerable benefit from his stay.

—Mrs. Irving Keck, wife of our business manager, with her daughter, arrived recently from Battle Creek, Mich. We are glad that they have come to make their home with us, and feel sure that their efficient services will be greatly appreciated by all interested in the prosperity of the sanitarium. Mrs. Keck has been put in charge of the dining-room—a position for which she has natural aptitude, and it is confidently expected that the service will be greatly improved under her supervision.

—A lawn tennis ground has been laid out in the grove upon the side hill, and our guests for whom this exercise should be appropriate, will soon have the privilege of this pleasant recreation. This, with the many other facilities in the line of manual training, are of great service to chronic invalids in the recovery of health. All the exercises of the patients are under the direction of the physician who has charge of that department, thus avoiding all evil effects; the growth and repair of the body are in this natural way regulated, while the patient gains strength and recovers from his disease.

—St. Helena received a large share of the snowstorm which was quite general in this part of the state on the night of March 1. Snow fell to the depth of five or six inches, and a number of days passed ere the sun had removed the last traces of the heaviest, and in fact the only snowfall of any consequence, that this vicinity has seen for six years. The hillside presented a very rare and picturesque scene, with its trees and bowers bending low beneath the unaccustomed load of pearly white. The novel experience of snowballing was heartily enjoyed by many. The past ten days have been the usually bright, balmy days of spring.

—Our missionary society recently had the privilege of listening to a lecture by Mrs. B. F. Dillingham, of Honolulu, who has for some time been a guest at the sanitarium. Mrs. Dillingham has always lived upon the islands, her parents having been among the first to lead out in pioneer missionary work on the Sandwich Islands. Mrs. Dillingham's long experience and close connection with the growth of Christian enterprises among the natives, made her talk especially interesting and valuable. It is to be hoped that the philanthropic and missionary enterprises of the present day may be carried out in the same interest and spirit of self-sacrifice as were those of early times. If it were so, great good might be accomplished with the added facilities of modern life.

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David praiseth God.

PSALMS.

He prayeth for safety.

19 To deliver their soul from death, and ^b to keep them alive in famine.
20 ^a Our soul waiteth for the LORD: he is our help and our shield.
21 For our ^c heart shall rejoice in him, because we have trusted in his holy name.
22 Let thy mercy, O LORD, be upon us, according as we hope in thee.

PSALM 34.

^a Prov. 24. 16.
^b Ps. 57. 19.
^c ver. 6. 17.
^d Ps. 130. 6.
^e John 13. 36.
^f Zech. 10. 7.
^g John 16. 22.
^h Ps. 94. 23.
ⁱ or, shall be guilty.
^j 1 Kin. 1. 29.
^k Ps. 71. 23.
^l or, Achish,
1 Sam. 21.
13.

19 ^a Many are the afflictions of the righteous: ^b but the LORD delivereth him out of them all.
20 He keepeth all his bones: ^c not one of them is broken.
21 ^d Evil shall slay the wicked: and they that hate the righteous ^e shall be desolate.
22 The LORD ^f redeemeth the soul of his servants: and none of them that trust in him shall be desolate.

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