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DOCTOR CHARLES W. ELIOT PREDICTS RACE DEGENERACY

DR. CHARLES W. ELIOT, President Emeritus of Harvard University, gave expression a few days since to the alarm with which every American thinker views the increasing evidences of race degeneracy. Said Doctor Eliot: "None of the industries are here that were here sixty years ago. Trades are different and the factory system has been established. This system is destructive to the worker, and it will never be possible to make it safe. It has brought about an extraordinary development of our industries and manufactures, but at the expense of grave results to the physical well-being of the factory and mill workers and their children.

"ALL SORTS OF EVILS OF IMMORAL CHARACTER attend city life the world over. The great cities of the world are all the time affording the means of their own destruction. It is not

practicable to bring up children in the big cities, because of the moral dangers that exist in them. City life, and the factory system, which keeps the immigrant boy and girl and man in the cities, are doing them untold harm, physically and morally.

"IF MEN OF PUBLIC SPIRIT, of foresight, and intelligence do not find the remedy, I foresee a terrible physical and moral degeneracy, already visible, within the next one hundred years, a condition similar to that existing in the English factory cities today. We must struggle against it.

"THE FAMILY LIFE AND FAMILY DISCIPLINE have greatly changed. Today the children of the rich do not attend the public schools. They are educated in boarding and private schools. The early families were large, numbering from ten to twelve children. It is said that one thousand Harvard graduates and their wives will not reproduce themselves in the next fifty years."

THESE ARE NOT THE WORDS OF A PROFESSIONAL ALARMIST, but of one of the profoundest thinkers of our time, a man of tempered ideals and of temperate and cautious statement. Doctor Eliot is not alone in his view. In the rapid increase in chronic disease, in the appalling spread of idiocy and feeble-mindedness, in the growing tendencies to crime, and in the lowering of moral standards, thoughtful men and women the country over are beginning to see unmistakable signs of racial decay.

THE PARAGRAPH QUOTED ABOVE acquires added interest just now because of the approach of an important conference in which Doctor Eliot is to take an active part. We refer

to the National Conference on Race Betterment, which is to be held in Battle Creek January 8 to 12, next. This notable gathering of scientists will be unique in that it will bring together leading American students of every science that is contributory in any way to the discussion of race improvement. Among the men and women who have signified their intention of being present and taking part in the deliberations of the Congress are eminent hygienists, physiologists, biologists, psychologists, educationalists, sociologists, political economists, conservationists, physical educationalists, and statisticians.

THE PURPOSE OF THE CONFERENCE, as announced, will be "to assemble evidence as to the extent to which degenerative tendencies are actively at work in America and to set in action agencies by which they may be counteracted." This is an ambitious program, one that would put to severe test a body not composed of men and women inspired by lofty ideals and a firm determination to do all in their power to turn back the tide of inefficiency and unfitness that is sweeping down the race. Doctor Eliot and Professor Irving Fisher—these and men like them are not interested in the subject of eugenics in a perfunctory way; they are interested in the subject because they have very deeply at heart the welfare of their fellowmen and of the future of the race, and because they know that in a world-wide campaign of education lies the only solution to better bred men and women.

The list of speakers is an imposing one, the following names being representative of the entire program: Hon. Woodbridge N. Ferris, Governor of Michigan; Dr. C. B. Davenport, Director of the Carnegie Station for Experimental Evolution; Dr. Eugene Fisk, Medical Director, Postal Life Insurance

Company; Frederick L. Hoffman, Statistican, Prudential Life Insurance Company; E. E. Rittenhouse, Conservation Commissioner, Equitable Life Insurance Company; Professor Walter Wilcox, Cornell University; Dr. Henry Smith Williams; Prof. Graham Taylor, Chicago Vice Commissioner; Victor C. Vaughn, M. D., LL. D., University of Michigan; Sir Horace Plunkett, K. C., V. O., formerly Minister of Agriculture for Ireland; Dean Sumner, Chicago; Winfield Scott Hall, M. D., Northwestern University Medical School; Mrs. Ella Flagg Young, Chicago; and Mr. Jacob Riis, New York.

THAT THE SCOPE OF THE CONGRESS will not be narrow in any sense is well shown by the following list of topics, which covers only a part of the program: President's address, "The Basic Principles of Race Betterment," by Stephen Smith, A. M., M. D., LL. D.; Biological Evidences of Race Degeneration, Decadence and Civilization, Increase of Insanity, Deterioration of Civilized Woman, Institutional Evidences of Race Degeneracy, Uneugenical Matings, Infant Mortality and Marriage Selection, Parental Care, Are Individual Injuries Race Injuries? Industrial Diseases, Effect of Industrial Conditions on Motherhood, Sanitary Surveys, Sterilization, Segregation, etc.

THE CONFERENCE IS OPEN TO EVERY PERSON sympathetically interested in the aims and purposes of the organization. A prospectus going more fully into the organization of the meeting and schedule of program and speakers has been prepared and will be mailed free to any one interested in the subject. Address Miss Emily F. Robbins, Secretary, National Conference on Race Betterment, Battle Creek, Michigan.

NEED FOR A TOOTH-BRUSH CAMPAIGN

IN THE PROGRAM OF THE RACE CONSERVATION MOVEMENT a prominent part must be assigned to dental hygiene, for undoubtedly a very close connection exists between racial and dental decay. Rarely does one find today a man or a woman of thirty years of age with perfectly sound teeth, and the situation is becoming more deplorable in proportion as the other signs of race degeneracy increase. Dr. William Osler indicated the seriousness of the situation when he said in an address at the Royal Dental Hospital of London, "You have just one gospel to preach, and you have got to preach it early, and you have got to preach it late, in season and out of season. It is the gospel of cleanliness of the mouth; cleanliness of the teeth; and cleanliness of the throat. These three things must be your text through life . . . Oral hygiene, the hygiene of the mouth,—there is not a single thing more important to the public in the whole range of hygiene than that; and it is with that which you, as practitioners, will have to deal."

BEFORE THE NEW YORK INSTITUTE OF STOMATOLOGY Dr. D. D. Smith indicated a few years ago the profound importance of mouth hygiene: "It may seem presumptuous," said Doctor Smith, "to intimate that in this subject of oral prophylaxis, when fully comprehended, are matters of a magnitude to radically modify the present thought and conception of dentistry, and to greatly change the present methods of practice. To advance a step farther, and suggest that there are hidden away under the débris of the oral cavity secrets of greater importance to the comfort and welfare of civilization than the great discovery of vaccination by Jenner in 1796, will

doubtless seem a magnification verging upon absurdity. And yet we venture to predict that the future of dentistry will disclose this as a truism."

DOCTOR KNOWLTON, dental examiner of the Diamond-match Factory at Barberton, Ohio, once reported that since attention began to be paid to oral hygiene among factory hands, he had observed a notable decrease in the number of days lost through sickness, and was confident that sounder teeth made for a better functioning of the digestive tract, with better health as a result. He had further observed that during epidemics of disease fewer employes succumbed to the prevailing maladies than before prophylactic measures were adopted.

DEFECTIVE TEETH ARE AT ONCE A CAUSE AND AN EFFECT. As Dr. John Syre Marshall has put it, "Suppurative or septic conditions of the mouth are exceedingly common and are in a large majority of cases associated with the teeth. The statement has already been made, and the fact is recognized, that dental disorders are the most common of all diseases that afflict the human race, and that many obscure diseases affecting the general system—such as chronic dyspepsia, gastritis, gastro-enteritis, certain nervous affections, tonsillar diseases, pharyngitis, bronchial and pulmonary affections, certain diseases of the eye and ear, and general septic conditions such as septicemia and pyemia—may be traced to infection from a septic oral cavity."

THIS IS NOT SURPRISING when we consider some of the bacteria which infect the mouth, a partial list of which a writer in *Oral Hygiene* gives as follows:

"Bacillus tuberculosis, bacillus buccalis maximus, bacillus prodigiosus, bacillus violaceus, bacillus proteus vulgaris, bacillus influenza, bacterium cerasinum, bacterium coli communi, bacterium gingevæ pyogenes, bacterium termo, iodoccus vaginatus, leptothrix buccalis, leptothrix innominatus, micrococcus gingevæ pyogenes, pneumococcus Friedlander, pseudo diphtheretic bacillus ('Roux & Yersin'), staphylococcus albus, staphylococcus aureus, staphylococcus citreus, saccina auranteaca, micrococcus lebragenous, mycelia (thrush), diplococcus catarrhalis, spirilla, streptococcus, vilrio rugula, Vignal's bacillus, streptothrix actinomyces, streptococcus mucoses capsulatus, and the microorganisms of diseases previously considered.

"These germs," says the writer, "are found in the following sheltered places where they propagate—here they have all the elements necessary for their existence, food, moisture and warmth: between teeth, under the gingival fold of gum surrounding each tooth, in cavities of carious teeth, necrotic roots, in infected pulps, abscessed teeth, under ill-fitting crowns, bridges and plates, defective fillings, pyorrhea alveolaris pockets, tonsils and abraded or pathogenic mucous membrane. They have been found to be very virulent, causing death to the patient and operator."

TO PREVENT THE SPREAD OF INFECTION FROM THESE ORGANISMS, constant care must be given to the teeth, and as an aid to this end we suggest the following practical methods:

1. See that the teeth are properly developed. To this end, supply the child while an infant, and ever after, with an abundance of food which is rich in "salts," such as peas, beans, graham bread, oatmeal, and the like, and carefully watch the first set of teeth as they are developed and give place to the permanent set.

2. Have a tooth filled as soon as the smallest appearance of decay is discovered; and in order to discover the very beginnings of decay, examine them frequently, or have a dentist do so. If a child complains of toothache, take him to a good dentist at once, for something is certainly wrong. It is a mistake to suppose that it is not worth while to have first teeth filled, since others will come in their place. Unless the tooth is about to be displaced by the permanent tooth, it should be filled, for the benefit of the coming permanent tooth as well as for the present health and comfort of the child.

3. Cleanse the teeth night and morning, as well as after each meal, taking care to remove all particles of food, brushing and rinsing well. Use soap and powder at least once a day. Give attention to the back teeth, and the inside as well as the front of the teeth. It is especally important to give attention to the spaces between the teeth.

4. Never allow mineral acids of any kind, nor such preparations as chlorid or sulphate of iron, to touch the teeth, as they will destroy the enamel.

5. Avoid allowing gritty substances to come in contact with the enamel, as they will scratch and mar it, and perhaps cause the beginning of decay.

6. If possible, never lose a tooth. An eminent physician once said that we lose a year of life every time we part with a tooth. They are too valuable to lose when by a trifling expense they may be saved.

7. Never employ traveling dentists nor purchase or use patent compounds for the teeth. Many of them contain substances which will destroy the enamel or induce disease of the gums.

8. Never carry "old stumps" in the mouth. If they cannot be filled, have them extracted.

9. If the teeth are utterly in ruins and can in no way be repaired so as to make them really serviceable, they should be replaced by good artificial teeth.

10. Artificial teeth must be cared for with as much scrupulous regularity and thoroughness as natural teeth, in order to preserve the health of the mouth. They should be removed from the mouth at night and placed in a glass of water, and in the morning should be thoroughly cleansed with fine soap or with a solution of chlorinated soda, which can be obtained of any druggist. They should also be removed from the mouth and thoroughly cleansed after each meal.

AT THE SAME TIME, as we remarked above, bad teeth are an effect as well as a cause. They are a result of lowered vitality, and indicate that the body health is not up to standard. On this account, diligent attention should be given to the general health. Indigestion, biliousness, constipation and other disturbances of the digestive tract are a prolific source of dental ill-health, and hence those measures of diet advocated from month to month in GOOD HEALTH must be rigidly applied, paying special attention to the question of constipation and other conditions which encourage the growth in the colon of malevolent bacteria.

EXERCISE IS ALSO IMPORTANT. Walking, horseback riding, tennis (in cases where tennis is not too strenuous), golf—these and all other outdoor pursuits are most beneficial forms of exercise.

ALSO CONDUCIVE TO INCREASED VITALITY AND GENERAL BODY RESISTANCE is fresh-air sleeping. The market now supplies so many ingenius devices for procuring fresh air for the sleeper in the form of window tents, porch beds, etc., that no excuse is offered for unventilated sleeping apartments. Too, the man or woman who would keep the mind and body at concert pitch will secure plenty of rest and sleep. The healthy body needs at least eight hours' sleep a day, and besides this, plenty of recreation and rest—which need not, however, involve absolute cessation of employment, but may take the form of hobbies.

THE CORRECTION OF MENTAL DEFECTS is playing a very large part in the medical inspection of school children. Every attempt is being made by community control to correct the defects in order to improve the mental capacity and alertness of the pupil. This is quite as it should be. We all, old and young, are ready to assent to this. But while applauding this very worthy work, parents should remember that they themselves, quite as much as their children, need periodical dental inspection and general overhauling of the teeth, and frequent use during the day of the tooth brush. Cavities and crevices filled with bacteria, great yawning spaces which make thorough mastication of the food impossible—they should remember that these play quite as important a part in their own dental states, and in their general condition of vitality, as in those of the children which they send to school.

"WHATEVER takes the mind out of itself, causes it to look up, interests it in great truths, helps the body too."—*J. Freeman Clark.*

Regarding John D. Works

IN THE SEPTEMBER NUMBER OF *Oral Hygiene*, the Editor, Dr. George Edwin Hunt, under the above head, takes a delightful fling at United States Senator John D. Works, of California, who has been backing up the Christian Scientists in their attack against the proposed Federal Department of Health:

"SOMEBODY," says Doctor Hunt, "presumably the distinguished gentleman himself, sent me two copies, franked so they would add a little to the post-office deficit, of a pamphlet containing a speech against the proposed National Board of Health made by Senator John D. Works, of California, in the Senate.

"NOW LET'S SEE. John talked nearly seventy-eight pages of six and eight point type, which is quite a little talk and must have consumed three or four hours. You and I, dear reader, are paying John $7,500 a year, clerk hire, and 'pickings' in the shape of hair-cuts, baths, shaves and various other things. Also, when John consumed some hours of time for which you and I are paying, to drivelling seventy-eight pages of small type stuff, he was wasting the time of some ninety-odd other senators whom you and I are paying $7,500 a year, clerk hire, and 'pickings,' not forgetting the mileage grab.

"BUT NOT CONTENT WITH THE ABOVE, John has the government print-shop, which you and I paid for building and whose employees and paper and type we are putting up for, John had them print a few thousand of the pamphlets of his speech. There must have been quite a few thousand, because

I received two copies and I never held public office, am not rich, never was in politics except as a reformer, and have done nothing to entitle me to such an unexpected, and totally undesired honor. Then John sent those pamphlets out broadcast over the country at the expense of the government—that is, at the expense of you and me. So John's little oratorical flight cost you and me a considerable sum and constitutes one of the reasons for the h. c. of l - g.

"WHY DOES JOHN DO ALL THIS? Easy! John and Mrs. John are Christian Scientists and do not believe in disease, death or doctors.

"IF THE CALIFORNIA LEGISLATURE will kindly send a different type of representative to the Senate, it will greatly oblige. If John D. will quit sending me his speeches, he will also greatly oblige."

The Causes of Old Age

ONE OF THE MOST STRIKING FEATURES of the autumn magazines was an article contributed by Dr. Stoddard Goodhue to the *Cosmopolitan Magazine*. Inquiring into the causes of old age, Doctor Goodhue finds that the first and most important of all causes is an excessive proportion of proteins in the dietary of the average person, and so closely do the conclusions reached by Doctor Goodhue after a study of the most recent experiments coincide with the position which GOOD HEALTH has taken for many years on the subject, that we quote at some length as follows:

"DO YOU KNOW HOW OLD YOU ARE? The question sounds absurd, but it is not not. Of course, you know when you were born; but are you sure you know how fast you have lived? Age is not measured solely by birthdays. It is far more surely measured by the state of your arteries. You may in reality be thirty-five or forty years old, while your neighbor is properly to be spoken of as seventy or seventy-five years young. The difference is that your neighbor has learned the secret of right living, whereas you, if old at forty, are probably poisoning yourself with the food that you eat.

"PERHAPS YOU ARE NOT AWARE THAT COMMON FOODS may become poisonous to you under certain conditions. If you eat too much nitrogenous food, the bad effects will make themselves felt on your arteries, and you will age in reality by two or three years with each successive birthday. Protein (meat) poisoning makes brittle arteries; and a man with brittle arteries has the sword of Damocles hanging perpetually over his head. Hundreds of thousands of people are thus menaced, as the death-rolls from apoplexy, heart-failure, paralysis and sundry diseases of liver and kidneys prove day by day. Do you know whether you are thus menaced? If not, it is worth your while to find out.

"THE ALARMING PREVALENCE OF THIS CONDITION of arterial degeneration gives peculiar importance to a report read at a meeting of the Paris Academy of Medicine last May by Professor LeTulle. The report concerns the remarkable work done there in recent months by Doctor Moutier in the way of treatment of diseases of the arterial system with the high-frequency electric current. It was reported that Doctor

Moutier has succeeded, in a large number of cases, in restoring diseased arteries to a normal condition, thus giving a normal blood-supply to the tissues.

"IT IS HIGHLY INTERESTING TO ADD THAT ALMOST SIMULTANEOUSLY the report comes from Berlin that Doctor Saubermann has accomplished similar results by treating diseased arteries with radium. These discoveries deal with a subject of profound importance. In 1910, more than 100,000 persons died in the United States from diseases of the circulatory apparatus—almost twice as many deaths as were due to an entire coterie of much-dreaded contagious diseases. Tuberculosis causes the death of only 160 persons per 100,000 of the population, and cancer and other malignant tumors claim only 76, as against 185 who fall victims to diseases of the circulatory system.

"MOREOVER, THERE ARE MANY DEGENERATIVE MALADIES affecting other vital organs that are inaugurated by, or dependent upon, disturbances of the blood-supply; and these degenerative diseases affecting the heart, blood-vessels, kidneys and other vital organs are very actively on the increase. It is computed that the death-rate from this class of diseases per 100,000 of the population was 190 in 1880, that it advanced to 243 in 1890, to 314 in 1900, and to 387 in 1906; thus more than doubling in the course of a single generation.

"AND THE ALARMING CHANGE IS CLOSELY CONNECTED WITH ERRORS OF DIET which lead to degenerative changes of the arteries; changes which have hitherto been considered incurable, but which, according to the reports from

Paris and Berlin, may now be brought within the scope of remedial treatment.

"But while great interest and importance thus attach to the possible restoration to the normal of arteries that have become diseased, it should go without saying, in this age of preventive medicine, that a still greater importance attaches to the question: 'How can we prevent the arteries from becoming diseased.' Here, as elsewhere, prevention is far better than cure. And it fortunately happens that these maladies are preeminently preventable. In the main, they are brought on by habits of life that might readily be changed.

Injurious Habits of Eating

"ONE OF THE MOST STRIKING CONCLUSIONS to which recent investigators have come is that a very large proportion of people who have reached middle life have acquired habits of eating that are directly injurious, and that subject their systems to a slow poisoning that, in effect, hastens old age and ultimately brings death itself.

"There is nothing new in the statement that most people eat too much. But the new investigators go beyond this and point out the precise kinds of food that produce particular types of injury. They tell us that a great number of persons who have passed middle life have accustomed themselves to a diet that includes an excess of proteins—that is to say, of foods that contain nitrogen, of which prominent examples are eggs and all kinds of meat.

" 'Protein,' says Dr. L. F. Bishop, of New York, 'is very important in building up the tissues, strengthening the muscles, and stimulating the activity of the brain and emotions. It is

the food that produces great leaders and brain-workers, but it is also a food that, in the present day, is terminating prematurely some of the best lives in the nation.'

"The specific explanation given by Doctor Bishop of this rather alarming statement is based on a long series of observations in which laboratory work has joined hands with clinical experience. This work has to do with a condition of the organism which the specialist terms 'anaphylaxis.' Stated untechnically, this means a curious susceptibility to a particular food or medicine. Such so-called idiosyncrasies have been known in a general way from the earliest times. It is traditional that 'what is one man's food is another's poison.' But the scientific investigation of the matter is altogether modern.

"An individual may become susceptible to the poisonous properties of the protein of eggs or of fish, or of beef or mutton. The individual in whose system this undue sensitiveness has developed may be quite unconscious of his infirmity. Indeed, the food that particularly poisons him may be one of which he is especially fond. So he continues to take it in large quantities, and is steadily and persistently poisoned. The effects are not immediately obvious in a marked degree, but the cumulative result is finally apparent in the degeneration of many tissues, leading ultimately to a marked disturbance of function of such all-essential organs as the heart and vascular system, the liver and the kidneys. Doctor Bishop believes that the typical malady of middle life known as arteriosclerosis, or hardening of the arteries, is due to systematic poisoning from the habitual ingestion of foods to which the particular individual has become unduly sensitized.

"These facts should be known to and pondered by every individual who has reached middle life. But how, practically

speaking, may you and I know whether we are poisoning ourselves?

Food As Fuel

"IT IS OBVIOUSLY ESSENTIAL for the proper working of such a wonderful heat engine as is the animal machine, that the blood-vessels should be elastic and resilient, responsive to the mandates of the nervous mechanism. Nor can we expect ideal conditions if the body is constantly called upon to consume a needless supply of fuel and to generate an undue quantity of heat. Under such circumstances, the excretory channels become clogged with waste products, just as the carbonator and cylinder of a gasoline motor become clogged if too much gas is supplied or an improper admixture of gas and air.

"Let us ask, then, a little more specifically, just how it may be known whether you, individually, are supplying your bodily machine with the right kind and also the right quantities of fuel.

"FOODS ARE EITHER PROTEINS OR FATS OR CARBOHYDRATES. Fats and carbohydrates consist of carbon, hydrogen and oxygen; protein contains the same elements with the addition of nitrogen. The familiar carbohydrates are starches and sugars in their various combinations. The proteins are supplied by meats of all kinds, and by bulk, cheese and eggs. There is also protein in bread, and a relatively high percentage in leguminous vegetables such as beans and peas.

"ALL THREE CLASSES OF FOOD PRODUCTS SUPPLY FUEL to be oxidized, or burned, in the system. But there is a very radical additional function subserved by the proteins or

nitrogenous foods. These supply nitrogen to take the place of that which is constantly set free in the action of muscular tissue and eliminated from the body. The bodily machine immediately begins to run down if the nitrogen-bearing proteins are withheld or the supply is insufficient in quantity.

"But, on the other hand, as we have seen, the same proteins, if supplied in excess or in improper quality, may be the undoing of the bodily mechanism. So here we are placed between the devil of too little nitrogen and the deep sea of too much. We can't live without the nitrogen, and if we are not careful we shall find that we can't live with it. . . .

"You perhaps suffer, now and again, from headaches or neuralgias. You may be rheumatic or gouty. You are subject to attacks of biliousness, are easily fatigued, lack energy and initiation of mind and body, find yourself short of breath on walking briskly or on going up-stairs. At times your heart palpitates unduly. These are all symptoms that suggest disturbed assimilation.

"THE FIRST QUESTION TO ASK YOURSELF is this: Is there any food that I am accustomed to take habitually that is poisonous to me? It is quite possible, according to the newest theories above outlined, that your regular diet may include something that to you individually is toxic.

"The obvious way to test the matter, if you have any doubt at all on the subject, is to cut out one or more of these questionable foods from your dietary for a given period, and note the results. The proteins that are most under suspicion are those contained in the animal albumens—meats of all kinds, including fish and eggs—and in such leguminous vegetables as peas

and beans; and the uric-acid-forming substances of tea and coffee. In making a radical test, all these should be avoided.

"It is unquestionable, however, that you may be suffering from a slow poisoning due to deleterious food, without experiencing any symptoms that you associate directly with your diet. Your arteries may be gradually hardening, week by week, without producing any sensation that arouses your suspicion. About the only way to put the matter to a crucial test is to go to your physician and have him measure your blood-pressure. It is now recognized that increased blood-pressure is one of the earliest symptoms of protein poisoning. The physician is provided with several appliances by which the pressure may be tested, and is able to offer timely warning to many a middle-aged person who supposed himself to be in fairly good health, or who, as yet, has only vague premonitions of his malady.

"ALTERED BLOOD-PRESSURE may be due to the condition of the heart itself, or to changed resiliency of the arteries and capillaries through which the blood courses. But recent studies strongly suggest that the initial condition in a great many cases—perhaps in all cases—is a thickening of the blood itself.

"This thickening, which thus disturbs the circulation and which is premonitory of disaster, may be due to the ingestion of unwholesome foods, or merely to the ingestion of an excessive quantity of wholesome ones. Thousands of men and women of sedentary habits have accustomed themselves to a daily regimen including some such combination of proteins as the following: at breakfast, two eggs and a slice or two of bacon; at lunch, a cup of bouillon, mutton chops, or a slice of cheese; at dinner, a long series of proteins, including oysters or clams, soup, fish, fowl and a red meat.

"Such a dietary is utterly abnormal and must inevitably lead to disaster.

"NO ONE BUT A LABORING MAN or an athlete in full training could with impunity eat regularly even small portions of such a variety of proteins. And no wisely trained athlete would think of undertaking such a feat. The most powerful athletes that I have personally examined eat meat only once a day, and a good many of them habitually take but two meals, breakfast comprising a roll and one egg, or at most two, and dinner having for its chief protein never more tha na single kind of meat, and a moderate portion of that.

"If your habits are sedentary, you obviously require less food than the athelete in training. So it is more than likely that you eat not merely more protein but a great deal more food of every kind than is good for you. Not unlikely you consume daily twice as much food as your bodily machine can advantageously manage."

THIS IS AN EXCEEDINGLY INTERESTING SUMMARY of the position of the more advanced of the medical profession on the subject of protein in relation to old age. If in the present writer's mind any criticism were to be made at all of Doctor Goodhue's statement of the case it would be with reference to the last paragraph quoted, which errs on the side of conservatism, for he might have added with equal truth that hundreds of the most powerful athletes use no meat whatever, and instead of finding their endurance and strength impaired by abstinence from flesh-foods, on the contrary find it vastly improved.

APOLOGISTS FOR A MEAT DIET never weary of citing the Esquimos to prove that meat may be a necessity in nature, assuming that the very meat eating habit was imposed upon the people of the Far North by their Creator. The truth of the matter is, however, that meat-eating is as unnatural for the Esquimo as for the native of the tropics. Attention has again been called to this fact in a recent work by Dr. Arnold Lorand, Physician to the Baths at Carlsbad. "When an exclusive nitrogenous meat diet is indulged in, as with the Esquimos," says Doctor Lorand, "growth is hindered, and low stature is the rule. Not in this case either can the climate be considered a factor, for in that of tropical Africa there may be found in addition to the above-mentioned giants, tribes of dwarfs, the Batwa and the Wambuti. These forest-living dwarfs are like the Eskimos in that they also feed almost exclusively upon meat. There can be no question of coincidence in the matter. There must therefore be a certain relationship between modes of nutrition and growth. This relationship must be of such a nature that, in the pronounced growth of those persons living upon a diet rich in meat, a certain influence is brought to bear upon the organs which regulate bodily growth."

Keeping the Sleeping Rooms Flushed with Fresh Air

DR. J. N. HURTY, Secretary of the Indiana State Board of Health, in a recent bulletin issued by the Board, calls attention to a frequent habit of keeping the sleeping-room windows sealed tight during the daytime, and advises frequent flushing of the rooms with fresh air during the day.

"With the approach of winter," says Doctor Hurty, "we are facing the season when many people tightly close all windows in the house and keep them closed day and night. This habit is the cause of much illness. We need air and we need fresh air. A great many people think only of warming their houses without any reference to the way in which it is done. During the daytime when we are in our living rooms, without wraps and not prepared for the cold, it is reasonable to expect that the windows will be kept closed or nearly so most of the time, but there is no reason why the rooms cannot be flushed with fresh air at intervals. Every house should be thoroughly aired out several times a day and yet we all know people of considerable intelligence in whose houses the windows are never raised during the entire cold season. The custom of opening windows in our bedrooms at night is gradually gaining foothold. Time was, and not very long ago, either, that people were afraid of "taking cold" if they allowed their windows to remain open because of the fact that night air would enter the bedrooms. It has been positively established that night air does not differ from day air except that it is freer from dust and smoke; otherwise it is exactly the same thing, and as some sanitarians have put it, "The only night air that is dangerous is last night's—open the windows and let it out." There is no occasion for any one being afraid of a draft if they are warmly covered up in their beds at night; the fact that the cold air blows about in the room does not bring with it the result of making people ill, but on the contrary keeps them in the best of health by assuring them a sleep which is restful and refreshing. This is not an idle theory; it has been tried out by a large number of people, and they all agree that they feel much better if they sleep in rooms in which the windows are wide

open than in tightly closed rooms. Try it now. The weather is not so cold that it will be disagreeable at all to make the experiment, even if you have not done it previously, and by the time the weather gets severely cold you will have become accustomed to it, and so strongly in favor of it on account of your improved health that you will refuse to shut your windows even in zero weather."

Health Training for Mental Efficiency

A NEW ORISON SWETT MARDEN BOOK we commend very heartily to our readers. It is entitled "Training for Efficiency," and consists of short, practical talks on how to keep fit for the business of life, whatever form that business may take. Throughout the volume Doctor Marden constantly lays emphasis on the capital value of health and vitality. "No man can afford to transact important business when he is not in fine condition," says Doctor Marden, "and it pays one in health and in comfort as well as financially to be very good to one's self, especially when health and a clear brain are our best capital." But the average man gives to the apparatus which is to furnish these vital assets far less intelligent thought and interest than he gives to the veriest piece of machinery in his plant or office equipment. As Doctor Marden says, "Take the treatment of the digestive apparatus, for instance, which really supplies the motor power for the whole body and we will find that most of us do not give it half a chance to do its work properly. So much energy is spent trying to assimilate and digest improper food that there is none left to assimilate and digest that which is

actually needed. There are many who go to the other extreme and do not get enough variety in their foods, so that some of their tissues are in a chronic condition of semi-starvation.

IT IS IN THE SAME SPIRIT that Doctor Marden says that "the great thing in life is efficiency. If you want to amount to anything in the world, your time is valuable, your energy precious. They are your best capital and you cannot afford to throw them away or trifle with them. Whatever else you do, husband your energy, save your vitality, hang on to it with the determination with which a drowning man siezes and clings to a log or spar. Store up every bit of your physical force, for it is your achievement material, your manhood timber. Having this, the man who has no money is rich compared to the man of wealth who has squandered his vitality, and thrown away his precious life energy. Gold is but dross compared to this, diamonds but rubbish; houses and land are contemptible beside it."

NOR MAY WE OVERLOOK this delightful *mot*: "The brain gets a great deal of credit which belongs to the stomach and the muscles and the lungs." Most people feel that we can "rob Nature; that we can break all health laws, doing two or three days' work in one; eating as much at a single dinner or banquet as Nature would require for two or three days; that we can abuse our system in all sorts of ways, and then make amends by drugging ourselves and patronizing the springs and other health resorts. Many of us spend our lives oscillating between two extremes, abusing our bodies and doctoring them. The result is dyspepsia, exhausted vitality, nervous diseases of all kinds, insomnia, mental depression, insanity."

Family Made Sick by "Perfect Meat"

THE DETROIT *News* publishes an account of a family made very sick by eating meat that the city Meat Inspector had examined and pronounced perfect. It is impossible in any case for a meat inspector to tell whether the meat contains a sufficient amount of ptomaine to produce grave or even fatal results. Cold storage meat often contains bacterial poisons which are without odor. In the last few years bacteriologists have made the discovery that at a temperature near the freezing point, putrefaction goes on slowly but without producing the odorous substances which ordinarily give warning of the presence of putrefactive germs and the deadly poisons which they produce. In eating meat one is always taking chances, the magnitude of which he cannot estimate. In general, it may be said that meat is always a dangerous article of food. If severe illness were as often produced by potatoes as by oysters, fish and meat in various forms, the potato would be regarded as a very dangerous article of food and would be rarely eaten.

Going Down On All Fours with the Dog

A CONTEMPORARY publishes an account of the Annual Beefsteak Eating Contest of the Sam Brenner Association of New York. The contest was won by Frank Bostel, who ate eight and three-quarter pounds of beefsteak. Of the other competitors, three ate from five to eight pounds each.

THE SPECTACLE OF A DOZEN BUSINESS MEN, dressed in citizen's clothes like sane people, with their hands tied behind them and rooting into great chunks of meat like dogs or

hyenas, would seem less out of place in the cannibal islands than in a great center of civilization. Such a circumstance affords another evidence that civilization is not altogether a success, that sometimes it seems to have missed a mark and makes men more brutal than the veriest savages of the forest.

How to Handle Bulk Milk Delivered at the Home

MILK DIPPED FROM A CAN OR DRAWN FROM THE FAUCET of a can may be a source of danger, and should be avoided where it is possible to get bottles of milk, according to the specialists of the Department of Agriculture. The air of city streets and houses is laden with dust and bacteria, and frequently particles of filth. Even if the milk is clean in the milkman's receptacle, the repouring of it into an open vessel or pitcher for the customer gives an excellent chance for floating disease germs to get into the milk. In stores where dipped milk is sold, filthy conditions often prevail, and milk is frequently handled most carelessly. Clerks, and even customers at times, frequently drink out of the milk dipper. It is dangerous to give such milk to children and invalids, and at best it is not a clean food. Milk drawn from the faucet of a milk-dealer's can, while not exposed to the air so long as dipped milk, also has the disadvantage of not being thoroughly mixed. Some consumers therefore receive less than their share of cream.

IF BOTTLED MILK CANNOT BE OBTAINED, try to have the milk delivered personally to some member of the family, and receive in a scalded covered vessel that has not been exposed to the air of a room or street. Otherwise set out a scalded covered dish or bowl, or a glass preserving jar with a glass top

without a rubber band. In no case should an uncovered vessel be used. Milk should be taken into the house immediately on delivery, or if this is impossible, it should be placed in an outside refrigerator, or the outside door of the refrigerator in the house, if its ice-box opens to the outside. Cleanliness in the handling of milk is as necessary in the home as in the production of milk on the farm. Milk must be kept at low temperature at all times, to prevent growth of bacteria and subsequent souring. It should be kept in closed vessels as far as possible. The consumer should insist on having bottled milk delivered, and if this is impossible should at least see that the milk after delivery suffers no additional contamination.

German Authority Condemns Laxatives

BIRK, A GERMAN PHYSICIAN, in a recent issue of the *Deutsche Medizinische Wochenschrift*, of Berlin, condemns the use of laxatives for constipation and diarrhea in children, since it gives only temporary relief. For the relief of constipation he recommends the free use of fruits and vegetables, avoiding the concentrated diet of milk, eggs, butter and meat, which he finds produce constipation. He condemns especially the use of purgatives and laxatives for infants. In cases of diarrhea in infants he recommends the suspension of all food for twenty-four hours, giving only a little flavored water. After this the infant is given a thin oatmeal gruel, and later milk is given. In infants fed on a milk diet, the stools often abound with lime soaps, which indicate the lack of lime and milk malnutrition. Milk in large amounts appears to act with some children almost as a direct poison.

Question Box

11492. Abscess of Liver.—B. E. S., Wisconsin:

1. "Please suggest the causes of abscess on the liver?"

Ans.—Infection, generally from the intestines.

2. "What are the earliest symptoms of abscess of the liver?"

Ans.—Pain in the region of the liver, and fever. A physician should be called if any trouble of this sort is suspected.

11493. Excess of Hydrochloric Acid—Low Protein Diet—Breaking Out on the Face—Oranges—Saliva.—F. M. C., Michigan:

1. "Please explain the following seeming inconsistency. An excess of hydrochloric acid is said to result from the absorption of poisons from the intestines and yet fruit acids which are so highly recommended as an intestinal antiseptic are said to increase hydrochloric acid secretion, while fats, which have a tendency—especially with some people—to create foul conditions of the intestines, are recommended as a remedy for an excess of hydrochloric acid?"

Ans.—There is a seeming paradox in the recommendation made, nevertheless it is based upon sound physiologic principles. There are many things which stimulate the gastric secretion: fruit acid, sugar, dextrin and peptone, as well as the putrefaction products absorbed from the colon. Fats when taken in excess promote putrefaction, but they should not be taken in excess. Two tablespoonfuls of olive oil at each meal is not a large

amount. Vegetable fats promote putrefaction in the intestine much less readily than do animal fats.

2. "Are there not cases of excessive hydrochloric acid where the taking of fats is followed by increased acidity, owing to the development of fatty acids?"

Ans.—No. Hyperacidity is never due to the development of fatty acids.

3. "If the great majority of stomach troubles are accompanied by an excess of hydrochloric acid and thorough mastication stimulates the secretion of this acid, is it not a fair inference that thorough mastication is detrimental in most cases of dyspepsia?"

Ans.—The majority of stomach trouble are not accompanied by excess of hydrochloric acid. Cases are comparatively rare in which hydrochloric acid is produced in very great excess. The recommendation to use soft food without chewing as a means of suppressing the secretion of acid is only to be employed as a temporary expedient. When the stomach returns to its normal condition, dry and solid food may be taken and this must be well masticated.

4. "Are there positively no exceptions to the low-protein diet rule? Are there absolutely no conditions that require a liberal supply of protein in the diet? If there are such conditions, please name them."

Ans.—No. Protein is required only for tissue repair. The condition under which the most protein is needed is when the body is growing. If any person needed a high protein diet, it would be the human infant, but nature supplies the infant

with a low-protein diet. An infant fed on mother's milk gets a very small amount of protein. The amount is less than one calorie a day per pound, which is less than one-third the amount usually eaten by adults. In other words, the infant is supplied by nature with a very low-protein dietary. This fact clearly shows that human beings are not adapted to a high-protein diet, but the reverse. Physiologists tell us that a high-protein diet does not increase the formation of flesh but has the opposite effect, that the carbohydrates are the real flesh formers. They promote the formation of flesh by preventing the destruction of protein and so promoting tissue building.

5. "Where a breaking out of the face follows every attempt to use fats, even a moderate amount of olive oil, what does it indicate? Also what is signified when even a few swallows of water, as much as an hour and a half after eating, burden the stomach as much or more than taking food?"

Ans.—The indication is that there is something seriously wrong with the stomach. In such a case, a bismuth meal should be administered and the alimentary canal thoroughly examined from mouth to rectum.

6. "How many oranges per day would be required to supply the necessary raw elements, where the balance of the diet consists of thoroughly cooked food?"

Ans.—Six to ten oranges will be none too much, but it will be better to supply a variety of fresh green vegetables as well as fruits. An infant requires the juice of one orange a day.

7. "Is there any truth in the statement that saliva is quite similar to the gastric juice?"

Ans.—No.

11494. Prolapsus of the Stomach—Hyperpepsia—Catarrh of the Stomach—Falling of the Bladder.—G. E. W., California:

1. "What would you advise for prolapsus of the stomach and liver? Is there any form of physical exercise one can take to relieve the condition and strengthen the abdominal walls? This condition almost causes paralysis of the intestines."

Ans.—Strengthening the abdominal muscles by special exercises, especially with the inclined table and the wearing of an abdominal supporter, are the best means of treatment. It is also important to acquire the habit of sitting with the chest held high.

2. "In hyperpepsia, would you advise the use of fruit other than dates, prunes and figs? What cereals, if any, should be used? Should these foods be thoroughly masticated?"

Ans.—Dates and figs are not to be recommended in hyperpepsia. They contain a large amount of sugar which often irritates the stomach. All the cereals are good. Much mastication should be avoided in extreme cases, when only soft food should be used. It should be remembered, however, that liquid food should be avoided.

3. "What fruits should be used in a case of catarrh of the stomach? Also, what cereals?"

Ans.—Purées of pears and baked sweet apples and banana pulp are among the best fruits for such a case. All the cereals are wholesome if properly prepared.

4. "What can be done for falling of the bladder, accompanied by cystitis?"

Ans.—Probably a surgical operation is required. Tem-

porary relief may be obtained by the knee-chest position and in some cases by the use of a proper abdominal supporter.

11495. Poor Circulation.—J. C., Washington:

"What do you recommend for poor circulation? Even in moderately cool weather my fingers become anemic, and it is almost impossible to keep the blood circulating."

Ans.—The difficulty is probably due to a vasomotor spasm of the vessels in the extremities. The most common cause of this is toxin absorbed from the intestine. The bowels should be made to move three or four times a day by regulation of the diet and the use of simple non-drug remedies.

11496. White Bread.—H. M. J., Pennsylvania:

"Is it a fact that the use of fine wheat bread may be responsible for appendicitis?"

Ans.—Anything that tends to produce constipation will favor the development of appendicitis.

11497. Soda Crackers.—A. G., New York:

"Are soda crackers a desirable article of food?"

Ans.—No. They are a very poor substitute for bread.

11498. Eggs.—A. C., Pennsylvania:

"Are hard boiled eggs more injurious than soft boiled or raw eggs in cases of autointoxication or other disease?"

Ans.—Yes. The white of hard boiled eggs is very likely to escape digestion entirely and, undergoing putrefaction in the colon, give rise to toxemia.

11499. Dandruff.—E. B., Ohio:

"Please suggest a means of destroying the germs of the scalp that cause dandruff?"

Ans.—A simple remedy that is usually effective consists of ten grains of resorcin and one drop of castor oil in one ounce of alcohol.

11500. Oleomargerine.—A. S. K., Minnesota:

"Is oleomargerine, being largely vegetable fat, as wholesome as butter?"

Ans.—We have never thought it proper to recommend this artificial substitute for butter.

11501. Pricking Sensation.—M. D. T., Michigan:

"What is the cause of and cure for a pricking sensation in the hands and feet, particularly my right hand? The sensation is like tiny electric shocks. I am more than sixty-seven years of age."

Ans.—The symptoms described may be due to neurasthenia or to arteriosclerosis. A physician should be consulted.

11502. Neuritis.—A. J. M., Pennsylvania:

"Please suggest the cause of and cure for neuritis in the right arm?"

Ans.—Neuritis is produced from many causes. A bruise or exposure to cold may produce inflammation of a nerve. The most common cause are poisons absorbed from the colon, which may give rise to so-called inflammation of a nerve or to chronic rheumatism of the nerve.

11503. Strained Eyesight.—A. C. W., New York:

"For some years I have done my reading with one eye, owing to the other becoming inflammed when I use it, and now this in turn is failing me. Have I overstrained it by reading, and would you advise me to give up reading entirely?"

Ans.—You should consult an occulist. Bathing the eyes with hot water for five minutes three times a day may prove beneficial.

11504. Autointoxication.—V. G., Illinois:

"For many years I have been trouble with constipation; beating of the heart is weak and breathing difficult. May this be due to asthma? Please advise treatment for this condition."

Ans.—The symptom complained of is frequently the result of chronic toxemia due to constipation. Make the bowels move three or four times a day by regulation of the diet, by simple and non-medicinal means and the difficulty will probably disappear. The writer has seen this result in numerous cases.

11505. Bow-legs.—J. E. P., Iowa:

"What physical culture methods do you advise for the correction of bow-legs? I am twenty-six years old."

Ans.—There are no exercises of any sort likely to cure malformation of the legs at your age. The bones are hardened and relief can be obtained in no way except by an operation.

11506. Vegetable Gelatin.—F. J. K., Colorado:

1. "Is any of the nutritive value of vegetable gelatin lost in the process of washing?"

Ans.—No.

2. "Is it necessary to wash it?"

Ans.—No. It has been thoroughly washed and sterilized.

11507. Woolen Underwear.—P. H. B., Pennsylvania:

"Would you recommend the wearing of woolen underwear for a person who takes cold easily?"

Ans.—No. Wear cotton next to the skin and woolen over it for warmth.

11508. Eczema.—J. E. R., Wisconsin:

"Is eczema contagious when there are no exudations from the skin?"

Ans.—Eczema is not generally regarded as a contagious disease.

11509. Cream and Rice.—L. E. S., Michigan:

"Is sweet cream used frequently with rice a good food, or is it apt to cause fermentation?"

Ans.—Most persons can use a moderate amount of sweet cream with rice or other cereals without detriment.

11510. Olive Oil.—W. G. A., Pennsylvania:

"Has the constant use of live oil a tendency to make one bilious?"

Ans.—No, not unless the amount used is excessive. It is important to keep the bowels open. They should move well three times a day.

11511. Blood-Pressure.—W. B. B., New York:

"My blood-pressure at forty-six years of age is 105. What is the normal?"

Ans.—The normal blood-pressure is 100 to 110.

11512. Curvature of the Spine.—J. H., Texas:

"Please describe proper treatment for curvature of the spine?"

Ans.—Such a case requires the services of an orthopedic surgeon.

11513. Colitis.—M. J. V., Michigan:

"Please outline suitable treatment for catarrh of the bowels, or mucous colitis, that can be taken in the home?"

Ans.—Colitis is a very obstinate disease and difficult to cure. The infection frequently involves not only the whole colon, but extends also to the small intestine and even to the stomach, bile passages and gall bladder. The measures necessary for a cure are first, an antitoxic diet. Meats of all sorts must be discarded, and, in extreme cases, milk and eggs must be avoided. The bowels must be made to move three or four times a day by the use of laxative food. It has been shown necessary to employ in addition to a combination of fresh fruits and vegetables, sterilized wheat bran. The diet should consist chiefly of fresh vegetables and fruit. Cereals should be used in moderation. In addition to these measures, it is often necessary to give the colon special treatment by means of hot or cold irrigation as may be indicated in the individual case. When spastic constipation exists; that is, when colitis gives rise to spasm in the intestine, hot irrigation renders great service. The cool enema, 80 to 70 degrees, taken an hour after breakfast is often useful in training a dilated colon to normal activity and in restoring the normal sensibility of the lower colon. Massage is also often useful. The lactic acid ferment should also be employed. *Bacillus Bulgaricus*, *bacillus bifidus* and *bacillus glycobacter* have been shown to be of great service in such cases.

New Medical Discoveries

of Interest to Lay Readers

Diet in Diseases of the Heart

IT IS INTERESTING TO NOTE the large number of European medical authorities who are adopting simple life methods in the treatment of diseases of the heart and kidneys, especially in relation to diet.

H. Vaquez, in an important paper in the *Berliner Klinische Wochenschrift*, a leading German medical journal, condemns the use of salt and meat in cases of disease of the heart and blood-vessels, especially when the kidneys are diseased. He mentioned that on a salt free diet attacks of cardiac asthma and edema of the lungs become less frequent. The benefit derived from the saltless dietary is so great that in some cases the patient continued the salt free diet for months and even years, certainly a very sensible thing to do.

THIS AUTHOR LAYS SPECIAL EMPHASIS upon the low-protein diet. He finds that even milk sometimes contains excessive protein and recommends that in such cases milk should be given in moderation, fruits and vegetables being freely used. He condemns altogether the use of alcohol, which he very rightly says "belongs more to toxicology than to dietetics."

Prolific Typhoid Fever Germs

THE BACTERIOLOGISTS TELL US THAT TYPHOID FEVER GERMS double every forty minutes. At this rate of increase, a single typhoid fever germ in three days would make more than a billion billion billion germs. This mass of organisms would fill a space of several cubic miles. Each germ is one twelve-thousandth of an inch in length. A billion billion billion germs arranged in a row would form a line more than a billion billion miles long.

LIGHT TRAVELING AT THE RATE OF TWO HUNDRED THOUSAND MILES A SECOND would require eighty thousand years to travel from one end of the line to the other. It is, of course, impossible for typhoid fever germs to multiply in such great numbers for the reason that they depend, first of all, upon food supply and growth ceases as soon as the food supply is exhausted. They cannot travel about in search of food. They can only grow by the aid of food which is adjacent to them, and as soon as the food supply is exhausted, their growth must cease.

The Probable Cause of Pellagra

THE CAUSE OF PELLAGRA SEEMS TO HAVE BEEN DISCOVERED AT LAST. *American Medicine* for October contains an interesting article, from which we learn that Dr. Lewis W. Sambon, of the London School of Tropical Medicine, has practically proved that the bite of the sand fly is the cause of the disease. There are seventy different species of this fly, often

known as the "black fly" of which fifteen species are found in the United States.

PELLAGRA WAS INTRODUCED INTO THIS COUNTRY from Italy and seems to be rapidly extending, especially in certain localities. It is breaking out in all parts of the United States and in certain places is developing rapidly. The rapid development of the disease in Illinois is now believed to be due to the fact that ten species of sand flies are found in the State of Illinois, no part of the State being free from this pest.

PELLAGRA APPEARS TO BE INCREASING VERY RAPIDLY in South Carolina. According to a press dispatch from Spartanburg to the New York *Sun*, "The Board of Health's vital statistics for the year show that pellagra now causes more deaths than any other disease in this city. Pellagra for the last three years has been second to tuberculosis, but this year takes first place, having caused thirty-one of 340 deaths in Spartanburg. More than six hundred cases have been found in the country. . . . A bill is spending in Congress for the building of a $300,000 Government pellagra hospital here."

Researches Show Alcohol to be a Virulent Poison

DR. J. FRANK DANIEL, a Professor in the University of California, has devoted long and patient efforts to the question of alcoholic toxicity. This question was studied many years ago by Dujardin-Beaumetz, of Paris, but has been restudied by Doctor Daniel by the aid of more refined methods of research and the results obtained agree entirely with those

of Dujardin-Beaumetz; namely, that alcohol is unquestionably a poison; that, in fact, the whole alcohol family is a poison family, the toxicity of which is increased by regular series, ordinary or ethylic alcohol being second in the list.

IN THE TABLE GIVEN BELOW THE DEGREE OF TOXICITY SHOWN IS EXPRESSED IN DRAMS OF ALCOHOL required to kill (that is, to produce immediate death of) one pound of living tissue.

ALCOHOL		
Methylic	3.0	drams
Ethylic	1.3	"
Propylic	.4	"
Butylic	.2	"
Amylic	.04	"

It is interesting to compare the toxicity of these different alcohols. The first, methylic, or ordinary wood alcohol, prepared from the distillation of wood, is the least toxic.

TO PRODUCE IMMEDIATE DEATH in a man weighing 160 pounds, would require as large a quantity as three and one-half pints of this alcohol, while ethylic alcohol or wine spirit, the alcohol found in intoxicating drinks, requires a pint and a half for a fatal dose. Propylic alcohol, obtained by the distillation of certain vegetables, would require less than half a pint, butylic alcohol four ounces and amylic alcohol less than an ounce.

ALCOHOL IS A MEMBER OF A FAMILY, every member of which is a poison. While it is not the most dangerous member of the family, yet it is not the least dangerous. In the

face of these facts it is quite impossible to believe that alcohol can possess any food value, while it is true that when alcohol is taken into the body some portion is burned. The same is also true of each one of the other members of the alcohol family, yet no one would for a moment think of attributing to amylic or methylic alcohol food properties.

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Unhandicapping the Weakly Child

IN A STIMULATING ARTICLE in the November *Cosmopolitan*, Dr. Stoddard Goodhue makes a statement that thirty years ago no one would have understood, but that today is being repeated so often as to be in danger of becoming aphoristic. "We now know that the weakly child should be kept on the playground rather than in the schoolroom," says Doctor Goodhue, "even at the expense of retardation of its book-education. A sickly child that has been kept out of school altogether up to the age of seven or eight will generally be farther advanced in its studies at the age of twelve than it could have possibly been had its physical health in earlier childhood been sacrificed to the parental solicitude for its book-training. For the child with susceptible lungs—and, indeed, for children in general—that wonderful modern invention, the open-air school, is a positive boon.

"AS SUPPLEMENTING THE OUTDOOR LIFE FOR THE WEAKLY CHILD, it is desirable to practise a systematic hardening of the constitution with the aid of cool baths. By beginning early and tempering the bath to the needs of the individual, gradually using cooler water as the child becomes ac-

customed to it, it is possible to develop a hardiness of constitution and powers of resistance to changes of temperature which will stand the individual in good stead. To be susceptible to all changes of temperature and thus rendered perennially unhappy about the weather over which we have no control, is to carry a tangible handicap in the business of everyday life. The judicious following of a schedule of open-air life and of cool baths for the growing child may very largely give it immunity against this influence. A child thus hardened will be but little susceptible to 'taking cold,' and it will have corresponding power of resistance against the germs of the more virulent maladies."

Foot Ball Casualties

IT IS REPORTED THAT DURING THE FOOT BALL SEASON JUST CLOSED, fourteen players were killed and one hundred seventy-five injured. The number of deaths was one greater than last year. The number of injuries, many of which are of a permanent character, is a few less. It is surprising indeed that so rough and dangerous a game should be still tolerated and especially that it should even be encouraged at such great intellectual centers as Yale, Harvard and other of our leading colleges. The record of the last two years would seem to indicate that fool ball is really more dangerous than warfare. Indeed, the game is too rough for soldiers.

DOCTOR STOKES, SURGEON OF THE UNITED STATES ARMY, and Colonel Clarence P. Townsley, Superintendent of the United States Military Academy, both condemn foot

ball in unstinted terms. According to Colonel Townsley, seventy-five per cent of all the injuries treated by the surgeons at West Point, are due to foot ball casualties. This large number of injuries are suffered by forty or fifty cadets who engage in the game, while the remaining twenty-five per cent occur among over six hundred other cadets. According to this, foot ball players are thirty-six times as liable to injury as students who do not play football.

WE HOPE THE TIME IS NOT FAR IN THE FUTURE when foot ball will be so generaly condemned by public opinion that it will give place to some more civilized and rational form of sport.

THE JOY OF THE SPIRIT indicates its strength. All healthy things are sweet tempered.—*Emerson.*

Cooperation in Health Conservation

FIFTY YEARS AGO there was not a Board of Health in the United States and scarcely an officer of conservative health of any sort. At the present time every State has a more or less efficient Board of Health, and every city, even most towns, are provided with health officials. The large cities, such as New York, Chicago, San Francisco and other cities of considerable size, have highly efficient health organizations that look after water and milk supplies, food inspection, etc. But the great mass of the people of the United States, those who live in country districts and small towns, are still without protection. The health officer in country regions is generally a

layman, not infrequently is a supervisor or some other officer whose time is taken up with duties of a character entirely foreign to questions pertaining to health. In most instances these quasi-health officers are entirely incompetent, having no knowledge of sanitation or any other subject with which health officials should be thoroughly familiar.

THE SOLUTION OF THE PROBLEM OF CONSERVING THE HEALTH OF PEOPLE of rural districts is certainly most difficult. The question is a live one and must be solved before any considerable advance will be made in diminishing the mortality race which in certain directions rises higher in country districts than in cities, as in the case of typhoid fever for example.

A SUCCESSFUL EXPERIMENT which has been tried in Massachusetts recently seems to point the way toward a possibly successful solution of this problem. In April last, several towns in Massachusetts—Wellesley, Melrose, Framingham, and five others—organized a cooperative health department. The population of these several towns aggregates 55,000. The combined appropriation for health purposes was something over $6,000, an amount quite insufficient to maintain a separate health department for each town. By combining their resources, however, it was found possible to establish at Wellesley a central office and laboratories equipped with an administrative officer, a bacteriologist and chemist, a plumbing and sanitary inspector and an efficient clerical force. This experiment is being carried on under the supervision of Professor Phelps, of the Massachusetts Institute of Technology. So far the plan is working admirably and it seems likely that it may prove worthy of general adoption.

Death of American Physician Under the Friedmann Treatment

WESTENHOFFER REPORTS, according to the *Journal of the American Medical Association*, the case of an American physician who visited Berlin for treatment for tuberculosis. The treatment was begun by Friedmann, who, according to the report, assured the patient that he would recover his health entirely, and even allowed him to smoke. After two or three weeks the patient was picked up on the street with a fatal hemorrhage of the lungs. Examination showed an acute tuberculosis, and the condition was such as to give ground for strong suspicion that the tuberculosis was the result of the Friedmann inoculation.

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The Federal Government Prescribes a Cure for the "Dope" Habit

IN A BULLETIN ISSUED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE the diet of the average American is said to consist of bread, butter, meat, fish, potatoes, and patent medicine laxatives, the latter being condemned in vigorous fashion. Uncle Sam advises the housewife to give fruit and vegetables a more prominent place in the daily ration. "This would do much," says the bulletin, "to eliminate the need for patent medicine laxatives, such as figure so prominently in many an American bill of fare. If every home kept on hand enough canned products so that there might be a can of fruit, a can of greens and a can of vegetables for every day during the winter, there would be little need for the laxatives now so regularly purchased from the corner drugstore. There would also be great

economy in the substitution of inexpensive foods for more expensive ones."

The writer also makes a powerful appeal for more canning of vegetables, estimating that more than fifty per cent of all the vegetables, greens, and fruit that are produced in this country are wasted because housewives have not learned to care for these products efficiently and to make them available for winter months by canning. Home canning is the ideal method of securing canned products, but "there will always be people who have neither the time nor inclination to can their own products. More home canning, on the contrary, will accustom people to using canned products in general."

When Ex-President Roosevelt Exercised

MRS. DOUGLAS ROBINSON, sister of Ex-President Roosevelt, told the other day of how exercise saved the life of the Colonel, and related in connection therewith a characteristic incident. "When he was a tiny child he was so ill with asthma that no one thought he would live," said Mrs. Robinson, "but my father said Theodore must live, and fitted up the third story of our house as an open-air gymnasium. There we played all day. I remember once when my father arrived on the scene just as Theodore and I had fixed a seesaw over the balustrade, and my brother was climbing out on the end that hung over the court yard, three stories below. I don't tell you that as an example to be followed—but I want to impress upon you that systematic exercise gave my brother the strength to do and bear. It isn't what our life is that matters: it is the courage we bring to it."

Overland Walking Club Department

The Relation of Walking to Athletics

THE ULTRA-ATHLETE, the man who sees no virtue in exercise that does not involve sprinting, Marathons, putting the shot, and that sort of thing, when approached on the subject of walking very often scorns it as being outside the pale of real sports. And yet athletics and walking have very much in common. As Arthur Hugh Sidgwick, an English essayist and walker has put it, "The two are simply different but related modes of expressing one idea, the idea, that is, of realizing the body's capacity as a thing good in itself." This thesis seems sound—to every walker at least—and we take pleasure in quoting Mr. Sidgwick's elaboration of his idea:

"EVERY FOOT-POUND which the athlete adds to his physical capacity is felt in his walking. There is nothing you can do in your physical life which will not affect you for better or for worse as you walk. Walking is the book of the recording angel of the body, who never forgets or forgives. If you have set up late, or eaten and drunk unwisely, or breathed foul air, or listened to or participated in waltzes, or done all these things simultaneously, which is quite easy—you will know it at the eighth mile next day. But if you have trained your body, and given it its due of food and drink, and sun and air, then you

will walk with a peculiar exaltation; you will swing your legs to the full rhythm of your physical being; you will feel yourself one with all the greatest moments of your bodily past—that last sprint up the straight, when your legs felt like somebody else's; those forty-five frenzied seconds in the wash of the boat in front, until your nose grated on her stern; that wild gallop down the left wing with the half-back in pursuit and that sweeping center which the inside right did (or did not) put through.

Related Modes of Expressing One Idea

"ONCE THIS IS UNDERSTOOD, further argument about the relative merits of walking and athletics becomes futile and absurd. The two are simply different but related modes of expressing one idea, the idea, that is, of realizing the body's capacity as a thing good in itself. This common interest outweighs any difference of expression. Walkers and athletes are working to the same end, and are closely allied. Indeed, it is not matter for argument; for the idea, like other ideas, can never be completely proved. We only know, instinctively, that athletics are good, that in training and exercising ourselves to the full we feel a natural satisfaction and that walking at its best shares in this feeling. The idea works itself out in the usual way of idealism; in the beginning it calls to us dogmatically to exercise our bodies, and only as we continue in the process do we begin to realize its meaning; we can never completely justify it in argument, since it is an idea, and therefore demands faith as well as reason. But this at least can be said, that any other explanation breaks down. If we try to explain athletics and walking by reference to any standard outside themselves—to anything older than the pure bodily idea—utter confusion ensues.

"THERE IS ONE PARTICULARLY INSIDIOUS LINE OF ARGUMENT which starts from the conception of health, and exhibits walking and athletics and most other things as part of a general health movement. It looks extremely attractive—the single cause exhibiting itself in a numerous and varied selection of phenomena: sanitation laws, food reform, fresh air, physical training, the simple life, hygiene, health-conscience, *mens sana in corpore sano* and the rest. On this view we talk and undertake athletics for the same reason which makes us open our windows and keep regular hours and observe moderation in food and drink—namely, to preserve health. It is all very impressive and scientific, until we begin to apply it in detail, and consider various forms of athletics from the health standpoint.

Some Disturbing Problems

DISTURBING QUESTIONS THEN ARISE. Is it not a fact that running is apt to strain the heart? Does not rowing need to be supplemented by something a little more jerky to keep the liver in order? Does not football lead to an abnormal and ill-distributed development of the frame, so that the professional footballer is neither hygienically nor artistically a model? Is not walking, as a mild and equable form of exercise, really healthier than any other form of athletics, operating more beneficially upon the heart, liver, lungs, digestion motor-centres, blood-corpuscles, opsonin index, and the rest of the catalogue of modern physiology? Finally, is not the best exercise, from the health standpoint, a carefully graduated system of physical culture, nicely adapted by an expert to each individual's needs, and performed in correct clothing in a sterilized atmosphere of 57° Fahrenheit?

"THIS ARGUMENT IS DANGEROUS IN MANY WAYS. It goes near the truth and just manages to miss it completely. It holds out a bait to walkers to desert the cause of athletics that their own craft may be exalted. It encourages people who dislike athletics, but can walk in a fashion, to distinguish between walking and sport and say that all sport is unhealthy as well as demoralizing. It sets a gulf between athletics and physical training, so that the man who pursues both is in an equivocal position. It encourages doctors to talk about health, which they misunderstand, being preoccupied with illness. Finally, it lets in philosophers, who begin to say that a healthy activity must be spontaneous, that all health movements, including athletics, are fads, and that the only sound rule is to do what you like and eat what you like and drink what you like—particularly this last. So in the end walkers, athletes, doctors, hygienists, physical trainers and philosophers are set by the ears and an intellectual Riot Act is read.

Health Not to be Analyzed

"THE WHOLE TROUBLE ARISES FROM TREATING 'HEALTH' as something that can be analyzed and defined. Really, it is one of the ultimate terms, like happiness or virtue or poetry. Doctors can, of course, define health in a limited and negative way as the absence of specific disease; and so far it may be possible to analyze the body into a catalogue of organs, to enter against each item the effects of the different kinds of exercise, and then to add up the entries and pronounce a result. Granted that this is a genuine scientific process, and not gross empiricism got up so as to impress the statistically susceptible, it still does not carry us very far. Health in the

true sense is a single and positive thing: it is the active well-being of the body. To prove a man healthy, it is not enough to go through the items in his catalogue and give each a satisfactory mark; it is not enough even to group his items and show that A, B, C prove that he can breathe properly, and D, E, F that he can digest food, and X, Y, Z that he can sleep. Health is not, any more than morality, the capacity to do things; it is the actual doing of them. It is good for a man to jump and run and walk and breathe and eat and sleep—not physiologically good in the sense that vaseline is good for chapped hands, but fundamentally and categorically and inexplicably good: it is what the body was made for, the realization of its idea. Whether these activities are also good in the physiological sense; whether, that is, they keep A, B, C and the other items in good condition, is of quite secondary importance. As a matter of fact, if we disregard physiological evidence for and against, it is pretty clear that they are good in this sense: the things which the body naturally finds good also tend to preserve and strengthen it. This, after all, is only what we should expect, assuming the body not to have been invented as a bad joke. But the physiological consequences are secondary: the primary thing is the activity itself.

Why We Desire Health

"ONCE ADMIT THE PRIMACY OF HEALTH in this wide sense, which is the same as the primacy of the bodily idea, and the rest of the tangle is easily cleared up. We regulate food, drink and sleep, not because this is physiologically good for our organs, still less because discipline is good in itself, but simply

(*Continued on page 14, Advertising Section*)

Book Review

A Plea for the Younger Generation

MR. COSMO HAMILTON has given us a volume whose point of view is unfortunately unique in these days when science, not yet softened by emotional (yes, sentimental, if you please) considerations, has everything pretty much her own way. "I have written this small volume," he says, "not only in order to make a plea for the younger generation as to the way in which they shall be taught sex truths, but also in order, if possible, to prove to the advanced thinkers of the day that it is not old-fashioned to beg that God may be put back into the lives of His children, but a thing of urgent and vital importance." Not that he disavows the new pedagogy that would teach the child the truths concerning his own body and its functions, and this from the scientific standpoint—Mr. Hamilton would have all that, but he would have it shot through, may we say, with the old-fashioned faith in God. This instruction and the discipline that follow the revelation must come of God, else "the young boys and girls who will all too soon be standing in our shoes will go through life with hungry souls, with nothing to live up to, and very little to live for."

"A Plea for the Younger Generation: An Intimate Talk on the Vital Question of Telling the Truth to Children, from an Altogether Human and Unscientific Point of View." By Cosmo Hamilton, Author of "The Blindness of Virtue." Seventy-five cents, net. New York: George H. Doran Company.

The Three Gifts of Life

OF THE many books that have been written for the purpose of instructing the young girl in matters pertaining to reproduction and the sex instinct, this is one of the most beautifully done. The story is told frankly, but in a delicate manner that in the mind of the reader creates a feeling of reverence for the wonderful ways of Nature. The "Three Gifts" are, *Dependence*, as seen in plant reproduction; *Instinct*, in

animals; and *Choice*, as exercised by men and women. And, as the writer says, the greatest of these is choice—and the most fateful, too, for that matter, for people do not choose equally well: "By looking back through history, we learn that the progress of the human race can be measured by the way that men and women have made use of choice; on the side of reason to develop their minds, and on the side of the will to develop their character. As we look forward we do not yet know to what heights the human race will rise; but we do know that when humanity learns to use reason as a guide, and develop the will power so as to make it a force for good, that both individuals and the race as a whole will be rewarded by gaining ever greater richness and fullness and power in life." The author tells the girl how to be guided in the exercise of choice, and how best to fit herself for a wholesome and beautiful maternity.

"The Three Gifts of Life: A Girl's Responsibility for Race Progress." By Nellie M. Smith, A. M., Lecturer for the American Society of Sanitary and Moral Prophylaxis. Introduction by Thomas Dennison Wood, M. D., Professor of Physical Education, Columbia University. Fifty cents, net. New York: Dodd, Mead and Company.

Pocket Cyclopedia

THIS wonderful little volume is a mine of medical light and information, arranged alphabetically. It is admirably adapted to the needs of the intelligent layman who frequently runs across medical terms which are not easily understood. The selection of subjects treated has been made with such care that room has been found for everything really essential to a volume of this sort. It is printed on very strong, highly finished paper, in clear type, and bound in morroco with gilt edges. The size is convenient for carrying in the pocket. The book is in every way a credit to the great publishing house by which it is put out.

"Gould and Pyle's Pocket Cyclopedia of Medicine and Surgery." $1.00 net. Philadelphia: P. Blakiston's Son and Co.

Flies and Mosquitoes

ANY one desiring a small guide to house-fly and mosquito prevention will find the present work very practicable and helpful. Sixteen pages are crammed full of valuable information, the fact that it is written

by one of the most eminent of our engineers making it authoritative in every way.

"Flies and Mosquitoes as Carriers of Disease." By William Paul Gerhard, C. E. Twenty-five cents. Published by the author, 30 East 42d Street, New York City.

Social Environment and Moral Progress

"THERE has been no definite advance of morality from age to age, . . . And even the lowest races at each period possess the same intellectual and moral nature as the higher." "There is no proof of continuously increasing intellectual power." "Our whole system of society is rotten from top to bottom, and the social environment is the worst that the world has ever seen." In these hard sayings the late Dr. Alfred Russel Wallace, co-discoverer with Darwin of what has become known as "Darwinism," epitomized his theories as to social progress. He does not say that social progress is not possible, for it is now well established that "the essential character of man, intellectual, emotional and moral, is inherent in him from birth; that it is subject to great variation from individual to individual, and that its manifestations in conduct can be modified in a very high degree by the influence of public opinion and systematic teaching. These latter changes, however, are *not* hereditary, and it follows that no definite advance in morals can occur in any race *unless there is some selective or segregative agency at work*." Doctor Wallace's position has undoubtedly been misunderstood, at least by people who have read *about* Doctor Wallace and not read his book first-hand. The picture which he paints seems on the face of it discouraging, but the proviso contained in the closing clause of the last-quoted sentence opens before the mind a vast realm of human possibilities. Doctor Wallace's "selective or segregative agency" are improved social conditions. The great commercial age which began with the era of industrial expansion beginning with he nineteenth century piled up wealth so rapidly and so changed the social status of men and women that time was not given for social and intellectual adjustment to new conditions. The result has been that as the world prospered more and more the mal-adjustment became more and more pronounced. The reforms necessary must be in large part eugenic. There must be, Doctor Wallace believed, a definite facing of facts, and an industrial and social equality. Better social conditions would serve as a natural

selective agency; fewer unfit children would be born, because the tendency as families rise in the social scale is to have fewer children. Diminished industrial diseases and accidents would leave a preponderance of males among the population, thus giving woman a wider selective range; this would lend to delay marriage to a later age than now holds, this fact, too, tending to limit offspring and to produce offspring of a better quality. Here, then, and not so much in what Doctor Scott Nearing has called "negative eugenics"—the forbidding of mental defectives to bear offspring—is the solution that social reform has to offer for the problem of race degeneracy. The book is a notable one and is the fruit of long years of study and observation on the part of its author. The style is clear and lucid, an example of English prose at its best and purest.

"Social Environment and Moral Progress." By Dr. Alfred Russel Wallace, O. M., D. C. L. Oxon, F. R. S., etc. Author of "Darwinism," "Man's Place in the Universe," "The World of Life," etc. $1.25 net. New York: Funk & Wagnalls Company.

"You Can"

"THERE'S a man in the world who is never turned down, wherever he chances to stray; he gets the glad hand in the populous town, or out where the farmers make hay; he is greeted with pleasure on deserts of sand, and deep in the aisles of the woods; wherever he goes there's the welcoming hand—he's The Man Who Delivers The Goods." This Walt Masonic gem the author has quoted in order to set forth the point of view of his inspiring little volume. For it is Mr. Adam's belief that you can make good by taking command of yourself at any moment you desire to do so. By studying and analyzing your powers and abilities and mustering them all into your service, "you can make of yourself a towering figure in the work of the world. No one owns you. One hundred per cent of the stock in your personal Corporation belongs to you. The little People of Destruction that whine at your door, whine at the door of every forceful man. You can make them mere Pygmies in their Power over your Future." The volume consists of a fine collection of stimulating sermonettes that make a static appeal to action, to work, to integrity, to loyalty, to courage, and to the many other factors that make for success.

"You Can." By George Matthew Adams. $.75 net. New York: Frederick A. Stokes Company.

First Book of Health

THE young pupil, says the authors, "should be taught how to be cleanly in person and how to escape every disease that he himself has the power to avoid. He should not be burdened with information that is not directly and immediately applicable to his daily life and needs. In the matter of drinking water, for example, he should be taught the injuries that lurk in the common drinking cup, for he can avoid these by using one of his own. But he need not, at an early age, be taught how to locate and encase a well, for such matters are usually beyond his control." In this statement, by way of preface, the authors indicate the scope of the present text-book on hygiene. The aim constantly worked to has been to help the child form correct habits of life and to teach him that reverence for the body which will make him desirous of preserving it for usefulness and efficiency in later life. The book is well illustrated and is quite up to the high standard set by the previous health text-books brought out by the publishers.

"First Book of Health: A Text-Book of Personal Hygiene for the Pupils in Lower Grades." By Carl Hartman, B. A., M. A., Instructor in Zoology in the University of Texas, and Lewis Bradley Bibb, B. A., M. D. $.35. Yonkers-on-Hudson: World Book Company.

The Training of the Child

PROFESSOR DINSMORE'S purpose in the present book has been to supply reliable information concerning the nature and development of the human mind, its needs, its manifestations, its inclinations, etc., for the use especially of country and village teachers, men and women whose training has not included courses in pedagogy and psychology. The essential principles underlying these two sciences are set forth in plain and simple language, the author believing it possible "to express the underlying truth of any important science in the everyday language of the people." We are glad to see two entire chapters devoted to the care of the sense organs, in which the author avails himself of the opportunity to instill into the mind of the readers important lessons in personal hygiene.

"The Training of the Child, a Book for Young Teachers." By John Wirt Dinsmore, A. M., Professor of Pedagogy and Dean of the Normal School of Berea College; author of "Teaching a District School." New York: American Book Company.