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A Sound Mind in a Sound Body.

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The Brain and Its Functions.

BY A. J. SANDERSON, M. D.

FROM the investigations of recent years quite a full understanding of the working and nature of the various organs of the body has been obtained, but our knowledge is still very limited concerning the structure and functions of the brain, especially that part of it which relates to action of the mind with its varied manifestation. The nervous system represents the highest and most complicated part of the anatomy and physiology of the human body, and yet the function of every part of it is as much physical as is the function of any other organ. If rightly studied and rightly exercised it is as susceptible of change, development, and right education as are the lungs, the liver, or the stomach.

Because of our ignorance concerning the organization of the brain we are inclined to look upon the mind with a good deal of superstition, thinking there is behind it some life principle which is beyond our comprehension. But from the standpoint of physiologists we are continually being more and more informed that the functions are largely physical, and that the force which operates upon the mind is very closely related, at least, to the same life principle which operates upon every cell and tissue of the body.

We study the action of an organ, such

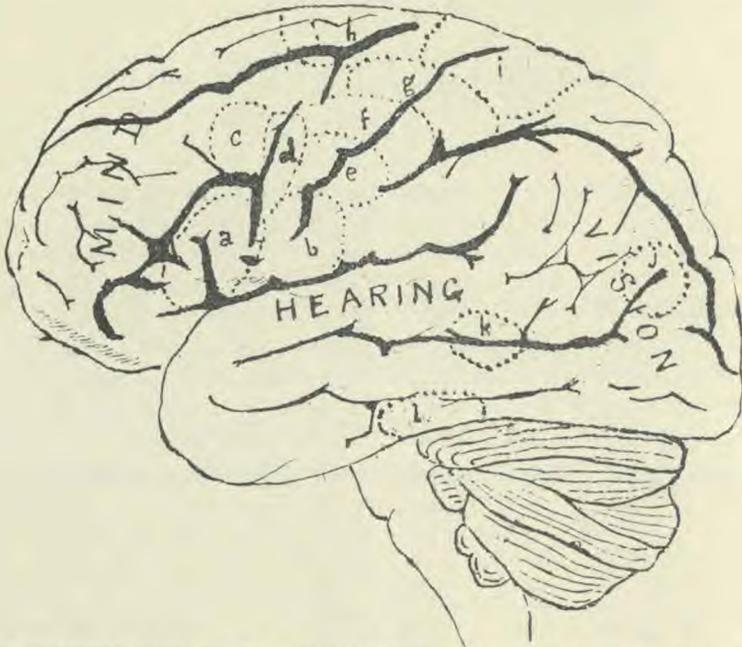
as the liver, for example, and see the work which the individual cell is performing, and notice the results and changes which take place in the blood and nutrition of the body thereby. But to tell the first cause or the beginning of activity in the cell we must simply say that it is because of the life it contains. So with the brain; the life in man which comes from God is the unseen force in operation. Still it is within the power of the close student to study the operation of brain cells, and the mind cells, the same as they study the operation of the liver cells and the gland cells, and as by adhering to the ordinary laws of hygiene with reference to the functions of the body, we can thereby maintain and develop healthy organs and strong muscles, so by rightly exercising the mental powers, which are a heritage to every individual, mental powers and mental strength may be likewise developed.

As a physical organ the brain is most perfect and beautiful in structure, more complex and highly organized than any other part of the human body. Its functions, likewise, stand at the head of all the functions of the body. In fact, it controls every other function. It is the office-room of the body. It is connected by telegraphic and telephonic communications with every part, receives every im-

pression brought to bear upon the life, and sends back orders originating and directing every action. Sever this telegraphic communication and you at once sever all action. A limb that has been separated from its nerve connection with the brain is absolutely lifeless as far as use is concerned.

In structure the brain is made up of two

by fissures into longitudinal ridges. The brain is first divided into two halves or hemispheres by a deep groove called the longitudinal fissure. The centers for all the functions of the body are duplicated, being alike situated on the surface of each half of the brain. Nerves from the center of the left side of the brain go to the right side of the body, and *vice versa*, in each



CUT SHOWING SURFACE OF ONE-HALF THE BRAIN VIEWED FROM THE SIDE.

The centers containing special functions are located as indicated: (a) producing speech; (b) controlling the movements of the larynx, throat, tongue, and lips, and expression around mouth; (c) movements of the eyes; (d) centers for expressing written language; (e) controlling the movement of the fingers; (f) movement of arm and shoulder; (g) movement of hips and knee; (h) movements of trunk; (i) movements of toes, feet, and ankles; (j) that part of vision which enables us to see words; (k) that part of hearing which enables us to distinguish words; (l) naming.

kinds of tissue, which are known as gray matter and white matter. The gray matter represents the nerve cells, which originate nerve impressions, and are located mostly on the surface of the brain. The white matter is the nerve fibers which connect the brain with every other part of the body, and also connect one part of the brain with the other, associating the different portions together. The surface of the brain is not smooth, but divided up

half of the brain. We have the frontal, middle, and posterior lobes. Each of these are divided into convolutions or ridges having deep furrows between them. In the frontal lobe we have the superior, middle, inferior, and ascending convolutions; in the parietal lobe we have the ascending and inferior convolutions, etc. This uneven surface of the brain gives a larger area, and hence increases the amount of gray matter or nerve cells which are located

in its substance. People who have the most well-developed brains have these convolutions most marked and the fissures are more deeply situated.

From point of localization of function we find the position grows more important as we go from the back of the brain forward, until in the foremost part we have the functions of the mind located. The prominent development of the frontal lobe is a feature which marks the development of the brain of man as above that of other animals. A lack of mentality of the individual, especially if it is inherited, will show a poor development of this part of the brain.

By the accompanying cut we notice the localization of many important functions upon the surface of the brain. The function of hearing and sight occupy the large area toward the posterior part of the brain.

As you go forward we come into what is known as the motor area of the brain. The sense of speech lie side by side with the centers which produce motions of the voice, and expressions of the face, etc. Just above the center of speech, in close relation to it, will be noticed the centers that produce motion of the eye, beside of which are the writing centers, which represent the part of the brain that gives expression to written language. We further notice that these centers lie beside those that control the movements of the fingers and arm.

Following upward and backward from this point we see located the centers that control the motion of the body from the head and arms downward. A little study of the cut and foot-note will give a bird's-eye view of one of the many interesting features of the brain.

The Fruit Cure. No. 1.

BY G. H. HEALD, M. D.

PATENT-MEDICINE venders or enthusiastic devotees of some favorite method of treatment are so accustomed to making exaggerated claims for their remedies—claims which on trial prove to be entirely unfounded—that one naturally shrinks from the use of the word "panacea," or cure-all, in regard to any remedy; but if there is one remedial measure which more than any other approaches to the position of a panacea, it is the intelligent use of a fruit dietary. To one who recognizes fruit as the natural food of man, and who sees in the many substitutions which man has made in his dietary, a cause for a large proportion of the ills to which the human race is subject, it is not difficult to understand why a return to the fruit diet is so generally beneficial in disease.

Comparative anatomy shows in many

ways that man is related, not to the carnivora, with their claws, tearing teeth, short intestinal tract, nor with the herbivora, with their hoofs or paws, complex stomachs, etc., but with the frugivora, or apes, with their hands.

True, some men seem desirous to discover a relationship to the hog; and I would not for a moment deny them that distinction. No doubt there has been a process of involution going on by which certain members of the human family have become more closely allied to the hog than to anything else. They eat like hogs, they act like hogs, and, for aught I know, they think like hogs. I would not deny them the privilege, if they so desire it, of being classed with the omnivora.

Man, by nature, is frugivorous, or fruit-eating; his omnivorous propensities have

been acquired, and are handed down as a legacy; but the legacy also includes gout, epilepsy, insanity, dyspepsia, and a multitude of other undesirable heirlooms. Content, once, with the products of nature in their simple forms, he now ransacks the vegetable, animal, and mineral kingdoms in order to find "delicacies" with which to tempt his much-abused appetite. To his overstimulated and much-benumbed palate everything in the state of nature is insipid and unpalatable.

The practise of stimulating the appetite has become so universal that men who stand high in scientific circles are ready to defend the practise as beneficial. In fact, I suppose there has no habit taken hold of the human family so injurious but some man, who might have made better use of his talents, has been found to champion the practise, and demonstrate to those who are anxious for such a demonstration, that the practise is actually a blessing instead of a curse. Thus you will find men loudly defending the alcohol habit, the tobacco habit, the tea and coffee habit, the opium habit, and scores may be found who defend that modified form of cannibalism which lives at the expense of our dumb friends. These men are addicted to these habits, and therefore they seek for some reason why they are beneficial; and, of course, the reasons are readily found when one is seeking for them. So men who have a reputation for scientific attainments are ready to show that condiments, spices, etc., are necessary in order that the

digestive juices may be produced in proper quantities.

To return from this digression, man, in his present condition, is leading an unnatural life. He is using unnatural foods, and forcing his digestion by artificial stimulants, first whetting up his appetite, then whipping up his digestive apparatus to handle indigestible, abominable mixtures in quantities far beyond its natural capacity. As the digestion grows weaker, the stimulation is increased, until at last abused nature gives up the struggle, and there is a collapse. During all this time the individual may not have had so much as a pain in his stomach. If questioned on the subject, he would probably say: "Oh, there's nothing the matter with my stomach! I can digest anything, from sawdust to an oyster can." And probably he can, if he will take with the sawdust and the oyster can a sufficient quantity of dilute hydrochloric acid. For you will usually find these people "take a little something" after dinner to make their dinner set. The stomach can digest anything put into it, provided you put in the right kind of material to aid in the digestion, but it is sometimes ruinous to the stomach.

The fact is, whether they know it or not, whether they will admit it or not, much the larger portion of human sickness begins in the stomach.

I will say more, later, on the influence of gastro-intestinal disturbances on other diseased conditions, and the rationale of the fruit cure.

"Turn Ye, Turn Ye; for Why Will Ye Die?"

BY DAVID PAULSON, M. D.

THE Lord told the children of Israel if they would obey all His statutes and commandments that none of the diseases of the Egyptians should come upon

them, for He was the Lord that healeth them; and as God controls the universe by the same great power at all times, it is evident that if we fully comprehend what con-

ditions it was necessary for the children of Israel to fulfil, and live up to them, we may claim the same blessing. It was not merely a mental assent that was required of the children of Israel in order to have this blessing, but a vigorous looking after the details of dietetic and sanitary science.

The children of Israel were given instructions not to drink out of earthen vessels that had become infected, as from their porous nature they would continue to be sources of contamination. If a metal vessel had become similarly infected, they were given instruction to scour it and rinse it with water. Lev. 6:28. They were given instruction to burn clothing which had been so exposed as to become a means of conveying disease. They were to recognize various quarantine restrictions. If the hands had touched anything so as to become infected with germs, it was not simply enough to bathe them in a basin of water, but they must be washed thoroughly in running water, so that every germ could be carried away. Lev. 15:13. They were told to drink water "with carefulness;" were given suggestions as to diet,—how to avoid food liable to ferment and putrefy. When they should carry out these and other truths God gave them, they would be cooperating with the divine agency, who would then give them the precious gift of health, so there should be no feeble one in their tribes.

We have reached a time when we can no longer consider it an accident to become sick, but the outgrowth of certain steps taken in a certain direction in a scientific manner. Human beings in a most persistent and persevering way take the steps from which disease must result, so that in many cases the body becomes a hold of almost every foul and loathsome disease, when, instead of that, the body might come into the blessed possession of glowing health, the difference being only a matter of sowing. The same soil that

will produce thorns will produce roses, and lilies, and pinks, it being merely a matter of difference in seed.

In our next article we will consider some health seeds which, if conscientiously sown, will spring up and bear some thirty-fold, some an hundred-fold.

CARE OF THE EYES.

THE care of the eyes is of vital importance to every one, and is something that is too often neglected, even in text-books on the eye. The size of the type for continued health of the eyes is important, and should not be smaller than one-fifteenth inch high (this for letters like "n," "s," etc.), and it would be better if they were one-twelfth inch high. The space between lines should be about one-eighth inch. The type should be heavy faced. The paper should be heavy enough so the type does not show through, and firm enough to keep the ink from spreading. A paper that is glazed is tiresome, a dead surface being the best, and the color a neutral tint, not enough tint to be glaring, but so the sharp contrast between black and white will be avoided.

The light should fall upon the paper from a point a little above and to the left of the individual, so no shadows are caused in the paper in turning the leaves. The eyes should not be used over fifteen minutes at a time, for close work, without giving them a rest. After the age of thirty, ten minutes is long enough, and after the sight of old age sets in, five minutes should be the limit. This applies to close work. The time of rest does not mean a half hour, but fifteen or twenty seconds will generally be enough. This gives the delicate muscle of accommodation a little "breathing spell," and it will show its appreciation by allowing you to do much more work without protesting than you otherwise could.—*Dietetic and Hygienic Gazette*.

QUESTION BOX.

111. WHAT is a good preventive of malaria?

A sound stomach and other good digestive organs. Malaria is a disease of the blood, and it gets into this tissue through the alimentary canal. A dilated or foul stomach is the fruitful source for the development of these germs. Often the poisonous products which come from a bad stomach are the cause of malaria. Good water, pure food, and a proper dietary are the best known measures for preventing this disease.

112. What injurious effect, if any, results from the use of too much albuminous matter?

Albuminous element in our food is that which supplies the tissue-building material of the body, and is needed in small proportion when compared with the farinaceous material, which constitutes the purely fuel food of the body. The daily need for tissue growth and repair is very limited, and the processes which make these changes are very complicated. If an excess of the nitrogenous food is taken, it will overtax the eliminative organs. Individuals living on an excess of meat, eggs, nut preparations, or other albuminous foods, will either find the eliminative organs overtaxed and becoming diseased, or the failure to eliminate will clog the system by excess of these elements.

113. I use a tooth-brush every day, yet my teeth are dark at times. Is there any remedy?

Discolored teeth are either due to an accumulation upon the surface of the teeth, or chemical changes made by acid or acid conditions in the mouth, or by the permanent color of the teeth. For the last cause no remedy can be had. If there is not a proper chemical condition in the mouth, the mouth should be fre-

quently washed with a slightly alkaline and antiseptic preparation. Milk of magnesia has been recommended by some dentists as a very good mouth wash. If the teeth are discolored by an accumulation of material left in the mouth by the remnants of food, that is not readily removed by a tooth-brush, the teeth should be frequently scoured either by antiseptic chalk or charcoal; or, if necessary, they should be scoured occasionally by the dentist.

114. Are whipped eggs good food for a person suffering with dilated stomach?

A person with a dilated stomach needs an aseptic dietary, and one that will digest easily. Some of these cases have quite good digestive power in the stomach. If this is true, whipped eggs, made quite light, will be a good food. If the dilatation of the stomach is accompanied by atrophy of the gastric glands, so that no hydrochloric acid or gastric ferments are secreted, a more farinaceous diet would be more easily handled by the digestive organs.

115. What class of sufferers are benefited by the use of unfermented grape juice?

Grape juice is mainly used because of the amount of water contained, and the small amount of nutritive element it possesses. It was quite popular some years ago to treat by means of the grape cure. The advantages of this treatment have been to withhold from the system indigestible food, and supply it with a small quantity of nutritive element that is readily assimilated, and the giving to it of a pure, antiseptic, natural fluid, which, by its free circulation in the blood and tissues, brings about a cleansing process and increases elimination. Grape juice is largely pure water. Hence it is good in all classes of diseases where the poisons of the body have a tendency to accumulate.

116. What is a good topic for table conversation?

That which is farthest removed from the question of food or digestion. The digestive organs of an individual that is constantly studying about his food and the nature of the digestive work, is in a similar position to a man working at his trade who has a dozen bosses suggesting every detail of the work, that it be done this or that way, contrary to his own best judgment. Instead of allowing ourselves to think about our eating at the table, we should be constantly employed in thinking of the anticipated prospect and pleasures there are in the work, energy, and life that will be used as a result of taking the food into a living, active, useful body.

117. Are all forms of fat counter-indicated in all cases of dilatation of stomach?

When fermentation takes place in fatty material, fatty acids are liberated, which are very irritating. Hence fermentation in this class of food produces worse results than that in any other class. The use of butter in case of dilatation of the stomach will nearly always produce this result. The advisability of using other forms of fat can not be told except by the experience of the individual. If one finds, after using nuts or any other food that contains oily matter, that he is constantly tasting them afterwards, it is evident that he should avoid such oily material.

118. What is the effect of discouragement upon health?

Discouragement is unnatural, and con-

trary to life, and prevents every phase of healthy development. It is common habit that a person should be discouraged when he meets with disappointment or suffers from disease; and yet life, to be complete, has to be worked out by varied experience. Disease and sickness teach important lessons which will make our future life very much richer, if we study them from a right standpoint, and learn what they should teach. If this is done, discouragement does not usually come, but hope and inspiration are given to the individual who thus meets the emergencies of life. Discouragement is a morbid condition, and should always receive rational treatment, and it is necessary to have it remedied before progress in any phase of life can be secured.

119. Why is milk sometimes injurious?

For two reasons milk disagrees with some individuals. With a class of people it undergoes fermentation, and produces poisons which enter into the system and do a great deal of harm, especially in clogging the liver, and even producing feelings of suffocation, dizziness, and other symptoms. With other people, milk curdles in the stomach, and becomes indigestible, thus acting like a foreign body in the alimentary canal. This symptom is noted in children when the curds are passed on the stool still unchanged. With older people it is usually retained in the alimentary canal until broken up, but to the great detriment of the digestive organs.

A HINT OF LIFE.

DON'T look for the flaws as you go through life;

And even when you find them,
It is wise and kind to be somewhat blind,
And look for the virtues behind them;
For the cloudiest night has a hint of light
Somewhere in the shadows hiding.
It is better by far to hunt for a star
Than the spot on the sun abiding.

The world will never adjust itself
To suit your whims to the letter;
Some things must go wrong your whole life
long,
And the sooner you know it the better.
It is folly to fight with the Infinite,
And go under at last in the wrestle;
The wiser man shapes into God's good plan,
As the water shapes into a vessel.

—Ella Wheeler Wilcox.

DIET FROM AN ENGLISH PHYSICIAN'S STANDPOINT.

BY G. H. HEALD, M. D.

A RECENT little work on "Diet and Food," by Alexander Haig, M. A., M. D., Oxon., F. R. C. R., England, contains a number of good things on the diet question. The diet he recommends consists of dairy products, grains, pulses, fruits, and vegetables. He says, among other things:—

"The records we are now getting from all sides show that the less animal flesh a people take, the better do they come out in trials of force production, and especially in endurance. As regards force production, those having equivalent quantities of albumen available from any source, animal or vegetable, will be equal to each other; but in endurance those will do best who get their albumens from such animal and vegetable sources as are practically free from uric acid, and who do not indulge in such stimulant poisons as tea, coffee, and other similar alkaloid-containing substances.

"Now, so far as I know, the 'vegetarians' of this country [England] are pretty decidedly superior in endurance to those who feed on animal tissues and might otherwise be expected to equal them; but these 'vegetarians' would be better still, as I have for some years been pointing out, if they not only ruled out animal flesh, but also eggs, which contain a large amount of uric acid, or substances physiologically equivalent to it; also tea and coffee.

"But there is another side to this picture, for in so far as this effect of flesh is due to stimulation it will come to an end . . . and is followed by a fall which is rapid and decided. . . . It follows from this that a meal of meat as compared with a meal of, say, milk, cheese, and bread, equally rich in albumens, is

like the force in an explosive oil as compared with the same amount of force in a slow-burning oil.

"And the man who has dined on flesh, though possibly more lively and energetic at first, will find himself at the end both of his stimulation and his available albumens, and faced by rapidly-falling urea and increasing fatigue, some time before his opponent, who got a precisely similar allowance of albumen from other sources.

"Stimulation is not strength, but force rendered a little more quickly; and it is always followed (and must be so) by an exactly corresponding amount of depression."

"I think that this action of meat as a stimulant and producer of quickly-worked-off force, has a good deal to say to the fact that *as we have come to eat more and more meat we have also come to have a larger and larger number of meals in the day*" (Italic inserted.)

I have made quotations from Dr. Haig's conclusions without giving his experimental proofs, not to bring forth something new on the question of diet, but to show how thinkers across the water look upon this subject.

HOW TO TREAT POISON-OAK.

BY A. J. SANDERSON, M. D.

THE presence of poison-oak in California is a great source of annoyance and often of much suffering to many people. Much of the trouble, however, that arises from it is avoidable. It is the object of this article to place before the readers some suggestions which will help to diminish the amount of evil that results from the presence of this poisonous shrub. The susceptibility of different people to the poison is very different. With certain individuals it seems impossible to avoid being poisoned whenever they come near the plant. This is often either due to a

lowered condition of vitality or the presence of some constitutional weakness, which, when removed, will enable the individual to be more exempt from the poison. A great deal of suffering comes from carelessness on the part of the person about handling or getting near the poison-oak, and neglect about treating the earliest manifestations of the poison. For all persons who are not sure that they will not be poisoned by coming near the shrub the following suggestions will be found helpful:—

The person should, before going into the field or hills, learn to recognize the shrub, and thereby avoid personal contact with it. Poison oak is always worse at certain seasons of the year. It will be found to be more poisonous after the first rains in the fall, and also during the season of the year when the sprouts and leaves are the most tender, which means during the three months from the time when the new growth first starts in the spring; this varies according to the advancement of the season. It sometimes begins with the last of January, or it may not start to come out until the latter part of February or the first of March.

Dampness and wind increase the poisonous influence. By going out just after a rain, especially if the wind is blowing, or in the evenings, a person susceptible will be sure to get poisoned. For this reason a person who is over heated or perspiring is endangered. In windy weather a person very susceptible may become poisoned by living in a vicinity where it grows. A person who has suffered with poison-oak should, when going out into the fields for a walk, take every precaution against being poisoned. One of the means of doing this is to cover the face with a very thin coat of pure white vaseline. Wearing a veil is an additional safeguard. Gloves can be worn on the hands to keep them from being exposed. After coming in

from a walk where one is afraid he has been poisoned, apply to the surface a lotion of sweet spirits of nitre. If there is the least manifestation upon the skin that it has been affected by the poison, wash the surface with strong, cold salt water, or, better, with soft soap and salt together. If the symptoms are at all marked, bathe the surface continuously with a saturated solution of hyposulphite of soda for four or five hours. Another remedy that has proved effective in some cases is the continual application of strong spirits of camphor, applying it every five or ten minutes and allowing it to dry upon the surface. This should be continued for several hours.

Another application which has cured many cases on the start is the frequent use for some time of a solution made by mixing five drams of menthol liniment and three drams of compound tincture of benzoin. Menthol liniment can be made by taking forty or fifty grains of menthol crystals and dissolving it in five drams of alcohol.

Ammonia is also a good antidote for the poison. It can be applied by taking one ounce of dilute aqua ammonia and mixing it with three ounces of olive-oil, and applying this emulsion to the poisoned surface. The effect will be improved by covering the application with a soft cloth or oiled silk, thus excluding the air.

In using ammonia do not use the strong solution, as it is liable to blister the surface and produce sores. No one remedy will act alike on different cases, but these recipes, together with others which may be known to the reader, if applied early and thoroughly, will usually abort the trouble, which becomes so painful when allowed to continue and the parts become swollen.

Other useful lotions may be made by the use of alcohol, tincture of belladonna, tincture of grindelia robusta. Ointments may be made by taking zinc ointment and

mixing it with carbolic acid, ten drops to the ounce, also adding compound tincture of benzoin. When the surface is badly swollen, fomentations will give great relief. They may be given every two hours, followed by the application of an ointment. In treating serious cases of poison-oak, as soon as the swelling has been relieved, the parts will recover most quickly by dry treatment. If blisters are formed, the water should be let out of them carefully in such a way as not to break the loosened skin. As soon as the parts begin to dry, an application of dry powder, such as starch, is good, and as soon as they will stand rubbing, massaging the surface with dry starch, will soften and remove the scaly material, and will bring about a smooth surface quicker than almost any other measure.

OLD AGE AND EXERCISE.

EXERCISE is essential to the preservation of health; inactivity is a potent cause of wasting and degeneration. The vigor and equality of the circulation, the functions of the skin, and the aeration of the blood are all prompted by muscular activity; it also keeps up a proper balance and relation between the important organs of the body. In youth the vigor of the system is often so great that if one organ be sluggish, another part will make amends for the deficiency by acting vicariously, and without consequent damage to itself. In old age the tasks cannot be thus shifted from one organ to another; the work allotted to each sufficiently takes its strength, and vicarious action cannot be performed without injury. Hence the importance of maintaining, as far as possible, the equable action of all the bodily organs, so that the share of vital process assigned to each shall be properly accomplished. For this reason exercise is an important part of the conduct of life

in old age, but discretion is absolutely necessary. An old man should discover by experience how much exercise he can take without exhausting his powers, and should be careful never to exceed the limit. Old persons are apt to forget that their staying powers are much less than they once were, and that, while a walk of two or three miles may prove easy and pleasurable, the addition of a return journey of similar length will seriously overtax the strength.—*Dietetic and Hygienic Gazette.*

A BALANCED DIETARY.

BY G. H. HEALD.

THE accompanying tables show the food value of simple prepared foods. Fruits have not been included, as there is so little uniformity in the amount of sugar used in preparing fruits; and often the amount of sugar used would make a marked change in the food value. Mixed dishes, on account of the lack of uniformity in their method of preparation and consequently in their food values, have also been omitted. The writer hopes in the future to give directions for preparing healthful mixed dishes, together with their food values.

The values here given are of course only approximate; but it is hoped that the careful reader may, by giving close attention to the food values and to the proper proportion of food ingredients, become so accustomed to noting the values of foods that he will unconsciously choose those foods which will give him the proper nitrogen equivalent and the proper amount of energy.

The excess or deficiency in protein is given in each case; and all that is necessary in order to secure a balanced dietary is to select articles so that the total excess protein will be equal to the total deficiency in protein.

extensively advertised is tried; money is freely and sometimes lavishly expended; but the gulf between us and health widens. Then, as the last resort, a trip abroad to some foreign land or mountain-side is suggested. Trunks are packed, and farewells are spoken, and the journey in search for health begun.

When the nineteenth century was ushered in, it found the people with good eyes, ears, mouth full of teeth, heads covered with a heavy growth of hair, and a body strong and hearty. Oculists were unknown; their services were not required. The optician, with his spectacles, was also yet unknown. To be near or far-sighted then was the sure sign that old age was coming on; but to-day we have the optician in the doctor's office, drug, jewelry, notion, and hardware stores, also with the vender of wares standing on the street corner. Children from six to fifteen years old wear spectacles now, so those things that would indicate age in former years are indications no longer.

When the teeth of grandfather or grandmother began to crumble and break, we used to say, "Why, grandpa, you are surely growing old!" Fifty years ago it was a rare thing to find a middle-aged person who did not have a mouth full of sound teeth, thirty-two of them; but to-day it is a rare thing to find an individual with thirty-two sound teeth (not store teeth) without filling of some kind in them. Up to the middle of the present century dental parlors were not known; there was no demand for such places; but so rapidly, in the last forty years, have teeth decayed that a demand for the dentist has sprung up everywhere.

Fifty years ago the doctor of medicine extracted teeth; it was a branch of his profession; but so frequent and urgent have grown the calls from persons with unsound teeth that dentistry has become an independent profession by itself.

Colleges are established and well supported by men who are studying the fast-growing profession of dentistry. Artificial teeth are manufactured by millions every year. Large concerns with vast wealth are actively engaged making the various fillings for teeth and the scores of articles that belong to the dentist paraphernalia.

The heavy growth of hair in olden times was so common that a bald head was a curiosity, but bald heads to-day are seen everywhere, notwithstanding "hair restoratives" and "sure cure" for baldness advertisements are prominently displayed constantly.

Why is it that all of this sudden trouble and misery should swoop down on the people of the nineteenth century like a destroying avalanche? Is there no way to escape the apparent devastation that threatens the nation? Surely sometime in our lives we must have grossly violated nature's laws, and have continued to do so for an extended period of time, before this visible reversal of conditions could possibly exist. Those conditions are here, and that a large majority of the people are afflicted by them is beyond contradiction.

How would it do to pull the lever once more and let there be another reversal in our habits and mode of living, for we must confess that far better and more satisfactory results were obtained by our people who formerly lived on plain articles of food than we secure to-day?

A nation of dyspeptics is the name given to us by the people of other countries, and so we are, made so, though, by our careless and indifferent regard for the laws which govern our bodies.

The plainer, simpler, and more natural the food of man is, the more perfectly the laws relating to his body are fulfilled, and the more healthy, vigorous, and long-lived will be the man. A corresponding activity will also be seen in the intellectual and moral faculties. Man has no power to abolish or violate any of nature's laws without injuring himself.

(To be continued.)

HOW A WOMAN MAY RETAIN BEAUTY.

THE physical beauty of women should last until they are past fifty. Nor does beauty reach its zenith until the age of thirty-five or forty. Helen of Troy comes on the stage at the age of forty. Aspasia was thirty-six when married to Pericles, and she was a brilliant figure thirty years afterward. Cleopatra was past thirty when she met Antony. Diane de Poitiers was thirty-six when she won the heart of Henry II. Anne of Austria was thirty-eight when described as the most beautiful woman in Europe. Mme. de Maintenon was forty-three when united to Louis, and Catherine of Russia, thirty-three when she seized the throne she occupied for thirty-five years. Mlle. Mar was most beautiful at forty-five, and Mme. Recamier, between the ages of thirty-five and fifty-five.

A woman beautiful in all else, but wanting mirth, will grow old, sour, thin, and sallow; while the merry, fun-loving woman will be fresh and sweet, despite life's happenings and sorrows. The highest beauty is the beauty of expression, and the cultivation of this requires the crushing out of envy, hatred, malice, and all low motives and passions.

True beauty rests on plain living and high thinking, on blood, bearing, and brains. It is in one sense a relative thing. To dip far into philosophy on the subject is not necessary.

The gospel of relaxing, of "letting go" of one's self, at times, is essential to facial well-being. The nervous system, like the violin, must not be kept always at concert pitch.

Beauty means harmony, balance, the mental fire of sensibility, as well as bodily attractiveness. Banish fretting, trivial perturbation, scowling, whining, wailing, excessive laughter, and pointless smiling.

In the first place, health is all-impor-

tant. Flesh texture and tint, for example, depend upon it. A complexion lacking luster, plumpness, and elasticity, shows a lack somewhere in the vital or nutritive system. A mild diet, gentle temperature, even digestion, open-air exercise, sleep, and a tranquil mind, pertain to good looks. Mistakes in diet begin usually in childhood. Often a girl sits down to a potato and pickles, several cups of strong tea, pies, cakes, ices, and fiery condiments. If meat be on the bill of fare, there is a chance that it has been spoiled in the cooking. As a result, when the girl is twenty, her eyes are dull, teeth yellow, gums pale, lips wan, flesh flaccid, and skin unyielding. Recourse is had to padding, face washes, stains, and belladonna. The habits of life are unaltered. Before there can be an improvement, a change must be made and firmly persisted in. The diet, while generous, must be temperate. Peppered soups, stews, game, pâtés, ragouts, and spices are not good for the complexion. What is termed the epicurean woman will have, before she is thirty, a blotched face and flabby flesh. Women of nervous and sanguine temperament should restrict themselves to a diet of eggs, milk, bread, fruit, light broths, etc. Pure water should be the daily beverage.

A great deal of beauty at low cost can be obtained through the plentiful use of rain water, sunlight, and open-air exercise. Frequent bathing is a healthful luxury. Bodily exercise should be carried on temperately, its aim being facile muscles, supple joints, and pliant limbs—in a word, physical beauty.

How many women know how to walk? Observe them in the street or entering a drawing-room, even the better classes. One shambles, another slouches as if her shoes were down at the heel; but most of them dive, straining every muscle in their bodies, ploughing along with strenuous

effort, like a ship in a high sea and facing head-winds. A perceptible swing of the body should be manifest with every step—that is, advance all of one side at the same time, with a slight turn right and left of the shoulders as the corresponding foot is projected. A long step—not a stride—easy, unhurried, the leg thrown forward from the hip,—this is the secret of the ideal gait.—*Science Siftings*.

THE OLIVE.

BY A. J. SANDERSON.

CUSTOM has much to do with the diet of mankind, and every age have had various articles of food which have become popular and been utilized with greater or less degree of enthusiasm as being an ideal article of diet. Probably no fruit has a more ancient record than the olive, but for many centuries it has been little utilized by many classes of people. But during recent years the olive industry in California is becoming more and more prominent, and the product of this tree is being used upon the table.

The ripe olive, we believe, contains many admirable qualities that supply real needs in the system, which perhaps can not better be obtained from any other kind of fruit. As a fatty food it gives to the system this element in its most natural form.

The greatest difficulty with the use of olives heretofore has been the kind of olives, and the way they have been prepared. The olive has been taken green and pickled by such unnatural processes that it has furnished very little food material. The value of an olive, like that of nearly every other fruit, is the most perfect when it has reached its natural ripe stage. The oil is most abundant and the richest when it is just ripe enough and not overripe.

One difficulty in the use of fresh olives is the bitter principle it contains when it is thus ripe. This, however, when properly treated, can be removed, and the olive can be preserved in such way as to retain all its natural qualities without this objectionable feature. Some treat olives in lime solutions, but no doubt this method does to a greater or less degree deteriorate the value of the fruit as a food. They are best prepared for food by having the bitter principle removed by the water process, and then preserving them in a good salt solution until the time they are needed to be prepared for the table. Olives in this way become a very palatable and nutritious food, furnishing the system with some elements in a more perfect state than they can be obtained from almost any other article.

B. F. RICHARDS, of the San Francisco Medical Mission, is preparing a course of lectures for the School of Health, which will be started sometime in March. It is the intention of Mr. Richards to make plain the laws that govern the body, especially that portion of them that relate to hygiene and dietetics. In this School of Health instruction will be given by able teachers on perfect combinations of foods, and the best methods of preparing them.

THE first cup of coffee made in France was drunk by Louis XIV. It was then worth £5 16s. a pound, \$8.68 of our money. An eastern merchant by the name of Edwards started the first café (coffee house) in Newman's Court, Cornhill, London, in 1653, and in 1672 cafés were started in Paris. The present consumption of coffee is 3.2 lbs. to each person in France annually; .9 lbs. in England; 7.2 lbs. in United States; 5.2 lbs. in Germany; 11.2 lbs. in Belgium; and 14 lbs. in Brazil.

A GIRL'S TALK WITH GIRLS.

BY ROSE M. WOOD-ALLEN.

A FEW years ago I was a member of a well-known seminary in northern Ohio. We girls used to have great times visiting together. A few congenial spirits would gather in some cozy corner and talk over their plans for the future. We were all ambitious girls, and planned great things for the years to come. When we had learned more, had gained more experience, and had reached the years that give weight and dignity to one's actions, important work was to be done by each one of us.

After leaving the seminary, however, I learned that we had been mistaken in our conception of things. I found that girls have influence—more influence than they dream of.

I learned, in the first place, that they are the ones who decide upon the standard of conduct to be held up before the boys of to-day. I saw young men ridiculing the ideas of their parents as to the proper conduct of young men as "old-fogyish" because some girl had said she thought it manly for a boy to smoke and drink a little. And, on the other hand, I saw with exultant spirit how a young girl's idea of manliness influenced every young man that came near her. I saw one give up his smoking because she objected to it; another leave off card-playing because it met with her disapproval; and even those who were not so greatly influenced, revered her for her high ideals, and always spoke of her in glowing terms.

Thus it was I learned that young girls hold in their hands a greater power than they realize. It is theirs to do what no one else can accomplish. The mother has done the work as well as she knows how; but when the boy reaches a certain age, he is apt to be beyond her reach. And it is just at this period that he steps

under the influence of the girl. She can now either go on, and bring to a noble completion the work the mother has toiled so hard to perfect, or she can begin to tear down and destroy what has already been done.

My heart burns within me whenever I think of the mighty work that might be done by the young women of to-day, did they but realize their power, and rightly use it. Do you long for great things to do? The opportunity is yours *now*.—*Review and Herald*.

NUMBER OF CIGARETTES USED.

INVESTIGATIONS have been made during recent years ascertaining statistics for the number of cigarettes that have been smoked since this baneful habit was introduced among the American people. In 1874 it had become so popular that one million were smoked annually. In ten years it had increased to two billion. To this number another billion was added in nine years, and the increase was so rapid that in 1896, three years later, the amount reckoned was four billion. The money used for the purchase of these articles, if turned into charitable channels, it is claimed would put a pair of shoes on every child in the country, and purchase the necessities of life for a hundred thousand families. It is somewhat hard to estimate, in the present age, whether the civilized or so-called uncivilized countries have the greater need for being educated in the principles of the great moral reforms.

DR. DE NEVILLE, a noted physician, said "the numerous maladies of the stomach and the intestines, from simple catarrh to the most serious diseases of the organs, are often due to our appetite for meat and other stimulants."

GIRLS AND BUSINESS.

DISCUSSING the question whether the so-called business education of our girls is practical and helpful in the preparation for life's battle, one of the New York papers recently made the following statements, which are certainly worthy of consideration:—

"Our girls are being overeducated. Their brains do not find their way out at the finger-tips. After completing the grammar and normal college courses, there seems no opening for them but a teacher's position, the ranks of which are always filled. Cooks, milliners, and dressmakers are needed; but the only material available comes through Castle Garden. A dressmaking establishment in this city, that gowns the Princess and Princesses of Wales, sends to England for help, and pays the passage over, and a good salary besides, to young women for their services, because intelligent American girls *will* not sew, and ignorant ones *can* not. These imported hands command better pay than teachers or stenographers. Their hours are long and confining, and the work hard; but so is everything that brings success. Among milliners there is a never-ending cry for help; and any artistic trimmer can get \$25 a week from the start. It is estimated by a Sixth Avenue employment agent that ten thousand places can be found for cooks at \$60 a month, and twenty-five thousand where good cooks are paid \$80. These are in small, refined families, where from two to four maids are employed, and where the Hercules of the kitchen will not be tolerated. It would seem that, assisted by a scullion, a scholarly cook might map out a program, and make a success as mistress of the kitchen. There are women in this city who own property paid for with their own earnings."

—*Good Housekeeping*.

SEEING THE POINT.

THE following story is told of a Philadelphia millionaire who has been dead some years. A young man came to him one day and asked pecuniary aid to start him in business.

"Do you drink?" asked the millionaire.

"Once in a while."

"Stop it. Stop it for a year, and then come and see me."

The young man broke off the habit at once, and at the end of the year came to see the millionaire again.

"Do you smoke?" asked the successful man.

"Now and then."

"Stop it. Stop it for a year, and then come and see me again."

The young man went home and broke away from this habit. It took him some time, but finally he worried through the year, and presented himself again.

"Do you chew?" asked the philanthropist.

"Yes, I do," was the desperate reply.

"Stop it. Stop it for a year; then come and see me again."

The young man stopped chewing, but he never went back again. When asked by his anxious friends why he never called on the millionaire again, he replied that he knew exactly what the man was driving at. "He'd have told me that now I have stopped drinking and smoking and chewing, I must have saved enough to start myself in business.—*And I have.*"—*Selected.*

DON'T wait for great things; for while you wait, the door to little ones may close.—*Galax Leaf.*

It is said that the royal physician of China receives his salary as long as he keeps his royal patient in health; when he fails in this his salary stops.

FREQUENT FEEDING.

THIRTY-FIVE per cent of children die within the first three years after birth, from disorders of stomach and bowels. There is no greater dietetic sin than to put food into the stomach before it is emptied entirely of the last meal. This error is one of the common causes of indigestion in infants. As a rule, they are fed entirely too frequently. It is a common custom to feed them every two or three hours, or from six to ten times in twenty-four hours. A recent writer of large experience, who tried feeding not oftener than five times a day, had an annual death rate equal to three in four hundred—less than one-twelfth the usual mortality rate among infants.

RECIPES.

APPLE SNOW.—Six large apples, the white of six eggs, grated rind of one lemon, one-fourth pound sugar.

Peel, core, and cut the apples into quarters and put them into a saucepan with the sugar and a little less than half a pint of water. Cook until tender. Beat them to a pulp and add them to the whites of eggs, which should be previously beaten to a froth, and either heap on a glass dish or serve in glasses garnished with preserved cherries or bits of bright-colored jelly. A jug of cream should be served with it.

VEGETABLE STOCK (the basis of all vegetable soups).—Three carrots, two onions, and a leak, two turnips, half a head celery, one of lettuce, two tomatoes, two tablespoonfuls of olive-oil, a bouquet of mixed herbs, two quarts of water. Cut the vegetables small, add the lettuce, and cook for thirty minutes; then add the herbs and the boiling water; salt to taste, stew gently for two hours, and strain through a cloth. Use as soup or gravy stock.
J. E. PATTERSON.

Why We Should Not Eat Meat.

PROF. LEO WIENER, of Harvard University, comes forward with a new theory on vegetarianism, based on observation of animals. He says that the teeth and jaws of man are fashioned directly after those of the fruit and grass-eating animals, instead of carnivorous animals. He also states that man's stomach is more like the herbivorous than the carnivorous animals. From this he proceeds to show that the human race will be obliged to come to vegetarianism, because there will not be land enough left for cattle-raising. He writes as follows in the *Sunday Examiner*:

“Looking at vegetarianism in the light of comparative anatomy, it is self-evident that man was designed to be a vegetarian and nothing else. Quadrupeds are divided into classes according to their foods, and, with the single exception of

man, no animal, as a class, has ever varied from the design of nature.

“These classes are the carnivorous, or flesh-eating, the fruit-eating, the grass-eating, and the omnivorous. Each of these classes has distinctive organs adaptable to the kinds of food it eats, and to no other kinds.

“Man has artificially become an omnivorous animal, in spite of the fact that, anatomically, he is a fruit-eating animal. It is an amusing and significant fact that the only typical omnivorous animal is the pig. Man is trying hard to be a pig.

“The carnivorous animals all have very short intestines, adapted only to the digestion of meat. They have only one stomach, and could not digest grass as the cow does. Their teeth are all long and sharp, so that they can tear meat, but they have

no flat-topped teeth to grind vegetable foods, as man has.

"It has been said that the so-called 'canine' teeth of man are like those of the carnivorous animal, and that this is an indication that man is an omnivorous animal. This is not correct. These are not canine teeth, strictly speaking. To be sure, they are somewhat pointed, but they are flat also, flat and pointed, and not round and pointed, like those of the carnivorous animals.

"The grass-eating animals have several stomachs—from two to five—and very long intestines, specially adapted to the digestion of grass. They have also flat-topped teeth for grinding.

"The fruit-eating animals are the only ones that resemble man. They have only one stomach and a medium-length alimentary canal, half way between that of the carnivorous and the grass-eating classes. The nearest animals to man are the monkey and ape. They are fruit-eaters.

"No meat-eating animal in the world has the horizontal movement of the lower jaw in eating as man has. This is proof positive that man is not a meat-eater, according to the design of nature. These arguments on the physical side of the question prove primarily that man is not physically adapted to the eating of meat.

"From an economic standpoint, it can easily be seen that man must sooner or later become a vegetarian. This is merely a question of time and a matter of room. The increase of civilization and population gradually must do away with cattle raising, because of the absolute demand for land for cultivation.

"When we eat meat, we are eating the product of the earth at second hand. The vegetation has been eaten by the animal, and a large part of it converted into bone and tendon and wasted, and we eat only what is left and made into flesh.

"To reduce the economic problem to

figures: One acre of land, which would furnish enough flesh to support one man, would furnish enough grain to support ten men. Thus, you see, when the increased population causes an increased demand for food, and for land on which to raise food, it will become necessary to raise that which is the most economic—that which will produce the most per acre.

"The hygienic argument you can obtain from any reputable physician, who will tell you that meat-eating is heating to the blood, that it is especially a stimulant rather than a food, and that there is great danger of the transmission of various serious diseases from animal to man.

"Meat-eating in the ideal stage is bad enough. If the animals that we eat were in all the health with which nature endows them, roaming wild and free over the open fields, with plenty of exercise, and permitted to choose of their own free will from the best of the various vegetable growths for their food, that would be one thing. But, as civilization has advanced, cattle are raised for the sole purpose of slaughter. They get little or no exercise.

Any veterinary surgeon will tell you that animals kept without exercise will contract and propagate various diseases which are practically unknown to them in their wild state. They are artificially fattened, and this kind of fat is not the material which we should put into our bodies.

But it is the appalling character of the disease in meat which frightens us. Tuberculosis, one of the most common and fatal diseases among cattle, causes great destruction of human life by consumption. A recent alarming spread of leprosy in Norway, Hawaii, and the other fish-eating countries, is traced directly by scientists to the eating of fish. In this case, to be sure, it is thought that the eating of the fish raw, instead of cooked, is what brings on leprosy, but the fact that the germs are there at all is sufficient.—*S. F. Examiner.*

PUBLISHERS' DEPARTMENT.

CALIFORNIA MEDICAL MISSIONARY AND BENEVOLENT ASSOCIATION.

MOST of our readers will remember that during the summer of last year this association was organized for the purpose of carrying on various lines of philanthropic work. It has been incorporated under the laws of the State of California, and plans are being laid for the promulgation of the different interests. The association has had the running of the Sanitarium for some months. This institution is run on a benevolent basis, but as it has to find its own means of support, it can not do the amount of work for the poor that it would be pleased to do. Other lines of work are taken up, which are more directly charitable in their nature. The education of nurses at the Sanitarium Training School is to prepare them for lines of work in the association. District nursing work in San Francisco has been carried on for several months, which has afforded a great deal of help to many of the poor and suffering who could not thus have the ordinary necessities supplied for the sick-room.

For the purpose of disseminating a better knowledge of the principles of healthful living, the organization of schools of health is being planned. In connection with this B. F. Richards has been requested to give courses of lectures upon these several subjects.

An outline of one of these courses will appear in an article written by himself in the present issue of the JOURNAL.

SANITARIUM PROGRESS.

WORK at the Sanitarium during the present season has developed many features of interest and prosperity. The conditions of the buildings have necessitated that certain improvements should be made. To accomplish this the first story of the main building has been largely rebuilt, and the dining-room has been placed in the front part of the building. Quite extensive improvements are also to be made in the bath-rooms, which will give better facilities for treating

the various classes of patients who come to the Sanitarium for relief.

The work in the different departments is becoming better organized than ever before, and the needs and comfort of those coming to the Sanitarium have never been so thoroughly met as they will be during the present season.

OUR JOURNAL.

OWING to the success which has followed the publication of the JOURNAL, and its wider circulation, which is being developed, some improvements have been made in our paper. This number comes out with four additional pages. Contributors of larger experience have been secured to furnish articles, and we can assure our readers that the PACIFIC HEALTH JOURNAL, will be one of the most valuable visitors that can be had for the physical welfare of the home and the individual.

CLUBBING RATES.

ARRANGEMENTS are being made from time to time to secure clubbing rates for the PACIFIC HEALTH JOURNAL, with other valuable periodicals, both in this state and the east. We are preparing this month to offer to our readers a clubbing rate with the San Francisco *Weekly* and *Daily Call*. By this arrangement these papers may be had at the price of one. The *Weekly Call* with the HEALTH JOURNAL can be had for \$1.00 a year. The *Daily* can be sent with the HEALTH JOURNAL for one month for 75 cents. A three months' subscription for the *Daily Call* with the JOURNAL can be had for \$1.50. The annual subscription for the HEALTH JOURNAL and the *Daily Call* is \$5.00. Both periodicals are to be sent by mail, and subscription, accompanied by the money, should be sent to PACIFIC HEALTH JOURNAL, St. Helena, Cal.

Our readers will also notice that arrangements have been made so that the *New Crusade* can be furnished with the PACIFIC HEALTH JOURNAL, for \$1.25 per year. Also, *Good Health* can be secured with the JOURNAL for \$1.25 a year.

VISITING NURSES.

DURING the last six months several of the Sanitarium nurses have been spending a part of their time in visiting the sick poor in San Francisco. This is a very needy field. Many worthy ones are suffering and dying because there is no one to help them.

In one family visited there was a sick mother who had been helpless for many months. The father was out of work and the burden of support rested upon the young children. The nurse gave the mother treatment for several weeks, and she made rapid improvement. The father is now at work, and the mother is able to assist in the home. The whole family are rejoicing that the Lord sent them help in their sore need.

One poor girl who had tuberculosis was nursed through the last days of her sickness. She died, believing her sins were forgiven.

Food, clothing, and good cheer have gone into many homes, causing hope to be renewed and aspiration for a better life.

It is the intention of the California Medical Missionary and Benevolent Association to give, through the contemplated lectures and School of Health, information that will not only be beneficial now, but will be helpful through life; true conditions as they exist in the human family, will be made plain, and the remedy will be carefully taught.

Full instruction will be given on the digestion of food, what is and what is not food, what foods should be eaten during the meal hour, why harmful results come from wrong combination of food, how much food should be eaten at the meal, how often food should be taken, how food should be prepared, and when and what to drink.

Considerable attention will be given to the study of food elements, a knowledge of which will aid materially in not making mistakes in selecting a suitable combination of wholesome food. "Man, know thyself," is excellent advice; but, "Man, know thy food," is fully as important.

THE Vegetarian, a hygienic restaurant recently opened in San Francisco under the direction of the branch of the St Helena Sanitarium, is being well patronized by

those who are seeking health and good food. It is standing as an exponent of general dietetic reform, advocating temperance in both eating and drinking.

The San Francisco branch of the St. Helena Sanitarium was never more prosperous than at the present time. One year ago it was established in its present location, 1436 Market Street. The patronage has steadily increased until it is necessary to enlarge the facilities for work.

During the recent six days' bicycle race in San Francisco, the winners of the first and second prizes lived upon Sanitarium health foods. Mr. Miller, the champion, weighed as much when the race was finished as at the beginning. During his race in New York he ate the same food and gained one pound in the six days. His trainer, Mr. West, says: "The men who eat health foods finish the race in a much better condition than those who do not."

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