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**LECTURES, SPEECHES, NOTES, AND
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(UNDATED BY TOPIC)**

HEALTH

Translation of "Hygiene Alimentaire", by Dujardin Beaumetz.

Premiere Conference.

At the beginning man had only the most restricted hygienic means with which to combat disease, and in prehistoric times medicines consisted only in the administration of some ~~drugs~~ drinks and the application of heat and massage, for man was ignorant of the medicinal properties of the vegetable forms which surrounded him, and hence could make no use of them. Imperfect as his knowledge was, the prehistoric man could make use only of hygiene in the treatment of disease. We have a certain proof of this in observing what exists to-day among the people who live still at our time, as lived in ancient times the individuals of the stone age. Observe, for example, the inhabitants of Terre del Fuego. Thanks for the facts which have been offered to us by our friend, Dy Hyades, who has passed a year in this island. We know that the Fuegian in the treatment of various diseases employs only the following means: massage, vapor baths, which he obtains by placing the sick man under some blankets where a fire is lighted, and cold baths which all newly confined women must take immediately after confinement. This is a resume of the therapeutics of these primitive people.

They might be able to utilize, however, some ~~of these~~ medicinal plants which grow in their country, but they do not, being ignorant of their curative fruits. At the last moment of the death struggle, by the sentiment of commiseration rather than of cruelty, they terminate the painful scene by smothering the patient. In

proportion as the human race is elevated by civilization, we see hygienic and therapeutic means perfected

It is from the Hindoo in the Vedas that we must find the first elements of this therapeutic hygiene. With the Hindoo people hygio-therapeutics take a religious character, a character which they have maintained during long centuries.

It is in the sacred books of the Hindoos, in the Vedas, and particularly in the Rig-Veda and the Code de Manou that we find the precepts of this religious hygiene. The two protectors of medicines, the Aswins, preside over all which relates to health. It is to them that one must appeal for assistance in resisting disease, and in order to show you the important role which they attribute to air and water in therapeutics, I can ~~do better~~ not do better than to cite you to some passages of a sacred hymn from the Rig-Veda. The hymn is addressed to Viswadevas.

"Two winds blow, one from the sea, the other from the distant continent; the breath of one gives strength, the breath of the other brings disease.

"O, wind, apply the remedy; O, wind, dissipate the disease; you possess all medicines; you are sent from the gods.

"The wind said, 'I come to you with happiness and health; I bring strength and beauty; I carry away disease.'

"The shadows are salutary; the shades repulse disease; ~~for~~ they contain all species of remedies; they cure you."

Besides these hygienic precepts, Hindoo therapeutics is especially a therapeutics of prayers and offerings to the gods.

This therapeuti

This therapeutics offers nothing precise. It is ^{more} ~~merely~~ a fetishism than a true art.

It is another people who must give to hygiene a much greater impulse, reserving in it its religious character. It was the Israelite people who found in the tables of the Mosaic law the hygienic precepts which are still applied in our day. This law regulated the dietary, the care of property, measures of aeration which made man pure or impure according as he observed these rules rigorously, or accordingly as he neglected them.

The talmud, which is, as you know, the commentary upon the law of Moses, insisted, especially at great length, upon the hygiene of foods, upon that of habitations, and of clothing, and finally upon the hygiene of the organs of generation. In relation to diet, it requires the sacrificer who kills the animal to examine with care the lungs, the kidneys, the liver, the intestines; and maintains that adhesion of lungs in animals which one kills must cause them to be rejected as food. Anticipating thus the modern ~~proscriptions~~ proscriptions, the Talmudist Doctors prohibited the use ~~of~~ as food all tuberculous flesh.

In relation to a hygiene of habitations, it insists ~~that~~ upon the necessity of the destruction of all houses where contagious maladies have developed and those which are unsanitary. Finally, in relation to the hygiene of the organs of generation, it separates the woman during the ^{menstrual} menstrual period.

Egypt continued the Hindoo practice and gave special attention to sacerdotal medicine, a medicine which was composed exclusively of hygienic care, and of ^{which} baths, gymnastics, massage and bodily

exercises composed nearly the whole. If one adds the use of some purgatives one would have a very restricted summary of the means which they employed in the treatment of disease. The whole was directed by laws which fixed the time when each of these means must be applied. But the people or community who made the greatest progress in the advancement of hygienic precepts, and formed a complete hygienic system, were the people of Greece. The Grecian people were impelled in this direction by their . . . in all its forms, which led them to create those imperishable masterpieces which we have never yet been able to equal, and which are an object of admiration for generations past, present and future.

To show the intimate union of hygiene and medicine, the Greeks made, in their poetic theology, Hygeia the Goddess of health, the daughter or the wife of Asclepiades; besides the pupil of the Centaur Chiron had at his disposition only hygiene means, and the priests who served his alters at Cos Epidaure employed only hygiotherapeutics. Her temples placed near the border of the sea, in conditions the most salubrious, surrounded with sacred woods erected in the neighborhood of Thermal Springs, or of living waters, offered to the numerous invalids who resorted ~~there~~ to them in search of health, all the desirable hygienic conditions which we seek in our day in our Sanitary. Exposed upon the steps of the temple, submitted to a special dietary, happily influenced from the moral point of view by the idea of the definity present, and by the numerous votive plaques, which, attached to the walls of the temple, indicated the innumerable cures obtained at the place, the invalids found themselves in the best conditions for a cure.

These hygienic means were the only ones employed by Asclepiades, excepting that they had added to these prescriptions the use of some simples, in particular the hellebore. Hygιο-therapeutics reigned here an absolute mistress. The Asclepiades were divided into two groups, one group remained attached to the temple, retaining their priestly character, these were the sacred Asclepiades; the others abandoned the temple and constituted the lay Asclepiades, who traveled through the different parts of Greece and the orient, and took in consequence of their voyages, the Periodeutes. It is in this last group that we must place the founder of medicine, the divine Hypocrates. Contemporary with Socrates and with all the illustrious personages of the century of Pericles, Hypocrates of Cos, was the first to establish the basis of dietetics in disease, and in his books he has given us two chapters, which have been during the centuries the sole guide of the physician in the employment of hygienic means in the treatment of disease. In his book devoted to the study of Air, or water and of places, to show the importance which he attaches to this chapter upon hygiene, Hypocrates commences with these words: "Whoever wishes to thoroughly understand medicine must not ignore the substance of which I am about to speak." But it is especially in the book entitled "Regimen in Disease" that Hypocrates insists upon hygιο-therapeutics. He passes in review the different foods, insisting upon the disadvantages and inconveniences of wine, and considers white wine as a diuretic. According to him, ale is a stimulant and increases the urine. Cheese is heating, and

lentils astringent. As regards meats, the flesh of raw pork is harmful, and the councils especially advise to use this flesh cold. As regards bread, that which is badly baked gives rise to gaseous distension; that which is hot is difficult of digestion. Finally, the originator of bathing in acute disease, Hypocrates, councils to treat inflammation of the lungs by warm baths. You will find besides, in the series of Hypocritic writings, innumerable citations relating to hygienic therapeutics.

For a long time the Asclepiades followed the doctrine of the physician of Cos, but little by little they changed their practice. One substituted for hygiene, imperial practices more or less gross which attained their height at the school of Alexandria. There resulted from this gross impericisms such abuses that soon they returned to the doctrines of Hypocrates, and the most ardent reformer in these was most certainly Asclepiade, de Pruse (en Bithynie.

Asclepiade discarded all useless and dangerous drugs. He desired by hygienic care alone, and especially by exercise, to sustain and reanimate the invalid. He recommended particularly attention to the different excretories, and especially the skin.

The Romans took from Greece their arts and their medicines, and it has been affirmed that there existed no Roman physicians--nearly all were Greeks, and nearly all had been educated at the school of Alexandria. These physicians had little of the doctrine of Hypocrates.

Celse in his excellent book De re medica, devoted a long chapter to hygiene. His first book is devoted to the hygienic

precepts which robust persons must follow to preserve health. Then in other chapters he traces the rules of diet for summer and for autumn, and shows that these rules are variable not only with the season of the year, but also with the temperament and the age of the persons to whom they are applied.

**Organisation of the Health and Efficiency League
In Affiliation with the American Health League.**

August 14th there was organized, at the well-known assembly at Chautauqua New York, a new health association, which it is believed is destined to accomplish much in the promotion of health, longevity, and efficiency among the people.

The date named was the last day of Health and Efficiency Week, organized and conducted at the Chautauqua with the cooperation and support of the ~~Chautauqua~~ Chautauqua management, by Mr. Horace Fletcher. Health and Efficiency Week proved to be the banner week at Chautauqua, the attendance having exceeded that of any other week.

Mr. Fletcher's talks and daily lessons of instruction proved to be a great drawing card. Numerous able speakers on health topics had occupied the platform of the great amphitheatre, which had been filled to overflowing on each occasion.

At the conclusion of the afternoon lecture, when the regular Chautauqua program was ended, Dr. Geo. E. Vincent, who had previously been consulted in relation to the matter, and who entered heartily into the plan, requested those who were interested in the organisation of a Health and Efficiency League to give permanent form to the popular and practical health movement, which had already begun so auspiciously, to resume their seats/ A large part of the great audience remained, opportunity then being given for remarks, suggestions, or resolutions.

Prof. Irving Fisher, of Yale University, New Haven, Conn., Chairman of the Committee of One Hundred and Chairman of the American Health League, arose in the audience, and on invitation came forward to the platform and addressed the audience. Professor Fisher first referred to the work of the Committee of One Hundred and the American Health League, which has now acquired a membership of

more than 25,000. The great health movement which these organizations have inaugurated has come to be one of the greatest movements existing at the present time. The special object and work of the Committee of One Hundred he stated to be the promotion of national and municipal hygiene and sanitation. He stated that he had for sometime recognized the importance of a movement for the promotion of personal hygiene and the hygiene of the home, and believed the time had come when an organization should be created for this purpose, and hence was glad to improve the opportunity to offer the following resolution motion:

"I move that we proceed to organize an association, to be known as the Health and Efficiency League, which will conduct its work in affiliations with the American Health League organized by the Committee of One Hundred."

The motion was seconded by Mr. S. S. McClure, ~~sixth~~ editor of McClure's Magazine, who, on invitation, of President Vincent, ~~also~~ stepped upon the platform and delivered a most enthusiastic address, setting forth the needs of an association for the promotion of public health and efficiency, and the great possibilities which might be accomplished by such an association, especially in securing to its members fifteen to twenty-five years of additional life and efficiency after the arrival of the usual time for retirement from active work. He explained to the audience how he himself, with a few weeks, experienced a remarkable uplift in well being and working ability through the adoption of the principles of simple, health living, such as it would be the special work of this organization to promulgate. Mr. McClure's remarks created great enthusiasm and interest.

Hon. C. M. Dowe, Chairman of the national commission in charge of the Niagara Falls Reservation, offered a motion authorizing President Vincent to appoint a committee to prepare a ~~constitution~~ constitution and by-laws and plans for the proposed organization, with power to act in the selection of officers and the inauguration of the work of the League. This motion was seconded and unanimously carried. Chairman Vincent appointed the following named persons as the committee: Prof. Irving Fisher, Yale University; Dr. Horace Fletcher, of New York and Venice; Hon. C. M. Dowe, Jamestown, N.Y.; S.S. McClure, New York City; and Dr. J. H. Kellogg, Battle Creek, Mich.

On motion, the meeting adjourned.

Before adjourning opportunity was given for all who were interested in the work of this League to write their names and addresses upon a slip of paper so that information might be sent to them. About _____ hundred persons handed in their names at once, and many others were received later.

A session of the committee on organization was held immediately after the adjournment, and a partial organization was effected. Mr. Horace Fletcher was elected president of the new League, and arrangements were made for completing the work of organizing, the results of which will be announced as soon as reported by the secretary.

We will give in our next issue fuller details respecting the objects, scope and methods of work of this new organization, which we believe is one in which every reader of Good Health will be interested.

President Vincent expressed great interest in the new association; and extended a cordial invitation to the Health and Efficiency League to hold its annual meetings at Chautauqua, suggesting that if, as expressed by Mr. McClure, the league would add from fifteen to twenty-five years to the longevity of its members it would also promote the prosperity of Chautauqua by ~~adding~~ increasing the sale of season tickets. As an encouragement to members of the league to live as long as possible, he made the generous offer of free season tickets to all who reach 100 years.

THE GOSPEL OF HEALTH.

Dedication of the Surrey Hills Hydro.

Opened in August, 1898, by the late Mr. J. Barford, the Surrey Hills Hydropathic Institution, Caterham Valley, has had a somewhat chequered career, owing in a large measure to the death of Mr. Barford in the early days of the institution. For a while it ceased to fulfil the functions for which it was founded, but recently the Hydro passed into the hands of the International Medical Missionary and Benevolent Association, and was on Thursday afternoon dedicated as a branch of the Battle Creek Sanitarium, U. S. A. This institution is the parent of the movement, which is now conducted in sixty similar institutions. The hydro, is under the charge of Mr. Alfred B. Olsen, and on the afternoon of the dedication he welcomed a large company, which included several of the leaders of the movement. Mr. D. Morgan Thomas, J. P., ~~xxxxxxx~~ presided, and after a quartette had been sung, said he happened to be one of the oldest residents in Caterham, and although he did not happen to know much about the association, wished to give a welcome to those who had come to the Hydro. He believed in the brotherhood of man, and anybody who came to Caterham to do good work ought to have the right hand of fellowship extended to him. It was remarkable how subtle were the links which ran through all our history. He remembered the Hydro before it was such, and he remembered it open by one who had now gone, one of the most honorable men he ever had the pleasure of knowing in his life, Mr. Barford. His views would be very much the views of Dr. Paulsen, both upon the question of morality and religion, and the question of general health. Not without personal sacrifice he opened the Hydro, and passed away before seeing the success which all hoped now awaited it. Then it changed hands, and afterwards passed into

the hands of the gentlemen who were there that afternoon. So came the connection between the village hydro and Michigan. The main aim and object of the hydro was to do good. It was not a mere dividend-earning concern, nor a quack concern. It was not a place in which to get a pill to cure everything. It was an attempt to teach in England an idea which was first developed in America half a century ago. Elder White caught the idea, and it had been gradually developed to its present form. The idea was that the human body was a sacred thing, that the human organization was a moral and spiritual organization, and if we would do the best work we could for usefulness, for liberty, and for good, we must keep this temple of ours in a proper condition for the soul to inhabit it. Another idea seemed to him to be that we were to learn that there were laws. The faculty had found out some of those laws and were following them. In his childhood days a popular hymn told that "There is a happy land, far, far away." As far as he understood, the aim of the gentlemen present that afternoon, who were connected with the movement, was to make that happy land very, very near, and prevent people transgressing the laws of health and morality, which were the cause very largely of the great portion of human suffering which we saw all around. When he caught the idea he rejoiced. He felt that they were on the right track; therefore, he came there to welcome them to the neighborhood, and to wish that the promulgation of those fine views might be as successful in England as elsewhere.

Dr. David Paulsen addressed the gathering at length. He said while the commencement of the work in Caterham might appear to some of them to be small, those who had seen its growth in other places had faith to believe that it would enlarge. What was the need of such a work? It was not to furnish employment for a few people,

though that would be legitimate, laudable, and praiseworthy. There was a deeper reason; there was a need of such a work, which at times did not appear on the surface. We were sometimes intoxicated by the advancement which we had been making in this generation. It would, however, be desirable if we had made some advance physically. But the facts did not at all bear that out, and he wished to call their attention to the real situation, the facts of which no intelligent man could contradict. He would show that instead of being on the up-grade physically we were on the down-grade. What about the physical condition of modern society? Years ago in America they were contending with the question of slavery. Today all civilized countries were contending with a greater slavery. There was something about these evils that flourished everywhere; they were part of the spirit of the age. The slavery, for instance, of drug-taking, which fastened the victims with stronger bonds than those which ever bound the human slaves of America. In America there were more than a million victims of the cocaine and morphine habits. The majority of them would be sent to insane asylums. No victim of such a habit could be a right man or a proper man in the community, in his Church, or in society. Then, again, the increase of cancer and tuberculosis was a national calamity. The latter was wiping out the fairest in the land. Why? Because man had become weaker than the microbe. Every violation of natural law was an invitation card to disease. Insanity increased three times faster than the population. What did that mean? We might cover these things up, but they were signposts pointing in the direction of that which was dangerous and serious. Apoplexy was directly produced by the wrong habits of the age. Disease was secured just as we secured education: by vigorous

sowing for it. Men were willing to toil for sickness. One half of the premature deaths were wholly preventible. There was nothing so easy in this world as to prevent an unnecessary funeral. He regretted that he felt it his duty to picture such things as disease and death before them, but it was necessary. It was his duty, because it was the very situation of which he was speaking which made it the excuse for establishing such an institution as that which they were dedicating that day. There was only one way to solve the difficulty, and that was to lay an axe at the root of it. True Christianity was for each man to fill his place in society; to fill the place God had given him in the world. Every death from typhoid was preventible. We were suffering from the curse of modern civilization. The way in which the population lived in cities was not conducive to health. Where a nation was expending more on vices than on education what else could we expect? The doctor was emphatically strong upon the vice of cigarette smoking by boys, and many who came under his care in Chicago were stranded hulks of humanity. "Whatsoever a man soweth that shall he also reap," was daily shown to be true. Patent medicines made largely from cocaine, morphine, and bad alcohol, were nerverel-foolers. They only post-poned the inevitable. Coming up from Plymouth he saw every mile or so advertisements of patent medicines. And it enforced itself upon him that this must be a nation using these things. It showed him there was a great need of educational work along the lines of that institution. Many of the people over the country were mere fragments of humanity. Out of nine thousand men presenting themselves for soldiers in a Midland city during the war, six thousand were physically unfit for service, and of the remainder one thousand were below the standard. If men were not fit for soldiers were they fit for carrying on the daily battle of life?

That in itself was evidence that something needed to be done. Then there was the modern cook. She was in league with the saloon-keeper, and undertaker, as she worked for both. She created the thirst in people which the town pump could not satisfy. See how children were fed. Boys were fed on food with mustard, which would raise a blister if applied externally, and this created a thirst and a craving for cigarette smoking. There seemed to be an idea in these days that anything which was not good enough for anything else was good enough to be swallowed. A mother said, "Johnny, eat this or it will be thrown away," and Johnny ate it. Was it not the duty of mothers to build up a splendid physique rather than tickle the palate? The world needed nothing so much as great men; they were needed everywhere. A great life was the production of proper study as much as great business. In conclusion he said there was room here for such work as that carried on at Battle Creek, and he counted one of the rarest pleasures of his life to be present in Caterham at the planting of this institution.

The standard was then run up the flag-post by the aged mother of the Superintendent of the Hydro, which the Chairman declared open. Three English cheers were then called for and given.

On the motion of Dr. Waggoner, seconded by Professor Salisbury, a vote of thanks was accorded the Chairman and Dr. Paulsen, which the latter acknowledged.

The visitors were ~~xxxx~~ afterwards served with a "health tea," and then inspected the building.

Let those who have favored the notion that the Sarrey Hills Hydro at Caterham is being exploited by cranks disabuse their minds. The reports of the proceedings there on Thursday afternoon, which

appears in another column, is conclusive proof of the establishment there of a new treatment, but only new as regards this country. Good things come out of America as well as extraordinary, and if the sixty sanitariums do a tithe of the good work accomplished at the parent institution at Battle Creek, Michigan, ^{U.S.A.} humanity will benefit. The address of Dr. Paulsen was greatly enjoyed by the large company present, and those who attended with open minds-- like children in such matters-- must have gone away, if not charmed by the "tea" served, at any rate convinced that the heartiest success must be wished those whose aims are so high. The Americans present, and a more sociable lot of ladies and gentlemen are rarely met, are enthusiastic in the movement, and some of that enthusiasm was caught by the Britishers, who, if conservative, can appreciate the efforts of those who aim at the betterment of others, and, above all, the prevention of much that is evil. Prevention is better than cure.

Topics For Study And Discussion At Mother's Meetings.

Some time ago we prepared a list of topics for use in mother's Meetings, which have been widely circulated and studied by many unions. For the benefit of such unions as have completed the first list, and desire suggestions for the further continuance of their work in the line of mother's meetings, the following additional topics are offered. The topics of the first list were provided each with a leaflet, as an aid in the study of the subject, but at the present time so much is being written and printed upon topics relating to social purity, that helps are far more plentiful than they were, and it has been deemed wisest, for the present at least, to offer only a few suggestions^{to} thoughts under each topic, and to urge local superintendents to arrange for papers, essays and talks on the topics at their meetings, making an especial effort to interest and secure different members for the duty as often as practicable. To broaden the work in every judicious, practical way, should be our constant aim.

I. Our Duty to the Girls we Employ in our Households.- The previous list of topics covered very largely the influences and temptations that assail our children while yet within the home nest under the guiding care of parents, but there is a large proportion of young girls who are compelled, often at a very early age, before their characters are well formed, to enter the ranks of those who toil for their daily bread, by going out to service in families. Thrown thus upon their own resources, lacking home training, and possessing a fondness for dress and excitement, they are

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often placed in positions fearfully open to temptation and sin. In many instances their employer takes little or no interest in their moral welfare. If the work allotted is properly performed, that is about all for which a concern is felt. Women ought to realize that to a great degree they are their "sister's keeper" and that upon their shoulders rests much of the responsibility respecting the purity and moral character of the young girls employed in their households, many of whom know no other home save that of their employer, and have no other ~~home save that of their~~ ^{one to counsel and} warn them of the dangers besetting their pathway. Says one who has given this subject much thought: "So many of us permit these girls, some of them very young, to go in and out of our homes, never concerning ourselves how or where they spend their time. Could we not by our influence save many of them from ruin? Girls are led off so many ways in these days- some by ignorance which we might avert by a few plain talks about health and purity; some by ^{a love} giving dress which we may have encouraged by giving dress too much of our time and thought." More than one ^{young} girl's ruin has been brought about by being sent out on errands at night with no provision made for her protection and no concern expressed as to how late she remained out. It is far easier to prevent than to rectify evil after it is done. Let us save these girls before they have fallen. In almost all of our cities there are branches of the Girl's Friendly Society or Girls' Clubs; let us take pains to persuade the girls in our employ to join some such society, and, even at some inconvenience to ourselves, see that they have time to attend the meetings.

2. The "Working Girl" Problem.- Not only the girls who go out to service, but those who are employed in factories, shops, and as working girls in other vocations of life are particularly surrounded by dangers, danger from association with those of impure character, both at their places of employment and at their boarding houses; danger from lack of home-like surroundings when the day's toil is ended; danger from lack of wholesome means for recreation; danger from unscrupulous employers; danger from the starvation wages paid for work in addition to the numerous other influences at work to lead girls astray, and to which the majority of girls away from home are most susceptible. Read in connection with this subject the little leaflet, "Wages and Vice" of the Philanthropist series; also "Prisoners of Poverty," by Helen Campbell, "The Children of Cibeon," by Walter Besant, and "Moral Elevation of Girls," published at 10 cents per copy, at 21 University Place, New York City. Study also the best ways to lend a helping hand. "A Bundle of Letters to Busy Girls," by Grace Dodge, published by Funk & Wagnalls is a most excellent little book to circulate among working girls.

3. The Question of Amusements.- Dancing is an amusement, the tendency of which is directly towards impurity; particularly are the round dances calculated to stimulate impure impulses. The moral ruin of many young women is directly traceable to the dance. The New York Chief of Police states in his report, that "three-fourths of the prostitutes in that city attribute their downfall to the dance". Is any stronger testimony needed to show that this

often so-called innocent amusement is conducive to impurity?

The skating rink and toboggan slide are no places for pure girls unaccompanied by father or brother. At such places all classes of men and women congregate. They are the special resort of fast young men and profligates ; and although the exercise may not be objectionable, the promiscuous associations which are unavoidable at such places render these amusements decidedly objectionable . Many cases of disgraceful downfall have been directly traced to the influences of the skating rink. There are other and better means of exercise. The opera and theater are open to many objections which it would be wise for the mothers to think of and discuss in this connection. And while studying this subject do not forget to give a few thoughts to the games which the little children play at home and at school; some of which, like "forfeits," where kisses are freely interchanged between members of the opposite sex, and others of a similar character, seem to tend directly to instill into the minds of the very young such thoughts about love and sentimentality as ought to be left for more mature years.

Read in connection, "The History and Mystery of the Dance," also published by S. H. Bessly, "Plain Talks about the Theater," by Dr. Herrick Johnson, Chicago.

4. Dangers from Impurity in Schools.— Emerson truly says, "You send your child to the school-master, and it is the school-boys who will educate him. You send him to the Latin class, but much of his tuition comes on his way to school from the shop-windows." The prevalence of immorality among the pupils of the public schools is something that should cause much concern to every lover of purity. Teachers everywhere should be aroused to

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the immensity of the evil, and made to feel the responsibility in this matter. This work is one that mothers should be doing. Few mothers, however, realize the greatness of the evil. They know little of the school, and still less of the teacher to whom their child is entrusted two-thirds of every day. It is simply taken for granted that the teacher is all he should be simply because he is a teacher. Unscrupulous and conscienceless teachers are rare, but those who are ignorant respecting the evils of impurity and the importance of watchfulness and care in this respect are by no means so few. Let mothers seek to know to whom they intrust their children; let them read and circulate among teachers "Shield and Buckler" and "School-boy Morality," two little leaflets of the Social Purity Series, published by the W. T. P. A.; let them insist upon faithful watchfulness over their little ones, during their study hours, and, if permitted to have recesses, during their play-time also; and let them use their voice and influence with the school board in the election of women members upon such boards, and the selection of such teachers as are known to feel their responsibility for their foster charges. Let them insist upon clean and decent out-buildings, and such other conditions as are most favorable to the development of purity; and, above all, let them warn and fortify their own little ones against the temptations sure to assail them.

5. Industrial Training as a Preventive Measure.- Under this head the mothers may discuss the value of kindergartens for the wee ones, and kitchen garden and industrial work for boys and girls of older growth. Idleness and aimlessness are potent factors

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of vice. The cup that if full can hold no more, and the boys and girls whose minds and hands are occupied with suitable plays and proper employment will be far less apt to stray from virtue's path. Read in this connection the chapter on "Industrial Training" in Mrs. Livermore's "What Shall We Do With Our Daughters"; also "How to Win", by Miss. F. E. Willard; and chapters on "Work and Play," in "Childhood: Its Care and Culture," by Miss. West.

6. Immoral Advertising.— Scarcely a newspaper, religious or secular, can at the present time be found, which does not contain in more than one of its pages the advertisements of the most unscrupulous charlatans, promising sure cures for diseases resulting from the most abominable vices. Is it not apparent that the young will think lightly of the penalties of sin if they find for it a dozen certain panaceas offered? Are not such advertisements really an invitation to vice, with a guarantee of immunity from suffering attached? Let mothers seek to arouse editors and publishers to a sense of their obligations in this matter, and refuse to read or admit to their homes all papers containing advertisements of this character? The exhibition of woman's face and figure as advertisements in the windows of saloons and cigar shops should also arouse our mothers to strenuous efforts to secure their removal.

IRONING.

Articles which have been thoroughly washed, and rinsed, and well and carefully dried do not require ironing on the score of either health or cleanliness. Indeed there are those who claim that no ironed fabrics are so clean, so sweet smelling and withal so hygienic as those which have been subjected only to the action of the sun and air, and are laden with the ozone they have absorbed while drying. Undoubtedly much energy as well as time might be saved for other and more valuable things by dispensing with the ironing of many articles in the weekly wash. Towels, dish towels, and sheets may be made smooth by careful folding when slightly dampened and placing under a weight. Hosiery and knitted underwear may be used unironed. Carefully folded flat pieces may be smoothed by putting through a clean, dry wringer, instead of ironing.

Custom has much to do with the apparent need of ironing a good deal of which is done for the sake of appearance although comfort demands the careful ironing of many articles, and especially any such as has been starched.

Utensils Needed.--A good fire of steady heat is the first requisite in the preparation for ironing. No fuel is more convenient, especially during hot weather, than gas or gasoline for heating the irons, but care should be exercised that they are not placed directly over the flame, as the intense heat will roughen and spoil the best of such. A sheet of iron or an old stove-lid should be kept under the irons while heating, if one does not possess one of the triangular arrangements sold for this purpose. A cover over the iron irons retains the heat, thereby necessitating less fuel, and it will prove a real saving in time to have one with substantial handle made by a tinsmith to fit the number and size of irons ordinarily used. The irons easiest for the hands are those with removable handle

les of wood. They are obtainable in sets of three. It is desirable for alternate use when much ironing is to be done to have two handles with the outfit. The Troy polishing are among the best. For good results, the irons must be kept scrupulously clean and smooth. They should be frequently washed in soap and water, carefully dried, and always kept in a clean, dry place. If an iron becomes rusted, apply sweet oil and powdered quick lime to the rusted part, allowing it to remain for a few days; then wash well in clean water, and afterward with a strong solution of sal soda. For the best results the laundry should be equipped with a skirt board, to which is attached a sleeve board, and if shirts are to be ironed, a basin board, nine by eighteen inches, and carefully covered with a single thickness of heavy cloth.

The ironing boards or tables need to be of firm construction, and of such a height that the ironer can keep a proper poise while at work. It should be covered first with one or two thicknesses of some heavy flannel or felt. An old blanket serves admirably for the purpose; heavy double-faced cotton flannel is also good for the purpose. This should be smoothly drawn over the board, and tacked firmly on the under side. Over this, tie or pin smoothly a clean cotton cover, preferably of unbleached muslin. It is a good plan to keep a supply of covers on hand, made of unbleached muslin. Cut them just the shape of the ironing-board, hem, and at distances of four or five inches sew on strong tapes, long enough to reach under the board and tie securely. By this plan one may have a clean ironing cover whenever needed.

At the right hand, for testing the irons, place several thicknesses of clean paper, a piece of old cloth, and the stand for the irons. Have also near by, though not on the ironing-board, a paper on which is spread about one-half cupful of salt, also a bit of bees wax tied in a cloth. Whenever an iron seems rough, rub it over

the salt, wipe, then rub the wax lightly over it, and wipe again carefully before using. Pains should be taken to see that all portions of the irons, the top as well as the bottom and sides, are clean and free from rust to begin with.

It is advantageous to commence by ironing some of the coarser articles first, until the irons are in their best condition. A few such should also be kept on hand on which to temper the fresh irons when they have become well heated. The usual test for heat is to touch the iron with a moist finger. If it hisses, it is hot; if the sound is a short one, it is likely to be too hot. The movement in ironing should be a regular and uninterrupted one, up and down over the article, straight with the grain of the cloth, without raising the iron from the board. Press lightly and slowly at first, increasing the pressure as the cloth gains smoothness. The straight and selvedge edges, the borders and hems of flat pieces should be ironed first, and then the whole article drawn carefully into shape before finishing. When ironing trimmed garments, the ruffles and other trimmings and the parts that will muss least in handling should be ironed first. It is well to turn buttons toward the board, lest they be broken by the irons. Each piece should be ironed until it is dry, otherwise it will muss very easily. Iron the thinner parts of waists and dresses first, as these dry soonest.

If one uses wood or coal as fuel, the heat of the irons is apt to be lessened each time the fire is replenished. Articles made of thin fabrics, like handkerchiefs, require less heat to smooth and can be better ironed during this period than other pieces. Iron embroidery on the wrong side, with several thicknesses of flannel underneath it to bring out the design. Starched articles should always have a hot iron. Laces and other raised patterns require the same treatment.

Table linen, if of good quality, requires no starch. It should be well dampened, and ironed with a hot iron in a single thickness, lengthwise, until thoroughly dry. Then fold as necessary, and press again. The fewer folds made in table linen, the better. Indeed, the ideal way to keep table cloths is to fold but once lengthwise through the center, then hang over poles in the linen closet. It is important in folding table linen to make the edges straight and exact. Any initials or markings should come on the outside. The first ironing of ~~new~~ table linen should be on the wrong side to bring out the pattern. Afterward fold with the selvages evenly together and iron both right sides, increasing the pressure as the linen dries. Have the selvedge edge always toward the operator, so that it may be kept even. If necessary to make other folds in the cloth, double lengthwise, so that the selvedge edges nearly touch the center fold and iron again. No crosswise folds in table cloths should be creased by ironing. As few as possible should be made, and none until the linen is perfectly dry, so that when the cloth is opened upon the table at the most only three lengthwise folds will appear, each with the shape edge uppermost. If the linen dries too fast, spread a damp towel over portions which the ironer will not immediately reach.

Iron napkins in the same manner, making sure that the edges are first pulled straight. When the lengthwise folds have been made, double once crosswise, and iron both surfaces, then a second time repeating the process. Always iron linen doilies with the weave of the goods. If there be fringed edges, lay the piece out smoothly wrong side up on the board, pull the edges straight, and brush the fringe with a soft whisk broom before ironing.

Crocheted, netted, Battenburg and similar doilies after washing should be stretched into shape and fastened on some rather heavy white cloth, laid up on a flat surface with a clean cloth

above, and weighted until dry. No ironing is needed unless there be plain centers. These should be smoothed with a hot iron. To iron Mexican drawn work, first spread it out carefully, pull it lightly into shape, then iron from the center out, always with the weave of the cloth, finishing with the linen border, after the center has become sufficiently dry to hold the pattern.

In doing the shirts, iron the body and sleeves first with an ordinary iron, keeping a damp cloth over the bosom as much as practicable, then place the board under the bosom, smooth out all wrinkles, wipe carefully with a damp cloth, and iron very lightly at first, until the surface is smooth, and sufficiently dry to retain its shape, afterward increasing the pressure, using for polishing a very hot iron. Polish by rapid movements, accompanied with heavy pressure.

Spread the cuffs smoothly upon the ironing board. Wipe carefully with a piece of wet cheesecloth, or other soft fabric, on both sides to make sure there are no particles of starch to adhere to the irons. Run the iron lightly over the wrong side first, then lightly over the right side. If the pressure is heavy at first, the iron is to stick, as it also probably will if the linen is not carefully wiped. After lightly ironing both sides, increase the pressure, but on the wrong side first, so that the thick edge made by the turning in of the cloth shall not present a raised surface on the right side as it is likely to do if the right side is first ironed. With all starched pieces, it is important to iron until thoroughly dry. Polish cuffs on both sides, the right side last. Have the polishing iron immaculately clean, and heated to just the right degree. This with quick movements and heavy pressure is the secret of good results for hand work. The requisite curve to the cuffs may be given while

still hot by fastening the corresponding buttonholes together.

Proceed in the same way for ironing and polishing collars.

It is easier to iron shirt waists if the sleeves are first turned wrong side out. Iron the neck band first, then the back, next the fronts of the waist, shaping the shoulders over the corner of the ironing board. Turn and iron the sleeves. A sleeve board is a great convenience for this. Any creases that may have been made in the waist by handling, should be pressed out on the wrong side. Particular pains should be taken to see that the seams of the shoulder and arms eye are ironed dry, lest they wrinkle afterward.

Airing the Clothes.-- After the pieces have been ironed, they should be thoroughly aired before putting away. Fold flat work lengthwise in the creases made in ironing, and hang upon a clean line or clothes horse. Shirts, night gowns, dresses, etc., may have the bands buttoned and hung without folding. If one has a room for the purpose, a clothesline stretched from side to side, to which the freshly ironed garments may be pinned and thus suspended for a time, is an excellent way to air the clothes without wrinkling.

MOVING DAY PROBLEMS.

At the beginning of spring every year hundreds of families somewhere in the land change their habitations. The mass of people, who as tenants make their homes under hired shelter and amid environments over which perhaps they can exercise little or no control, ^{greatly} augments the problem of public health. In multitudes of instances circumstances beyond which there is no choice, determine the boundaries of the new home, and all one can do is to make the best of it. There ought to be a law compelling all landlords to see that before tenants are permitted to take possession the conditions existing in and about houses for rent, are such as will not endanger the life and health of their occupants.

~~When~~

Whenever there is option of selection, the house seeker should first subject the new quarters to a test regarding all points of hygiene. See if the water supply is pure, the cellar if there be one, dry and well provided with light and means for ventilation. Examine the closets and clutter places, woodshed and back yard, to see that there are no unwholesome places ^{lurking-} for disease germs. Make sure that the drainage and plumbing, if there be any such, have no faulty connections, no leakages where foul gases may escape into the dwelling. Observe all out buildings with an eye to sanitary criticism. Choose the place with plenty of windows and ample provision for indoor as well as outdoor sunshine rather than the house embowered with trees if thereby the genial sun rays are largely excluded.

See that the inner walls are not decorated with several thicknesses, ^{of paper} covering a reeking mass of mold and germs, and that

the windows are provided with such arrangements as will allow of their being opened when desirable.

It should be ascertained whether or not the previous occupants were afflicted with tuberculosis or any other germ disease. It is always well, under any circumstances, to have the new quarters thoroughly disinfected, as well as cleaned with soap and water, before moving in, and this is absolutely essential in case the former occupants had suffered with any ~~communicable~~ communicable disease.

The most effective method of house disinfection is fumigation with sulphur or with formaldehyde, the liquid gas of formalin. The latter is preferable where there is anything to be disinfected which might be injured or discolored with sulphur fumes. In using either agent, it is necessary first to seal securely all windows, doors and cracks through which the gas might escape, by strips of paper made to adhere to the woodwork with ordinary starch paste.

To insure the more thorough disinfection, the room should be well saturated with steam by boiling large dishes of water over kerosene or other portable stove, the water ^{being} afterward ~~being~~ removed from the room before beginning disinfection.

A special apparatus, placed just outside of the apartment and connected with it by a tube passed through the keyhole, through which the gas as generated is discharge ~~into~~ the sealed ~~room~~ room, is the most effectual arrangement for the use of formalin. This can usually be obtained at the pharmacy.

The quantity of formalin required is five ounces for every one thousand cubic feet of air space. This space for each room can be easily determined by dividing its cubic contents that is the

product of its length, breadth and height) by a thousand . To illustrate, suppose the cubic contents of a room to be 2592 cubic feet, allowing five ounces for each one thousand cubic feet, the amount of formalin needed would be so near fifteen ounces that this amount should be used.

The family is a fortunate one which can move into renovated apartments with walls and floors redressed and freshened. Though there be few, comparatively, who can thus "turn over a fresh leaf and begin anew," it lies within the province of all to see that no dust and dirt be transported from the old home to the new, and that this is at least, as clean as soap and water can make it .

It is well to begin sometime before the advent of the day decided upon for moving, to sort over and pack such things as are not in constant use preparatory to the change of location. With the very best of facilities, the matter of moving from one home and settling in another is no light task, and for the sake of the health and comfort of all concerned should be undertaken in the best plan, ^{and} most systematic manner possible . Head work should and supplement at each end of the road.

superceed ^{hand} work [^] Circumstances are
seldom the same in different families, hence nothing more can be laid down than general principles, which each one must work out according to existing conditions.

At the outset of the work, it is a wise plan to gather together [^] and put in a basket to be kept in some place easily accessible, a supply of dust-cloths, pins, needles, sizzars, twine, thread, tacks, hammer, wrapping-paper, and other needful articles sure to be in demand up to the last moment in the old home, and needed first of all in the new one.

It greatly lessens the labor of moving as it does of the semi-annually house-cleaning to do the work by degrees. Begin with the storage rooms, dust and pack in trunks or boxes anything that is to be moved, at the same time sorting out all cast off articles which may be of service to others, and putting them in some convenient place (a large box or barrel is most suitable) to be disposed of as occasion may offer. All small articles, ~~knives~~ bricabrac, ornaments, pictures, and extra china, carefully packed among the bed blankets or wrapped securely in papers may be early packed in boxes or barrels and set aside. Granose boxes do very well for packing, but the boxes having slots in the side for handling, such as are used by market men for fruits and vegetables, are especially convenient and are obtainable at a mere nominal cost. Such boxes, lined with paper so as to keep out the dust are particularly nice for books which need to be packed carefully, and those from each shelf or case separately and in order. ~~It~~

It should be a rule in the packing of all articles to keep everything together in such a way that the unpacking and settling in the new quarters shall be attended with the least possible disorder and confusion. Where boxes are filled with miscellaneous articles, it is desirable to make a sort of general list of the contents, to be placed in the top of the box for reference when the destination is reached. All boxes and trunks and barrels should be labeled as packed, that the contents of such as are not immediately needed may be left undisturbed ^{upon} at the arrival at the new home, until convenient to unpack. Bureau and other drawers packed in an orderly way with such articles as will not be harmed by the handling, may be locked or removed from the cases, covered

securely and packed one above another to await the morning. It saves much time and trouble at the other end of the route if things are kept where they belong as far as possible. Clothes baskets of ample size are excellent for carrying the wearing apparel.

* After disposing of the merely ornamental and least used articles, the draperies, curtains, rugs and carpets may be cleaned and gotten in readiness for the new home, and the bedding sunned and washed. If one may be allowed the privilege, it is far preferable that at least some of these should be put in place in ~~some~~ of the new apartments before the furniture is moved, and especially so if the carpet is to be laid and tacked to the floor.

It is desirable to keep one ^{room} of the old home for storage during the packing for moving, and it is likewise a great convenience to use one room of the new home for the same purpose during the settling. It is so much easier to collect the things needed from one than from every place about the house.

When moving day arrives, the articles most in demand should be first moved and as early in the day as practicable, in order that at least some portions of the house may be set in order before night. The wise woman will have calculated beforehand and packed such bedding, towels, dish-towels, table-linen and cooking utensils as will be first needed where they will be at once in readiness for use. She will also have made provision for the first few meals in the new home so that no great amount of time will be required for their preparation.

That both time and strength may be husbanded for the duties

awaiting her in the arrangement of the new home. Like the preparation for moving, the task of settling should be accomplished by easy stages. If the packing is done with forethought and system, this will not be a difficult matter. If the new house is one which has been for some time unoccupied, it should be well aired and heated before settling. As to the old home, for the sake of the neighbor who may succeed in turn in it it should ^{be} be- for leaving, at least swept and garnished of all dust and rubbish.

SANITARY LAUNDERING.

Wherever clothing for the body is a recognized need there also exists the necessity of some method for cleansing of fabrics and wearing apparel. Dust and dirt are of such universal prevalence it is impossible but that clothing should become soiled through contact with them while the impurities being constantly given off by the body itself renders even more imperative the need of washing and changing of garments as a sanitary measure. Washing of clothing was regarded a matter of such moment that it was enjoined by the Lord upon the children of Israel (Ex. 19: 10-14) as one of the measures whereby they were to prepare themselves to appear before Him. Throughout the Scripture the frequent mention made of the purification of garments, the washing of robes would seem to indicate the truth of the old adage that cleanliness is next to godliness.

The primitive method of laundering was probably akin to that in practice among the peasantry of European and other countries at the present day; the washing being done on the banks of a stream or lake, using a stone for a wash board or rubbing the clothes with the hands. Sometimes the clothes are put into a box and soaked in water in which soap has been dissolved, afterward they are pounded with sticks or stones and then rubbed clean with the hands.

In Mexico, where this custom is also in vogue among certain classes it is a very amusing and interesting sight to come upon a river or brook on wash-day along the banks of which the women of the half the community are ranged with their paraphernalia for washing.

In the days of our grandmothers a pounder and barrel were considered the requisites for washing. Soft soap, which the thrifty housewife manufactured for her own use and kept on hand in bulk was first freely applied to all particularly soiled portions after which the articles were placed in a barrel filled with warm water of a

depth to cover them and then with alternate pounding and turning the dirt was readily extracted. Whether this procedure was less laborious than the "rub a dub dub" of the board and tub depends greatly upon the strength and muscle of the worker. It certainly did not induce the constrained-back breaking positions so frequently accompanying the use of washboard and tub. Both methods have been largely superseded by machines which do most of the work on the same principle, that of forcing water by some means through the meshes of the cloth to cleanse it of dirt and grime.

With a good machine the labor of keeping the household linen sweet and clean may be greatly lessened, but even the best washing machine will not do the work well unless intelligently operated.

Materials Needed.

By whatever method the work is to be accomplished plenty of pure, soft water is a first essential. Soft water is not only more agreeable to the hands but requires the use of less soap and more easily extracts the dirt. Water is apt to dissolve and carry along with it traces of the inorganic substances over which it flows. From the air it absorbs more or less carbondioxide.

Carbondioxide has the property of combining with lime, when the water soaking into the soil flows over magnesia or limestone forming with it a carbonate or soluble salt. It is the presence of compounds of lime and magnesia in solution which gives us what we term "hard" water. Soap dissolved in soft water at once makes a lather but in hard water no lather is produced until all the inorganic matter in the water has first combined with the soap to form a coagulate or "curd" which rises on the top of the water.

The simplest way to soften hard water due to carbonate of lime is by boiling. This causes the gas and mineral element to separate, the one passing off into the air and the carbonate of lime precipitates

or settles at the bottom of the vessel in which the water is heated. A few minutes boiling will not always suffice. It may take two or three hours continuous boiling to precipitate all the lime which can be removed in this way. Experiments based upon the number of grains of carbonate of lime in a gallon demonstrated that water of fourteen degrees of hardness (that is containing fourteen grains of carbonate of lime to the gallon) lost but two degrees when merely brought to the boiling point, but upon being boiled one fourth of an hour the hardness was reduced ten degrees.

It is also possible to soften water the hardness of which is due to carbonate of lime by the addition of lime water, one part to ten of the hard water. The lime absorbs the excess of carbondioxide and the insoluble carbonate separates.

The presence of sulphate of lime or magnesia in water also gives it hardness. To soften such the usual method employed is the addition of such alkalies as sal-soda, potash, lye, ammonia, these combine with the sulphuric acid of the compound thus decomposing the sulphate, and rendering the water soft.

Great care however is necessary in making use of such chemicals as if an excess is employed they are very liable to injure the fabrics cleaned in the water.

Experiments.

Test Water as to softness. Dissolve a little soap in alcohol. Put a few drops of the solution in the water to be tested. If it remains clear the water is perfectly soft. If it becomes cloudy or opaque it is hard. The degree of hardness corresponding to the density of the cloudiness.

2 Soften hard water by boiling.

3 Soften hard water with lime water and other chemicals.

For all uses it is better to prepare a solution of sal-soda in the proportion of one pound of the soda to one quart of water. Heat to the boiling point when the soda will have become dissolved. When cooled it may be bottled and kept for use and will serve the purpose far better than when used in crystalline form. For laundry purposes use in the proportion of one tablespoonful to three pailsful of water.

Soap.

Water cleanses soiled fabrics both by mechanical action and by its solvent power. Much of the dirt on clothing particularly that on personal linen is oily matter in some form communicated by perspiration or contact with the skin. Water has no affinity for oil and can neither dissolve it nor remove it without the aid of some other cleansing agent. Alkalies are the chemical agents most suited to the purpose, but they are too strong for ordinary use unless modified by combination with some other substance. Soap is a soluble compound made by combining an alkali with some fatty acid. Added to water the soap becomes decomposed, the alkali in its composition acts upon the dirt in the fabric, dissolving it while the fatty acid forms an emulsion with the water giving to it the milky appearance characteristic of soap suds.

Soaps are said to be hard or soft according to their consistency and this is dependent upon the materials used.

When potash is the alkali employed, the soap product is of jelly like consistence. Hard soaps are prepared with soda and the degree of hardness is also increased by the quality of the fat used. Soaps made from tallow and stearic acid being much harder than those compounded with oils.

Ordinary white soap is a combination of tallow and soda. Yellow soap contains beside the fat and soda more or less resin. Such soaps should not be used for washing of wool fabrics as resin has the effect of hardening the fibres of woolens.

Genuine Castile soap is a compound of olive oil and soda sometimes colored.

Toilet soaps are prepared from various oils saponified with soda, colored and perfumed according to fancy. Care is taken that there shall not be an excess of alkali in their composition. Alcohol, naphtha and other cleansing agents are sometimes added to the soap to increase its efficiency.

The best method of using soap for laundry purposes is to prepare a soap solution- Shave an ordinary size bar of white soap quite fine; add to it two quarts of soft water and boil until all the soap is dissolved. Use while hot. A solution may be made from yellow soap in the same way, but will require more water in proportion to the difference in the size of the bars. There are many other cleansing agents, washing powders and fluids used in the place of soap or in connection with it, most of these are chemical compounds which freely made use of do more or less injury to the fabric. They lessen the work necessary for the process of cleansing however, and are usually considered a great boon to the laundress where present rather than future results are sought after. These compounds as likewise such chemicals as sal-soda, concentrated lye, borax, ammonia, etc. if used should serve only to assist in the cleansing and not be relied upon to do the whole work. Great care must also be taken that all articles cleansed with them be most thoroughly rinsed afterward.

Utensils and their Care.

The utensils necessary for washing when one has not a laundry ~~equipped~~ ^{equipped} with stationary tubs are:- three or four medium sized tubs, those made of fibre are most satisfactory in that they do not rust like metal tubs nor fall to pieces as do those made of with hoops, a boiler, washboard, clothes wringer, clothes basket, clothes-stick, clothes line and pins. Benches or stands for the tubs are essential and these should

always be of such ~~x~~ height as will permit of the worker standing in a comfortable upright position at her work. Pails and dippers for filling and emptying tubs, one or two granite cookers for soap solution and starch, and a tea kettle for heating water are other needful articles. A washing machine is also a very desirable adjunct to the laundry equipment.

After a washing is completed every utensil should be carefully washed and wiped and left clean and dry. The screws of the wringer should be loosened and the cogs and every portion of the machinery wiped dry. If the wringer does not turn easily clean the cogs with a few drops of kerosene; afterward wipe dry and apply a very little sewing machine oil then work for a few minutes. Just before it is again needed for use carefully wipe off all the oil that none may adhere to the garments, while passing through the wringer. If the rollers are dirty a few drops of kerosene on a cloth may be used to clean them but as kerosene corrodes rubber the rollers should be carefully washed and wiped afterward that no trace of the kerosene be left upon them. If there be a machine for washing it too should be carefully cleaned and dried in every part.

Preparation for Washing.

The first step in the preparation for washing is a careful sorting and looking over of all articles to be laundered regarding the following points:-

(1) All articles needing repairs should if possible be mended before washing. Rents and tears are likely to become greatly increased during the washing process if the garment is not entirely ~~xxxxx~~/ruined thereby. Garments which are so soiled as to necessitate washing before mending may frequently be better preserved by basting up rips and rents before cleansing, leaving more painstaking mending to be done when clean before they are ironed.

(2) Every article should be examined for stains and any such as will not readily yield to soap and water should be removed by special methods before the articles are washed. In such instances soap and water sets the stain.

(3) A sorting of articles according to texture and cleanliness. Not all textile fabrics can be treated alike. The cotton and linen garments must be put by themselves, the woolens, silks and laces likewise. Of these different assortments the cleanest of each kind must be washed first. Colored articles are to be separated from white ones, and these also sorted according to texture and cleanliness.

Removal of Stains.

It is an excellent plan to have directions for removal of stains either typewritten or printed tacked on the woodwork of the laundry in some place in plain sight. Fruit stains if treated when fresh may in most cases be removed with boiling water. A very good way to proceed is to stretch the stained portion over some deep dish and ~~firm~~ pour water, which must be actively boiling, directly through the stain until it disappears. Should this fail after a thorough and repeated trial Javelle water may be used. Javelle water is prepared by dissolving together one pound of sal-soda and one fourth pound of chloride of lime in two quarts of boiling water. When the solution has cooked and settled pour off the clear liquid and bottle it for use. Care must be taken that no undissolved crystal or dregs pass into the bottle. To use, stretch the fabric over a plate and apply the Javelle water to the stain with a soft brush, (an old nail or tooth brush) rubbing gently until the stain disappears, then rinse in several clear waters and finally in ammonia water.

Grass stains may be removed by first washing in kerosene and afterward with soap and water. Washing in alcohol will likewise remove grass stains.

Blood Stains require cold or tepid water. Hot water sets the stain. Soak for a time, changing the water if necessary until the stain is brown or nearly gone then wash with soap and hot water. When mucus is mixed with the blood as in the case of handkerchiefs, it is well to first soak the articles in a solution of salt and cold water, two to four tablespoonfuls of salt to a quart of water.

Ink stains. To be successful in the removal of ink stains one needs to know the composition of the ink and to treat the stain while fresh. Black aniline ink is indelible. Alcohol will usually remove the stain of colored aniline inks. Many ink stains may be removed by being soaked in milk. If one does not know the composition of the ink in question the best method of procedure is to wash the fresh stain in clean cold or tepid water as long as the water will remove any of the ink, then soak in milk. The stain is not fixed by either the water or the milk and if neither will remove it other measures may be tried later. With all kinds of stains it is desirable to try the simplest methods first. It sometimes happens that the stain which does not disappear at once will do so after being soaked for a day or two in milk. No harm is likely to result if the milk sours. Sometimes the sour milk proves more effective than sweet milk. When the ink is an iron compound, oxalic or muriatic acid applied to the stain will generally remove it. Stretch the stained cloth over a bowl two thirds full of steaming hot water. Drop a little of the acid on the stain with a medicine dropper or sponge. Let it remain for a moment then dip the stained portion in the water beneath. Repeat the process until the stain disappears then wash well in clean water and lastly in weak ammonia water, for the purpose of neutralizing any acid which might remain to injure the fabric. Some ink stains are removable by the use of lemon juice and salt. Sprinkle the stain with salt and apply hot lemon juice. Let it act for a few minutes then rinse in tepid water and renew the application

Ink stains which have dried can not be readily extracted, and when this method is tried upon such the article should be kept moist with the lemon juice and salt and placed in strong sun light for several days. Rinse thoroughly each day before renewing the application.

If the fabric is a colored one the acids are liable to take out the color, sometimes this may be restored by dipping it in weak ammonia water. Javelle water is also recommended for removing ink stains. Dip the stain in the javelle water and allow it to soak until the ink disappears.

It must be understood that in the use of any of these chemical agents there is danger that not only the stain but the texture of the fabric will be attacked, and that it is imperative that very careful rinsing should follow the application. Dilute ammonia one part household ammonia to four of water should always be at hand to use to neutralize any of the acid which may still remain in the fabric.

Mildew is a kind of mold, a vegetable growth nourished by warmth and moisture which attacks the fibres of cloth because it has been left while moist or wet in some warm place. During the early stages of its growth it may be removed by the application of soft soap thickly spread with powdered chalk. Keep the spots moist with the soap and lay the cloth in the sun. The sunlight destroys the mildew plants and also tends to bleach the discoloration. A mixture of chalk and salt spread upon the spot after the cloth is moistened may be resorted to if laid in the sunlight is also effective. Soaking in Javelle water may be resorted to if these measures fail. However, when the mildew is of long standing it is not always possible to remove it.

Medicine stains can generally be removed with alcohol.

Coffee, Cocoa and Tea stains are best removed by sprinkling the spot with pulverized borax and soaking in cold water for a time.

before washing.

Iron rust which is the result of oxidation, that is the union of iron with oxygen of the air when moisture is present, requires for removal the application of an acid. Oxalic or muriatic acid used in the same manner as for ink stains is generally effectual. Allow the acid to act until the stain is changed to a bright yellow then dip it in the hot water, repeating the process if necessary. Afterward rinse in ammonia water and again in clean water. Salt and lemon juice are also serviceable when the stain is a slight one. Being a weaker agent it requires longer time to extract the stain.

Iron rust is very frequently the result of washing garments on which are plated hooks and eyes, buckles, etc. which have more or less iron in their make up. It is always safest to remove such fixtures before placing the garment in the wash, since the presence of moisture during the washing and drying invites the oxygen of the air to unite with the iron and rust is formed. Ordinary tin utensils are made of iron plated with tin which plating soon wears off, so that the pans, pails and ~~tin~~ dish pans if not new are liable to stain moist fabrics with rust if such are permitted to remain long therein. For a similar reason granite ware and porcelain lined utensils unless the surface be entire are undesirable for piling moist clothing in on washday.

Milk stains should be treated while fresh by soaking in cold water.

before washing. Tea and coffee stains will usually disappear when treated with boiling water the same as fruit stains.

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Wheel grease may be removed by rubbing the spots with lard until it thoroughly penetrates the goods, afterward sprinkling with a liberal quantity of magnesia and after waiting a little time for it to absorb what it will;- passing over it a warm, not hot, iron, protected by clean paper, then brushing away the magnesia and finishing the cleaning with soap and warm water. Magnesia used in a similar manner is useful for the removal of grease from fabrics not washable.

Blotting paper spread both under and above the soiled fabric, followed by the application of a warm iron over the grease spot is sometimes an effectual method of removing it.

Machine oil will usually yield to cold water and ivory soap.

Vaseline stains while fresh may be removed by the application of turpentine. Boiling water will set such stains.

Soaking the Clothes. While it is possible to do a washing without soaking the clothes there is certainly many advantages in so doing. Under the best conditions laundry work is a laborious process and it is wise to provide against and unnecessary outlay of energy and to secure the desired cleaning of the clothes with as little wear and strain as possible. Soaking tends to loosen the dirt making less friction necessary for its removal, being thus a measure of economy as regards both the labor and the clothes. It is

It is quite customary to put the clothes to soak over night if this is not convenient they should at least soak for an hour or two before the time of washing. The tubs having been carefully rinsed should be half filled with

warm not hot soft water to which enough soap solution has been added to make a good suds. Each article to be laundered should also have every streak, spot and especially soiled portion well soaped before immersing in the water. Fold the articles with the soaped portions toward the center, and roll up rather tightly. By this plan the soap is kept where it is needed during the soaking and not dissipated throughout the water before it has done its work. It is important to use separate tubs for soaking the table linen and for the least soiled articles. Handkerchiefs used while suffering from colds, catarrhal affections and other illness should be soaked and washed by themselves, using some effectual means of disinfecting the same. It is a wise plan for each member of the household to have a separate bag in which to keep these soiled articles, so frequently left in corners, permitted to cumber bureau drawers or miscellaneously mixed with the general wash. Many diseased conditions might doubtless be avoided were care taken in this respect.

Flannels and woolen and colored articles liable to fade should not be put to soak. In warm weather the soaking must not be too long continued lest the clothes should mildew. Neither should too strong soaps or washing preparations be used in the water.

When the clothes have been well soaked they should then be wrung ^{out} ~~and~~ lightly and put into clean suds for washing, whether this be done with a machine or by hand. Clothes which have had efficient preliminary attention, unless exceptionally soiled, will generally require only gentle rubbing to cleanse them. Some who wash appear to deem it necessary to spend much time rubbing away upon every portion of a garment. If one will reflect it will be evident that only the parts especially soiled

or stained need vigorous treatment and much undue expenditure of strength and unnecessary wear of the fabric may be thereby saved. Clothing which is badly soiled should be washed through two suds, then wrung out as dry as possible. A wringer is to be preferred for this purpose as it injures the fabric far less and aids by squeezing out both the dirt and the water. When one has ~~no~~ a wringer but no washing machine, putting the clothing several times through the wringer and water will lessen the necessity of so great an amount of work on the rubbing board.

When the articles being washed have been made clean in the suds, whether one or two waters have been used, they should next be boiled (silk, wool and colored articles excepted). The boiling may not always be considered requisite for apparent cleanliness but it is important from a sanitary standpoint. Boiling being an effectual means of disinfecting any fabrics which may well be subjected to the process. Merely scalding the clothes is not effectual for their disinfection. Boiling also aids in the cleansing, dislodging and extracting the dirt which may have resisted the efforts previously put forth. The boiler should be held full of cold water to which only a little if any soap is added, the water being heated after the clothes are introduced. An ordinary washing may require the filling of the boiler two and sometimes more times, as the fine and least soiled ~~articles~~ articles should be boiled separately from those which are coarser and were more dirty. Clean, cold water should be provided for each fresh boiler full. If all the dirt is not removed by the washing a little soap may be rubbed on the soiled portions when put into the boiler. However, it is desirable to have the clothes clean before boiling if possible so that no soap need be used in this water and

the boiling serve to aid in the complete removal of the soap, already used upon the fabrics. Some house-keepers assert that boiling makes clothes yellow. This may happen when the clothes are imperfectly cleaned before boiling, or when soap made from impure materials are used in the water. In all probability it is not the boiling that yellows but the conditions under which the articles are boiled. During the boiling which should be for only a few minutes the clothes should be frequently pressed down into place with a wooden clothes stick. The handle from an old broom serves very well for such a purpose if nothing better is at hand.

On taking the clothes from the boiling water put them into a tub full of clean water. This should be warm, particularly if any soap has been used in the boiling. Cold water having the tendency to harden the soapy film on the clothes. Many of the poor results in washing are due to insufficient rinsing. The clothes should be put through several waters if necessary or until the water is clear.

When well rinsed of all soap or other washing compound the white clothes may be immersed in bluing water for a final rinsing. Such as are double should be turned wrong side out. Prepare the bluing in some small utensil pouring from this into the water in the tub stirring meanwhile until it is of an even sky blue color throughout. Use at once before the bluing settles. Shake out each article well before putting into the water, and rinse only a few things at a time, wringing each with a wringer as dry as possible so that there will be less moisture to be absorbed by the air in the drying. It should be remembered that each article introduced absorbs some of the bluing hence it is well to add only the amount necessary for the first clothes

at the beginning and more from time to time as needed. It should also be borne in mind that fabrics of firm texture absorb less blue than do loosely woven materials.

There are many kinds of liquid bluing obtainable ready for use. Most such contain some iron compound? When the bluing is used for clothes which have not been so carefully and thoroughly rinsed that all trace of soap or other alkalin preparation used in washing is removed, the iron compound from contact with the alkali is ~~washed~~ likely to be broken up and a precipitate of oxide of iron left ~~in the~~ ~~stains~~ spots on the clothes, or a yellowish tinge given to the entire article.

Ultra marine blue in the form of power is some times used. Such is insoluble, settles quickly and is liable to leave spots or streaks on the fabrics. If solid bluing is to be used it should be tied in a cloth and the blue squeezed from it into a vessel of warm water. This water being afterward used to give the required blueness to the rinsing water. By this method only the very finest of the particles are received into the water. Never the less great care must be taken to keep the water well stirred to prevent the blue from settling in spots.

Proper care in washing, that is a painstaking removal of the dirt, and the subsequent removal of all soap or alkaline preparations used, by thorough rinsing, makes the bluing of clothes unnecessary when it is possible to dry them afterwards in the sunshine. The sun is the great purifier and bleacher.

No other method can out rival the whiteness and sweet freshness of well washed clothes dried clothes dried in the open air and sunshine.

Washings must sometimes be done, however, when the sun is hidden behind clouds, and rain or storm prevents open air drying.

The best substitute available in the ordinary home in generally the heat from a fire. This may be made to serve the purpose very well if the clothes are carefully stretched on a clean clothes horse, and frequently turned to expedite the drying.

Hanging the Clothes

This is really an art in itself, and much labor is saved in the ironing by pains taken in hanging the clothes to dry. A wire clothes line is to be preferred, and it or any other line, should be wiped thoroughly clean before the clothes are hung. Clean clothes pins are also a requisite. For the sake of appearance let the clothes be hung upon the line in groups of the same kinds. Sheets spread and table linen ~~shank~~ should be hung straight with corners and edges even, doubled once only over the line and securely pinned to it. Pillow cases, towels, napkins will dry quicker hung full size and fastened to the line by clothes pins at the upper hem. However on days when a strong wind prevails there is much more danger of their becoming detached and blown away, or torn by flapping than when hung doubled over the line one third or one half their length. Wearing apparel should be hung wrong side out, the heaviest part upward and fastened to the line by the strongest seams or the hem, or hung by the bands. Clothing hung to dry in the shape it is desired to have it for wearing greatly decreases the labor of ironing. Clothes that dry in streaks are evidence of careless washing or rinsing. White articles should be hung where the sun light will be strongest, colored fabrics require to be hung in the shade, articles which have been starched should not be exposed to strong winds while drying.

Washing Preparations and other Aids.

If washing preparations other than soap be used for laundering it is best to follow the printed directions which accompany

such. It should be borne in mind that chemicals ought not to be expected to do all the work, but merely to aid by loosening the dirt.

Kerosene is frequently employed in cleaning the clothes. If carefully used it is an effectual aid in removing the dirt but it is likely to leave a somewhat characteristic odor behind in the clothes. When this agent is to be used the best plan is to soak and wash the clothes for boiling in the usual manner. After this is done put a portion of the articles washed into a half boiler full of rather strong soap suds, of boiling temperature to which two tablespoonfuls of kerosene has been added, and boil for half an hour/ Only so many articles should be put into the water as will allow of its free action upon each piece. When the first batch has been boiled, a second half boiler full of suds should be prepared in the same manner for another supply. Proceed thus until all the clothes have been boiled. Suds and rinse the articles in the usual manner. Articles soiled with soot and grime from use about the kitchen stove if soaked in kerosene over night may be afterward cleansed quite easily by washing in cold water and soap.

Borax in the proportion of a tablespoonful to every gallon of water is often employed for its bleaching properties in the boiling of clothes, and there are some laundresses who prefer borax to bluing for the last rinsing water. Borax also possesses some value as a disinfectant. Colored cottons which are liable to fade should have their colors set before drying. Salt in the water will set most colors but the same process must be repeated at each washing.

Alum used in rather a strong solution after the last rinsing will fix the colors permanently in most cases.

Strong soaps and other alkaline solutions should be avoided in washing colored cottons. Starch may be substituted for soap as a cleansing agent. Let the water used be warm only, (never hot). If soap is used it is better that it be in solutions as a suds. Wash the articles quickly, dry quickly and always in the shade.

Fibre Structure. It is important that the laundress understand something of the character of the fibres from which the various fabrics to be washed are made that she may better know the proper methods of treating each. The ~~filaments~~ filaments composing a cotton fabric are straight and smooth, showing under the microscope a twist which makes possible a firm hard thread. Silk fibres are also perfectly smooth and softer than cotton. The ~~fibres~~ fibres of woolens are jagged and toothed. The little fibre teeth become curled matted and knotted together by compression or rubbing. The expansion and contraction by the use of an alternating hot and cold water or the use of very hot water or strong alkalies produces a similar effect. The shrinkage or fulling of woolen materials is due to this binding together of their ultimate fibres. When cotton is mixed with the wool in the production of cloth there is less opportunity for the fibre teeth to become tangled together, hence less shrinkage. Smooth fibre textiles like cotton and silk shrink very little. ~~like cotton and silk~~ Linen fibres are jointed or notched and for this reason shrink more than cotton although not so much as woolen.

(Experiment--Show fibres of various kinds of cloths under microscope--make drawings of same enlarged.)

Washing of Woolens-- It will be evident that in the washing of woolens the aim should be to prevent as much as possible the

fibres of the material from becoming entangled and knotted together. On this account it is desirable when the process is ~~is~~ once begun that it should be finished with all possible despatch. The different waters used should all be of the same uniform temperature, warm, about 100^o, but never hotter than can be comfortably borne by the hands. No soap should be applied directly to wool fabrics. If soap is needed it should be in solution in the water. Use only white soaps and in quantity just sufficient to make a good suds. Do not rub the articles on a board. Press and squeeze them lightly with the hands, sopping up and down in the water to remove the dirt. Put through a second or even a third suds if necessary turning the wearing apparel, before washing in the last one. Much loose dirt is likely to adhere to the tooth-like fibres of wool fabrics and the labor of cleaning such will be greatly lessened by careful shaking and brushing to remove this loose dirt before putting the woolens in the water? If the methods suggested fail to satisfactorily remove the dirt stretch the soiled parts over some smooth surface and rub with a soft brush dipped in a soap solution. For many flannels, borax or ammonia is preferable to soap as a cleansing agent use in the proportion of one tablespoonful of borax previously dissolved in a pint of hot water, or two tablespoonfuls of household ammonia to every three gallons of water.

After careful and thorough rinsing in water of the same temperature as that used in the washing put the woolens through a wringer, shake out well, stretch and pull as nearly as possible into the shape desired when dry, before hanging upon the line. This stretching and shaping is a necessity in order that the little fibres which have gotten hooked together in the washing may be separated before they become permanently matted thus

preventing as much as possible the shrinkage of the material. Woolens should not be wrung by twisting with the hands. If a wringer is not available squeeze or press the water out by rolling the article tightly in a thick dry cloth or towel and squeezing the whole until the cloth has absorbed the moisture. Hang in the sunshine in the open air, the thicker side uppermost. A light breeze is advantageous for drying. If the weather is stormy it is better to dry woolen in doors but never where they will be subjected to intense heat. As with the washing so with the drying, moderate heat is best. Freezing or extreme heat will cause much shrinkage or fulling of the material. The drying indoors is best accomplished by hanging upon a clean clothes horse placed near enough the heating apparatus of the room to allow a gentle and continuous heat; the articles should be often turned so that each portion shall dry out evenly and quickly. It is also a good plan to frequently stretch undergarments and other articles of wearing apparel during the drying process. With care taken to thus facilitate the drying and to shape and stretch the garments, there is even an advantage in indoor drying. To leave woolens to dry in doors hung in some damp or unheated apartment, would be likely to result in such shrinkage as to render them unfit for further use. It is an advantage to dry wool underwear and hosiery on wooden frames sold for the purpose. Loosely woven, knitted and crocheted articles which are apt to stretch out of shape should be pinned to a sheet or other firm fabric of proper size before being hung to dry. It is also wise to turn the sheet up side down when the articles are partially dry so that the strain upon all parts may be equalized. Take flannels from the line before thoroughly dry roll in a clean cloth and iron as soon as possible. Deli-

cate colored flannels should be washed without the use of chemicals and dried quickly in the open air hung in the shade lest they fade.

Most dark colored flannels require similar treatment. A little borax may be used to soften the water when it is very hard. Ammonia will change the colors of the goods. Blue woollens may be freshened in color by the use of a tablespoonful of vinegar in the last rinsing water.

To Wash Blankets. Select a clear, breezy day which will facilitate their drying, on which to wash blankets. Remove any colored bindings likely to fade in the operation, and shake well to remove dust and lint.

Have three tubs in readiness half filled with warm water, one containing enough soap solution to make a very strong suds the other containing less soap, and the third containing only clear water for rinsing. All three waters must be of the same temperature. Three tablespoonfuls of borax dissolved in a quart of water and added one half of it to each of the tubs containing soap, is considered an advantage when washing white blankets. Put a blanket in the first tub; sop it up and down until it appears clean then press out the water lightly and put it into the second suds and wash in the same manner, next rinse thoroughly, fold evenly as possible and put through a wringer care being taken that the screws are only so tight as is necessary to remove the water. When this is done two persons taking each hold of two corners of the clean blanket should stretch it at full size and shake it vigorously for several minutes to loosen the fibres of the wool, after which it should at once be hung carefully and evenly upon the line and fastened with pins in several places so that no portions shall be subjected to undue

strain. The washing of but one blanket should be undertaken at a time and the whole process completed before beginning with a second. Fresh water is desirable for each pair of blankets. To remove the dirt from spots that have become especially soiled stretch the soiled portion over some flat surface as a board or table and brush with a soft brush and soap suds until clean before commencing to wash the blanket. Rubbing with a brush hardens and knots the fibres less than would rubbing on a wash board or between the hands.

Allow the blankets to become thoroughly dry on the line. Fold carefully and evenly when taken down. Blankets do not require ironing but if desired they may be pressed under a weight.

Linens. Many linen fabrics like woolens collect dust and dirt on the surface which may be brushed or shaken off thus lessening the work of laundering. Care should be taken to prevent linens from becoming twisted in wringing or during drying as it is difficult to straighten the fibres afterward. The same precaution is also necessary in regard to woolen.

Starching. Starch may be prepared from a variety of substances. The laundry starch of commerce is preferable for most purposes but if one can not obtain this common white flour, corn starch rice flour, potato starch or even the water in which rice has been boiled may be used as substitutes, Gum arabic and gelatines are also made use of for starching laces and delicate fabrics.

Both raw and cooked starch are used. Raw starch gives the greater stiffness. When articles are desired very stiff it is customary to starch them first in cooked starch and when dry to wet them again in raw starch.

Starching requires great care and good judgement. The starch must be evenly distributed through the meshes of the fabric and not merely pasted over the surface. In using cooked starch it should be applied to the articles while wet, and if it is desired that the article be especially stiff it should be used hot. In using raw or cold starch the articles must be dry.

Cooked Starch. For cuffs, collars, shirt bosoms and articles requiring much stiffness a starch prepared in the proportion of one tablespoonful of commercial laundry starch two tablespoonfuls of cold water and one half cupful of actively boiling water, of will serve an excellent purpose. The dry starch must be first thoroughly braided with the cold water and then the boiling water added stirring constantly meanwhile. The result should be a clear, smooth starch. If it be not clear it has not been thoroughly cooked and should be stirred over the fire until clear. If there are lumps it was not properly braided with the cold water or not sufficiently stirred during the introduction of the boiling water, and in either case required straining before using. If the starch stands for a time after boiling it will need to be strained before using. The utensils in which the starch is made should always be clean and without rust.

If it is preferred to afterward wet the articles to be stiffened in raw starch a double quantity (one cupful) of boiling water should be used. Starch of this strength is well suited for collars and cuffs of shirt waists and boys waists etc.

For white skirts, dresses and other articles which require but little stiffness, one pint of boiling water may be used.

Cooked starch is also made from flour, corn starch etc. in a similar way, using two parts water in which to braid one part

of dry starch material, afterward pouring over it, stirring continuously such a quantity of boiling water as will make it of the desired consistency. From two to six times as much boiling as the cold water used affords a good range for ordinary purposes. The starch should be allowed to boil for five minutes after the water is added when prepared with the coarser products. Strain through cheese cloth. Starch that is boiled for several minutes is less likely to be sticky on goods. A bit of paraffin wax or sperm candle or of lard or mutton tallow be dissolved in the starch before using it gives an added polish and also makes the starched articles easier to iron. A little borax likewise adds to the glossiness of the starch and aids the fabric to keeping its stiffness in a damp atmosphere. It must be used with care however or it will injure the fabric. One half a teaspoonful of borax to a table spoonful of dry starch is a sufficient amount to use, and of wax a piece not larger than a pea for a similar quantity of starch.

The cooked starch does not readily penetrate fine mesh fabrics and pains must be taken to rub it ⁱⁿ well and evenly. In starching small articles like collars and cuffs a good way is to crawl them through the fingers, thus pressing some of the starch between the meshes and removing the superfluous portion from the surface.

Articles stiffened with cooked starch require to be thoroughly dried, and afterward well dampened before ironed.

Large articles like skirts and dresses should be turned before starching. Starch all colored articles on the wrong side of the goods. Thin starch is best suited for freshening dresses, aprons, etc. Have it strained, and use ~~wax~~ in small quantities just sufficient to starch one or two articles, and

when these have been wrung out, add fresh starch and repeat the operation for one or two more pieces. Starched pieces require to be thoroughly dried and afterward well dampened and rolled up in a dry clean cloth for ironing. Strong winds and freezing weather will destroy the effects of starch.

Raw or Cold Starch. If it is desired to have the article very stiff a table spoonful of laundry starch dissolved in a cup of cold water is a good formula. Strain through cheesecloth and use immediately as starch in cold water begins to settle at once if allowed to stand. If it has settled the mixture should be stirred before using. Raw starch is suited only for use on dry articles. Rub the pieces in the starch as if washing them, and when thoroughly wetted; squeeze as dry as possible, straighten and spread smoothly in clean cloths in which they may be tightly rolled and left for an hour before ironing.

If the articles need only moderate stiffness a double quantity of water should be used in making the starch. Starch of this consistency is generally used for articles already starched in cooked starch.

Washing in starch. A very satisfactory way to treat dark colored cotton materials, prints etc., is that of washing in starch water instead of soap suds. The starch used should be cooked starch of a consistency about like thin cream. Use warm water and measure when putting it into the tub. To each gallon add one quart of the starch for the first water unless the articles are very much soiled when a double portion of the starch is needed. Treat the garments the same as if washing in soap suds and rinse in warm water containing one pint of starch to two gallons of water. Bran water made by tying one cupful of wheat bran in a cloth and pouring over it two quarts of boiling water,

is frequently used for washing delicate colored fabrics.

Washing Laces and Curtains. With the proper equipments curtains of lace are not difficult to launder. The first step is to free them as completely as possible from dust by shaking or hanging on the line on a breezy day. Since the fabric is too fragile for the use of a machine or the rubbing board the dirt must be extracted by soaking them and squeezing and pressing with the hands.

Prepare a soap solution by dissolving a half pound of Ivory soap in two quarts of boiling water. Add this and two table-spoonfuls of borax dissolved in another quart of boiling water to a half tub full of warm water. Let the curtains soak in this over night. In the morning prepare a clean hot suds adding a tablespoonful of dissolved borax. Sop and squeeze the curtains in this until all traces of dirt have disappeared then rinse thoroughly in one or two clean waters, and hang up to dry. When dry starch in cooked or clear starch. The finer the lace the less starch is needed. While wet with the starch they must be drawn into shape, and fastened to something stationary which will keep them thus. A drying frame is particularly desirable for this purpose. One may be purchased for a small sum or can be made of fine wooden strips, both ends of each having several holes through which pegs or nails may be passed to fasten the frame together and make it adjustable. A clean starched curtain spread and dried in a frame requires no ironing but will hang better if pressed with a moderately hot iron.

If one has no frame and the curtain edge be a scalloped one firmly bound, the curtain may be doubled, pinned, to a clean clothes line at each scallop and a long light strip of wood for small pole will stretch and shape the curtain. A mattress ~~is~~

covered with a clean cloth offers another substitute for a drying frame. Fold the curtain in half crosswise and pin it, two double, carefully and evenly, for drying, to the mattress, which should be out of doors or in some room where the air can circulate freely. It is well to measure the curtains before washing and when stretching them for drying, measure and fasten so as to insure the original length and width. After drying smooth with a hot iron.

Gelatin for Stiffening. Soak one half an ounce of gelatin in a pint of cold water for an hour then pour over it two quarts of boiling water, stirring meanwhile. When the gelatin is all dissolved strain and use the same boiled starch.

Silk Garments. Prepare a tepid suds using some good white soap, and soak the articles to be washed for half an hour. A little borax may be added to the suds in the proportion of one half ~~xxxxxxx~~ teaspoonful to the pailful of water. Wash the silk pieces by rubbing with the hands, never on a board. Rinse them thoroughly in two waters, and hang out in the air to dry. While still quite damp take them in and spread on a clean muslin cloth. Roll up tightly, and in about an hour press out with a moderately hot iron, placing a clean white cloth between the silk and the iron. In washing colored silks omit the borax.

Embroidered Articles. Centerpieces, doilies and other pieces of fine embroidery, are best washed in the same manner as silks, using nothing but the suds from some good white soap. After rinsing carefully in at least two waters, shake as dry as possible, and roll up in a clean dry cloth. Let them remain thus for a few minutes then press on the wrong side until dry, with a moderately hot iron, having a piece of flannel under the embroideryd article and a cloth between it and the iron.

Folding Clothes. When the clothes are dry and ready to be taken from the line, it is best to fold such as are to be ironed, at once. If hung upon the line so as to preserve as nearly as possible the shape in which they are desired for use and when taken in are folded carefully the work of ironing will be very greatly lessened. For sprinkling have a broad clean table, over which spread a clean ironing cloth, a basin of clean tepid water, and a whisk broom. Spread each article separately upon the table and with the whisk broom dipped in the water sprinkle so as to get a fine spray on all parts. One may use the tips of the fingers to distribute the water but it is more difficult thus to secure an even dampening. Bed linen and under clothing need but slight dampening, table linen and starched clothing should be made quite damp.

When the sprinkling is completed, line the clothes basket with a clean cloth which one should have several for laundry use and clearing one end of the table for the purpose fold the clothes beginning with the smaller pieces as they are likely to become dry soonest.

Such small articles as handkerchiefs, napking, etc., may be folded together, only taking care to spread each out perfectly smooth, and ~~drawing~~ draw the edges straight and even. Roll firmly and wrap in a towel. Articles like towels and pillowcases which need to be doubled should be folded evenly in the middle with the edges drawn perfectly straight, and made as smooth as possible before being rolled. The sides and corners of table cloths and sheets need to be matched with much care, and the folding done with exactness. Articles which require much dampening as table linen and starched garments should be protected from the air by being rolled in some clean dry cloth.

It is well to fold the clothes several hours before ironing, and when the weather is such that there is no danger of their becoming mildewed it is well to fold them the day previous to the one on which they are to be ironed.

HOUSEKEEPING IN HOT WEATHER.

To the housekeeper the advent of hot weather brings various conditions which call for special vigilance and increase the need of care if one would faithfully meet her responsibilities of preserving the health and securing the comfort of her household.

Bacteria and molds, always more plentiful and vigorous in warm weather, keep her on the alert, if she is to make sure that the contents of every box, bag, basket and bottle containing foodstuffs is perfectly sweet and wholesome. The danger of water infection is increased, because with the frequent rains comes a liability of decomposing organic matter, which is in an active state of fermentation and full of disease-producing germs, being washed into the lakes, wells, cisterns, and other sources of water supply. Open doors and windows are a constant invitation for the microbe-laden dust to enter; if there be about her own or her neighbor's premises attractions for flies and mosquitoes, a continuous warfare with these household pests must be waged, beside which is the problem of how to keep the house cool and one's family comfortable with the thermometer registering way up into the nineties.

The wise housekeeper, looking ahead, makes plans for the exigencies incident to hot weather, and is prepared to meet them with the least possible friction. Her windows and doors are screened early, not only as a matter of comfort, but also of health, as we are learning that both mosquitoes and flies may be carriers of infection. She aims to simplify her housekeeping in every possible way, that her duties may be less arduous and her own leisure augmented during the summer season. With the probabilities of an increase of dust within doors, she decreases the need of labor for its removal by packing away her bric a brac, photographs, pictures, and small articles which are merely for ornament, exchanging all heavy, dust-retaining draperies for something simple and washable,

even putting away such articles of furniture as can be well spared, or as are difficult to keep clean. Linen covers over upholstered pieces, give an appearance of coolness. If she can afford to do so, she substitutes dainty grass or fibre rugs for her wool and velvet floor covering, and dispenses as far as possible with everything which can not be wiped off with clean water or sent to the laundry. As compensation for all this trouble, her rooms have the appearance of airy coolness, and what is far more important, are easily kept clean. For adornment in places of the dust-catching collection stored away, she uses flowers in plentiful abundance, fresh from wildwood, meadow, roadside, or garden, the gathering of which affords her an incentive to get out of doors into Nature's own haunts and by-ways.

The wise woman is an early riser in summer time. She begins her day with a cool bath, the very best tonic to prepare one for the labor and heat of the day. She so plans her work, that a large share of her duties can be attended to before the sun is high. She opens her doors and windows wide to fill her rooms with the fresh cool air of the morning, and when the sun begins to send down his scorching rays, she closes the doors on the sunny side, leaving every window in the house open about six inches, and draws the shades down to this aperture, thus providing for a circulation of air with protection from the intense heat.

She arranges the menus for the family meals in such a way that most of the necessary baking and cooking can be avoided, particularly in the form of rich pastries, cakes, and confections, which have the addition of objection of being difficult of digestion. Still, drinks and foods of every kind, including tea, coffee, fleshy foods, gravies, sauces, and dishes highly seasoned with pepper and other strong condiments, which are prepared and served, should be completed while the day is cool.

She recognizes that simplicity of diet is a matter of importance at all seasons, but particularly so during the hot days of midsummer, when, to aid in keeping cool, the digestive organs should be taxed as little as possible, as likewise the strength and patience of the cook, so plans for light meals and but few foods requiring any lengthy preparation. The hours spent in an almost broiling heat in a hot kitchen, over a cook-stove, preparing rich, unwholesome, and time-taking dishes of all sorts, is conducive neither to the health of the one who cooks nor to that of the one who eats.

While keeping cool in hot weather is a prominent desire with most people, not every one realizes that there exists a relation between the discomfort they experience and the food they eat. The several purposes of food are to promote growth, to supply force, to produce heat, and to furnish material to repair the waste which is constantly taking place in the body. Upon thought, it will be evident that if the food supply be such as to keep the vital fires glowing fiercely within, while the sun's rays beat down with intensity without, one will be, as the old saying is, "between two fires," and his suffering will be proportionate to the heat produced by each.

It follows to reason, then, that while the bill of fare should contain a proper proportion of all different food elements, an excess of fats and sweets, which are especially heat producers, should be avoided, particularly in the form of rich pastries, cakes, and confections, which have the additional objection of being difficult of digestion. Stimulating drinks and foods of every kind, including tea, coffee, flesh-foods, gravies, sauces, and dishes highly seasoned with pepper and other strong condiments which inflame the blood and fan the vital fires, should likewise be discarded from the menu in hot weather; and in their stead may well be substituted a simple fare after Nature's own plan, of seeds, nuts, and fruits.

The lavish wealth of fruits and succulent foods which the advent of summer brings, should be taken as a health hint from Nature, of the important place these were designed to fill in the summer dietary. Though possessing but little nutritive value, their abundant juices and wholesome acids cool and cleanse the system, and when served with food with which they combine well in point of digestibility, they are a food par excellence for hot weather use. Fruits do not affiliate well with flesh-foods, milk, and milk products, and often give rise to digestive disturbances when partaken of together, but these latter are not for several reasons the most desirable hot-weather foods, and it were better that they be largely or wholly excluded from the menu in midsummer. They are foods that spoil very quickly at this season, requiring special conditions and care to keep them fresh and sweet even for a short period. The jeopardy to health from their use when not fresh being so great, the conditions for their proper care so frequently being unattainable in homes of moderate means, and the liability that proper attention will be neglected by careless cooks and servants in well-to-do families, it is wiser to substitute other foods of similar nutritive value, less liable to be served in an unwholesome condition.

The dietetic value of these foods consists chiefly in the fat and proteid material which they supply to the system. These two necessary food elements may be supplied in quantity quite as well, and in quality far more healthful, in nuts and the cereal foods, which, when supplemented by a plentiful use of fruits, form an ideal dietary for the hot season.

Nuts and cereals are now manufactured into so many delicious, palatable, and pleasing foods that one can arrange a bill of fare for a hot day, hot appetizing and nutritious and with--what will be appreciated as a boon by most housewives--almost no cooking.

With such breadstuffs as granose biscuits, wafers, rolls, sticks and zwieback as a foundation upon which to build, an almost unlimited variety of dainty and healthful dishes may be prepared in connection with fresh and stewed fruits and ^{succulent} vegetables. Wafers toasted just a moment on each side under a gas jet or in an oven to render them crisp, then spread with nut or dairy butter, may be filled with any preferred filling for sandwiches; hot browned granose biscuit make the most desirable toast on which to serve asparagus, spinach, poached egg, omelets, corn pulp, and eggplant; no better accompaniment for soups and salads can be found than nut sticks, while the possibilities of zwieback--simply made hot and crisp by five minutes in the oven, to be used dry as bread, with butter, or eaten with malted nuts, or softened slightly to be used with fruit dressing as a toast, or with fresh fruit as a shortcake or sandwich, or as a dumpling with vegetables and stews--are almost limitless. The keeping qualities of these breads is such that even if prepared at home,--as sticks, rolls, and zwieback may be if preferred,--it is not necessary to make them as often as is required for softer kinds of bread, and they can be made in quantity on days when cooking is comfortable work, and if stored in a dry place, will keep ~~longer~~ in good condition a month or longer. If becoming too dry, they may be freshened by dipping each separately in cold water, placing on tins, and rebaking for a few minutes in the oven. Prepared from whole-wheat flours, they are pre-eminently nutritious foods, easily digested, and always convenient for use.

All foods, both moist and dry, should be kept carefully protected from dust and insects. Dust infected with disease germs may settle upon foods and their use give rise to serious illness. The habit so common among housekeepers of setting moist hot foods uncovered in ^{the} windows to cool, is a dangerous one. If fortunately such be not seasoned with bacteria-laden dust productive of disease, it is likely to be a temptation

to flies which love to sport near the light, and which are eager for a bite or a sip of all the cook's delectable dishes. They not only take their taste of everything edible, but give to it in return, as they wander over it, the germs they carry about on their feet and wings. Born and bred in filthy animal excrement, lighting upon everything in their way as they flit about, they may have come fresh from vault or compost heap, their feet coated with the germs of typhoid or dysentery to partake of anything accessible in the way of foods, and if such be a liquid like milk or soup, may even end their lives by drowning therein. Quite probably their dead bodies will be skimmed out and cast aside, and it may be on the score of economy the food, with the germs they left, are served for the family meal. It is all-important from a health standpoint, that flies be kept out of dwelling houses, and particularly from contact with food supplies.

The larger proportion of diseases which afflict human beings during the summer are chiefly due to ~~the~~ infection of food or drink. The protection of health thus lies mainly within the domain of the housekeeper. Fresh foods are of fundamental importance. Stale vegetables and fruits should be rejected. All fruits and vegetables to be eaten raw should be washed, and this should be done with sterile water. Water that is not fit for drinking purposes, is not fit for washing foods that are to be eaten. Such may remove the dust and visible dust, but there can be no doubt that death frequently lurks in a crisp and dainty salad, the lettuce for which was rinsed in water from a polluted source.

Cooking is a sterilizing process. Foods eaten soon after being thus treated, afford the greatest safety. Moist foods that are to be kept for a time, are best preserved in a clean refrigerator, the temperature of which is kept lowered to a point at which germs thrive least; dry foods should be kept in receptacles which admit no dampness, and if under the least suspicion, should be "tried by fire" rebaking or reheating throughout in a hot oven before being eaten.

Bearing in mind the increased demand for drink during the hot weather and the need of care that the water be both pure and cold, unless her supply comes from a source unquestionable, our wise housekeeper sterilizes the drinking water by distilling or by boiling, bottles it, and packs the bottles in the ice chamber of the refrigerator, to cool for use. Thoughtful people refrain from the use of cracked ice in drinking water on account of probable impurities. Fruit juices and fruit beverages, of which free use may well be made in hot weather, may be bottled and chilled in the same way. If one has no refrigerator, put the bottles in a shallow pan partially filled with cold water, ^{and} wrapping each with a wet cloth, the lower portion of which extends down into the water. Keep this extemporized cooler in some open, shady window, where there is a good air current, renewing it two or three times daily. By proper wrapping and covering, articles of food may be likewise kept fresh and cool.

One is wise to spend as much as possible of the summer time in the open air, storing up energy and nerve tone for the cooler months when shelter must be sought from the cold. Housekeepers are apt to excuse themselves from such a change of climate with the plea of the work to be done. Doing one's housework out of doors may seem paradoxical, but it is not impossible and is far more comfortable to thus do one's washing, ironing, serving, mending, paring of vegetables, preparation of fruits for canning, and numberless other tasks which must be done, rather than to miss the health giving fresh air and comfort of the cooling breeze. Of course, one will need some shady corner to work in, the piazza, back porch, a shady nook on the lawn or the back yard as circumstances may favor or demand. It must certainly have been intended that one's life should be lived as fully as possible out of doors during the warm months, else why so much of beauty and loveliness to attract and lure one forth into Nature's realm.

Open air meals for the family are both practicable and health

giving. The fresh air sharpens the appetite, and anything tastes good out of doors. Piazza picnics and lawn lunches are far more alluring to the majority of people than staid meals indoors in hot weather. One is satisfied, too, with a much simpler bill of fare, the preparation of which may be accomplished in the cool of the day, the dishes needed for service may be made very few and a little experiment will generally prove such meals to be economical in money and time, and saving of labor, as well as restful and healthful. A wire screened porch makes an admirable place for out of door eating. If one is about to build, she will find it well worth the cost to provide such a porch for a summer dining room convenient to the kitchen. Such a protected enclosure also makes a desirable "camping out" place for sleeping in hot nights. Indeed one is most fortunate who can command such an insect-proof fresh air sleeping apartment for the entire season.

There are many, of course, who have neither porch nor shade trees to protect from the rays of the sun, but there are many substitutes and necessity is the mother of invention. If one has the purpose to get the benefit of out of door living, there are many ways to accomplish it. One woman stitched together breadths of unbleached muslin, sewed rings to the four corners and attached these to her clothes-line posts, thus making a canopy under which her children played, and she worked in comfort during the sultry days of summer. We have heard of another family who constructed for out of door living a light, house-like frame, which they roofed with canvas; inclosed with netting, and mounted on rollers, so that it might follow the shade around the yard. The purity of the air in which one lives out of doors needs purposive thought. The summer time is the active life period of both insects and germs, and to keep health at its best the environments of the house and the premises should be kept up to a high standard of cleanliness. The outdoor closet is often a menace to the

health of the occupants of country and villiage homes. If one has not a properly constructed earth closet, it is important that all filth be at least kept fully covered with quicklime or chloride of lime, or dry coal ashes. No garbage receptacles should be permitted to befoul the air of the back yard, and no waste or dish water thrown upon the ground to form a breeding place for germs beside the kitchen door.

Dr. John Harvey Kellogg, for more than 60 years Editor of Good Health, has written a book in which he summarizes in a concise and interesting way the results of 60 years' intense and concentrated study of the problem of

How to Live

in a thoroughly scientific or physiologic way. After graduating at the age of 23 years at Bellevue Hospital Medical College, then the leading medical college in the United States, where he enjoyed special advantages as a private pupil under the elder Austin Flint, the most eminent and progressive medical leader of the last century, the Doctor supplemented his American training by studies in the leading medical centers and laboratories of Europe, where he made the acquaintance of Pasteur, Metchnikoff, Tissier, Pavlov, and other of the great pioneers who have by their researches and discoveries made possible the great advances in knowledge of the art of health and the causes of sickness and how to avoid them which have enabled the world to make more progress in 50 years in combating disease and prolonging human life than in all the thousands of years preceding. At the age of 25 the Doctor's attainments as a health expert were recognized by his appointment by the governor and legislature of Michigan as a member of the State Board of Health on which he served for 18 years. The opportunities for study and research thus afforded him, together with the great opportunities for clinical experience enjoyed during 60 years devoted to the development and direction of the Battle Creek Sanitarium, have given him an extraordinary if not wholly unrivaled preparation for producing an authoritative volume on the art of right living.

Unfortunately, most works on personal hygiene are mere rehashes of

trite information or exploitations of some fanciful theory with little or no scientific support. Dr. Kellogg's health teaching differs from the great mass of literature relating to health which gets before the public through various channels,--books, lectures, magazines and newspapers, much of which can properly lay no claim to scientific accuracy, and, indeed, may be properly designated as misinformation. Every idea presented, every new practice recommended has been carefully examined and exhaustively tested both by laboratory researches and by practical human experience. Dr. Kellogg's teachings, which have come to be widely known as "the Battle Creek idea," have been tested and found sound and practical not only by the nearly half million persons who have visited the Battle Creek Sanitarium within the last 60 years, but by millions who have in various ways come in contact with the new biologic ideals and unique methods and products which have for more than half a century been going out from this health workshop and laboratory.

I In this little volume of barely 500 pages is elucidated and condensed the results of this extraordinarily rich extensive and life-long experience and research.

Dr. Kellogg practices what he teaches and to this attributes the fact that at the age of 84 years he is still hard at work and engaged in all the numerous activities to which he has devoted his life, practicing his profession as a physician and surgeon, spending many hours daily in his consulting offices, performing delicate and difficult operations, lecturing, planning and supervising researches and experiments by numerous laboratory experts and assistants, keeping busy two or more secretaries in dictating letters to correspondents and in addition spending some hours daily in writing and personal studies and researches.

How to Have Good Health

(On bicycle)

Dr. Kellogg Out for a Bicycle Ramble of 5 to 15 Miles

In "How to Have Good Health" the reader finds more new and practical well tested ideas and methods of health promotion than in any other modern treatise on health. It is a mine of new, choice, up-to-date, authentic and highly important information, the careful following of which has added half a score or more of years to the lives of hundreds of persons who had been pronounced incurable. Something of an idea of what the work contains may be gained by a glance at

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Buffalo, N.Y. July 2

PHYSICAL DETERIORATION RESULTING FROM SCHOOL LIFE; CAUSE; REMEDY.

Some years ago, in spending a short time among the Yuma Indians, in the vicinity of Old Fort Yuma, I observed, one morning, a considerable number of old warriors and chiefs gathered in from the forest, and collecting in the old fort. On inquiry I found that there was to be an Indian school meeting, the first one ever held among the Yumas.

The school had been started some two years before by Sister Alphonse and two or three other devoted Catholic sisters, who had ventured out among the wilds of Arizona to undertake the experiment of trying to educate the Yuma boys and girls. Their school had not prospered. The children had been kindly treated; they had been supplied with an abundance of food, whereas before they were often hungry; they had been furnished with clothing, including hats, bonnets, shoes and stockings, whereas before they roamed the forest in a state of absolute nudity. The schools were furnished with all the necessary modern appliances, and the teachers labored earnestly in behalf of the students. Nevertheless, Sister Alphonse confessed to me that the school was not a success, and that the old Indians were very much opposed to it. I inquired the reason for this opposition, and was told that the Indians complained that going to school did not agree with the health of their children; that after having been in school a few months, they were far less robust and vigorous than before, and that they suffered from indigestion, catarrh, and other diseases, from which they were before as free as the birds, the antelopes, and the prairie dogs among which they lived. The good sisters honestly confessed that the complaint of the

old Indians was not a whimsical one, and that for some reason the little wild children of the forest soon began to lose their vigor and vivacity after entering school, and for this reason the most sagacious parents kept their children at home.

The school meeting had been called for the purpose of presenting to the old Indians the advantages of an education, so as to convince them, if possible, that the children would better have an education even if it should spoil their stomachs and weaken their lungs and destroy their keen sense of smell through catarrh, and impair their eyesight, and dull their hearing, and deprive them of the hardihood which had enabled them for centuries to maintain the independence which they still possess.

I did not remain to hear the conclusion of the matter, but a few years later, in passing through on a visit to the Pacific Coast, I spent a day among the same Indians. I found the school flourishing, to the great delight of the good sisters, but the children were perishing. The forest air of rollicking freedom had disappeared, and the evidences of physical depression and deterioration were unmistakably apparent. Civilization had conquered, and the Indian had become convinced that the children must be educated even at the expense of health and vigor.

The deteriorating influence of school life upon children has been so long and so generally recognized that I do not need to undertake to demonstrate the reality of this stupendous evil, nor to cite the abundant statistics collected by various workers in this country, England, Germany, and Russia, which show so graphically the enormous proportions which the evil has assumed.

Until the recent development of gymnastics in connection with

our colleges, seminaries, and, to some extent, our public schools, to be a scholar, a cultivated man or woman, meant almost universally to be a chronic invalid. The man or woman of letters is still generally pictured as a person of rather attenuated form, pale countenance, hollow eyes, lax muscles, and, if not nervous or hysterical, escaping those dismal afflictions only by virtue of extraordinary force of character or especially favorable environment.

I think there are good grounds for believing that the aristocracy of dyspeptic literati is diminishing in numbers, thanks to the influence of the bicycle, college athletics, the growth of more sturdy ideas relating to education in general, and the scores of missionaries sent out into different parts of the country by the Chautauqua School of Physical Culture, and allied institutions.

It is still true, however, that the great mass of persons engaged in the educational training of children and youth have little appreciation of the importance of giving attention to the physical condition of their pupils as well as their mental and moral training and culture. If the conditions of school life were properly related to the health of the children, the school period would be the most regular and healthful of the whole life. Childhood is not burdened with perplexing cares and anxieties, nor subjected to trying emergencies as is the adult, and the perfect regulation of its life should be in the highest degree conducive to normal and healthful activity. But that this is not the case under existing conditions is everywhere and by everybody recognized. The annual vacation is a confession of the unhealthful and exhausting character of the school work. Exhausting work is not the most favorable for development, and is, indeed, fatal to the best development. The permanent results of school training depend upon tissue changes in

the brain structure, which, in turn, depend upon digestion, circulation, and the various nutritive processes of the body. Hence, sound health and the proper performance of all bodily functions are the conditions most essential to a sound education.

This question is one of the most important which could possibly be considered by the great body of educators gathered in this city to-day, and of such superlative importance that every other question might profitably be laid aside, and the entire time of this great assembly during this convention, be devoted to the consideration of the causes which make school life unhealthful and exhausting, and to the remedies required.

I shall not, however, in this brief paper, undertake to deal with the almost numberless phases of the subject which has been assigned me, especially as branches of this great question have been ably and comprehensively considered by various writers whose works may be readily consulted. I wish to especially place before this Association for earnest consideration, a single phase of the subject which quite extensive observation leads me to believe has been, to a large extent, ignored. My paper will deal chiefly with the injurious effects of incorrect postures in sitting and standing, in the development of displacements of the internal viscera and the long train of evils arising therefrom.

INCORRECT ATTITUDES.--

The frequency of the displacement of the internal viscera, particularly prolapse of the stomach, prolapsed or floating kidney, prolapse of the bowels, and displacement of other viscera, is a morbid condition the existence and significance of which

has been recognized only in comparatively very recent times.

Much has been written with reference to the influence of wrong position in sitting, in the production of spinal curvature, flat chests, and other deformities which are externally visible; but, so far as I know, little or no attention has been given to the relation of incorrect posture to these displacements.

A number of years ago my attention was called to the important relation of displacements of the abdominal viscera to the general health by the writings of Glenard and Pasteur, two eminent French physicians, who, twelve or fourteen years ago, began to address the progression upon this subject. Glenard pointed out that in the great majority of persons suffering from chronic indigestion, prolapse of the stomach or bowels, or both, is the fundamental cause of the disease, and showed that many dyspeptics may be cured by the simple application of a bandage for the support of the prolapsed organs. Prof. Bouchard, the eminent French pathologist, later points out the fact that Bright's disease of the kidneys, rheumatism, or pulmonary consumption, and other chronic maladies, are traceable to the same cause, the foundation for these maladies being laid in indigestion resulting from displacement of the digestive organs.

Something more than six years ago I began a careful study of this subject, and soon noted a very distinct relation between displaced conditions of the internal organs, and the external form of the body. In order to make my observations more exact, I devised an instrument by which a profile of the entire body could be quickly made, and began making tracings of my patients in connection with the physical examination, with reference to the location of the principal viscera of the trunk.

I made in this way, many hundred of tracings until I fully established the facts to which I wish especially to call attention, and which I will also demonstrate by copies of some of the typical forms of internal and external deformities which I have observed. The accompanying cuts will illustrate some of these deformities. (Figs. 1-4)



whereby the location of the stomach, kidneys, and other viscera may be exactly determined.

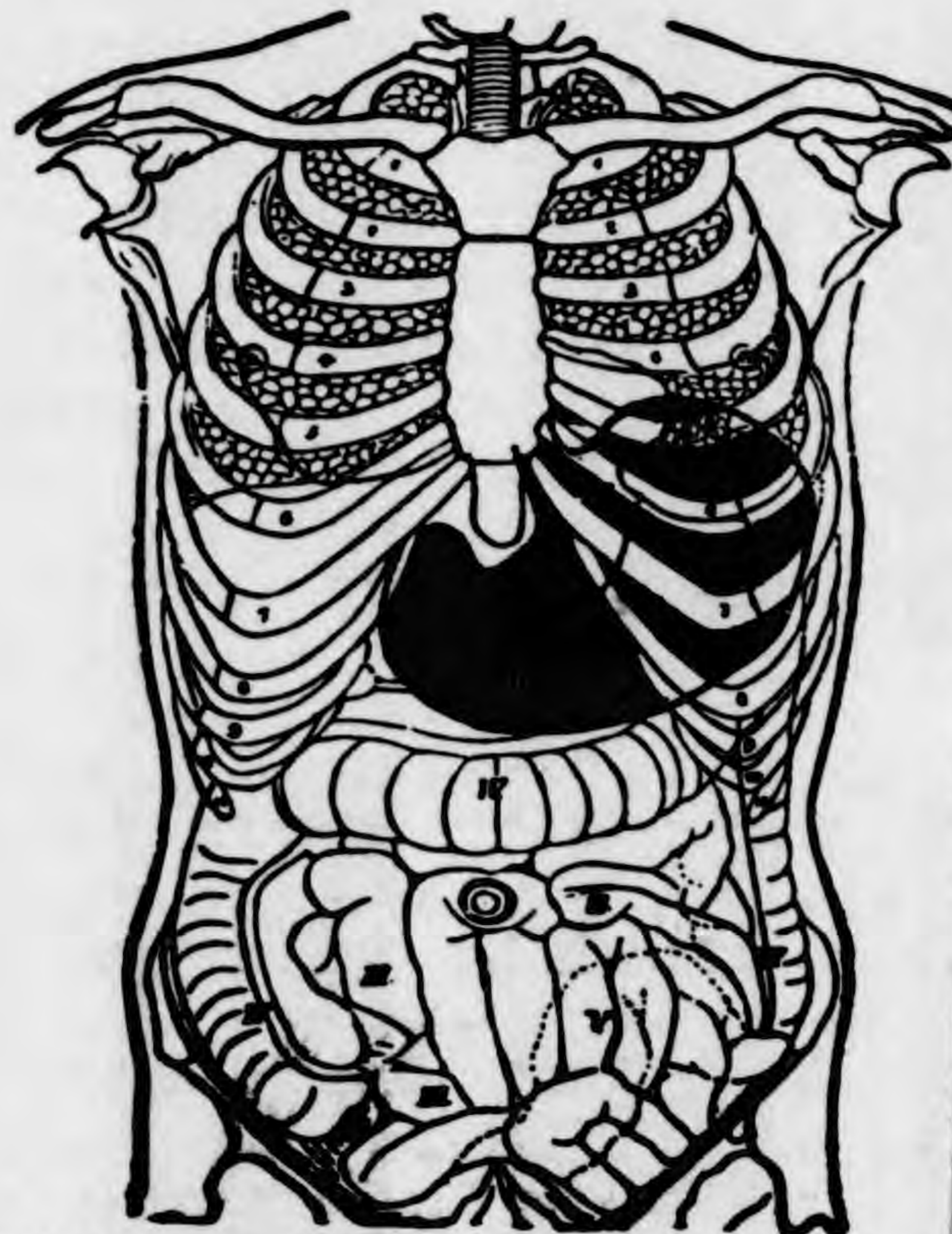
From a careful study of the health of these cases, I have been convinced that in the majority of instances, the foundation of these defects is laid in childhood, and during the school-going period. But before making further remarks of a general character, I wish to call more particular attention to the exact nature of the evil which I am endeavoring to discuss.

The trunk is practically divided into two cavities. The division of the lower cavity into pelvis and abdomen is an artificial and

not an anatomical subdivision, useful for the purpose of description, but misleading and confusing, unless ignored in studies concerning causation and pathological relations. Anatomically, the trunk is divided by the diaphragm into two cavities only, the upper containing the chief organs of respiration and circulation, and the lower containing the principal organs of digestion, and the genito-urinary apparatus. The chief anatomical facts which I desire to have kept in mind are, the normal position of each of the viscera which occupy the lower cavity of the trunk, and the mode in which these various organs are held in place. It will be remembered that the liver, spleen, pancreas, and stomach are all located above or at the waist, as shown in the accompanying diagram after Ziemssen. (Fig. 5)

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ld in position? Although

fitted together with the nicety of an articulation, the viscera are certainly not held together by anything corresponding to the firm ligamentous bands which unite the osseous elements of the joint. The so-called ligaments which hold in place the liver, stomach, spleen, and

bowels, cannot properly be called ligaments, as very little ligamentous structure enters into their composition. The same must be said of the ligaments which are supposed to support in place the organs of the pelvis.

The organs are held in position by the muscular walls of the abdomen and the support of the adjacent organs, as all are fitted snugly together like the various articles contained within a well-packed trunk.

The liver and kidneys, and the greater portion of the stomach, when in their proper positions, are almost entirely covered at the front of the body by the ribs. The abdominal muscles, which constitute the chief support of these organs, are joined to the ribs above, and to the upper border of the pelvic bone below. It will readily be seen that in bending forward, the two points at which these are attached, the ribs above and the pelvis below, are brought nearer together, consequently the abdominal muscles are relaxed and the natural support of the organs of the trunk is removed. At the same time, in bending forward, the lower ribs approach the spinal column, thereby forcing downward the organs which lie beneath them, namely, the liver, kidneys, and stomach. These in turn crowd down the colon, intestines, and other organs which underlie them. Thus we have two causes operating together to produce displacement of the organs which lie at the upper part of the trunk-- an abnormal pressure above and the removal of the natural support below.

A glance at the accompanying figure from Ziemssen (Fig. 5) will show at once the relation of the ribs to the liver, stomach, and kidneys. It should be recollected, also, that the spleen and pancreas lie beneath the ribs as well as the former organs named.

In a person whose figure shows a normal outline, as in the accompanying figure (Fig. 6), that of a German peasant, it is noticed that there is a strong anterior curve of the spine.

and that the abdominal muscles are well drawn up. A lessening of the posterior curve of the trunk results at once in a depression of the chest and waist, and produces an abnormal fullness in the lower abdomen, the natural consequence of the displacement of the organs lying about the waist, downward, and a forward bulging of the abdominal walls. This is well shown in Fig. 7, that of a seamstress, who, in her occupation, has acquired the habit of sitting in a relaxed position, bending forward over her work.

It thus at in the schoolroom leads only danger of acquiring ugly shape, but there internal organs, which as the result of habitual individual for life.

We see a variety about the world, persons carriage of head, and disordered stomachs, and

Not only are stooped position in sitting wise hampered. On having breathe into a spirometer to be only 270, whereas was able to expell 310 increase of 25%.



the student sits at his desk book or work, there is not spine and a correspondingly sion and displacement of tion becomes permanent, will, ease, and cripple the indiv-

crippled individuals going ters, flat chests, forward spine, indicate prolapsed and bowels.

crippled in their action by the ing, but the lungs are like- ed, flat-chested person th, I found the lung capacity nding in a proper position, a full inspiration, an in-

The involuntary respiration must be interfered with to an even greater extent. The person breathing in a stooped sitting posi-

tion is constantly in a state of air-starvation, a fact which is evidenced by the disposition to straighten up and draw a long, deep breath every now and then, which is constantly noticed in persons who habitually sit at study or work in a stooped attitude.

The physical injury which a person receives from an incorrect sitting posture is of far greater consequence than the mere ugliness of the appearance. The posterior curvature, or abnormal straightening of the spine, resulting from an improper sitting position, is the most common of all forms of spinal curvature, but singularly enough, is not mentioned even in special medical treatises. Round shoulders, flat and hollow chests, are considered, but nothing is said of posterior curvature of the spine. When we come to study this matter closely, we find that posterior curvature is present in all these cases, if it is not the cause of the conditions themselves. Every round-shouldered person, every flat-chested person, has posterior curvature of the spine.

There are three forms of posterior curvature:

1. That which affects the upper part of the spine, causing the head to be thrust forward over the chest. There is extreme roundness of the shoulders, and the hips are carried back. This form is most common in aged people, and in laboring men who have to bend over their work.

2. That form which affects the middle portion of the spine. In these cases the head and hips are both thrown forward. This form is found in young and middle-aged people, and is usually due to bad positions in sitting and standing, and a lack of development of the muscles of the trunk.

3. That in which the lower, or lumbar, region of the spine is affected. In these cases the forward curve is effaced, or nearly so, the spine becoming straight. The hips are nearly on a line with

the spine, giving a most ungraceful figure.

Incorrect sitting may result either from defects in the seat, or from neglect on the part of the pupil. A seat that is too broad naturally results in posterior curvature, for the reason that no support can be obtained from the back of the seat, unless the pupil leans back so far as to make his position absolutely insupportable without relaxation of the muscles, which immediately induces posterior curvature.

Too high a seat drags the lungs downward, and produces a similar effect. A low desk encourages a stooped position in sitting.

If the student has a habit of sitting too far forward upon his seat in a relaxed position, posterior curvature of the spine naturally follows. Students not infrequently acquire a slack habit of sitting in a relaxed position with the trunk bent backward at the middle, even when the seat and desk are properly constructed, both in relation to each other and in relation to the pupil. Correct sitting is a forcible position,-- not a strained position, but one in which the muscles of the trunk are active.

To remedy this evil, which I have sketched too briefly to give any adequate idea of its importance, requires:

1. Constant correction on the part of the teacher, of the improper attitudes assumed by students, and the employment of suitable corrective exercises for two or three minutes at every change in the day's program.

2. A regular systematic course of scientific physical training as an essential part of the daily work of every pupil in every school in all grades.

The conditions which surround the child during its school life, are a mold into which it grows, and whereby the whole after life

of the man or woman is favorably or unfavorably influenced.

Later revelations in medical discoveries have established beyond doubt the fact that a large share of chronic and disabling ailments from which men and women suffer, have their foundation in erroneous habits and vicious conditions of life in childhood and youth.

When the writer was a pupil of Prof. Hartelius', the rector of the Royal College of Gymnastics, at Stockholm, Sweden, some thirteen years ago, he was told by that eminent and most experienced teacher of gymnastics, that he had never encountered curvature of the spine in a single case in which the individual had had the advantage of gymnastic training during his school-going period. At that time, gymnastics had long held a prominent position in Sweden, being by law obligatory in every school. The result is to be seen in the erect and well-developed physique which is the prevalent type in Sweden. One may see, on the streets of Stockholm, a larger proportion of men and women with fine figures and graceful carriages than in any other city in the world.

The benefits of exercise in connection with the school work, are not confined to its influence upon the bodily shape. The growing period is the only time in life at which any marked changes can be effected in the physique. This is the time for enlargement of the lungs, development of the chest, and the correction of any errors and weaknesses and morbid tendencies. Systematic daily exercise, carefully adapted to the age and strength of children, produce, even within a comparatively short period of time, marvelous results; e. g., an eminent French physiologist found the respiration of students at a boarding school to double the volume during sleep as the result of six months' systematic exercise.

During the twelve or ~~th~~ fifteen years spent in school, the sedendary habit often becomes firmly established, so that in after life

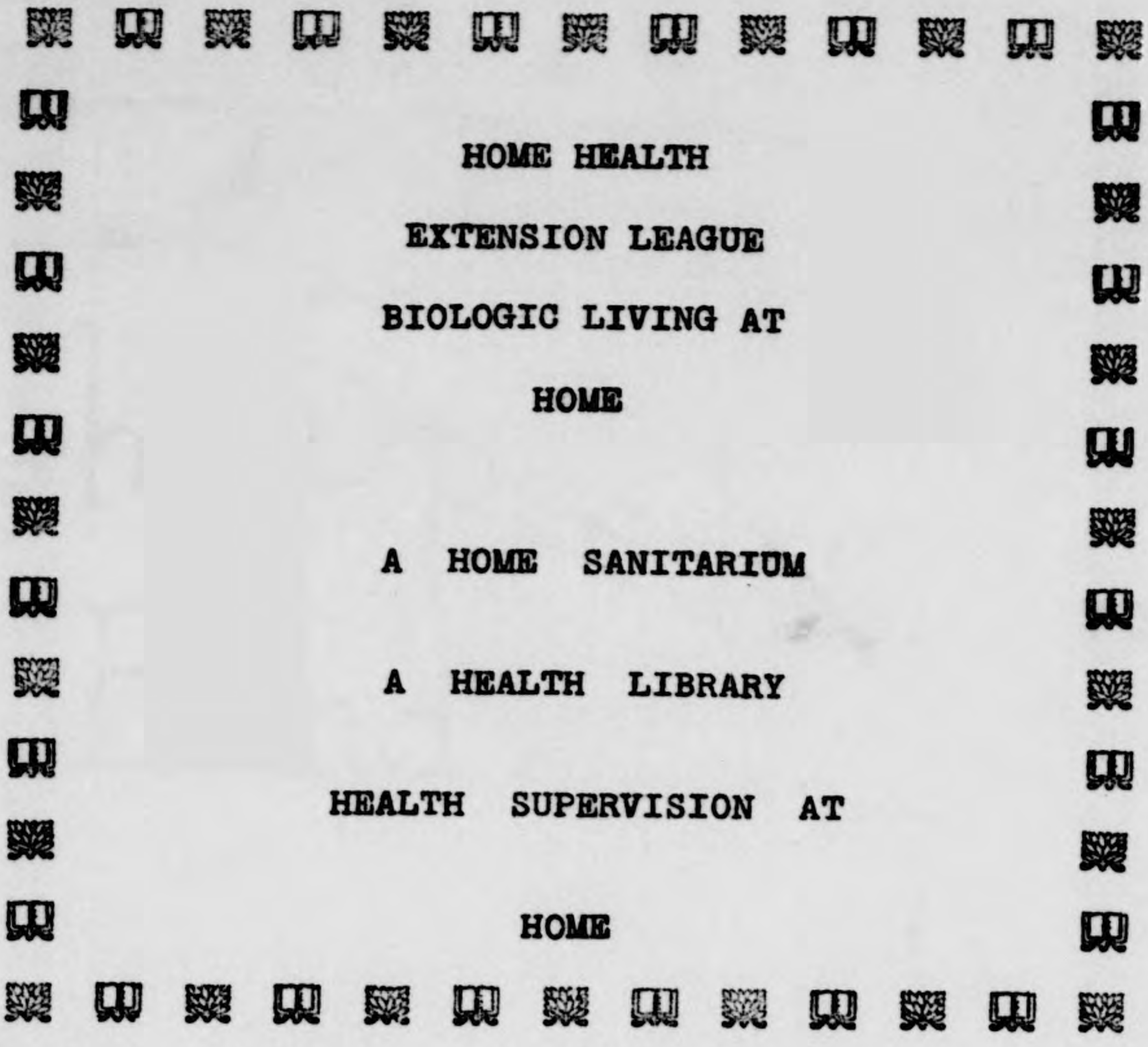
exercise is avoided as much as possible, through a natural aversion to it, whereas the physiological necessity for exercise increases with advancing age, so that a cultivation of the habit of exercise, and the appetite for it, may be properly regarded as one of the important objects to be attained during the school-going period.

A thoroughly enlightened community will provide, in connection with its public schools, gymnasiums and laboratories, and when we become sufficiently civilized to value health as highly as does the savage, we may expect that our municipalities will take such steps as will save a sufficient amount of money now wasted in attempting to repair the ravages of alcoholic drunkenness, and other forms of vice, to provide for every city a suitable number of public gymnasia and swimming baths, and that it will be considered at least as important that a child should have a large pair of lungs and a vigorous chest, as that he should understand Greek and Latin books, or natural philosophy, and more important that a man or woman should be able to swim than to be able to calculate an eclipse of the moon. Our schools, seminaries, and colleges, are every year turning out a lot of young men and women who might properly be termed "school cripples", who are maimed in body by the neglects and the damaging environment to which they have been subjected, and damaged intellectually by the one-sided and artificial methods under which they have been trained.

A volume might easily be written-- indeed, volumes have been written-- upon the evils arising from deficient ventilation, bad lighting, dust, the vicious habit of spitting, and other means of transmitting disease, and the danger of moral contamination, or the contraction of sexual vices and the evil associations to which children are more or less exposed in our schools:. The limit of this paper has

already been reached, however, and I will conclude with urging upon every teacher the importance of making a careful study of all that pertains to the physical welfare of their pupils while under their care, and further, would add the suggestion that immense advantages might be gained by holding parents' meetings at regular intervals, for the purpose of discussing the needs and the interests of the child in the home and the school, and securing the co-operation of parents in establishing for the child in the home such conditions as will second the efforts of the teacher in the schoolroom in the development of a well-rounded character, the attainment of the highest possible educational ideal, that recognized by the ancient Greeks, who set us so many noble examples in matters pertaining to education, "A sound mind in a sound body".

J. H. Kellogg, M. D.,
Superintendent Sanitarium,
Battle Creek, Mich.



HOME HEALTH
EXTENSION LEAGUE
BIOLOGIC LIVING AT
HOME

A HOME SANITARIUM

A HEALTH LIBRARY

HEALTH SUPERVISION AT
HOME

PURPOSE
OF THE
HOME HEALTH EXTENSION LEAGUE

For the most part disease is a home product and so is health. Errors in diet, neglect of proper exercise, ignorance about the bodily functions, the cumulative effects of a multitude of little mistakes and oversights,--these are the real causes of the depreciations in fitness, endurance and vital resistance which finally result in the break-down which sends the patient to a sanitarium or to retirement from active life. "It is the little foxes that spoil the vines" the small but oft-repeated infractions of biologic laws of which one may be wholly ignorant.

"Right living," "biologic living," is simply regulating one's daily life with the same good sense and intelligence with which one cares for a high bred horse or a pedigreed dog.

Modern science has opened wide the door of escape from the ills which handicap effort, defeat achievement and make life miserable, and can show the way to superlative health and high efficiency. We apply this knowledge in training animals and athletes, but neglect to make use of it for ourselves. Why?

The wonderful benefit to be derived from applying scientific knowledge to the care of our bodies is shown in the usual results of a few weeks' stay at such a place as the Battle Creek Sanitarium, where every known health promoting agency is applied and one's life is regulated in harmony with the teaching of the sciences of human physiology. But it is to be remembered that these results, marvelous as they often are, depend for their permanency upon continuance of the means by which they have been secured. This does not mean that one must spend his life at a Sanitarium, but it does demand that when one leaves the Sanitarium he shall not cut the ropes by which he is being pulled up from the quadmire of disease and physical decadence into the sunlight of health. Health is the result of culture. Health education and health training are as necessary as training in learning a trade or a profession.

The Technic of Right Living.

There is technic in personal hygiene as fine and as essential as in base ball, tennis, painting or music. The fine art of living has in recent years become a real science, and has attained its highest development in the ideals and methods of the Battle Creek System which have not only made the Battle Creek Sanitarium known the world over as a Mecca for health seekers, but have evolved a fully equipped college in which health and health promotion are made the corner stone of education.

Fortunately this health technic is so simple and rational that its essentials may be practised anywhere, at home, on a journey even, but knowledge is necessary, and wise forethought in providing the few necessary facilities and accessories.

The New Life Insurance

The real purpose of the Home Health Extension League is to make available to every one the information and the appliances needed for organizing and maintaining at home real biologic living, so that

the benefit obtained by a sojourn at Battle Creek or by a period of recreation may not prove only temporary, but may be maintained and added to and be made the means not only of doubling comfort and efficiency, making life really worth while, but of doubling or tripling life-expectancy. One's life-expectancy (that is, the time left for an average person to live) is approximately one-half the difference between his age and ninety years. If one's age is 60 years, his life expectancy is half of thirty, or fifteen years. At seventy, the life-expectancy is reduced to ten years and at 80 to five. But this is average life-expectancy. It is the life-expectancy of the man who does not know the technic of life and health extension. By the application of known and thoroughly tested methods the average life-expectancy may be easily doubled and often tripled. Of course a person whose health is greatly impaired, who has a damaged heart, liver or kidneys, who has hardened arteries, high blood-pressure or is otherwise vitally crippled, has a life-expectancy much less than the average. In such cases, by carefully supervised biologic living, the real life-expectancy may not only be doubled but quadrupled and sometimes increases ten fold or more.

HEALTH AT BARGAIN PRICES - THE HEALTH BUDGET

Health and years of life are for sale and at a cost ridiculously small compared with the value received in return. When a man stands face to face with death, expecting each moment to be his last, what will he not be willing to give in exchange for a year of life? A million dollars does not loom large in contrast with a year of life with all its possibilities. Yet many a man has bartered away not one year but many years for a big dinner, a daily after-dinner cigar, breakfast coffee or some other pet indulgence.

Every up-to-date institution, even the U.S. Government to-day is run on the budget system. Why not budget your health as well as your business? You save thousands for the future by small appropriations for inspection, for repairs, for fire insurance, and even for life insurance, to be paid after you are dead. Why not save millions in health, better efficiency, increased life-expectancy- life insurance, which is not merely a gamble on your life chances, but which actually adds to your years of life. The small cost is not an expense, but an investment which pays 100 per cent dividends?

Here are the principal items the Health Budget must include:

Item 1. An up-to-date set of good health habits.

Item 2. Health literature for study and reference.

Item 3. A few appliances for making use of health promoting agencies and such special accessories as may be needed, in carrying out a systematic, supplementary course of treatment at home.

Item 4. Health supervision by means of a periodical personal Health Survey supplemented by special tests which may be conducted at home.

The total amount of the budget covering these special items will vary in each individual case, but will be very small in all cases, a mere trifle compared with the cost of sickness and inefficiency, and an exceedingly small investment for the great returns which may be confidently expected.

BECOME A MEMBER OF THE HOME HEALTH EXTENSION LEAGUE

To aid the earnest health seeker in beginning and carrying out a systematic health program is the object of the Home Health Extension League.

To become a member you have only to enter your name on the Roll of Membership. The next thing to do is to get a program of the Sanitarium School of Health and get instruction in the art and technic of biologic living. Get private instruction from your dietitian about making bills of fare. Visit the Cooking School and learn the art and science of the new cookery.

THE HOME HEALTH EXTENSION LIBRARY

Ignorance is most expensive of all and dangerous. It kills vastly larger numbers than does vice, accident, war, famine or pestilence. Ignorance is the great destroyer, the monster cyclops. The cure for ignorance is education. Start a systematic course of reading. Here are some books and booklets which are readily accessible and in which you will find the art of living long and well presented more fully and authoritatively than in any other books.

The Simple Life in a Nutshell
The Reason Why
The Measure of a Man
The Relation of Habits to Life Expectancy
The Itinerary of a Breakfast
Colon Hygiene
The New Dietetics
The New Cookery
The Health Question Box
The Natural Diet of Man

These are books which ought to be in every home. You need the fresh and important information they contain for yourself and for your children. You can't afford to miss it. You are in daily need of these vital health and life saving facts which these books present as do no others. In these books are found the quintessence of the information gathered during more than a half century of study, experiment, observation and world-wide research, - the winnowed truth about right living which shows the way to fight disease successfully and to hold old age at bay. As a member of the Home Health Extension League you can possess these indispensable helps on such terms that they really cost you nothing.

THE HOME SANITARIUM

And then you need a few appliances by means of which you can make available at home some of the most valuable and essential of the methods which have made the Battle Creek Sanitarium a Mecca for sick people from all over the world. Here are some things which are really indispensable:--

The Photophore. This simple appliance first used at the Battle Creek Sanitarium, now found in hospitals all over the world, makes the wonderful healing power of the sunlight available in any home lighted by electricity.

The Thermophore. An electrically heated rug which takes the place of the fomentation. Ready for use any minute. A convenient bed warmer. Indispensable for out-of-door sleeping.

The Dumb-bell Vibrator. Awakens the activity of the sluggish colon and other internal organs that need physiologic stimulation. Wonderfully restful applied to the hand and spine and effective in driving away a multitude of neurasthenic miseries.

The Electric Light Bath. One of the great contributions made by the Battle Creek Sanitarium to the art of scientific healing, and approved and used by the most eminent medical authorities all over the world. King Edward had this bath installed in two of his palaces. The King of Sweden and other European royalties have used this bath for many years. It is a wonderful aid to healthful living. It is not simply aid to healthful living. It is not simply a sweating bath. It is a real sun bath,- sending into the depths of the tissues electro-magnetic waves,- rays of thermic and chemic energy which ionize the blood making the cells radio-active (Schuler), which in turn distribute the energy to the whole body, activating every body cell and vitalizing every tissue and function. An electric light bath in a home is a whole healing establishment in itself. An efficient remedy for colds, beginning influenzas, rheumatism, neuritis, and one of the best of all known means of combating and preventing the untimely inroads of that most implacable and indefatigable enemy, old age.

OUTWITTING THE OLD MAN WITH THE SCYTHE

A mariner who neglects to take observations soon loses his way and has no idea of where he is on the great waste of waters. He may be near his goal or he may be a thousand miles away from it and may be sailing among dangerous reefs and shoals on which his ship may any moment be wrecked. The mariner on life's ocean is in precisely the same situation. The business man who is suddenly stricken down with apoplexy has hit a reef. He felt well, he looked well, he had no suspicion of his danger; but if he had consulted a capable physician the threatened danger would have been recognized and might have been averted. Fatal endings from heart disease, apoplexy, Bright's disease and similar disasters do not develop suddenly. They are the result of degenerative changes which have been going on for years, steadily advancing day by day. The causes of these disorders are known. They may be controlled when recognized in time. They are allied to the old age process, which is subject to control and may be postponed not months only but years. The essential things are to keep the blood up as near par (100) as possible; to keep the bowels active (three efficient movements daily); to change the flora and keep it changed; to maintain a sense of fitness and readiness for work or play, a zest for living such as normally healthy persons should feel.

By means of a scheme for a personal health survey which has recently been perfected a very fair estimate of a person's physical condition may be made by means of information obtainable by correspondence. These surveys may be made monthly or quarterly as may be deemed necessary or desirable. There are certain tests which may be made at home or through specimens sent by mail by which the state of the blood, the bowels and the flora may be accurately ascertained, and thus the progress under home and home treatment may be easily followed.

The following laboratory tests may be employed at home:

The Blood Hemoglobin Test, which shows how nearly the blood approaches to the normal 90-100 per cent.

The Intestinal Motility or Colon Activity Test, which shows the time during which food residues and wastes are retained. Important because great delay and resulting putrefaction and autointoxication often occur even when the bowels move three or more times a day.

Tests for the Intestinal Flora. Suitable containers are supplied for sending by mail samples of the stools for bacteriological examination.

The monthly health survey is conducted by mail by means of the above tests and answers to the questions on carefully arranged blanks.

For further particulars apply to -

Health Extension Bureau
Good Health Building
Battle Creek Michigan

Paulson at Caterham

GOSPEL OF HEALTH.

Innovation at Caterham.

Medical Man's Maledictions.

Americans have invaded Caterham Valley, and the drawl of the Yankee was heard on all hands on Thursday afternoon. For once, however, our cousins have not come with the idea of business monopoly, or of financial advancement; they have come to preach a new Gospel, the Gospel of Health, the basis of which is physician^{al} morality. It is a strange creed, worthy of the characteristic originality of our cousins 'neath the Stars and Stripes, and they have erected a tabernacle one of sixty, in the peaceful valley. The devotees of the hygienic creed, which had its origin in Michigan, U. S. A., have taken over the hydropathic establishment erected by the late Mr. Burford, and in it they have placed a staff of nurses from the Battle Creek Sanatorium in Michigan, which is the headquarters of the movement. The institution will be in charge of Dr. Olsen, and the many maladies to which the flesh is heir will be treated under his supervision and the hydro will be known as the "Sarrey Hills Hydropathic Institution."

The sanatorium was formally opened on Thursday afternoon, when a large company from London, mostly Americans, took up their position on the spacious lawn at the rear of the health hydro. The proceedings were entirely al fresco, and thanks to the brilliant sunshine and pleasant breeze, were exceedingly enjoyable. The company was grouped in chairs on the green carpet, facing a dais on which were

seated the principals, with Mr. Morgan Thomas, J.P., in the chair, accompanied by Miss Morgan Thomas. The chief speaker was Mr. David Paulsen, M. D. of the Battle Creek establishment, and one of the leaders of the movement. Prior to the speech-making, a talented male quartette contributed sacred selections in admirable style, and the Rev. Mr. Irwin offered up a prayer and evoked the divine blessing on the institution.

The Chairman, at the outset, said as one of the oldest residents in Caterham he gave a hearty welcome to those who had newly arrived, and wished them success in their international medical mission work. He believed in the brotherhood of men, and he thought the strangers ought to have the right hand of brotherhood extended to them. Referring to the great American writer Emerson and to his conversation with the sage of Chelsea whilst on a visit to Scotland, the Chairman remarked on the effect of past events and occurrences of the present day. He well remembered those houses which now formed the hydro, and he recollected how they had been rebuilt by one ~~or the other~~ ^{of the} most honourable men he had ever known, the late Mr. Barford, whose views would be very similar to those of the learned doctor, both on the questions of Morality and religion, and of general health. That institution, he learned, would not be a divided-earning concern, and not a quack concern where patients would be offered a pill that was supposed to cure anything; but it was the following ^{out} of an idea that was set forth in a miracle some half a century ago by Phillipp White, until it had developed to its present importance. The human body, he went on, was a sacred thing, and if we were to do the best work we could for usefulness, liberty, and God, we must keep this temple of ours in the proper condition. They had heard the hymn, "There is a happy land far, far away," and they were very glad to think of it, but they wanted to make a happy land very, very near. (Laughter)

They wished to prevent people from ~~be~~ breaking the laws of health and morality, which was largely responsible for evil effects. (Applause)

Dr. PAULSEN, who spoke with rapidity, and who possessed a dry humor that is very telling, then delivered an excellent speech. What was the use of such a work as they were carrying on? he asked. It was not to furnish employment for a few people, thought that would be legitimate and laudable. Every person who worked in that institution would do so by sacrificing more lucrative opportunities in order to their deal with humanity. We sometimes become intoxicated with the material advancement we had made. In engineering and labor saving devices the genius and inventive skill of man had made life comfortable when it had been miserable; and it would be a desirable thing if we had made the same advancement physically, but unfortunately the facts did not bear that out. Instead of being bigger and better physically, we were on a down grade; and that was the excuse for such a movement as had been initiated in Caterham. Proceeding to give an inventory of the physical condition of modern society, he said that in the United States today -- ~~it~~ and it was the same everywhere else -- they had to contend with the mighty evil, he meant the slavery of the ~~drug~~ drug habit -- cocaine, morphine, and others. In his own country there were a million cocaine and mor_p_hine slaves, and not one in ten thousand would be saved from the lunatic asylums. The ingenuity of the devil must have been taxed to the utmost to so enslave humanity. In Chicago alone there were 60,000 victims. The Doctor then drew attention to the great increase in cancer and tuberculosis, which now cut off one third of our adult population. Any why? Because man had become weaker than the microbe! Violation of nature's laws was an invitation card sent out to disease. Another great curse. Apoplexy wiped out 57,000 people in New York, and it was practically produced by a wrong mode of living; it was not inherited with our race. Disease was secured just as we secured education, by good, vigorous sowing for

it. Men had to do horrible things to get sickness, but men were willing to sow for it. If he were to walk through the cemetery and raise two dead people to life his fame would be spread through two Continents; but if he were to attempt to save one thousand from premature death he would be called a crank, a faddist, or extremist; and as though it were not better to prevent death -- besides look at the funeral expenses that would be saved. (Laughter) Continuing, he said that there were 27,000,000 cases of sickness in the United States last year, with all their attendant misery, agony and woe, and the funeral hearses, tears and sorrow. There was as much reason for a preacher against these evils as there was for John the Baptist; to eradicate disease was true Christianity. In America last year 50,000 died of typhoid fever, and every case was preventable. Typhoid meant drinking contaminated water or milk. The things that we suffered were the curse of modern civilization. On a half of our population was flocking into the cities and life in cities was not conducive to health; there was too much immorality and vice, and it was the very foundation of our whole social structure. In London they had to continually regenerate the population from the country; and the situation was becoming appalling. Every nation spent more on its vices than it did on its necessities, so what more could they expect. Our boys consumed 2 1/2 million of cigarettts annually, and if a lad smoked cigarettes it had been found that he never rose to any height of scholarship. These stunted hulks of humanity smoked 100 cigarettes a day; they were wrecks enough to live and not brave enough to die. Condemning ~~patent~~ patent medicines, the doctor said that there ~~was~~ two hundred million dollars worth of patent medicine consumed every year in America, and generally it contained morphia, cocaine, and bad whisky. Most of these things were "nerve foolers." The ~~real~~ real remedy for disease was physical repentence. All about us we see fragments of humanity. Out of 11,000 men who

G.H.5-

volunteered at Manchester for active service only 3,000 were accepted and 1,200 of these men were not up to the desired standard. Still another great evil was the modern cook who was in league with the saloon keeper and the undertaker; she found work for both. Her cooking gave a boy such a thirst that the town pump could not satisfy. (Laughter.) After denouncing the pampering of the palate, he said that when a boy was fed with such things as mustard it was only natural that he should go through life with an unquenched thirst. When he was lecturing in the States he placed a small portion of mustard on a young girl's hand, covered ~~it~~ it with a cloth and in a short time it had raised a blister that left a scar time did not heal. And yet the average man took the same amount of mustard every day without thinking that his stomach was as sensitive as his eye. The prevailing opinion ~~seemed~~ seemed to be that when something was not good for anything else, it was the right thing for eating. Mother said to her son, "Johnny, you will have to eat it, or I ~~must~~ shall throw it away." (Laughter.) After remarking that every sick person was a crank, the speaker said that there was nothing so scarce today as great men; they were needed in legislative halls, in the pulpit, and in every walk of life. (Hear, hear.) Concluding, he said the human body was the temple of God, and as such it ought to be carefully watched and furnished. He prophesied that the movement inaugurated in Caterham that day would be a national one, and that its benefits would be felt in future generations. (Applause.)

The Chairman said Dr. Paulsen had the resource of the scientist with the fire of the prophet. He then declared the institution ~~was~~ open, and a red flag with "Hydro" in white letters, was hoisted on the roof by the mother of Dr. Olsen. An American gentleman called for three "English cheers," and these were given heartily enough.

On the proposition of Dr. Waggoner, seconded by Professor Salisbury, a vote of thanks was passed to Dr. Paulsen for his speech.

"Hygienic tea" was then served on the lawn. In accordance with the principles of the establishment there was no tea, but cups of hot cereal were handed round. The liquid had the aroma of coffee, but it did not possess a pleasant flavor, and we should imagine it would be an acquired taste like whiskey and tomatoes. The foodstuffs consisted of a curious kind of sandwich which had a meaty taste, though the nature of their composition was hid in mystery. There were also numerous biscuits which, judging by their effect on the palate, contained a good deal of gluten.

After "tea" the guests inspected the establishment, which has a handsome exterior and a comfortable interior.

Occasional Notes to the Editor.

In another column will be found a report of the opening of the Hygienic Hydro in Caterham. Valley. This handsome Hydro is not only an acquisition to the town's architecture, but the establishment will bring Caterham right up to date. An American idea has taken root in the peaceful valley, and if the new doctrine infects the district we shall see some strange things happening in Caterham.

For instance, the butchers, grocers, tobacconists, and publicans will have to close their doors, for their wares are dangerous to health. The house-wives will have to learn a new method of cooking, and their offspring a new form of eating. Dr. Paulsen has declared war against all modern vices and culinary conventionalities, and if his teaching permeates Caterham, the fame of the district will spread throughout the country.

Personally, I cannot say that I care for "Hygienic tea". I had some on Thursday afternoon, and taking all things into consideration I think I would prefer to die ten years earlier, and dispense with cereal, sooner than imbibe cereal for the remainder

of my stay on this terrestrial globe.

Mr. Morgan Thomas, J. P., appeared to take kindly to the innovation, and when once he had got a grip of the subject he warmed to his work and became enthusiastically appreciative.

As a smoker, I was deeply interested in the doctor's tirade against "My lady Nicotine," and I was seized with a profound admiration ^{for the youth} who could consume a hundred cigarettes a day. I saw Dr. Paulsen afterwards and he repeated that he had known cases where boys consumed 150 cigarettes a day. Marvellous!

Perhaps the most fundamental and striking feature of this movement is its recognition of the dignity and sacredness of the human body. "Know ye not that ye are the temple of God, and the Spirit of God dwelleth in you?" has been taken to mean just what it says. The laws governing the cure of the body and the uses of its various organs are regarded as of Divine origin. Disobedience of these laws, whether intentional or otherwise, results in disease.

Therefore the proper cure of disease consists in an effort to ascertain what laws have been disobeyed; in other words, in what respect the life and habits of the patient have been out of harmony with right principles. This matter having been settled, it only remains to leave off hurtful indulgences, correct the wrong habits, and by the employment of simple, natural remedies, assist nature in effecting a perfect cure.

SCHOOL OF HEALTH.

Under the Auspices of the International Health Association

This will be conducted under the auspices of the International Health Association by physicians and nurses trained at the Battle creek Sanitarium. The course will include ten days' instruction and two lessons each day, with additional hours to devote to private instruction and practice classes. Special attention will be given this year to two subjects: Rational Diet and Scientific Cookery; The Home Care of the Sick, or How to Have a Sanitarium at Home.

The following subjects are announced with the understanding that the program may be varied somewhat to suit the wishes of the majority of the members of the classes after they have been formed.

RATIONAL DIET AND SCIENTIFIC COOKERY.

These lessons will consist of a short illustrated lecture, occupying twenty or thirty minutes, followed by a demonstration of methods of preparing the dishes discussed.

1. Chemistry of Foods.-- Food elements, chemical differences between green fruits and ripe fruits, raw foods and cooked foods, physiological relation of cookery, microscopical and chemical illustrations and demonstrations.
2. Bread Making.--Ancient methods, modern methods, and the new methods without yeast or baking powder; crisps, sticks, puffs, beaten biscuit.
3. Pastry.-- Yankee pie and indigestion; wholesome and toothsome pies and cakes; apple pie, prune pie, pumpkin pie.
4. Desserts. --A dozen delightful, delicious, attractive,

and perfectly wholesome as well as novel and simple desserts, such as granut pudding, granose short cake, etc.

5. A dozen delicious soups prepared without greasy meats, simple, wholesome, and palatable. Cream of corn, tomato bisque, cream rice, celery soup, vegetable, Swiss lentil.

6. Legumes.-- Peas, beans, lentils prepared in a variety of new and attractive forms.

7. Nut Cookery.-- Meat substitutes, nut broths, nut soup stock, best illustrating culinary effects.

8. Nursery Cookery.-- How to prepare a dozen infant foods at home, just as good as anything that can be purchased and better than most.

9. Diet Kitchen.-- Hows for the invalid, how to prepare them. Twenty tasty and wholesome dishes for the sick.

10/ How to Make a Scientific and Artistic Bill of Fare.-- Seasonable foods for spring, summer, or winter. Simple breakfast, simple dinner. Suggestions for Christmas, New Years, and weddings; school lunches, traveler's lunch bag.

HOME CARE OF THE SICK? OR HOW TO HAVE A SANITARIUM AT HOME.

1. What is Health? What is Disease? Why disease is catching, Health more contagious than disease. Causes of diseases. Treatments, how to conduct them. How the body combats disease. Microscopical exhibition of typhoid germs, cholera germs, tuberculosis, pneumonia, and diphtheria, malarial fever parasite, trichina, and other parasites.

2. Brain and Nerves.-- How we think, how we remember.

Pain--Headache, backache, sideache, neuralgia, colic, itching, burning, and other strange sensations. Simple methods of relieving it: Fomentations, compresses, hot-blanket pack, hot bath, etc.

3. Indigestion. Causes: Regimen for dilated stomach, prolapsed stomach, intestinal catarrh, constipation. Hot water drinking, cold water drinking, enema, wet gridle, hot and cold drunk pack.

4. Nervous Exhaustion--Neurasthenia-- Non-medicinal tonics; cold bath, cold mitten friction, cold-towel rub, and wet-sheet rub.

5. How to Get Lean. Diet for Fat People. Baths to reduce flesh: Sweating baths, cold baths. Exercise.

6. Fever Nursing-- Typhoid and malarial fever, measles, smallpox.

7. Uric Acid Disease, How to Prevent and Cure-- Diet, baths, and exercise.

8. Diseases of Children-- Measles, whooping-cough, croup, indigestion, worms, and other common maladies.

9. Common Deformities, How to Cure Them. Flat chest, spinal curvature, prolapsed stomach, etc.

10. Consumption: the White Plague. How to prevent: cautions necessary; diet, exercise, out-of-door life.

SUGGESTIONS TO MOTHERS.

Accidents and emergencies; what to do until the doctor comes; burns, sprains, fractures, hemorrhages. How to apply simple bandages; how to carry helpless or injured persons. An extra lecture especially for ladies will be given when desired.

(For School of Health Circular.)

THE SCHOOL OF HEALTH.

There is no question which is at the present time more prominently in the public mind than that of health. The public health is everywhere under the supervision of health boards and health officers. There are 150,000 doctors in this country alone trying to help ten millions of people to find the road to health. In spite of all their efforts, one million of these die every year in the United States alone. Twenty times this number is the world's annual death roll. Of the one million people who die in the United States every year, at least 900,000 might be kept alive anywhere from ten to fifty years or more. The average length of life in this country--about forty-two years--might easily be doubled, even tripled by attention to the laws of health.

While sanitary regulations are restraining the ravages of cholera, plague, yellow fever, and malaria, such chronic maladies as consumption, diabetes, neurasthenia, locomotor ataxia and Bright's Disease are rapidly increasing. Within ten years, the deaths from cancer, apoplexy, kidney disease, and diabetes have increased at an average rate of nearly 50%. If the four great maladies named continue to increase at the same rate, in fifty years from now they will destroy five times as many people as at the present time. The number of persons per 100,000 dying from the four diseases mentioned was in 1900 218. In less than fifty years, or in 1950, at the present rate, the annual deaths from these diseases will be increased to 1090. But the number of deaths from these maladies is small when compared with the deaths from tuberculosis which, at the present time, kills ten times as many persons every year as the four diseases mentioned. The significance of these awful facts

is only realized when it is understood that all the maladies named are preventable; and in the case of tuberculosis, the most terrible scourge of all, the disease is both preventable and curable. In the words of sacred writ, "the people are destroyed for lack of knowledge."

It requires scarcely more than a casual glance at the statistics of disease and mortality in civilized countries to convince the most optimistic that the human race is at the present time rapidly decaying, and is doomed to extinction unless the tide of physical degeneracy can be turned.

At the late American International Congress on Tuberculosis held at St. Louis under the general supervision of the World's Fair officers, in connection with the great Exposition, and at which were present representatives from all parts of the American continent, universal assent was given to the thought expressed by the eminent medical and other scientists present in that the only hope for deliverance from this rising tide of destruction lies in a return to natural methods in eating, drinking, and all that pertains to the conduct of life.

The International Health Association has been organized for the purpose of promoting this return to nature movement. A large corps of able and experienced lecturers and demonstrators has been engaged; and elaborate equipments consisting of colored slides, moving pictures, charts, manikins, diagrams, instruments and apparatus for experiments and other illustrative material has been provided. Through the courtesy of the World's Fair officials, this campaign was begun in the large lecture room of the Educational Building, where a continuous school of health was conducted during the last weeks of the Exposition. Many thousands of persons were daily interested,

surprised, and instructed by the information presented.

The school of health, as conducted by the lecturers of the International Health Association, is a unique method of popular instruction. It consists of afternoon demonstrations, practice lessons, and evening lectures. The subject matter presented is not of ~~the~~ hackneyed character,--simply a rehash of old facts made familiar from school physiologies and health departments of magazines for generations past,--but fresh, new, up-to-date information which for the most part has not yet found its way into literature. The instruction is made clear by lucid demonstrations and illustrations unique and original in character. The lecturers are assisted by trained nurses who assist in demonstrating not only the preventive, but the curative phase of the return to nature movement. The principles of the natural method as applied to food, dress, cookery, exercise, child culture, education, and the care and treatment of the sick are illustrated in many impressive and convincing ways.

Never before has such an opportunity for becoming acquainted with sound, scientific principles of health culture been offered to the public. The literature of the day abounds in pseudo-scientific advice about health. Every new nostrum solicits public favor through dissertations on some question pertaining to health. Health fads of every sort are continually thrust upon the public; and a multitude of ingenious schemes is continually being exploited in the name of health. The time is fully ripe for a vigorous campaign in the interests of popular education in the sound and scientific principles of healthful living.

The International Health Association is a humanitarian organization with representatives in all parts of the civilized world. Its lecturers are scientific, educated physicians, and members of well known scientific bodies; and its work is conducted in sympathy with all other organizations which are seeking to promote the human welfare.

The general campaign includes schools of health at leading Chautauques in the country, which have been held in numerous places in various parts of the country during the last ten years. Arrangements may be made for single lectures, or for schools lasting from three days to two weeks. The succeeding pages of this booklet will give something of an idea of the general character of the subject-matter presented in these schools. It will be seen at a glance that nothing of the sort has ever before been attempted; in fact there has never before been an organization prepared to do what is now undertaken.

The general managers of the Association have secured the services of Mr. H. A. Collins, well known as a successful Chautauqua manager, to act as advance agent, and to arrange for lectures or schools as may be desired.

Each community in which a school is held, is expected to raise a sum sufficient to cover actual expenses, the amount of which will vary more or less with circumstances. The expense will in all cases be very moderate, as lecturers are paid only moderate salaries, and municipal and public health authorities are always ready to assist in various ways in lightening the cost of a valuable and expensive effort which is so manifestly of public importance, and for the general good.

Those who desire further information should address, J. F. Morse, B. S., M. D., Sec'y International Health Association, Battle Creek, Mich. -----

SUGGESTION FOR GOOD HEALTH

"Influence of Fatigue and Pain upon the Expenditure of energy.—The expenditure of energy gradually increases even in the case of work which is not exhausting, and which can be carried out for hours at a stretch. Two army physicians, examined by Schumberg and Zuntz, consumed in the act of walking on the level after a march of 25 kilogrammetres 5 to 18 per cent ^{more energy} and 2 to 9 per cent more oxygen than in traversing the same distance prior to the march. L. Zuntz cycled at an average rate of 15 to 17 kilogrammetres per hour for four successive hours. In this case the expenditure of energy increased, notwithstanding the absence of any feeling of fatigue, about 9, 13, 10, and 23 per cent of the initial value after one, two, three, and four hours. Thus, if the same amount of work be performed for a series of hours, auxiliary muscles are gradually brought into action to a greater extent, partly for the performance of the work itself, partly for the fixation of the bodily frame work. These muscles naturally carry out the necessary work with less economy in expenditure. The same reasons also afford an explanation of the increased expenditure occurring in the case of work which is from the first excessive and of too fatiguing a nature, whether it be too great in itself or unsuitably distributed over too small a proportion of the muscular system, e.g., the severe labor entailed in turning a winch with one instead of with two arms. (A. Loewy) In the same way auxiliary muscles are called into play, and the CO₂ expenditure is increased as soon as the onset of pain enforces a restriction in the action of the muscles at work. In one case the metabolism during a march was increased to the extent of about 20 per cent, in consequence of inflammation of the tendon sheaths of the foot." Von Noorden, Vol II.
p. 220 (Abstract Vol. II. pp 47,48.

Necessity of keeping the body up to the highest condition, to avoid useless waste of energy. Thus may one lengthen life without diminishing the amount of daily work.

(Using one arm instead of two.) The lazy person loses more energy when he does work than the one who does the same thing energetically and with his whole strength. An additional reason why one should do with this might what his hand finds to do. (Avoid friction.)

(Good Health).

A CENTURY'S PROGRESS IN HEALTH REFORM.

In the early years of the last century, a small body of earnest souls, seeking an atmosphere of religious and social freedom, under the leadership of Rev. William Metcalf came to this country from the vicinity of Manchester, England, and settled in Philadelphia. These sturdy pioneers of the cause of emancipation from the thralldom of established opinion, brought with them the foundation principles of the great Health Reform Movement which has since assumed so great proportions and spread to all parts of the world. In England they had stood for years under the teachings of a scholarly and thoughtful clergyman, who, through reading, research, and experiment, had reached the conclusion that animal flesh was never intended-- at least away back in the beginning of things-- to be employed as an article of food; that that it is not good for a man's present comfort and well-being, nor is its use conducive to the prolongation of his life? These earnest souls were so thoroughly persuaded of the correctness of this thought, and of its far-reaching significance in relation to human health and happiness that they organized a church, in which abstinence from flesh-eating was made one of the essential articles of the creed, and it is gratifying to notice that this church still exists in the city of "Brotherly Love", and that regular weekly services are held in it, under the leadership of the Rev. Henry S. Clubb.

Through the efforts of these earnest thinkers, and perhaps through other channels also, men and women here and there, about the country, began to think more about their eating and its after consequences.

In 1830, Sylvester Graham became acquainted with Mr. Metcalf and his work, and began at once to investigate the mode of life adopted by his Bible Christian friends, from a scientific standpoint. The result was that he identified himself with their work, lecturing and writing upon temperance, vegetarianism, and kindred subjects. In consequence of this work, Graham boarding-houses were opened in New York, Boston, etc.

So successful was he in this movement that his name has been immortalized and honored in a manner accorded to that of no other human being by attaching it to a common article of food. Graham bread is now to be found upon every hotel bill-of-fare throughout the civilized world, and is a household word. It may be obtained in almost any bake-shop in the United States and England and is equally common in all German-speaking countries on the continent of Europe.

Dr. William Alcott became identified with the movement soon after Mr. Graham, and in 1835 began the publication of a monthly periodical, called Moral Reform, which was succeeded by The Library of Health.

Later, Dr. R. T. Trall and other men raised the banner of reform, and with voice and pen began to cry out against the prevailing customs of the age in diet, dress, and other perverted habits which have fastened themselves upon our modern life. Ripley, Emerson, Thoreau, the Alcotts, Dana, Hawthorne, Horace Greeley, Margaret Fuller, and some scores of names less known in the literary and thinking world of the United States, joined the movement and added their voices to the general demand for a radical revolution in habits of life.

The Brook Farm experiment was a long step toward simple living.

Rev. George Ripley, a Unitarian clergyman of saintly life, fine scholarship and high culture, was the soul of the enterprise.

The purpose of the enterprise is indicated by the founder himself:

"To insure a more natural union between intellectual and manual labor than now exists; to combine the thinker and the worker, as far as possible, in the same individual; to guarantee the highest mental freedom, by providing all with labor adapted to their tastes and talents, and securing to them the fruits of their industry; to do away with the necessity of menial services by opening the benefits of education and the profits of labor to all; and thus to prepare a society of liberal, intelligent, and cultivated persons, whose relations to one another would permit a more wholesome and simple life than can be led amidst the pressure of our competitive institutions."

The work of the associates was carefully organized, each having his place and share,-- enough for health and cheerfulness, not enough to check the intellectual and the spiritual culture which were the supreme end sought.

Dr. Codman says, "I have been requested to give my ~~XXXXXXXXXXXXXXXXXX~~ personal testimony as to the effect of a vegetarian diet as seen at Brook Farm. I willingly do so. For two or three years the farmers, mechanics, and others worked side by side, and no one could conscientiously say that inability to work in any field of labor, physical or mental, the vegetarians were outworked by their companions. Their health was fully maintained, and their mental cheerfulness was surpassed by none."

In dress, likewise, there was great simplicity. Many of the women wore short skirts and knickerbockers for their work, and when it was over, attired themselves in the simplest style of the period. The men, for labor, wore a blouse of blue or brown. Except in "the company rooms" there were no curtains or carpets.

One of the participants in the Brook Farm experiment pays this tribute to the life there, "The influence of the fine magnanimous living there, must have carried blessings to all parts of our land as its members scattered."

In 1856, Ferdinand Schumacher established the first oatmeal factor. It had a capacity of about ten barrels per day. His friends warned him that "while oats were good enough for horses, he could never get the Yankees to eat them," but somehow the Yankees took to the oats and Mr. Schumacher was soon able to double the capacity of his mill. During the next ten years he found it necessary to build much more extensive mills and added an elevator and pearled barley mill. In order to supply the demand for Graham flour and cracked wheat or farina, a large flouring mill was purchased and run in connection with the oatmeal mill. And then came another large oatmeal mill. The history of the oatmeal industry is one of constant growth until at the present time it is estimated that the mills owned by the American Cereal Company, whose principle trade-mark is Quaker Oats, have a daily output of 12,000 barrels, while the North-western Oatmeal Combine probably manufactures 10,000 barrels daily, making 22,000 barrels of oatmeal from these two companies alone. Add to this the scores of other cereal foods that are being manufactured all over the country, Lettjohn's Breakfast Food, Vitos, cream of wheat, Granose Flakes, Grānut, Granola, and other cereal foods put out by the Battle Creek Sanitarium Health Food Company, the nut foods manufactured by the Sanitas Nut Food Company and the Malta-Vita, and other cereal foods manufactured by Battle Creek's twenty-three other health food companies, there is surely no reason why the strictest vegetarian should not have pure, wholesome food in abundance and without extra effort.

About 1851, Joseph Bates quit the use of tea and coffee in the belief that they were poisonous and stimulating in their effects. So far as we know, he was the first to advocate reform in this particular. He was soon re-enforced, however, by Sylvester Graham, who, in his lecture on "The Science of Human Life" spoke very strongly against their use. Mr. Graham's fellow-workers shared his views on the subject and so the reform spread. People awakened to the deleterious effects of these beverages, and substitutes for them began to appear on the market.

Over twenty-five years ago, the Battle Creek Sanitarium began to manufacture cereal substitutes for coffee in a very small way but has grown to a product of many tons daily. Many other firms have engaged in the same business; it has gotten to be, in fact, a business which affords employment for hundreds of people and numerous extensive factories in different parts of the United States.

On October 25rd, 1899, the Rational Dress League, of England, held a meeting to celebrate the fiftieth anniversary of Mrs. Amelia Bloomer's first appearance in the divided skirt, which has since been known as the Bloomer costume. When Mrs. Bloomer started upon her crusade against the dresses worn by women, it must be remembered that hoop-skirts so large around that a woman could scarcely turn in a room were worn, and corsets so tight that it was almost impossible to breathe. Mrs. Bloomer rebelled and designed a garment that consisted of pantaloons to the ankles, over which was worn a short skirt.

Horace Greeley, who constitutionally fought all woman's rights movements-- if they seemed unwomanly to him-- describes it thus:

"It was an attempt to substitute for the cumbersome, inconvenient, inelegant, in many other respects objectionable dress which then and has since prevailed, one of light, graceful and convenient character."

Mrs. Elizabeth Cady Stanton, Susan B. Anthony, Lucy Stone, Charlotte B. Wilbur, and other women whose names are equally well known, adopted Mrs. Bloomer's costume and wore it conscientiously for several years, or until public opinion compelled them to lay it off.

In 1874, a series of lectures was delivered in Boston on the subject of dress, the purpose of which as stated by the committee that had then in charge was, "to arouse women to a knowledge of physical laws, to show them how their dress defies these laws, and what different garments they should adopt." Nearly all of these lectures were delivered by lady physicians of recognized ability and position, and they did much to break down the pre-

judice which existed against reformed dress.

The first dress reform movement in connection with the Battle Creek sanitarium was organized in 1865. The first attempts were drastic, and thoroughgoing, and perhaps laid more stress than was necessary upon the length of the dress, but the idea was right; the principle was sound and true, and has survived all the ridicule heaped upon it, until today dress reform has almost come to be a fad. The essential features looking to perfect freedom of bodily movement, and equable clothing, have developed into a most complete and perfect artistic dress system which the world has ever produced.

In the early days of the last century, Priessnitz was astonishing the world with the cures wrought at Graefenberg, in Austria Silesia, by the use of simple water, with plain diet and abundance of out-door exercise. Chronic invalids were making pilgrimages to the little mountain hamlet in which this self-taught but shrewd and successful physician resided, and soon physicians as well as laymen from all parts of the world were sitting at the feet of this medical magician.

Many thought him to be the master of the black art, and attributed his cures to the use of occult charms and cabalistic methods, but shrewd observers recognize the fact that the secret of his success was in the utilization of the masterful forces of nature, and that his whole secret lay in the recognition of the fact that man has within him a power which creates and heals; that doctors, medicines and remedies of all sorts are alike powerless to heal, but serve only to aid in supplying favorable conditions for the operation of the natural healing powers of the living organism.

Later, Jacob Bigelow, Oliver Wendell Holmes, and other master minds in this country, as well as in Germany and England, took up the cause of medical reform, and for more than half a century there has been a steady advance in the development of rational ~~xxxxxxxxxxxx~~ physiological therapeutics.

If it is not possible to say the physiological method has acquired universal adoption, it may be said, without fear of contradiction, that the physiological method-- the systematic employment of physiological agents only in the treatment of disease-- has received universal recognition and approval as a method of highest value and efficiency by scientific physicians.

of every school throughout the whole world.

Some humble citizens of Battle Creek, Michigan got hold of the idea that disease was the result of the wrong habits of life, and could best be gotten rid of by following the injunction of the prophet, "Cease to do evil and learn to do well."

On September 5th, 1864, these men organized a philanthropic association consisting of men and women interested in the promotion of food reform, temperance reform, dress reform, and all sorts of sensible, sanitary, and social reforms. A year later they incorporated it so as to make it a perpetual institution, and donated their time and money to give it a start. With the good start it got, and the good ideas put into the foundation, it has grown from its insignificant beginning to the greatest center of scientific sanitation and rational healing in the civilized world, having more than sixty branches in the United States and twelve foreign countries, which treat more than ten thousand sick people.

The one condition which has made this growth in facilities and appliances possible, was that all earnings and accumulations from all sources should be devoted to the betterment of the institution and the advancement of the principles for which it stands-- a condition which has been scrupulously adhered to, no one ever having shared any portion of its earnings in any way whatever.

It has never been the advocate of a single remedy; it has never been a one-sided or a one-idea institution. In the early days, when it was first established, water was one of the principle remedies used, nevertheless it was never the only one; correct habits of life, correct dress, correct diet, pure air, electricity, exercise, and a variety of other most potent agencies for healing were also employed.

It has been the work of the Sanitarium to teach a science of health by which the sick may recover, and be able to keep well after recovery.

Physical Education a World Need

Read by the editor at the conference of institutions giving professional training in Physical Education, held at Washington, D.C., May 7-8 .

The greatest problem before the world is how to save the human race from extinction. Man is a very old-fashioned animal. Most of the races of animals that began life on this planet with him have degenerated and disappeared. According to Keith, the eminent paleontologist, the human species reached the summit of development in the Cro-Magnon race 20,000 years ago. For thousands of years the race has been degenerating and in recent years the rate of decline has been accelerating so greatly that the stigmata of race decay have become so patent and so numerous, that the leading eugenists have renounced all hope of an indefinite future for the race. Davenport says, "Of course, we all know that the human race will ultimately perish; but if we give attention to engenic, the catastrophe may be postponed somewhat." And Professor Darwin, the son of Charles Darwin, said at the last Eugenics Congress, "If our present civilization survives, it will have to be the United States that saves it."

Such a calamity as the death of the human race is too terrible to contemplate with composure. I cannot believe it to be inevitable. We know the signs of race deterioration, and we are well acquainted with at least many of the causes, and we know how to combat these malignant agencies. We know even more; we are possessed of efficient methods for the promotion of race betterment, and are making daily use of them in improving our farm crops, our fruits and flowers, our cattle, horses, pigs, chickens and poodle dogs. Applied to the human race, these same methods, modified and adapted to the conditions of human life, might

in a few generations produce a race of men as much finer than the present man as the finest thorough-bred is superior to the common scrub of the farm.

The race may be saved through race betterment activities and I fully believe it will be. ~~Race~~ hygiene, eugenics, and personal hygiene, eutherics, are the agencies by which the race will be saved from petering out. Public hygiene may help somewhat but, on the whole, rather tends to aid race decay by preserving the unfit and preventing the operation of the law of the survival of the fittest.

Here, it seems to me, is the field, the great opportunity for schools of physical education. The great Galton had a vision of the time when eugenics would be a religion. A scientific religion is the world's greatest need to-day, not as a substitute for any religion, but as a ~~supplement~~ supplement to all other religions. Biology, physiology, in its broadest implications, supplies the code. This new religion, a religion based on science, on physiology, is in process of creation already. This is why we are taking more interest in sports, in the out-of-doors, in diet, sunshine and physical education. That is no doubt the real reason why we are here to-day.

It seems to me that the special function of schools of education is to elucidate the principles and to inculcate the practices of the religion of the body, of the race. Our youth must be taught to reverence the body, to develop and safeguard all its powers and functions, to obey the laws of physiology as an ethical obligation, to regard a heritage of vital stamina and vigor as a precious heirloom to be preserved, not

squandered, improved if possible, and passed on unimpaired to the next generation.

If the world is ever saved, it must be through education, and the school of physical education should be a school of evangelists of the new religion, a nursery for the training of young men and women into superb health of mind and body, not simply athletes, gymnasts, but fine specimens of healthy human beings, and good exemplars of physiologic rectitude.

The student of physical education needs careful training, both theoretical and practical, in dietetics as well as in gymnastics. His skin needs training by contact with cold air, water and light, as well as his muscles, through exercise. He ought to carry away from his course of training, along with his diploma, a full set of meticulously physiologic habits, and a genuine enthusiasm for biologic living. Such health directors could soon work a revolution among the 20,000,000 boys and girls of our public and private schools who to-day are being trained into disease and decrepitude by the unphysiologic conditions to which they are exposed. They could lay the foundation for an aristocracy of health which must be developed to purge the race from its degenerative taints.

Our schools of physical education ought to work out and promulgate a broad program of race betterment activities and should make sure that their graduates go out prepared to set going in every community to which they are called definite and effective race betterment activities, and ready to co-operate with such activities and agencies as they may find already at work. If our schools of physical education will grasp the great

opportunity which the world offers them they may render a service the appreciation of which will grow through all the coming centuries of human history. It is said that when Abraham Lincoln was about to sign the great document which made this country, in fact as well as in theory, "the land of the free," there were those who endeavored to dissuade him from his purpose. He replied, "We have an opportunity to basely lose or nobly save the world's last hope."

If we may believe the venerable Professor Darwin, such an opportunity is to-day offered to our schools of physical education. The teacher, and especially the well-trained health teacher, is truly the world's greatest and possibly its last hope.

615.1
CHINESE REMEDIES→ ABSTRACTS.

Chinese Croup Cure.

A Chinese croup cure consists of spiders' nests, in two of which there should be spiders. These are mixed with alum, and when cooked, given to the patient through a bamboo pipe.

A Chinese Medicine Chest.

The investigation of the custom house brought to light the contents of Dr. Lien Chi Fum's medicine chest from the celestial kingdom. It consisted of dried snakes, flies, bugs, centipedes and other preparations of animals possessing rare and invaluable medical virtues.

So long as spiders and spiders' webs are recognized as medicines by us we do not see how we can legitimately object to his dried snakes. We tolerate Spanish flies, the virus of rattlesnake, the contagious of smallpox, the infection of syphilis and remedies of much greater "worseness" as Josh Billings would say. Alcoholic poisons, the impurities from mineral springs, lances, leeches, mercurials, antimonials and proprietary medicines do not present a strong argument against the pharmacopoeas of Lien Chi Fum.

Chinese Physicians.

The Chinese pay their doctors for keeping them well, rather than for curing them when sick. When a Chinaman gets sick the pay of his physician is stopped until he is well again. From the abominable and disgusting articles used as remedies one would think that the Chinese doctors took occasion to chastise their patients for being sick, and thus depriving them of their fees. The lining membrane of a fowl's ~~stomach~~ gizzard is dried and used for dyspepsia; dung and beetle skins for skin diseases; snake-skin for smallpox; fragments of fossil crabs for diseases of the eye; dried toads to cause sweating; maggots for delirium; oyster shells for deafness; decoction of dried leeches for a purgative; and other similar articles of a nauseating character.

More Chinese Remedies.

The larvae of grasshoppers dried and roasted for headache; the inside of a stag's horn for rheumatism and bronchitis; a glutinous decoction of donkey's skin has great reputation for efficacy in pulmonary diseases. Powder prepared from the skin of the elephant is recommended for rheumatic pains. The tincture of scorpions for a stimulant and tonic; a very costly tonic consists of a gelatinous decoction of tiger's bones. The bear's gall is used as a general antidote, but the gem of all medicines is prepared as follows: a number of live toads are imprisoned in a jar half filled with flour, when the flour is moistened with the saliva of these creatures it is dried and kept as powder and is used as snuff to produce sneezing and is regarded as invaluable in restoring persons suffering from fainting fits, convulsions or hysterics.

Dried silk worms, crabs' eyes, dragons' teeth, hedgehogs' skins, fossil crabs, fossil teeth, horse-tails, straw, glass, cow-hair, Job's tears, "insects of nine smells", puff-balls, ground blood, cow's knees, tree-bugs, etc. To the celestial these decoctions possess the same mysterious and efficacious power of healing all ailments as do patent medicines and proprietary compounds offer to Uncle Sam's children.

Formula for Chinese Cancer Cure

Sold for \$100.00 to a wealthy Californian who swallowed several gallons before he died.

R _x	Dragon's heart's blood.....	1 oz.
	Pickled lizards.....	2 ozs.
	Korea ginseng root.....	1/2 oz.
	Willow cricket skins.....	12 ozs.
	Rattlesnake's tail.....	3 ozs.
	Sweet potato vine.....	6 drs.
	Black dates.....	2 ozs.

Chinese 3.

- Red bark.....1oz.
- Devil-fish suckers.....3 ozs.
- Reindeer's horn(ground).....3 1/2 ozs.
- Bird's claws.....1 1/2 ozs.
- Lotus leaves.....6 ozs.
- White nuts.....5 ozs.
- Coffin nails(old ones)..... 8 drs.

Boil the whole in two quarts of water. Dose: A tablespoonful every three hours.

Chinese Doctors.

The Chinese doctor sells his medicine as well as he prescribes it. He tells his customers what he thinks best for them or their friends; but it is very frequently the case that they make the selection. For instance, he may make up a prescription of ten or thirty remedies to be compounded, when the question will arise, how much is the cost? The physician makes as low an estimate as possible, and replies. The patient or friend may think it too high, that it cannot be afforded; and one article or another is thrown out to reduce the cost-- often the article most valuable to the patient. In some cases they cannot agree on a prescription or its price, and the patient deliberately gives himself up to die rather than pay the price demanded.

Don Lang's Herb Sanitarium.

This resort is located in San Francisco and well patronized even by Americans. He carried away \$20,000 from a large city in a few months. The usual fee is \$14 for one prescription for which the patient receives a few herbs and the following instructions for dieting:

Must not eat

Fish, oysters, lobsters, or any kind of fish food, duck or goose. Do not

Chinese 4.

eat uncooked fruits, except oranges and figs, or use ice-cream, lemon juice, or vinegar.

Must not drink

Cold water or cold drinks of any kind, acid drinks, soda drinks, liquors, beer or wine.

Must not use

Opiates in any form, chew tobacco, or smoke cigarettes. May smoke pipe or cigars, but not more than two or three times a day.

Do not chew

Gum or anything else that will cause saliva to flow between the meals.
Dr. Don Sang, Crown Point, Ind.

Chinese Anatomy.

An anatomical diagram issued by the Imperial College at Peking, represents the windpipe as passing through the lungs and communicating with the heart. The spleen is pictured as resting upon the upper portion of the stomach, and the heart as sending out three tubes, one each to the liver the spleen, and the kidneys.

Chinese Dentistry.

They insert artificial teeth of the sea horse and keep them in place by copper wire wrappings or fastenings to the adjacent teeth and charge ~~xxx~~ about three cents per tooth for the operation. Teeth are extracted by a hocus-pocus process called "coming up". The dental imposter applies a whit powder represented to be salt extracted from the sweat of a horse, but which is really arsenic which causes the gum to slough and thus the tooth is easily removed. The toothache which is supposed to be caused by a little black maggot is charmed away in a temple under an umbrella while the patient is asleep. The worm must be removed alive or the patient will go mad. This remarkable feat is made successful by attaching to the long

Chinese 5.

iron forceps a hollow bamboo rod containing the necessary creature. The dentist squeezes the bamboo, the maggot is ejected into the patient's mouth and adroitly removed by the nippers of the forceps and triumphantly held up before the grateful patient who hurries from the office lest the operation should not continue successful.

See *Jour. A. M. A.* Mar¹⁰ 1900, p 637
Obstetrics in China. A Hongkong Hosp. Beri Beri - C. Therapy. Spine surgery in C.

AN OPEN DOOR TO A USEFUL CAREER

There is no more honorable and no more useful profession or position in life than that of the trained nurse. Trained nurses of good character and ability are in demand everywhere, and are never idle. A nurse who has had such a training as that which is given at the Battle Creek Sanitarium Training School for Christian Nurses is certain to find always and everywhere an abundant opportunity to exercise his or her efficiency for usefulness to the fullest extent. The course of instruction of the Battle Creek Sanitarium School includes not only all those taught in the ordinary Hospital training school of the medical and surgical and obstetrical nursing, but in addition a thorough course of theoretical and practical instruction in natural or physiologic methods, comprising hydrotherapy, massage, gymnastics, dietetics, phototherapy, various forms of electricity, manual and mechanical Swedish movements, the open air treatment, and all that pertains to Sanitarium management.

The era of physiologic medicine has arrived. The American medical profession are becoming daily more and more interested in natural methods, and there is an increasing demand for trained nurses and medical assistants who can carry out these methods in the home, in city treatment rooms and sanitariums, in hospitals, and in State institutions of various sorts in connection with the work of the Young Men's Christian Association, the Young Women's Christian Association, and various charitable organizations.

There is no course of instruction anywhere which compares with that of the Battle Creek Training School as a means of equipping a young man and young woman of ordinary education for the greatest possible usefulness in life. All graduates of this school are certain of a good position, with good compensation for services. The Battle Creek Sanitarium pays its graduates from \$25 a month upwards, the minimum price being \$10 a week and expenses

for those who are sent out on cases. Graduates who engage in private nursing command from \$20 to \$25 a week. Although more than twelve hundred graduates have been turned out from the Battle Creek Sanitarium Training School, the demand for nurses who have had this training was never so great as at the present time. The course for young women covers a period of three years. The course for young men is two years. There is also a six months' course for graduate nurses, and a six months' course of instruction in bath room treatment has recently been organized for young men. Those who are interested should address Mrs. M.F. Foy, Superintendent. ?

JHK v--m

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Minister Wu Ting-fang in the Simple Life.

All who are interested in the promotion of the principles of the Simple Life will be interested in knowing that Ex-Minister Wu Ting-fang who is so well known in this country as the popular Chinese Minister to the United States has become a pronounced advocate of vegetarianism and the simple life. Some years ago one of the division chiefs of the United States Post Office Department, being broken down in health became a patient at the Battle Creek Sanitarium and a convert to its principles. Mr. Bishop was so enthusiastic over the wonderful results which he experienced in consequence of his adoption of the simple principles and habits which he learned at the Battle Creek Sanitarium that he prepared for his friends in Washington a Sanitarium banquet at one of the leading hotels of the city where he made his home. The guests included many of the notable people of Washington, among others, Minister Wu Ting-fang, and Mrs. J. B. Henderson. The editor of this journal was also a guest and made an address in which he presented the simple life principles of the Battle Creek Sanitarium, and the movement of which for more than a third of a century this institution has been the center. Later Mrs. Henderson wrote a book telling in a thoroughgoing and most effective manner the principles of the Simple Life. A copy of this was sent to Minister Wu. Recently a Prominent Philadelphia Attorney has received from Mr. Wu a letter concerning which the following reference has recently appeared in a leading news paper. (Print the news paper reference as near as possible, in the same style and kind of type as was used in the news paper.)

It is interesting to note that vegetarianism and simple life principles is no longer scoffed at as in former years. Intelligent thinking men everywhere are recognizing the claim of this teaching to respectful consideration. Mr. Wu Ting-fang is one of the most intelligent and scholarly Chinamen as ever visited this country. He has had a liberal

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education in the Universities of this country and Europe, and when Minister here he showed himself to be the intellectual equal of the Ministers from European and other countries. The example of so eminent and influential a man will unquestionably lead multitudes in the right direction.

CHEERFULNESS.

G.H. Vol. 17, p.54. Be Cheerful:-- Carry the radiance of your soul in your face. Let the world have the benefit of it. Let your cheerfulness be felt for good wherever you are and let your smiles be scattered like sunbeams "on the just as well as the unjust." Such a disposition will yield you a rich reward, for its happy effects will come home to you, and brighten your moments of thought.

Cheerfulness makes the mind clear, gives tone to thought, adds grace and beauty to the countenance. Joubert says: "When you give, give with joy and smiling."

Smiles are little things, cheap articles, to be fraught with so many blessings both to the giver and receiver--pleasant little ripples to watch as we stand on the shore of every-day life. They are our higher, better nature's responses to the emotions of the soul.

Let the children have the benefit of them; these little ones who need the sunshine of the heart to educate them, and would find a level for their buoyant natures in the cheerful, loving faces of those who lead them.

Give your smiles also to the aged. They come to them like the quiet rain of summer, making fresh and verdant the long weary path of life. They look for them from you who are rejoicing in the fulness of life.--Household.

Nothing on earth can smile, so it is said, but the race of man. Gems may flash reflected light, but what is a diamond-flash compared with an eye-flash and a mirth-flash? Flowers are beautiful but they cannot smile. This is a charm which even they cannot claim. Birds cannot smile; nor can any living thing. It is the prerogative of man--especially woman. It is the color which love wears, and cheerfulness and joy,--these three. It is the light in the window of the face by which the heart signifies to father, husband and friend, that it is at home and waiting. A face that cannot smile is like a bud that cannot blossom, and dries up on the stalk. Laughter is day and sobriety is night; and a smile is the twilight that hovers gently between both, and is more bewitching than either.

G.H. Vol. 19, p.362. Mirth as a Medicine:-- Mirth has a hygienic value that can hardly be overrated while our social life remains what the slavery of vices and dogmas has made it. Joy has been called the sunshine of the heart; yet the same sun that calls forth the flowers of a plant is also needed to expand its leaves and ripen its fruits; and without the stimulus of exhilarating past-times, perfect bodily health is as impossible as moral and mental vigor. And as sure as a succession of uniform crops will exhaust the best soil, the daily repetition of a monotonous occupation will wear out the best man. Body and mind require an occasional change of employment, or else a liberal supply of fertilizing recreations;--and this requirement is a factor whose omission often foils the arithmetic of our political economists. To the creatures of the wilderness, affliction comes generally in the form of impending danger--famine or persistent persecution; and under such circumstances the modifications of the vital process seem to operate against its long continuance.; well-wishing nature sees her purpose defeated, and the vital energy flags, the sap of life runs to seed. On the same principle, an existence of joyless drudgery seems to drain the springs of health, even at an age when they can draw upon the largest inner resources. Hope, too, often baffled, at last withdraws her aid. The tongue may be attuned to canting hymns of consolation, but the heart cannot be deceived and with its sinking pulse the strength of life ebbs away. Nine-tenths of our city children are literally starving for lack of recreation; not the means of life but its object, civilization has defrauded them of. They feel a want which bread only can aggravate; for only hunger helps them to forget the misery of ennui. The pallor is the sallow hue of a cedar plant; they would be healthier if they were happier. I would undertake to cure a sickly child with fun and rye bread, sooner than with tidbits and tedium.

--Selected.

M.M. Vol.5, p. 192:-- VThe Hygienic Importance of Cheerfulness.--

At the recent annual banquet of the French Societe de Hygiene, one speaker dwelt upon the absolute necessity of providing amusements for the masses as a hygienic measure. He mentioned an instance in his own experience, of a regiment whose commanding officer allowed the men to sing on the march. Health, spirits, and strength flourished, and the severest exercises seemed but play to the light-hearted men. The officer was changed, and the new-comer stopped the singing, when the men drooped, and the sick-list grew long.

Let Us Try to be Happy.

Let us try to be happy! We may if we will,
 Find some pleasure in life to o'erbalance the ill;
 There was never an evil, if well understood,
 But what, rightly managed, would turn to a good.
 If we were but as ready to look at the light
 As we are to sit moping because it is night,
 We should own it a truth, both in word and in deed,
 That who tries to be happy is sure to succeed.

Let us try to be happy! Some shades of regret
 Are sure to hang round which we cannot forget;
 Times come when the lightest of spirits must bow,
 And the sunniest face wear a cloud on its brow.
 We must never bid feelings, the purest and best
 To lie blunted and cold in our bosoms at rest;
 But the deeper our griefs, the greater our need
 To try to be happy, lest other hearts bleed.

Oh, try to be happy! It is not for long
 We shall cheer each other with counsel or song;
 If we make the best use of the time that we may,
 There is much we can do to enliven the way;
 Let us in earnestness each do our best,
 With God and conscience, and trust for the rest,
 Still taking this truth, both in word and in deed,
 That who tries to be happy is sure to succeed. --Sel.

G.H. Vol. 21, p. 100. Gladness as a Medicine:-- The ancients said that the liver turned over when one laughed. This may not be anatomically correct, but the liver circulation is quickened, the respirations are deeper and more profound, ~~xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx~~ and the man feels warmer and better. Mirth promotes digestion; while gloom and depression of spirits will produce dyspepsia. He who is habitually joyful and happy will generally possess good health. Some philosopher has said that he would always trust anyone who whistles while working.

Cheerfulness and gladness are not only of value in preserving health but they are of equal value as a remedy in disease. The medical ~~student~~ attendant or nurse who neglects this element of treatment, will often fail of success. No one should be allowed in a sick-room who is gloomy or despondent, or filled with vague forebodings. Every attendant upon an invalid should be not only hopeful but cheerful. Many a disease can be laughed out of existence. Let it not be understood that nurses should be always giggling and grinning; but a cheery, happy spirit, with occasional mirth, is a welcome guest in any sick-room. How often is it seen that a child, too full of life and happiness for repression, bursting into a sick-room like a gum-

mer's breeze, will drive away the blue-devils of the sick, and send a new life coursing through the veins. But let there be no misunderstanding. There are appropriate times and seasons. As no one should ever dance upon a coffin, or rush with a shout through a cemetery, so there are sick-rooms of too serious a nature for the introduction of mirth. It would be both dangerous and inappropriate. The actual presence or the near approach of death should not be greeted with levity. There is but little danger of violation of propriety: but no sickness, of however serious an import, need fear a cheerful spirit among its attendants. --Seb.

G.H. Vol. 16, p.277. The Bright Side.-- Look on the bright side. The Times may be hard, but it will make them no easier to wear a gloomy and sad countenance. It is the sunshine and not the cloud that gives beauty to the flower. There is always before or around us that which should cheer and fill the heart with gladness. The sky is blue ten times where it is black once. You have troubles, it may be; so have others. None are free from them; and perhaps it is as well that none should be. They give sinew and tone to life, fortitude and courage to man. That would be a dull sea and the sailor would never acquire skill, where there is nothing to disturb its surface. It is the duty of every one to extract all the happiness and enjoyment he can within and without him; and above all, he should look on the bright side. What though things do look a little dark? The lane will turn and the night will end in broad day. There is more virtue in one sun-beam than in a whole hemisphere of cloud and gloom. Therefore we repeat, "look on the bright side." Cultivate all that is warm and genial--not the cold and repulsive, the dark and morose.-- The Interior.

G.H. Vol. 16. Cheerfulness:-- Let your cheerfulness be felt for good wherever you are, and let your smiles be scattered like sunbeams "on the just as well as on the unjust."

If your seat is hard to sit upon, stand up. If a rock rises up before you roll it away, or climb over it. If you want money, earn it. If you want confidence, prove yourself worthy of it. Do not be content with doing what another has done, --surpass it. Deserve success, and it will come. The boy was not born a man. The sun does not rise like a rocket, nor go down like a bullet fired from a gun. Slowly and surely it makes its round, and never tires. It is as easy to be a lead horse as a wheel horse. If the job be long the pay will be greater; if the task be hard, the more competent you must be to do it. --Sel.

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The Kind of a Woman to Know.-- The woman with a loving heart is sure to look upon the bright side of life, and by her example induce others to do so. She sees a good reason for all the unwelcome events which others call bad luck. She believes in silver linings, and likes to point them out to others. A week of rain or fog, an avalanche of unexpected guests, a dishonest servant, an unbecoming bonnet, or any other of the thousand minor afflictions of every-day life have no power to disturb the deep calm of her soul. The love-light is still in her eyes, whether the days be dark or bright.

It is she who conquers the grim old uncle and the dyspeptic aunt. The crossiest baby reaches out its arms to her and is comforted. Old people and strangers always ask the way of her in the crowded street. She has a good word to say for the man or woman who is under the world's ban of reproach. Gossip pains her and she never voluntarily listens to it. Her gentle heart helps her to see the reason for every poor sinner's misstep, and she condones

every fault. She might not serve with acceptance on the judge's bench, but she is a very agreeable person to know.--Harper's Bazar.

G.H. Vol.31, p. 164. Cheerfulness is one of the great factors in promoting health. Says Matthew Arnold: "To make habitual war on depression and low spirits, which in youth one is apt to indulge, is one of the things learned as he gets older. They are noxious alike to body and mind, and already partake of the nature of death."

G.H. Vol.28, p. 75. Make the Best of Things:-- We excuse a man for an occasional depression, just as we endure a rainy day. But who could endure 365 days of cold drizzle? Yet there are men who are without cessation, somber, and charged with prognostication. We may be born with a melancholy temperament, but that is no reason why we should yield to it. There is a way of shuffling the burden. In the lottery of life there are more prizes drawn than blanks, and to one misfortune there are fifty advantages. Let us stand off from despondencies. Listen for sweet notes rather than discords. In a world where God has put an exquisite tinge upon the shell washed in the surf, and planted a paradise of bloom in a child's cheek, let us leave it to the owl to hoot, and the toad to croak, and the fault-finder to complain. Take outdoor exercise and avoid late suppers, if you would have a cheerful disposition. The habit of complaint finally drops into peevishness, and people become waspish and unapproachable. Sel.

G.H. Vol.28, p.276. The Doleful Neighbor.-- Do you know the doleful person? asks the Omaha Herald. She is always a good neighbor in health, and tries to be neighborly in sickness, but she makes a miserable failure at the latter. Do n't you remember the last time the baby was sick? After you had watched by the little one's bed day after day and night after night, seen the roses fade from the loved one's cheek, and the little form waste away, just at the time when you had about given up hope, the doleful neighbor came in, and do n't you remember how she tried to cheer you up with this a one-sided conversation something like this:--

"Why, Mrs. B---, how much worse the baby looks this morning. She looks just like Sarah Jones's baby did the night before it died.

"Gracious! I never saw a child so wasted away as was Sarah's, except yours. We just done everything for the child but it was n't no use.

"I never will forget how Sarah took on at the funeral!"

And the doleful neighbor suddenly remembers that she has to run home to "set a sponge" and when she goes you hope she will never return. You look again at the suffering babe, and listen to its rapid breathing feeling that your heart must surely break.

But suddenly there comes a knock at the door, and in comes the--well, the sunbeam neighbor is as good a name as any. She was over the evening before, and quietly and unobtrusively helped to do so many needful things, and when she left she dropped a word of cheer. And when she comes this time she says something like this:--

"Why, how much better the baby looks this morning!"

And do n't you remember what a bright gleam of hope crossed your mind?

"I never saw a child improve so much in so short a time before. I am sure the baby will soon be well."

And then the sunbeam neighbor re-arranges the bed, adjusts the blinds, tells you she will call again in a few hours, and hurries home.

Nonest, now, did n't she leave a confident feeling behind her? You felt better and more hopeful. Baby, even, seemed to rally under the words; and when at last the little one was playing around your knee again, did n't you think of the words of the sunbeam neighbor?

The doleful neighbor has frightened more mothers to death, buried more babies, and caused more tears than all the plagues combined.

G.H. Vol. 27, p.71. Be Cheerful.-- I give you the precept for just what it is worth, as I would recommend to you to be six feet, or at least five feet ten, in stature. You cannot settle that matter for yourself, but you can stand up straight, and give your feet five its full value. You can help along a little by wearing high-heeled shoes. So you can do something to encourage yourself in serenity of aspect and demeanor, keeping your infirmities and troubles in the back-ground instead of making them the staple of conversation. This piece of advice if followed may be worth from three to five years of life of you. Dr. O. W. Holmes.

Cheerfulness is health; the opposite, melancholy, is disease.

--Haliburton.

Cheerfulness ought to be the viaticum vitae of their life to the old; age without cheerfulness is a Lapland winter without a sun; and this spirit of cheerfulness should be encouraged in our youth, if we would have the benefit of it in our old age; time will make a generous wine more mellow; but it will turn that which is early on the fret, to vinegar.---Colton.

G.H. Vol. 12, p.233. Don't Worry about Yourself.--To retain or recover health, persons should be relieved from anxiety concerning disease. The mind has power over the body--for a person to think he has a disease will often produce that disease. This we see effected when the mind is intensely concentrated upon the disease of another. We have seen a person seasick, in anticipation of a voyage, before reaching a vessel. We have known people to die of cancer in the stomach, when they had no cancer in the stomach, nor any other mortal disease. A blindfolded man, slightly pierced in the arm, has fainted and died from believing he was bleeding to death. Therefore persons should have their minds diverted as much as possible from themselves. It is by their faith that men are saved, and it is by their faith that they die. As a man thinketh, so is he. If he wills not to die, he can often live in spite of disease; and, if he has little or no attachment to life, he will slip away as easily as a child will fall asleep. Men live by their minds as well as by their bodies. Their bodies have no life of themselves; they are only receptacles of life--tenements for their minds, and the will has much to do in continuing the physical occupancy or giving it up.--Sel.

G.H. Vol. 18, p.179. Take Comfort.-- It is well enough to provide for a rainy day, but that man is very foolish who saves his umbrella for a future storm while he is allowing himself to be drenched with rain. We do not take pleasure and enjoy contentment as we should do. We live too much in the future and too little in the present. We live poor that we may die rich. We get already to be happy; and when we are quite ready, infirmity or disease steps in, and the chance to take comfort in this life is gone. If we could only be content to seize upon the little pleasures that lie just outside, and often within, our daily pathway, they would make

a large sum total at the end of our lives. Too many of us often scorn pleasures that are cheap and near and within our grasp, and complain because we cannot have such as are costly and remote. But if we would only magnify the little things that make life pleasant as we do those that make it unpleasant, the cup of our joys would continually overflow. Be content to take life as it comes, and always make the best of the present, and let future sorrows be future, and let them not intrude upon the present by unnecessary apprehensions and forebodings.--Collegian.

G.H. Vol. 13, p.178. Be Cheerful if you Would Be Healthy.-- Happy dispositioned people are generally healthy people. The mental condition has far more influence on the bodily health than is generally supposed. It is true that the ailments of the body cause depressing and morbid conditions of the mind; but it is no less true that sorrowful and disagreeable^{emotions} produce disease in people who, uninfluenced by them, would be sound in health. Agreeable emotions set in motion nervous currents which stimulate blood, brain, and every part of the system, into healthful activity; while grief, disappointment of feeling, and brooding over present sorrows or past mistakes, depress all the vital forces. To be physically well we must, in general, be happy. The reverse, however, is not always true; for one may be happy and cheerful, and yet be a constant sufferer in body. Still, even in those cases, cheerfulness will be found a wonderful lightener of pain.--
Sel.

Cheerfulness is first conducive to health and happiness; Luther said that, "The devil hates a good laugh."

G.H. Vol. 9, p.265. Cheerfulness vs. Gloominess.-- Intellectually, we do not have the same tastes and talents, and there is no reason why we should expect our temperaments to be all alike; but much can be effected by habit and cultivation.

There some people who seem to prefer darkness to light, and gloom rather than gladness. They can readily turn to the chapter and verse that reads, "sorrow is better than laughter, for by the sadness of the countenance the heart is made better;" but they could scarcely tell whether in the Bible or almanac are to be found the sayings, "He that is of a merry heart hath a continual feast," "Pleasant words are as a honeycomb, sweet to the soul, and health to the bones;" "A merry heart doeth good like a medicine;" and for any practical use they are to such, these sayings of the wise man might as well be in the one as in the other. These people feel confident that Jesse will ever be a "wild, worthless fellow," because he always comes from school whistling, and that Julia will "never make anything" because she often indulges in an audible laugh.

Some are constantly ^{un}happy from the first of January until the last of December, because the weather isn't right? If it is very cold, they are certain the buds on the fruit-trees will be injured; and if it is warm, and the pond doesn't freeze so they can get a supply of ice,,they don't know what they shall do next July. In summer, if a shower doesn't come every day, they predict drouth and famine; and if it is rainy, they are sure the corn crop will be a failure, it is so cold and wet. Indoors, it is little if any better. The good woman returning from a visit, finds some one has opened the blinds and raised the curtains, and the full-blown roses and green leaves on the carpet have become several shades lighter in consequence; and this is not the only consequence as the offender can testify.

This woman cannot see why the sun should shine so much of the time; it has completely ruined six of her very best curtains; and then, when it comes cold and wet, what will be done! the cellar is so damp and mouldy that the

butter won't keep. If a child should be so unfortunate as to break a dish, one would suppose from the ado made that it had come in direct ancestral line from the king of England, and was the only one he ever possessed. And so, indoors and out, there is an atmosphere the density of which no philosophical computation has calculated, but which has often been felt by those who were unfortunate enough to come within the precincts of such a home(?).

Some are always on the lookout for aches and pains. They feel pretty well to-day, but they shall be sick in bed to-morrow--they always know, when they feel so, just what to expect; and Robert B. Thomas never predicted eclipses with greater accuracy, for they lie awake all night, dreading the morrow, and conjuring up all manner of doleful consequences arising from this yet-in-the-future unavoidable(?) illness.

Others had a fever once, the last of August, and were so certain there would be a recurrence of the same, every succeeding year, that, in view of the time they must lose, they have ever since done four months' work during June and July, and a little more, accordingly, the first part of the next month, every night counting with sad forboding the intervening days until the twenty-seventh of August. Of course the fever comes regularly.

Some are always telling you their trials and difficulties, and if you feel deeply for them, and try to benefit them by diverting their minds, and turning their thoughts away from themselves, you are at once set down as cold, unappreciative, and unsympathizing.

Some are morally certain hygienic diet and treatment will kill, if persisted in a great length of time. Why? they tried it once themselves, eating nothing for several weeks but graham bread mixed with water and dried in the sun, meanwhile taking a full-bath every morning in water just drawn from the well, and havn't enjoyed good health since; therefore, meat, spices, gravies, and apothecary medicine must be good.

Some people can truthfully say, when anything of a melancholy nature occurs, "I told you it would be so," for they are always looking on the dark dark side, and predicting something of the kind. To be sure, they say someth

times make a slight mistake, like the lady, who, whatever happened, always met her husband with this same comforting assurance. Such things sometimes become a little monotonous, even to men, and he thought he would cure her of the habit, if such it was. One day he rushed into the house exclaiming, "Wife, the cow has eaten up the grindstone." Not a look of surprise was visible as she very complacently remarked, "I told you it would be so."

"Let us gather up the sunbeams,
 Lying all along our path;
 Let us keep the wheat and roses,
 Casting out the thorns and chaff
 Let us find our sweetest comfort
 In the blessings of to-day,
 With a patient hand removing
 All the briars from the way."

Give us, O give us the man who sings at his work! Be his occupation what it may, he is equal to any of those who follow the same pursuit in silent sullenness. He will do more in the same time--he will do it better--he will persevere longer. One is scarcely sensible of fatigue whilst he marches to music. The very stars are said to make harmony as they revolve in their spheres. Wondrous is the strength of cheerfulness, altogether past calculation its powers of endurance. Efforts, to be permanently useful, must be uniformly joyous--a spirit all sunshine--graceful from very gladness--beautiful because bright.

CARLYE.

THE PHYSICS AND METAPHYSICS

OF SUNSHINE.

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By B. Frank Taylor.

"The world wants more sunshine in its disposition, in its business, in its charities, in its theology. For ten thousand aches and pains of men and women we recommend sunshine. It soothes better than morphine. It stimulates better than champagne. It is the best plaster for a wound. The good Samaritan poured into the fallen traveler's gashes more of this than wine or oil. Florence Nightingale used it on the Crimean battle-field. Take it into the alleys, on board of all the ships, and by the sick-beds. Not a vial full, but a soul full. It is good for spleen, liver complaint, for neuralgia, for rheumatism, for fallen fortunes, for melancholy. We suspect that Heaven itself is only more sunshine."---The Medicine of Sunshine.

There is a world of truth in the above paragraph, and it is as true in the physical as in the spiritual sense. Men and women do want more sunshine, as well for their bodies as their souls. The idea of Swedenborg, that "light is the shadow and emblem of God," contains, undoubtedly, emblems of truth; and he who would be well, physically, equally with those who seek moral renovation, must "turn to the light."

Medicine is dear. The various schools are at variance as to the means to be employed in the cure of disease. The science of chemistry, of botany- all sciences, in fact-- are invoked to aid the physician in his office of healing. We seek for the remedies for disease through occult processes; through dark and difficult labyrinths of research. The herb, the mineral, the elements of water, of fire of electricity, are questioned and applied. Nature is ransacked in the search for the "grand arcanum" whose touch shall yield the fol

gold of health. But still men die before their prime; still the tyrant laugh too often at the leech's skill, and the sepulcher "opens her ponderous and marble jaws," to receive her countless guests into her halls of darkness and of silence.

Yet, all around us in the bright, fair world, in the meadow, on the hill, and in the sunny vale, by rushing stream, and mountain side, nature is pouring from her heavenly vials, her streams of golden and all-healing medicine. And men are vainly seeking panaceas for his ills in the darkened halls of science, she casts all around him, even at his very feet, the unheeded, yet all-powerful balsam-- the simple medicine of sunshine.

That the physiology of plants and animals is in some respects similar is an accepted fact in science which of late years has been proven beyond controversy. Circulation, nutrition, assimilation, growth, maturity, decay, death, go on alike in the animal and vegetable kingdoms; and to both the "medicine of sunshine" is the great vivifier, reviver, and restorative. The pale and sickly plant in the dark cellar, the feeble and cadaverous prisoner in the windowless dungeon, alike are wasted and destroyed by want of sunlight; and many a poor sufferer whose ailments baffle the art, and resist the power of the drugs, of the physicians, languishes out long years of pain and feebleness, who, could he but bathe in the sunny rays, under the fair blue sky of cloudless days, would spring again speedily into a new life of ruddy health, as the plant which, when borne from the cavern to the sunlit skies of bright meadows, revives under the sweet influences of the warm and life-imparting rays, loses its pale and haggard hue of death, and buds and blossoms once again in luxuriant growth and vigorous life.

The nomadic tribes and wandering nations of all climes and all ages have been celebrated for their freedom from disease; for their stalwart forms, their power of physical endurance, their longevity, their rugged health. The wild denizen of the plains of Scythia, the Arab of the desert with his lean and wiry frame, the red Indian of the western wilderness, the herculean "backwoodsman" of our frontiers,--all these--;iving in tents or in the

open air--dwell under the rays of the bright sunshine of the prairie or the mountains, or under the burning rays of the desert land; and all these are healthy, strong, enduring, long-lived, brave, and free from those "thousand ills which (metropolitan) flesh is heir to."

It is true that pure air, habits of constant exercise, and simple diet have much to do with this physical perfection; but these are the companions and concomitants of sunshine, and he who seeks the one will naturally find the others also. The Esquimaux, who dwell where the sun's rays are feeble, and who, for a large portion of the year, are deprived of the light of day, are feeble, diminutive, and lacking in the energy and prowess of body and mind which are possessed by the inhabitants of sunny climes and radiant skies.

The wonderful results of the "blue-glass treatment," whatever may be the merits of that treatment, self-considered, are undoubtedly due, in large measure, to the exposure of the patient to the unaltered sunlight, as it comes from the Giver; even though that light be not improved (?) by artificial tints, and changes of electrical conditions. The "violet ray" may impart vitality; the red beams may contain the elements of heat; the "blue" may combine both life and caloric; but God's sunshine holds them all; and, like Him of whom it is the emblem and the gift, descends only to bless, to heal, and to say to the souls and bodies of the children of men, "Let there be light" the glow and the glory of health and happiness. "Sana mens in corpore sana" shall be given to him who seeks it from God's sunbeams, with a heart of faith to believe in the "power benign" of Nature, the great Healer, whose medicine is sunshine. The chilled frame, which impaired circulation has agued, shall feel the warmth of returning vitality; the pale cheek shall renew its roses, as the summer beam colors and tints the ripening peach; and the whole nature physical, mental, and moral, shall mature to the image of perfected being, and be as "the precious fruits of the earth, brought forth by the sun."

In the treatment of disease, the mind, the soul, as well as the body, must receive the thoughtful attention of the wise physician.

"Cast thou not minister to a mind diseased?"

Pluck from the memory a rooted sorrow?

"Canst thou not minister to a mind diseased?

Pluck from the memory a rooted sorrow?

And, with some sweet, oblivious antidote,

Cleanse the charged bosom of that perilous stuff

That weighs upon the heart?"

This is a question mutely asked of the physcian by the looks, the actions, the inward pleadings of many a poor sufferer. The answer should be, 'Yes' ther is sunshine for the soul, as well as for the outward being. But it is not to be found in drugs, in anodynes or stimulants, in narcotics or exhilarants, nor within the walls of darkened chambers. The bright beams of the morning sun shine not alone to gladden the eye, they brighten the spirit also. And even thus do words of hope and comfort, and kindly, cheering smiles, and the gentle ministrations of loving hearts, shed upon the downcast spirit of the feeble sufferer a light that, like sunlight, has power to chase away the mists of darkness and of fear. The psychological light the physcian should endeavor always to carry with him, taking it to the bedside, to the couch of pain and sorrow, and letting it drop, like a healing balm, into weary hearts. The patient also, himself, should cultivate it, should ~~look~~ away from the blackside of things, and turn the eyes of his spirit toward the sun, and to the good Father whose nature is light and love. Bring the body into contact with the physical, the spirit into union with the moral, radiance, and both shall be strengthened, healed, and shall receive the desired blessing. The demons of disease which lurk in the darkness of being shall flee before the impoured glory, and the mists that have hung so heavily over the sufferer through the long night of sickness shall fade away before the growing brightness of a coming day of gladness, health, and hope.

Better than the waters of Spa, of Chittenhara, of Brighton or Saratoga, are the tonics of physical and mental sunshine; and no chalybeate can redden the blood, and bloom the cheek, or cheer the soul, like the "medicine of

sunshine." Try it, dear, suffering reader, as the author of this imperfect sketch has tried it to his joy, and find in that sun which God "causeth to shine on the just, and on the unjust," and in the light which he can shed into sorrowing hearts, the joy of life, and the priceless boon of health.

The opening spring, with its balmy airs, and its wakening blooms, its song of birds, and its birth of flowers, its resurrection of nature, its new born glories, and its warm sunlight, is calling you forth with its thousand tender voices, to take the life-renewing medicine of God. Waste not, then, the precious moments, but come! come to the fair hills, and the flower-dotted valleys; to the silvery sheen of sun-bright brooks, and the breezy charm of tinted meadows; and let the renovating beams of the great light that rules the day shine a line on body and on soul; and, as it wakes to life the lilies of the field, and the sweet birds in their sylvan homes, so will it waken you, for whom God made it also, in whose parental eyes you are "of more value than many sparrows," and who wants you to "come unto the light" and be healed by his "medicine of sunshine."

From the earliest ages of the world the beneficent power of the "god of day" has been recognized. The Magians of early Persia adored his rising beams as the source of light, and warmth, and life, and scattered their votive offerings of flowers upon the bright waters of Iranistan and Shiraz, as a tribute to the hour of his advent in the east. So we, with better knowledge, and a holier and loftier faith, should offer to the God whose wisdom formed the solar radiance those morning flowers of the soul, faith, hope, and love, seeking bodily health in the life-giving sunshine, and the spirit's well-being in his light that shineth upon the spirit "more and more, unto the perfect day."

CHEERFULNESS.

If we consider cheerfulness in three lights, with regard to ourselves, to those we converse with, and to the great Author of our being, it will not a little recommend itself on each of these accounts. The man who is possessed of this excellent frame of mind is not only easy in his thoughts, but a perfect master of all the powers and faculties of his soul. His imagination is always clear, and his judgement undisturbed; his temper is even and unruffled, whether in action or in solitude. He comes with relish to all those goods which nature has provided for him, tastes all the pleasures of the creations which are poured about him, and does not feel the full weight of those accidental evils which may befall him.

If we consider him in relation to the persons whom he converses with, it naturally produces love and good will towards him. A cheerful mind is not only disposed to be affable and obliging, but raises the same good humor with those who come within its influence. A man finds himself pleased, he does not know why, with the cheerfulness of his companion. It is like a sudden sunshine that awakens a secret delight in the mind, without her attending to it. The heart rejoices of its own accord, and naturally flows out in friendship and benevolence towards the person who has a kindly effect upon it.

When I consider this cheerful state of mind in its third relation, I cannot but look upon it as a constant habitual gratitude to the great Author of nature. An inward cheerfulness is an implicit praise and thanksgiving to providence under all its dispensations. It is a kind of acquiescence in the state wherein we are placed, and a secret approbation of the Divine in his conduct toward man.

Addison.

The Good Health Campaign.

Human efficiency is not only the greatest national asset, but the greatest personal asset as well, and the largest factor in all the affairs of life.

The ability to do, and to endure, that is, to keep on doing what one finds profitable or agreeable, is the very essence of personal, social, and national well-being.

A new era is dawning. Men and women are beginning to ask most often and most anxiously, How can I increase my efficiency---that is, the capacity for work or for enjoyment?

Merely to live, is not sufficient for the educated, cultivated, highly trained man which modern civilization has produced. To be worth while, life must be efficient, forceful, virile, productive.

George Washington's Diet.

Washington was a man of frugal habits. Although not a trained athlete, he possessed great vigor. The place is still shown in the city of Washington where he threw a silver dollar farther than any other man of his time could throw it. On one occasion he covered twenty-four feet on a running jump, an achievement which has remained unequalled until within a few months of the present time. During his term as president, Washington and his wife entertained every Thursday, but it was noticeable that the president himself partook only of the plainest and simplest food, his entire meal often consisting of a single dish. This simplicity in diet may possibly be the secret of Washington's great physical endurance and of the clearness of mind which made him master of many difficult situations.

Are Eggs Wholesome.

Von Noorden, Wiczkowski, Koester, and several other European investigators have been studying the effects of eggs upon intestinal putrefaction. Their verdict is that eggs, particularly the white of egg, when eaten in excess are capable of increasing intestinal putrefaction to a very marked degree. This is true even when the eggs are taken very fresh, and especially when hard cooked. When eggs are slightly stale the ill effects are greatly increased because of the germs which are already contained in the eggs, and which rapidly develop putrefaction if the eggs are taken into the stomach. The use of eggs, and particularly the white of egg, is found to be especially injurious in cases of Bright's disease. Eggs encourage the growth in the colon of germs of putrefaction, which have been proved to be the cause of membranous colitis and of appendicitis.

The Care Of The Skin.

The outer covering of the body is remarkably adapted to its protection. When viewed with a microscope, its surface is found to be made up of several layers of horny scales, which form a protective layer that is a poor conductor of heat and electricity, but affords a considerable degree of resistance to the entrance of foreign bodies, the bites of insects, and the introduction of poisons. It also protects against the entrance of germs. Beneath this layer are found the active portions of the skin, glands, nerves, and blood vessels, by which are performed the various functions that are carried on by this remarkable organ. Of the glands, there are two kinds; we may, perhaps, say three. They are the perspiratory, or sweat, glands, consisting of a long tube leading from the surface to the deeper layers of the skin, ending in a little coil. The walls of these tubes are filled with blood vessels. The number of sweat glands in the skin has been estimated to be two and a half millions, and the walls of their tubes, if spread out, would cover a surface of ten or eleven thousand square feet. These glands secrete water containing salt and various waste substances. Under certain conditions, the sweat may also contain a slight amount of acid. Under ordinary conditions these glands pour out perspiration upon the skin, at the rate of about one and a half ounces per hour. Heat and exercise may increase their activity to more than forty times that amount. It is even possible for a person to perspire one fifth of his weight in twenty-four hours.

There are found in the skin small glands which secrete fat. This is poured out upon the skin as a protective measure. Probably to some extent the fat glands also act as purifiers of the blood, by removing wastes.

The Care Of The Skin -2.

Here and there in the skin are found little pockets, from which grow the hairs.

The skin is very rich in blood vessels, the capillaries of which, by a peculiar arrangement, are made to lie between bands of muscular tissue. These, under some circumstances, are able to contract and compress the vessels in such a way as to almost completely empty them.

Symmetrical Development.

What do we mean when we say that one person has a good constitution, and another person a poor one? The constitution of an individual is precisely the same as the constitution of a wagon or other piece of machinery. A wagon with large, strong wheels and light carriage axles would stand up under a load proportioned only to the strength of the axles. The harmony of the parts must always be considered. So we may say that the constitution of the body depends upon the quality of the structure and the harmony of its parts. A good constitution is a bodily condition in which all the organs are intact, each well developed, strong, and harmoniously adjusted to each other. The harmony of adjustment is of just as much importance as the integrity of the structure.

Did you every consider the reason for uniformity of bodily growth; for instance, how the little finger always bears the same proportionate relation to the rest of the hand from infancy to maturity? Symmetrical development depends upon the proper action of the heart in its distribution through the blood vessels of the nutrient elements taken into the body. If through any defect or malformation a part gets too much blood, it grows too fast. We often see upon the streets a demonstration of this in the "rum blossom" on the drunkard's nose. Alcohol has paralyzed the nerve which controls the blood vessels of the nose, and so that member gets too much blood. If the heart beats too slowly, there is always great irregularity in the circulation: too much blood is driven with too great force in one organ, and too little in another. If the heart is too strong, the blood is driven with too great force to all parts of the body, and this excessive tension is liable to work great injury.

Symmetrical Development.-2.

Suppose the lungs are weak, while the rest of the body is strongly built. The lungs cannot purify the blood fast enough to keep up with the waste incident to vigorous muscular action, and the individual is liable to die of consumption. Another may have splendid digestion, and be lacking in vigor of liver or kidneys. Such a one will be almost certain to overload his stomach, and thus put too great a tax on the weaker organs. In still another, the inequality of development may be in a weak, nervous system, while the muscular system may be strong and the bones large. The condition is becoming very common, for we live in an age of nervous diseases; but its effects upon the general health are much the same. Again, suppose a man is born with lungs large enough to last a century, and bones and muscles strong enough to last, with care, for two centuries, and yet with a heart capable of lasting only forty years. He will die when the forty years are up, unless he does something to make his heart stronger. Thus a one-sided development becomes a sort of physical predestination. This explains why many persons who are apparently feeble live on to be sixty or seventy years of age, while others apparently of ten times the vigor are taken off by a slight illness. The strength of a constitution is only the strength of the weakest organ.

It is plain, then, that this matter of balance is of great importance. A well-balanced constitution is exactly like "the deacon's one-hoss shay," it should wear equally, and go to pieces by a gradual and natural process. Those thus perfectly developed, instead of being snatched away by violent deaths, would fade slowly out of existence, quietly and painlessly, as if going to sleep.

Cold Air As A Tonic.

But if we had to pay a price for air,---so much a barrel, or so much a hogshead, or so much a cubic mile,---we should appreciate it more, and care a great deal more to get it, and breathe a great deal more of it.

An old sea-captain said that at one time the water supply got short, and he had to put everybody on allowance. The allowance was two quarts a day. Everybody smiled at the idea of having two quarts of water to drink a day, and one man said he could not drink half that. But the captain said that before noon the very man who had smiled at such a liberal allowance, said, "Captain Bates, would you be so kind as to give me a drink out of your canteen?" He had swallowed his large allowance, and wanted more. If he had not thought he was limited, he would not have drunk half so much. If we could put a price on air, and make it worth its weight in gold,--and it is worth its weight in gold, and a great deal more,--and if the people only believed that, they would breathe a great deal more of it.

Physical Righteousness.

But it is not in diet alone that man has wandered away from the right path. His habits of life are almost without exception perversions. He has cultivated abnormal tastes and appetites to such a degree that his natural instincts are well-nigh smothered. It is a favorite remark of the eminent Dr. Stanley Hall, of Clark University, that the greatest thing in the world is life, and the most interesting of all questions is how to live. This is indeed true, but nevertheless the science of right living is comparatively little studied. The dominant question with civilized men and women is not, "How can I live wisest and best?" but, "How can I extract the greatest amount of pleasure out of life?"

False conceptions of beauty lead us to cultivate deformities. Indeed, it appears that a penchant for modifying the normal shape of the body in such a manner as to produce real deformity prevails extensively in the human family, although no naturalist has yet reported the discovery of any such custom among the lower animals. Man alone of all creatures seems to have become possessed by the idea that the handiwork of the Creator can be improved upon. Even among many savage tribes the strange propensity to deform the body in some way is noticeable, although it generally takes a less dangerous direction than in civilized races.

It is strange, indeed, that intelligent human beings should entertain for a moment the idea that the natural human figure, whether masculine or feminine, needs to be modified or molded with the idea of making it more perfect or beautiful or shapely than the Master Artist himself is capable of making it. Such modifications can not be produced without damage to the physical health as well as to natural beauty and symmetry.

There is a great decalogue which grasps the whole man in its scope. Not a single principle can be violated without resulting injury and suffering. The principle of obedience is just as essential a factor in the physical as in the moral well-being of man. The laws which relate to our physical welfare are as inexorable and unchanging as the principles outlined in that great moral code, the ten commandments.

The Hygiene Of Beauty.

"As a man eateth, so is he," runs an old German proverb.

Food constitutes the marble, the granite, the strong steel beams and columns, or the wood, hay, stubble, mud, untempered mortar, cobblestones, rubbish, of which that wonderful temple, the body, is built. Eating is a divine ministration by which the Creator puts into our bodies his own energy. This energy is passed down in the sunbeam, and by the incessant activity of Omnipotence, is woven into the life, strength, and beauty of fruits, nuts, and grains--- that portion of nature's great storehouse of energy, the vegetable kingdom, which God has especially appropriated for the use of man.

It is entirely within our power to choose whether will supply the daily needs of the body for life and energy from sources which are pure, sweet, good, and beautiful, with bread of heaven direct from the divine laboratory in which it is especially compounded for man's use; or whether ^{we} will build our bodies of such rubbish as pickles, chow-chow, blistering condiments, dyspepsia producing pastry, painted confectionery, ices, brandied fruits, putrefying stuffs like cheese and sauer-kraut, the disease-contaminated corpses of animals, with their livers, lungs, kidneys, brains and other entrails, and offal of various sorts.

The things God made for man to eat are in themselves beautiful and impart beauty to the eater. The apple, the peach, the plum, the cherry, are beautiful everywhere---on the tree, on the table, in the chubby hand of the baby, set against the teeth of a rosy-cheeked maiden. An ox, a sheep, a fish, a bird, is beautiful as it stands in life, trembling with throbbing impulses, eyes flashing with intelligence; but lying pulseless, flayed, blood-stained, eviscerated, it is a thing hideous, repulsive, and loathsome. Only

The Hygiene Of Beauty-2.

when it has been dressed and garnished and disguised by those "layers out of corpses," as Plutarch calls them, "the butchers and cooks," are we able to endure the sight of it. We call these dead things by decent names to hide their repulsiveness. One would scarcely relish beef under the name of "roast ox;" "broiled sheep" would certainly be less appetizing than mutton-chop; and who of those that enjoy stewed chicken, for example, would be able with any sort of complacency to pick the bones of a dead mother hen with her young brood peeping close at hand?

What awful depravity of taste permits us to turn away from the delectable things which Heaven hands down to us from the trees, in nuts and fruits of infinite variety in form, flavor, color, inviting alike to all the senses, and to plunge down beneath the scum of some stagnant pool to seize a sprawling frog and devour it like a hawk or a turkey-buzzard, or to descent still deeper into the slime and ooze of the ocean bottom to fish out a germ-infected oyster!

The juices of fruits, and especially the acids which most of them contain, are exceedingly valuable for blood purifying. Used freely, fruit stimulates the action of the liver, the kidneys, and the bowels. In this way the body is freed from impurities, the skin is cleared, the eye is brightened, all of the bodily functions are quickened. Grapes, strawberries, peaches, apricots, apples, pears, bananas, and oranges are especially wholesome. The free use of these fruits is one of the best of all means of removing from the mouth the metallic taste which is indicative of retained excretions, and of cleansing the tongue from the thick coat of germs which is generally found upon it in the case of persons whose skins present a dirty, dingy hue. Many a leathery-skinned dyspeptic has recovered the bloom of health by a six weeks' sojourn among the

The Hygiene Of Beauty -3.

vineyards of the Swiss Alps, enjoying that most delightful of all therapeutic prescriptions, the grape-cure. The apple-cure, the cherry-cure, the raisin-cure, and other forms of fruit-cures have long been practised in European countries, and to some extent in this country. A fruit diet weeds out the germs which often infest the stomach and make of it a veritable factory of poisons which, diffused throughout the body, paralyze the vital functions, and seriously interfere with the activity of the liver, kidneys, skin, and other excretory organs, besides affecting brain and nerves, sometimes to an extraordinary degree.

For a steady diet, fruit is not sufficiently substantial. It does not contain an adequate amount of the proteid or albuminous elements upon which blood and tissue making depend, but by the addition of nuts to fruit we have a dietary which is perfectly competent to sustain life for an indefinite length of time, and in this combination we have presented, without doubt, the choicest bill of fare which the whole earth affords. Nuts contain not only a sufficient supply of proteids, but fats also, which are usually lacking in fruits, in a form most easily digestible. One of the offices of the oleaginous element is to give to the figure normal rotundity and symmetry.

The cereals are among the most easily digestible of foods consisting largely of starch. They are digested chiefly in the small intestine, being broken up in the stomach by the combined action of the saliva and the gastric juice. For prompt digestion, however, the cereals must be taken dry, and must be so thoroughly cooked that the starch will be, so far as possible, converted into dextrin. It is because of this thorough cooking that the crust of bread is more digestible than the crumb. The twice-baked bread, or zwieback, of Carlsbad, is without doubt as helpful to the mul-

The Hygiene Of Beauty -4.

titude of dyspeptics who visit that famous Bohemian watering-place as are the mineral waters which the patients so conscientiously imbibe.

There is not to be found a hardier, handsomer race than the natives of the Canary Islands, whose chief diet is parched, partially browned corn, coarsely ground in a rude mill, and mixed with water.

Most people, especially women, desire a beautiful complexion. Too often, however, their interest in the subject of complexion is confined wholly to that portion of the skin which is ordinarily visible, especially the face and hands. This solicitude for a clear, transparent skin is perfectly proper, but it should extend to the whole body; for such a condition of the skin is one of the signs of health.

A course of life which will produce health and activity of the whole skin will necessarily result in a beautiful facial complexion. There is, in fact, no way by which the skin of the face can be made so certainly and permanently beautiful as by adopting such a regimen as shall bring about health to the whole skin. For this, the daily bath, followed by adequate rubbing, is one of the most essential measures. A warm bath taken at night two or three times a week, and a cold sponge, plunge, spray, or shower-bath every morning, is a practise which has wonderful power as a beautifier. The cold morning bath, followed by a vigorous walk in the cool, fresh morning air for fifteen or thirty minutes, will bring color to the cheeks and brightness to the eyes more rapidly than any medicinal tonic known to the materia medica.

The person who would become beautiful must recognize every law of health, must carefully scrutinize every habit of life. Adequate sleep as well as abundant exercise, proper diet, and the daily bath,

The Hygiene Of Beauty -5.

must be recognized as essential, for sleep is nature's great restorer and healer. An abundance of fresh air in the dwelling night and day, proper clothing, especially the avoidance of overheating the body with excessive clothing, and the selection of the right materials to suit the varying atmospheric conditions, are all matters worthy of consideration by one whose ideal is beauty.

Through The Good Health Spy-Glass.

"Why, doctor," said a friend to a vegetarian physician,
"I never saw anything like it, you work like a horse!"

"That's because I eat like a horse," retorted the doctor,
"simple food and not too much of it."

"No, Willie dear," said mama, "no more cakes to-night. Don't
you know you cannot sleep on a full stomach?"

"Well," replied Willie, "I can sleep on my back."

This story shows that boys are just men before they grow tall.
Forty-nine men out of fifty would rather sleep on their backs or
lie awake all night than forego the delectable feeling of swallow-
ing cakes.

Are We A Dying Race?

Some years ago an itinerant clergyman, traveling through a Western State, spent the night with a farmer, and in the morning sat down with the rest around the breakfast table, to prepare for the long horseback journey which lay before him. The host invited him to ask a blessing upon the food about to be eaten. The reverend gentleman glanced over the table, taking a mental inventory of the food prepared for the dozen hungry mouths awaiting it. There were hot biscuits steaming from the oven, semitransparent with lard and yellow with saleratur; there were savory mince-pies, rich preserves, pickles green as grass, coffee black as ink, fried pork, fried eggs, fried potatoes, and a generous supply of doughnuts on the sideboard. Pausing a moment, after his survey of the indigestible viands, with a solemn voice the clergyman said, "Friends, this breakfast is not worth a blessing," and concluding that a breakfast not worth a blessing was not worth eating, he went on his journey without it. The farmer doubtless considered the blunt preacher a very ungrateful guest, and it is doubtful whether the lesson was of any practical value to him; but certain it is that a great share of the breakfasts and dinners eaten are not fit to be blessed or to be swallowed.

QUESTIONNAIRE REGARDING CANCER PATIENTS—SAN FRANCISCO

No.

1. Name..... Sex.....

Non-resident

2. Residence.....St.....Ward..... Address.....

Length of residence in San Francisco.....years.....months

" " " " " " " " " " " "

3. Race: White.....Negro.....Indian.....Oriental.....Otherwise.....

4. Birthplace of patient:.....

" " " Mother.....

" " " Father.....

5. Present age:.....years Married.....Single.....Widowed.....Divorced.....

How long married.....years. How many children.....

6. Physique and Health:

Height (without shoes).....inches

Weight (in ordinary clothing).....lbs.

Stout and fleshy?.....

Much meat eaten?.....Much fat?.....

Heavy eater?.....

Much sugar eaten?.....Cigarette

Heavy smoker?.....

Pipe smoker?.....smoker?.....

Much walking and exercise?..... Exposed to gases, smoke or fumes?.....

6a. Diet:

Ordinary daily diet, especially as regards green vegetables, fresh fruits, cereals, white bread, condensed or conserved foods, meats, sugar, including candy, etc.

Do you drink much water?.....

Do you take purgatives, and if so, in what form?.....

Are your motions constipated or normal?.....

How many movements a day?.....

Do you take laxatives in any form, particularly paraffin preparations?.....

Have you had appendicitis?.....Have you had gall-stones?.....

Have you had gastric or duodenal ulcer?.....

Do you suffer from rheumatism or rheumatoid arthritis?.....

Have you had tuberculosis in any form?.....

Have you had diabetes?.....

What is your complexion?.....Color of hair?.....Eyes?.....

7. Specific Occupation followed:.....How long?.....

8. Health and Disease:

Record of any past illness, especially gastric ulcer and intestinal stasis, also appendicitis:.....

Record of any past surgical operation:.....

Record of any past illness or injury:.....

Was growth preceded by ulceration, wart or mole?.....

Date of first cancer symptoms:.....

Name and address of physician first consulted:.....

Treatment, if any:.....

Date of first definite diagnosis:.....Name and address of physician:.....

Treatment followed:.....

Date of Hospital admission:.....Name and place of Institution:.....

If operation, who performed it?.....

What was removed?.....

Results:.....

Date of Radium use:.....X-Ray use:.....

Date of cauterization:.....

Results:.....

Any other treatment?.....If so, describe fully, including name of doctor or non-medical attendant:.....

Results:.....

Present condition of health:.....

Any complicating diseases?.....

Gain or loss in weight?.....

Any change in diet?.....

9. Description of cancerous condition:

Specific organ or region of the body affected?.....

Type of malignant growth? Carcinoma?.....Sarcoma?.....Melanoma?.....
Etc.....

Has primary growth metastasized to distant organs, or does it involve nearby parts?.....

Has growth been microscopically examined or determined?
If so, describe:.....

10. Family History:

Has cancer or any form of tumor occurred in your family?.....

If cancer or tumor has occurred, state number of individuals in your family.....their ages, if alive,.....or if dead, age at death and cause of death.....

Give details concerning deaths from cancer in your family:.....

Give number of members in your father's family:.....

Ages, if alive.....

Ages at death.....

State how many died from cancer.....

Give number of members in your mother's family:.....

Ages, if alive.....

Ages at death.....

State how many died from cancer.....

Remarks:

Signed:

THE PERSONAL HEALTH SURVEY- -WHAT IT IS AND HOW TO MAKE USE OF IT

The Survey consists of a series of questions, nearly all of which can be answered by yes or no. The questions are divided into three groups, or schedules, as follows:

Schedule I

The 25 questions comprising this schedule are intended to elicit such information concerning the health and physical efficiency of the subject as his own observations or experience may have brought to his attention. The score for each item is either 4 or 0. The count of 4 may be given for either yes or no, according to the nature of the question. A perfect score is 100, which will indicate a condition of perfect physical health. One good result of the Survey will be to call attention to defects of sight, or hearing and other ailments not previously noted.

In scoring for weight, mark minus 0 if the weight is 10 per cent. or more below the normal and plus 0 if the weight is 20 per cent. or more above the normal. If the height is normal for the age, or above normal, mark 4; if below the proper height for the age mark 0.

Schedule II

This schedule relates to health duties or good health habits. It comprises 20 items, each of which is given a count of 5 or 0. A perfect score is 100.

Schedule III

This schedule relates to unwholesome practices or bad habits and comprises 10 items, each of which is given a count of 10 or 0. A perfect score for this schedule is 0. The standing for health conduct is found by subtracting the total of Schedule III from that of Schedule II.

MAKING THE SURVEY

In making the Survey, three plans may be adopted.

Method No. 1

A copy of one of the schedules is placed in the hands of each student. The teacher then reads each question, making explanatory comments to interest and

and instruct the students and each student is asked to underscore the word -yes or no- which indicates his answer to the question. After each sheet has been signed and dated, the sheets are collected and the teacher or her assistant marks in the proper counts and determines the score. In doing this the teacher will note the various points relating to the individual students which should be brought to the attention of the parents or school nurse or school physician. Students will require assistance in answering some of the questions. For example, in relation to posture, the student must be told what correct posture is. In relation to hearing, the entire body of students may be tested at once by some simple method as gently tapping the table or speaking a word or syllable in a low or whispered tone, the students listening first with one ear closed and then the other. It not infrequently happens that a student is completely deaf in one ear without being aware of the fact.

Method No. 2

Instead of placing the questions in the hands of each student, the teacher may read the questions one by one and ask the student to write the number of the question followed by the answer. By this method the expense of a printed list of questions is saved.

Method No. 3

A third method, a plan which we think perhaps best of all for older or high school students, is to give each student a copy of the schedule to be retained. Let him read the questions and write the answers on a sheet of paper, numbering each to correspond with the schedule. The sheet should also bear the number of the schedule, the proper date and the name of the student.

Blank record books may be had which provide a space for a record of the results of the Survey for each week of the school year.

Students should be given credit for health attainment as well as for progress in reading, mathematics or any other study. Both the teacher and the pupil will find extremely interesting the definite relation between the answers made to the questions in the several schedules. If, for example, there are low

counts in Schedule I, there will very likely be found low counts in Schedule II, or high counts in Schedule III, which, in the light of known hygienic facts, will readily explain the low counts of Schedule I. For example, if I shows that the student suffers from headache, dullness and lack of energy, Schedule II will be very likely to show lack of exercise, lack of sleep or insufficient activity of the bowels, and Schedule III will often show the use of tea and coffee, excessive meat-eating or other bad habits which naturally cause headache. Headache is also very often associated with defective vision, of which the child may be unconscious until his attention is called to the fact, and which may be easily corrected by a competent oculist.

The Health Survey will bring to light a great amount of important information which should be brought to the attention of the school nurse, the school physician or the parents of the child.

The Survey will be of great assistance to the school nurse and in schools which have no nurse. The Survey will enable the teacher to make a most useful health inspection which will to some extent supply the deficiency while at the same time making clearly evident the great need for the services of a well trained school nurse.

By devoting half an hour every week to the Survey, the health of the students may be very greatly improved, their appetite for study increased, their normal development promoted, and indirectly, the homes from which the students come may also be helped by the diffusion of up-to-date practical health information.

HEALTH SURVEY

Schedule

1. Do you feel perfectly well all the time?
2. Do you have a good appetite and relish for your food at every meal?
3. Do you sleep soundly eight hours or more than eight hours every night?
4. Do you tire easily?
5. Do you enjoy study?
6. Are you happy and cheerful?
7. Are you frequently ill with headache, colds, sore throat, etc.?
8. Is your tongue clean and your breath sweet?
9. Have you any defect or deformity?
10. Have you been vaccinated, and have you had the Shick's test?
11. Do you get out of breath easily?
12. Can you hold your breath half a minute?
13. Is your sight perfect?
14. Is your hearing good?
15. What is your height?
16. What is your weight?
17. How many sound teeth have you?
18. Are you nervous?
19. Can you chin yourself five times?
20. Do you sit and walk erect?

DIRECTIONS FOR MAKING A PERSONAL HEALTH SURVEY

Schedules I, III and IV are to be filled out by the subject himself, noting the following points with reference to the several schedules:-

SCHEDULE 1.

1. To make 10 counts, one should enjoy uninterrupted good health, with a sense of fitness for his tasks and of complete physical and mental well-being. An occasional interruption of this state of physical beatitude would require a marking of 9, 8, or 7, according to the frequency of the loss of fitness. A person who feels always below par should mark himself zero.

2. An uninterrupted good appetite and relish for every meal, merits 10. If appetite is good for lunch and dinner only, mark 7. If a keen appetite and relish for food are never experienced, mark zero.

3. One who rarely wakes in the morning feeling refreshed and prepared for his day's duties, or who does not, on the average, sleep more than six hours, should mark 5. One who is really suffering from insomnia, will make still lower marks, according to the degree of loss of sleep.

4. A marked lack of endurance and great fatigue after slight exertion calls for a marking of 2 to 5. A person should be very strong and well to merit 10.

5. To merit the full 10 counts, one should have an uninterrupted appetite for study or other mental work and a normal degree of efficiency.

6. The full count of 10 calls for a placid, cheerful state of mind under conditions justifying such a mental state, and a reasonable degree of adaptability to adverse conditions.

7. If frequent attacks of colds or other illnesses occur, the marking should be 5. The constant presence of headache or of any one or more of the illnesses named, will require a zero mark.

8. If the tongue is coated and the breath odorous, or if unpleasant body odors are constantly present, mark zero. If only occasionally present, mark accordingly.

9. Any bodily defect of which the individual himself is conscious, such as hare-lip and eye squint, defective speech, pigeon-breast, curvature of the spine, club-foot, flat-foot, the effects of rickets in infancy, a history of typhoid, smallpox, unusually severe attack of scarlet fever, diphtheria or measles or recognized tubercular infection of lungs or bones, will reduce the counts to 5 or even zero, according to the number or gravity of the defects or diseases.

10. If the subject has had smallpox, he merits 10. The absence of vaccination will demand zero. Shick's test may in such a case count 5.

SCHEDULE 11.

This schedule is to be filled out by the examining physician, who will exercise his best judgment in the markings so as to make the counts for each item indicate as nearly as possible the relation of the particular organ or function concerned to normal conditions.

It should be borne in mind that the markings relate not only to structure but also function; for example, a completely obstructed nose will be marked 0. Zero marks will also be required by blindness and complete deafness. In case of cancer of the nose or any other affection which may spread to the rest of the body, or lead to death, the function of the organ is not only lost but it becomes a total liability and should be marked - 4.

1. The nutrition of the subject is judged by weight, color of the skin and general appearance and marked 1, 2, 3, or 4, according to the findings.

2. The standard for development is, of course, different for men and women and boys and girls at different ages. A muscular development which, in a woman, would be excellent would be very inferior in a man. It must be remembered that girls of 12 - 14 are normally taller and heavier than boys of the same age. The full count 4 stands for a high degree of excellence very near ideal perfection.

3. Not only marked evidence of defect or disease should be noted, but such general states as nervousness or abnormal nervous irritability, mental apathy or sluggishness, etc.

4. Eruptions, color, dryness, abnormal perspiration, etc.

5. Lungs. -- All the indications obtainable from the patient's history, physical examination and the fluoroscopic and other examinations should be taken into consideration in determining the markings.

6. Heart. -- The markings should show the indications of the heart by symptoms, that is, shortness of breath, palpitation, lip color, etc.

7. The markings should show the result of all the examinations made, subjective and objective. Symptoms of indigestions, gastric pain and constipation will reduce the markings to 1, 2 and 3 points.

8. Kidneys. -- The kidneys should show the results of examination aside from the urinary findings.

9. Pelvic Organs. -- In women, prolapse, retroversion, leukorrhea, dysmenorrhea, inflammation of the bladder, may reduce the figures to 1 or 2. After an operation for removal of the uterus, the markings will be 0. In case of cancer of the uterus, - 4.

10. The figures should indicate approximately any endocrine disturbance which may exist.

11. If the wearing of glasses is necessary for ordinary vision or reading, mark 2. If glasses are not required but eyes are inflamed or the seat of pain when used, mark 3. Blindness will be 0, and very poor vision or eye pain even with glasses, 1.

12. Complete deafness, 0; marked impairment, 3, 2, or 1, according to degree.

13. Nasal catarrh with chronic sore throat, enlarged or defective tonsils, 3, 4, or 1, according to degree.

14. Very few will be found qualified for the full score of 4. No teeth at all will be 0, and many fillings and bridges or marked pyorrhea 2; the average person, with several filled teeth, 3.

15. Weak foot, even though not the seat of pain, 3; flat-foot accompanied by pain after violent exercise on the foot, 2; pronounced flat-foot or other crippling disability of the feet, 1; inability to use the feet at all, 0.

Physical Tests.

1. The figures relate to the total strength as shown by the tests with the Universal Dynamometer. 100 per cent will be marked 4; an approximation to 75 per cent, 3; etc.

2. Posture will be marked 4, 3, 2, 1 or 0, according as it approximates the normal standard.

3. The marking is determined by the spirometer findings.

4. The degree to which the condition of the heart varies from the normal condition will be estimated by the total findings of the general and physical examination.

5. Markings will be based upon the findings of the chemical and blood examinations, the blood cell count, the estimate of the hemoglobin and the Wassermann tests.

6. The markings should show approximately the degree of efficiency of the kidney as compared with the normal standard.

7. The figures are based upon the finding of the carmine test. 4 indicates disappearance of the carmine within 24 hours. Disappearance within 30 hours, should be marked 3; 36 hours, 2; 48 hours, 1. If the delay is longer than this, a laxative or enema being required to empty the colon, the mark should be 0.

8. The standard for the intestinal flora is 80-20; that is, 80 per cent of the total bacteria should be of the acidophile or protective group. 60 - 40 should be marked 3; 40 - 60, 2; 20 - 80, 1.

9. Metabolism. --Figures lower than 4 mean either excess or diminution of metabolism rate. A deficiency of 10 or an increase of 15 should be marked 3. A deficiency of 20 or an increase of 30 should be marked 2. An excess or deficiency of 50 per cent should be marked 1.

10. The marking should be based upon the findings of the intelligence test.

Schedule 111.

1. The habitual, or daily use of any of the articles mentioned calls for 11 counts; the occasional use, 5. Only total abstinence merits 0.
2. Habitual use, 12; use on very rare occasions, 5; total abstinence, 0.
3. Habitual use in any form, 11; a social glass on rare occasions, 4; total abstinence, 0.
4. Regular and daily use of meat in any form, fish, flesh or fowl, 11; occasional use, 5; if never used, 0.
5. The free, every-day use of candy, 11; occasional 5; rare use in small quantities at meal time, 0.
6. Habitual use, 11; occasional, 5; if never used, 0.
7. Habitual eating to such excess as to cause a marked fullness or discomfort, or eating less than needed, 11, occasional indulgence to excess, 5.
8. The habitual use of any drug, 11; frequent use, 5 or more according to the degree or frequency.
9. Worry, morbid fear, frequent fits of anger require 11; if occasional occurrences, lower the mark in proportion to lesser frequency.

Schedule IV.

A careful reading of the booklet, "The Simple Life in a Nut Shell" or "Biologic Living" will aid in determining the proper markings for this schedule. Only one who follows all the rules laid down implicitly will be entitled to full counts and 100 per cent.

1. One count should be deducted for neglect to use, daily, in sufficient quantity, bran or other roughage; 1 count for neglect to supply iron, lime and vitamins by the free use of greens; 1 count for irregularity in the taking of meals and 1 or more counts for other infractions on the rules of right eating. 6 counts are merited only when one is strictly and without interruption carrying out the full program of biologic eating.

2. Thorough mastication requires chewing the food until it is reduced to a smooth, semi-liquid form. If the food is swallowed carelessly, mark 0; if chewed to a moderate degree after the usual fashion, mark 2. The full count of 5 is only merited by one who makes a conscientious and habitual effort to masticate each morsel properly.

3. The full complement of liquid required is six glasses. Deduct 1 for each glass omitted.

4. If once a day only, 3; if every other day, 1; if only by the aid of mineral waters or other medicinal water, or by the aid of an enema, 0.

5. The full count requires eight hours' sleep on an open sleeping porch or balcony or out-of-doors. For eight hours in bedroom with widely opened windows, mark 5. If bedroom is unventilated, even in the winter-time, mark 3. For each hour of sleep less than eight, deduct 1 count. Five hours' sleep in an unventilated room, if habitual, will merit 0.

6. Systematic, daily exercises for half an hour to an hour is required by all persons not engaged in active, muscular pursuits. The exercise should be active and of such a character as to correct the effects of bad posture, or deficient breathing occasioned by the daily occupation as well as to give the muscles adequate exercise. For this purpose, a definite and suitable program should be followed. If such exercises are taken faithfully every day, mark 6; if half the days, 3; if rarely, or not at all, 0.

7. Fatigue, when due to work, is Nature's demand for rest and the demand should be obeyed. Toxin fatigue due to constipation and drug habits is relieved by exercise, as is also nerve and brain tire due to work. The habit of relieving fatigue by drinking tea or coffee or coca-cola is pernicious and destructive. The markings should indicate the extent to which the duty to rest when tired is observed physiologically.

8. To merit 6, a correct posture should be habitually maintained in sitting, walking and working. The posture of the average person, man, woman or child, is so bad as to require a zero mark. Only one who conscientiously and habitually maintains a correct posture, that is, the upright bearing of the soldier is entitled to the full marking of 6.

9. If a cold air or water bath is taken on rising every day, mark 6. Make lower markings in proportion to the degree of neglect.

10. If this rule is observed only occasionally, mark 0.

11. To merit a mark of 6, the teeth must be kept in the best possible condition under the direction of a competent dentist. If only occasional, inefficient care is given the teeth, mark 0.

12. Indicate the degree to which this requirement is met.

13. Full breathing requires the use of the whole chest. This is only possible when the posture is correct and the clothing is loose. When the chest is held high, the breathing will take care of itself. Full, deep breathing should be encouraged by exercises which bring the lungs into vigorous play, such as running, skipping, swimming, etc.

14. By recreation is meant a change from the usual occupation, diversion, including the weekly rest-day which may or may not be recreative.

15. For safety, it is necessary to avoid as far as possible all contact with infectious materials. Special care is necessary in visiting the toilet. The hands must always be washed immediately, with soap and water. All public toilets are dangerous. Colon germs have been found on the hands of 30 to 50 per cent of all people examined, so shaking hands is sometimes hazardous. Coughing and sneezing project highly dangerous germs into the air and may spread contagion and diphtheria, influenza, pneumonia and other grave diseases. Avoid the proximity of people who frequently sneeze or cough. The mouth and nose should be covered always during coughing and sneezing. It is not to be forgotten that it is one's duty to protect others as well as himself.

16. Optimism, good cheer and amiability must be cultivated as a duty to one's self as well as a social obligation. Very few can claim a perfect score.

17. Compliance with this rule will lead to scrupulous care in relation to everything pertaining to biologic life as well as the items above mentioned.

PERSONAL HEALTH SURVEY

Vital stamina and physical vigor are matters of hereditary endowment, as are intelligence and mental aptitude. Physical health, strength and endurance, as well as intellectual efficiency, may be developed through training and correct habits.

The physical health one has is practically always less, generally greatly less, than it is possible for one to enjoy, and hence may be profitably increased.

The purpose of a personal health survey is to determine how far the individual's state differs from normal conditions, and thus to furnish a basis (1) for the specific treatment or training required to secure improvement, and (2) to provide a standard for comparison whereby changes for better or worse may be recognized. In making this health survey, inquiries are made under three heads.

1. Mental and bodily conditions.
2. Habits which may have a detrimental influence upon health.
3. Duties the performance of which should be a part of the daily routine of the life of the individual as health-promoting measures.

Under each of these heads or schedules are a number of items to each of which is assigned an arbitrary value such that by adding together the several values of each schedule, the total of each will be 100. There are four schedules. Schedules I and II show the Health Status; Schedules III and IV relate to Health Conduct.

Schedule I presents data, chiefly subjective in character. Schedule II presents objective data.

Schedule 11 summarizes the results of a complete physical examination. The Health Status rating is obtained by adding the totals of the two Schedules, 1 and 11, and dividing the sum by 2. The result for a person in perfect health should be 100.

The Health Status is the result of the original, hereditary endowment plus the effects of environment, accidents, infection, habits, etc. A low figure may be due to any of these causes. The element of personal responsibility may be large or small. In any case, there will always be room for improvement, and the attainment of as high a figure as possible should be regarded as at least as important as any scholastic objective.

The rating for Health Conduct is obtained by subtracting the total of Schedule 111 from that of Schedule 1V. Here the element of personal responsibility is dominant. By the exercise of sufficient self-control and painstaking effort, the attainment of a perfect score is entirely possible. Such a score would show zero for Schedule 111 and 100 for Schedule 1V.

Each of the items named in Schedule 111 is a menace to health and efficiency and is clearly shown so to be by modern, scientific research, as well as by experience.

Each of the items in Schedule 1V, on the other hand, is known to be a valuable means of promoting health and efficiency. Not a single one is a mere "stunt", or to be regarded as a work of supererogation.

A high rating for Health Conduct, maintained during a period of months, should be expected to improve the Health Status rating and thereby add to one's life expectancy as well as physical and mental efficiency.

An important purpose of the Health Survey is to establish a basis for rating health progress or attainment. By repeating the survey at stated intervals, and comparison of the findings, a means is supplied by which the student may be given an opportunity to earn credits by health attainment, as well as by progress in any of the ordinary subjects of study or training.

In determining a student's standing, credits earned for health attainment should be given at least the same weight and consideration as any other fundamental branch of culture or education.

SCHEDULE 1.

GENERAL INDICATIONS OF GOOD HEALTH

	<u>Normal</u> <u>Counts</u>	<u>Counts</u>
1. Sense of fitness and well-being.	10	
2. Good appetite and relish for food	10	
3. Sufficient sound, regular and refreshing sleep	10	
4. Absence of undue sense of fatigue after muscular effort.	10	
5. Readiness for and enjoyment of mental work, - regularity in attendance at classes, with lessons well prepared.	10	
6. Optimistic mental state.	10	
7. Freedom from attacks of headache, pain, faintness, giddiness, colds, sore throat, indigestion, biliousness, etc.	10	
8. A clean tongue, sweet breath and freedom from malodors	10	
9. The absence of any marked bodily deformity or defect or history of grave disease.	10	
10. Evidence of efficient vaccination (Schick's test)	10	
Perfect score	100	

SCHEDULE 11.

PHYSICAL CONDITION.

	<u>Normal</u>	
	Counts	Counts
1. General Nutrition.	4	
(Muscles		
2. Development (Bones	4	
(Physique		
(Figure		
3. Nervous System	4	
4. Skin	4	
5. Lungs	4	
6. Heart	4	
7. Digestive Organs	4	
8. Kidneys.	4	
9. Pelvic Organs	4	
10. Endocrine Glands	4	
11. Eyes.	4	
12. Ears.	4	
13. Nose and Throat.	4	
14. Teeth	4	
15. Feet.	4	

PHYSICAL TESTS

1. Strength	4
2. Posture	4
3. Lung Capacity	4
4. Heart	4
(Cheical	
5. Blood (Count	4
(Hemoglobin	
(Serological	
6. Kidneys (Urine	4
(Efficiency	
7. Intestinal Motility (Carmine Test)	4
8. Intestinal Flora	4
9. Metabolism	4
10. Intelligence test	4
Perfect score	
	100

This blank should be filled out by a qualified physician.

SCHEDULE 111.

HABITS TO BE AVOIDED OR CORRECTED

	<u>Discounts</u>	<u>Discounts</u>
1. The use of tea, coffee, coca-cola or cocoa.	11	
2. The use of tobacco in any form. . . .	12	
3. The use of alcoholic beverages in any form.	11	
4. Excess of protein--meat.	11	
5. Excess of cane-sugar--candy	11	
6. The use of pickles--vinegar, pepper, mustard and and other hot sauces and condiments	11	
7. Eating too much or too little	11	
8. The habitual or frequent use of drugs--aspirin, hypnotics, laxatives, etc.	11	
9. Worry, fear, anger.	11	
Perfect score	<u>0</u>	

SCHEDULE IV.

HEALTH DUTIES

	<u>FULL</u>	<u>COUNTS</u>
1. To eat regularly of wholesome, biologic foods, including a sufficiency of roughage, hard foods and of foods rich in iron, lime and vitamins.	6	
2. To masticate the food thoroughly.	5	
3. To drink 2 - 3 pints of water daily	6	
4. To evacuate residues three times a day.	6	
5. To sleep at least eight hours daily in pure, fresh air, preferably on porch or balcony.	6	
6. To take daily exercise as prescribed by a physical director, for half an hour to one hour, either in the open air or a well-ventilated room.	6	
7. To rest when tired.	5	
8. To maintain a correct posture	6	
9. To take a daily cold air or water bath.	6	
10. To dress in a manner conducive to health,-- loose, porous, light and light-colored clothing.	6	
11. To cleanse the mouth and teeth carefully twice a day.	6	
12. To insure a fresh air supply by proper ventilation and avoidance of contaminated air..	6	
13. To cultivate the habit of deep or full breathing.	6	
14. To take suitable recreation to the extent of at least two half-days weekly.	6	
15. Scrupulously to avoid contact with sources of infection and the communication of infection to others. (Hands, coughing, spitting, sneezing)	6	
16. To maintain an amiable and optimistic state of mind.	6	
17. To seriously endeavor in all things to live biologically.	6	
Perfect score	100	

Name _____

Date _____

(School of Health.)

P H Y S I C A L C U L T U R E .

1. General Ideas. Physiology and anatomy of muscles.
2. Bodily symmetry, how to develop, beauty.
3. How to be strong. Swimming.
4. How to cure weak backs.
5. How to develop weak lungs.
6. How to cure weak heart.
7. How to cure wrinkles.
8. Correct and incorrect attitudes.
9. Walking, stair-climbing.
10. Exercises for the too fat, the too thin, rheumatics, feeble invalids and children.

D I E T .

1. Foods--Man's natural diet.
2. Chemistry of food and digestion.
3. Common errors in diet.
4. Dextrinized foods.
5. The perfect way in diet.
6. Evils of conventional dress.
7. Simple remedies. Vom. etc.
8. The body a temple of--etc.
9. Simply remedies, --cold water drinking; fevers etc.
10. Diet and intemperance, tea, coffee, alcohol, small beer, etc.

COOKING SCHOOL.

1. Dainty and digestible desserts.
2. Relishable and wholesome soups.
3. Light and toothsome breads without yeast, leaven baking powder, soda ammonia or saleratus.
4. Meats and meat substitutes.
5. Mushes and something better.
6. Vegetables.
7. The Reason Why of the New Cookery. Gen. prin.
8. Invalid foods and infant diet.
9. Fruits, their uses, how to cook and serve.
10. Nuts and nut products.

HEALTH IN A NUTSHELL.

1000 Questions Pertaining to Health Answered Clearly, Tersely,
Scientifically, by a Physician and Author of Wide Note and Extensive
Experience.

Diet.

Cookery.

Dress.

Physical culture.

Vegetarianism.

Bathing.

Electricity.

Exercise.

Heating.

Digestion.

Breathing.

Liver.

Kidneys.

Lungs.

Consumption.

Tonics.

Mind Cure.

School Life.

Occupations.

Length of Life:

Men.

Women.

Natural.

Shortening.

Race Deterioration.

Weather.

Seasons.

Climate.

Water:

Hard.

Soft.

Rain.

Spring.

River.

City.

Well.

~~Distilled.~~

Distilled.

Malaria.

Trichinae.

Tapeworm.

Plants.

Foods.

Grains.

Nuts

Fruits.

Salt.

Pepper.

Mustard.

Glasses:

Old.

Near.

Far.

Hyper Metropia.

Muscular Asthenopia.

Mountain Air.

Sea Air.

Sea Bathing.

Alcohol.

Tobacco.

Tea and Coffee.

Caramel Cereal.

Nuts.

Bromose.

Maltol.

Ambrosia.

Nuttose.

Nuttena.

Nut Meal.

Nuttola.

Nuttolene.

Cocoanut.

Chocolate.

Coca.

Granose.

Granola.

Hulled Wheat.

Beans Cheese.

Pease cheese.

Fruits:

Characteristics.

Fruit Acids.

Fruit Sugars.

Nutritive Value of.

Diet.

Special Uses of.

Constipation.

Obesity.

Diarrhoea.

Bright's Disease.

Dyspepsia.

Liver Disease.

Melancholia.

Sunbath.

Electric Light Bath.

Work.

Canning Fruit.

Canned Meats.

Cheese.

Poison Cheese.

Sausage, Bologna.

Maltose.

Glucose.

Candy.

Ices.

Honey.

Hunger Cure.

Fasting.

Symptoms, How to Fix Them.

Convulsions.

Sunstroke.

Heat Stroke.

Lightning Stroke.

Fattening Foods.

Foods Hard to Digest.

Foods Easy to Digest.

Drinks.

Disinfectants:

Carbolic Acid.

Chlorine.

Copperas.

Formaline.

Sulphate of Copper.

Charcoal.

Ice-Water.

Hypopepsia.

Hyperpepsia.

Apepsia.

Zwiebach.

Gluten.

Sneezing.

Cold.

Backache (supporter)

Vegetable Milk.

Vegetable Cream.

Germs:

What.

Where.

(Continued next page)

Germs (continued):

Uses.

Dangers.

Growth of

Yeast.

Fermented Bread.

Unfermented Bread.

Saliva.

Dry Food.

Capacity of Stomach.

Enema.

Hall's Secret.

Piles and Pile Quacks.

Hemorrhoids.

A SKETCH OUTLINE ON IMPROVING INDIVIDUALS

I. In what ways can a person increase vitality and longevity?

1. Colon hygiene - reasons and methods

2. Diet

Low protein - no meat

High vitamin and mineral contents

3. No alcohol or tobacco

4. Exercise, sunshine, massage, hot and cold baths, etc.

5. Soy acidophilus milk

6. Avoiding disease and injury

7. Live in natural surroundings

8. Avoid exhaustive strains - mental or physical

9. Avoid worry, emotional excesses

II. How to increase nervous stability?

1. By increasing physical vitality, as above

2. By avoiding causes of worry, fear, anger, hate

3. By faith in a purpose in life

4. By avoiding confusion

5. By alternating enthusiasm and relaxation

III. How to increase intelligence?

1. By increasing physical vitality and nervous stability, as above

2. By observation, nature study, conversation and discussion.

3. By meditation

4. By avoiding superstitious beliefs.

5. By developing habit of logical thinking - asking why? good.

6. By summaries of knowledge to give perspective.

7. By insisting on consistency.

10-22-42

ARTICLE ON WINTER CARE OF SKIN

WINTER ITCH

TAKE VITAMINS INSTEAD OF THYROID

AVOID HARD WATER

AVOID CHAPPING

CREAM ON LIPS

"How to Live"

"Individual Hygiene"

p. 125b: "Diabetes may be aggravated by too much sugar, by infected tooth-sockets, or by too much worry."

Diabetes may also be aggravated by smoking, inasmuch as smoking raises the blood sugar.

Henderson intimates it is a benefit and that is the explanation of the exhilaration a person feels after they have smoked.

DR. KELLOGG: He is wrong about that. It is not a benefit. In the stomach carbohydrates are digested and gotten into absorbable form and then they are absorbed and carried by the blood into the liver. It would not do to allow all the carbohydrate a person takes in at a meal to go into the blood at once. The body would soon be used up and would be excited, so the first duty of the liver is to capture this sugar which was taken in in the form of starch, a colloid, and it cannot be absorbed as a colloid. The liver takes

this sugar and converts it back into colloid form, or glycogen, and that is stored up in the liver cells, and then little by little the liver by a kind of stoking arrangement reconverts this glycogen back into sugar and doles it out to the body just as it is needed. It gets a message from the muscles that the glycogen is being consumed and it is carried to the muscles. It is carried to the brain cells and the brain cells store it up. You look at a nerve cell when it is rested and it is full of little granules. These little granules represent minute bits of glycogen, and as the cell is used they gradually disappear until they almost all disappear. That is one of the effects of fatigue.

When a man takes nicotine the liver has to get busy to destroy the nicotine, for that is one of its most important functions to detoxicate poisons. It diminishes the toxicity of nicotine about one half. In doing that it is so busy for the time being it becomes inefficient and does not do its work of sugar

control as it ought to do. In diabetes it has lost that power almost entirely and in that case the blood sugar goes as high as four times as much as it ought to be. Smoking is one of the causes of diabetes. It poisons the liver and that produces an excess of sugar.

It is a most hideous thing for a physiologist to palm such a thing off on the public. He knows better. He did that to please the tobaccoists.

P. 149. Does cold increase heart beat?

DR. KELLOGG: Force or frequency of the heart beat? Which is it that you mean? Make a distinction. There is a distinction. Cold will increase the force of the heart beat but will diminish its frequency.

PROF. FISHER: A naked man in a cold room-- will his heart go up or down?

DR. KELLOGG: His heart will increase in force but it will slow down. It slows the heart but increases its vigor so it does more work.

When you take a shower bath-- I always take the cold water first on the head two or three times. That is to contract the blood vessels of the brain so as to protect it against the inrush of blood from the skin. First on the head, then next over the heart so as to increase the action of the heart, then an arm and the other arm, a shoulder and the other shoulder and then let the water run down on the back. That is the best way to take a cold shower bath.

P. 377 j.

Does skin breathe?

Does skin reabsorb perspiration?

Does skin absorb salt water?

(All these repeated elsewhere)

DR. KELLOGG: About one-fiftieth of the perspiration is absorbed by the skin. It is so small it does not amount to much.

It absorbs air. There is an exchange that takes place through the skin. When the skin is full of blood a little oxygen gets through and a little air is absorbed.

In a bath-- this was tested out by an actual laboratory experiment-- if you put minerals in a bath and the temperature is below the body temperature, the movement will be inward, but above body temperature the movement will be outward.

Do Esquimaux refuse salt?

DR. KELLOGG: Stefansson in one of his books says they got accustomed in a little while to eat their meat without salt, but when they saw the Esquimaux coming they knew they would eat them all out, so they would always put a little salt in. The Esquimaux would taste it and would not eat it. All they had to do to save their meat was to put on a little salt.

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Are some of the juices destroyed when potatoes are re-cooked?

DR. KELLOGG: No, you would not destroy any of the juices, but if exposed to a very high temperature it would lessen the vitamin C. That would be all the harm it would do. Especially in frying potatoes or baking potatoes it would destroy vitamin C. However, we do not depend on the potato very much for vitamin C.

If skin is covered will a man die?

Did a Pope try to gild a child as an angel?

Is it true historically and true in general that to cover the body, tar and feather a man, will kill him?

DR. KELLOGG: They did not know what the trouble was. It was the radiation of heat. If they had taken the boy and put him in a warm bath it would have saved his life. The heat was radiated too fast. The boy froze to death. His temperature fell.

PROF. FISHER: You think it is a historical fact?

DR. KELLOGG: Yes, sir.

PROF. FISHER: Do you know the reference?

DR. KELLOGG: I can give you the name of the Pope. I think Leonardo de Vinci was in part responsible for it.

Ben

Benjamin Franklin's Health Habits.

[In Franklin's time, little was known of either public hygiene or personal hygiene, but the original genius of this most remarkable man led him to anticipate many of the advances in hygiene, both public and private, that have only become current in recent times.

We quote the following ^{entertaining} paragraphs from "The Many-Sided Franklin", by Ford:]

Sp 33 sum

air bath (used)

3

Impress walking back (used)

Exercise 102

Drugs 104

Bath tub

7

Evils of Late Suppers.

"In general, mankind, since the improvement of cookery, eat about twice as much as nature requires. Suppers are not bad, if we have not dined; but restless nights naturally follow hearty suppers after full dinners. Indeed, as there is a difference in constitutions, some rest well after these meals; it costs them only a frightful dream and an apoplexy, after which they sleep till doomsday. Nothing is more common in the newspapers than instances of people who, after eating a hearty supper, are found dead abed in the morning." He even carried his theory so far as to approve of a physician "who prescribes abstinence for the cure of consumption. He must be clever because he thinks as we do". "I saw few die of hunger, Poor Richard affirmed; "of eating-100,000."

quicken my pulse from sixty to one hundred beats in a minute,
-counted by a second-watch, and I suppose the warmth generally in-
creases with the quickness of the pulse."

Exercise a Remedy for Gout

page 59.

While suffering with an attack of the gout, he wrote a friend
that he was "meditating a journey somewhere, perhaps to Bath
or Bristol, as I begin to feel a little giddiness in my head, a to-
ken that I want the exercise I have yearly been accustomed to."
"I was," he records at this time, "sometimes vexed with an itch-
ing on the back, which I observed particularly after eating freely
of beef. And sometimes after long confinement at writing, with
little exercise, I have felt sudden pungent pains in the flesh of
different parts of the body, which I was told was scorbutic. A
journey used to free me of them." "My constitution", he observed,
"and too great confinement to business during the Winter seemed to
require the air and exercise of a long journey once a year.
Which I have now practised for twenty years past."

8
Exercise

At first Franklin combated his tendency to physical ease by forcing himself to take exercise. "Dr. Fatsides made 469 turns in his dining room," he chronicled in the "Craven Street Gazette and that this was habitual is recorded by an entry in John Adams's diary, where it is recorded that "Dr. Franklin, upon my saying the other day that I fancied he did not exercise so much as he was wont, answered, 'Yes, I walk a league every day in my chamber; I walk quick, and for an hour, so that I go a league; I make a point of religion of it'".

54

10
Afraid of Medicines.

Inherited Tendency to Form Gravel, or Stone.-Franklin wrote to John Jay:

"It is true, as you have heard, that I have the stone, but not that I had thoughts of being cut for it. It is as yet very tolerable. It gives me no pain but when in a carriage on the pavement, or when I make some sudden quick movement. If I can prevent its growing larger, which I hope to do by ^{et} stemious living and gentle exercise, I can go on pretty comfortably with it to the end of my journey, which can now be at no very great distance. I am cheerful, enjoy the company of my friends, sleep well, have sufficient appetite, and my stomach performs well its functions. The latter is very material to the preservation of health. I therefore take no drugs lest I should disorder it. You may judge that my disease is not very grævous, since I am more afraid of the medicines than of the malady." p.76

Drugs

"In the year 1778, when suffering from a cutaneous trouble," he says, "I took a hot bath twice a week, two hours at a time," with the utmost benefit; and a subsequent neglect, when he "hardly bathed in those three months," served to bring on a second attack.

p.43

4 "In the last years of his life, when suffering from a complication of maladies, Cutler relates that he "used a warm bath every day," in a "bathing vessel said to be a curiosity. It is copper, in the form of a Slipper. He sits in the Heel, and his legs go under the Vamp; or the Instep he has a place to fix his book, and here he sits and enjoys himself."

HOW TO HAVE GOOD HEALTH IN FLA.

Out-of-door life.

Advantages.

Sunbaths - Skyshine - Sunburn.

Sunshine is food.

Rickets.

Healing power of sunshine.

Exercise - Walking - Horizontal

Burns 20 gram calories per pound every minute.

150 pound man uses 3 calories of energy per minute. Will burn up one pound of flesh walking, at 2 miles an hour.

And after walking 8 hours, will burn up one pound of flesh; that is, to lose one pound in weight.

Eating - Mastication -

Bulkage.

Too much protein.

Indigestion.

Sunday, Mar. 6/32

I don't think this
memo was used.

THE COST OF SICKNESS

The cost of sickness in the United States had been variously estimated. Expenditures for the services of physicians and nurses and for hospitals and medicines were estimated for 1921 by Mr. Moore of the Public Health Service as \$1,400,000,000 or a per capita of \$12.33, and by Dr. Charles H. Herty, of the Chemical Manufacturers Association, for 1925 as \$1,015,000,000. Doctor Dublin of the Metropolitan Life Insurance Company has presented similar estimates and reports that 2 per cent of his company's policyholders, and probably a larger percentage of the entire population of the nation, are constantly sick and there is an average loss of wages for each person of seven days in the year. Mr. Homer Folks of New York accepts these estimates and concludes that there is an average per capita expenditure for medical care of \$10 a year and a loss of wages because of sickness of \$12 per capita a year, or a total of \$22.

--The Bulletin of the American Hospital Association, Apr., 1928.

THE BANK OF HEALTH

Every rule of health observed is equivalent to a deposit in the Bank of Health. Every neglect of the body or harmful indulgence is a check drawn on the Bank.

FOURTEEN VITAL RULES OF HEALTH

To be 100% efficient, you must live 100% "health-wise"! The following factors are of vital importance in maintaining health and efficiency.

1. **WHOLESOME FOOD.** No meat, eggs in moderation, plenty of fresh fruits, vegetables and roughage in the form of bran and coarse vegetables.
2. **THOROUGH CHEWING.** Chew all foods thoroughly and sip liquids slowly.
3. **DISCARD COFFEE,** also tea, condiments, and all unwholesome and adulterated foods.
4. **CLEAN COLON.** Frequent evacuation of the colon is essential; secure three or four movements daily.
5. **WATER DRINKING.** Drink abundantly of water between meals-- two to four quarts a day. Avoid much water at meals.
6. **CARE OF TEETH.** Rinse the mouth after each meal, and clean the teeth carefully with a brush morning and night. Eating an orange or an apple is still more efficient than a tooth brush.
7. **OUTDOOR EXERCISE.** One or two hours of vigorous exercise in the open air is essential.
8. **CORRECT POSTURE.** Sit and stand with chest well raised. In sitting, the center of the back should be well supported.
9. **DEEP BREATHING.** Breathe freely of pure fresh air.
10. **BUILD POISE.** Avoid nerve tension. Relax frequently.
11. **SUFFICIENT SLEEP.** Get eight hours of sleep, on a sleeping porch or in a room with windows wide open.
12. **MORNING BATH.** Start the day with a cold water or cold air bath, followed by body rubbing and exercise.
13. **AVOID WORRY.** Cultivate an optimistic and pleasant state of mind.
14. **CULTIVATE AMIABILITY,** for anger, hatred, envy and irritability poison the blood.

- Dr. John Harvey Kellogg

Dr. Campbell agrees with Sir Frederick Treves that the neglect of the mastication of food is a potent cause of appendicitis. Solid lumps, especially in the case of such articles as pineapple, preserved ginger, nuts, tough meat and lobsters, are apt to pass beyond the pylorus and, escaping intestinal digestion, to lodge in the coecum and precipitate an attack of that dreaded disease, the most common predisposing cause of which is a loaded coecum, often preceded by constipation.

Dr. Campbell comes to the conclusion that "an appalling amount of misery and suffering may be saved by the simple expedient of inculcating the habit of efficient mastication.

--Finck.

Benjamin Franklin wrote: "While I was going towards seventy years, I felt I was marching towards death and the grave. After reaching seventy I turned around and began to march the other way."

--H.M.Rogers, in "Memories of Ninety Years"

INCORRECT ATTITUDES IN SITTING AND THE RESULTING EVILS.

The bones of the young are flexible.

Few people of sedentary habits are free from deformities of some sort.

A difference in the level of two shoulders.

Improper seats in school rooms.

The effect of interfering with the normal relation of vital organs.

A depressed chest is a weak inactive one.

Headache and biliousness among students and other sedentary people.

The physical effects of school life. Illustrated by ~~the~~ story of the ~~Yoma~~ Indians.

The effect of improper clothes upon attitude.

The organs are held in place by the muscles of the abdomen.

PROGRAM OF THE SCHOOL OF HEALTH.

PRINCIPLES.

The health should be as sacredly guarded as the character.

Health, strength, and happiness depend upon immutable laws which are written by God's own finger upon every nerve, muscle, and faculty entrusted to man.

In order to live a perfect life, we must live in harmony with those natural laws which govern our being.

Sickness is caused by violating the laws of health.

Mental and moral power is dependent upon the physical health.

Physical loveliness consists in symmetry-- the harmonious proportion of parts.

PROGRAM.

The course will consist of fifteen practical lessons.

I. Scientific Cookery:--

1. Principles underlying healthful cookery.
2. Soups, delicious and appetizing without "soupbones," "stock" or other deleterious materials.
3. Toothsome breads without yeast or chemicals.
4. Health Foods. What they are, how they are made, and how to use them.
5. Fruits and desserts,-- delicate cakes, etc., gratifying to the most fastidious, made without soda, baking powder, yeast, or chemicals of any kind.
6. Principles governing diet and digestion.

II. Physical Culture:--

1. How to acquire a strong, dignified, and graceful physical bearing. How to walk and how to sit.
2. Physical effects of exercise.
3. Cultivated deformities.

III. Simple Remedies for Home Use.

The cause, prevention, and cure of common diseases, with practical instruction in nature's remedies.

Supplementary Courses:--

In addition to the regular course, supplementary courses may be arranged for by those in charge, in which instruction in any of the regular subjects may be continued for a limited time on reasonable terms.

Private Instruction:--

Individuals or small classes desiring private instruction in any of the subjects named, may obtain the same on favorable terms, by special arrangements with the teachers.

(School of Health.)

PHYSICAL CULTURE.

1. General Ideas. Physiology and anatomy of muscles.
2. Bodily symmetry, how to develop, beauty.
3. How to be strong. Swimming.
4. How to cure weak backs.
5. How to develop weak lungs.
6. How to cure weak heart.
7. How to cure wrinkles.
8. Correct and incorrect attitudes.
9. Walking, stair-climbing.
10. Exercises for the too fat, the too thin, rheumatics, feeble invalids and children.

D I E T .

1. Foods--Man's natural diet.
2. Chemistry of food and digestion.
3. Common errors in diet.
4. Dextrinized foods.
5. The perfect way in diet.
6. Evils of conventional dress.
7. Simple remedies. Vom. etc.
8. The body a temple of--etc.
9. Simple remedies, --cold water drinking; fevers etc.
10. Diet and intemperance, tea, coffee, alcohol, small beer, etc.

COOKING SCHOOL.

1. Dainty and digestible desserts.
2. Relishable and wholesome soups.
3. Light and toothsome breads without yeast, leaven baking powder, soda ammonia or saleratus.
4. Meats and meat substitutes.
5. Mushes and something better.
6. Vegetables.
7. The Reason Why of the New Cookery. Gen. prin.
8. Invalid foods and infant diet.
9. Fruits, their uses, how to cook and serve.
10. Nuts and nut products.

X HOW TO LIVE CENTURY

Is long life natural to man? What is health? What are Phagocytes?
What are Macrophags? What Metchinkoff says of the long life. Micro-
scopical demonstrations.

X 2 THE SIMPLE LIFE.

Back to nature. The power of happiness as a health producer.

X 3 THE LIVING TEMPLE.

The chief enemies of the Living Temple, and how to avoid them.

X 4 HOUSEHOLD SANITATION

The care of the cellar; the care of the pantry; the sleeping room; the
nursery; etc. The sanitation of a healthful home, and sanitation in time
of sickness; fumigation; etc. Microscopical demcnstration of germs.

X 5 URIC ACID DISEASES.

Rheumatism; gout; renal calculii; electric light bath for rheumatism, ex-
ercise for uric acid diseases.

X 6 THE LIVER IN HEALTH AND DISEASE.

Uses of the liver; ~~Dangers to~~ ~~Nature's~~ ~~emenagogues.~~

X 7 LIGHT A REMEDY FOR DISEASE.

Sunshine and Tuberculosis; Phototherepy for rheumatism and the gout;
Phototherepy in diptheria, etc.

8 DRESS AND DEFORMITY.

Dress in its relation to health; for the babe; growing boy; school girl;
mature men and women; dress for the aged.

9 ACCIDENTS AND EMERGENCISE.

Or what to do until the doctor comes. In case of fire; drowning; broken
bones; Hemorrhages; etc.

Dress;

10 NATURE METHODS IN THE SICK ROOM.

Air; Light; [^]Exercise; Electricity; etc. Demonstrations.

Dress

11 HEALTH A FIVE CHORD CABLE.

Food; exercise; [^]sanitation; nature remedies for disease.

S. & B. * REGENT LINEN

W.

MADE IN U.S.A.

COOKING SCHOOL

FOOD AND DRINK FOR SUMMER ENTERTAINMENTS.

Lawn parties, picnics, afternoon teas, etc.

2 AN IDEAL HEALTH BREAKFAST.

Demonstration in course.

3 AN IDEAL HEALTH DINNER

Demonstration in course.

4 THE LUNCH BASKET

For the school boy, for the shop girl, the farmer, traveller and your own World's Fair lunch.

5 FOOD FOR BABY. WHAT, WHY.

Food for teething time, a dozen different home-made infant foods as good as any on the market and better than most.

6 FRUITS.

The chemistry of, uses of, how to serve, etc. Fruit coup, fruit nectar fruit juice, canning fruit, etc.

7 GRAINS, THE STAFF OF LIFE.

The value of as breakfast foods, for breadstuffs, how to prepare, how to serve.

8 VEGETABLES & TUBERS.

Food value of, how to select, how to care for, how to cook, how to serve.

9 NUTS.

Food value, objections to, how to prepare, when and how to serve.

10 LEGUMES.

Food value of, how to select, how to care for, how to prepare, how to serve.

11 THE FANCY WORK OF COOKING.

Deserts, Cakes, Icings, Ices, confections.

MEMORANDA FOR SCHOOL OF HEALTH AT MOLINE, ILL.

David Paulson.

INTRODUCTION.

1. Importance of the knowledge of true hygiene.
2. Temples of God.
3. Immutability of the natural law.

PHYSIOLOGY OF DIGESTION.

1. Five digestive organs.
 - (a) Mouth.
 - (b) Stomach.
 - (c) Liver.
 - (d) Pancreas.
 - (e) Intestines.
2. Five digestive fluids.
 - (a) Saliva.
 - (b) Gastric Juice.
 - (c) Bile.
 - (d) Pancreatic Juice.
 - (e) Intestinal Juice.
3. Ten digestive processes.
 - (a) Mastication.
 - (b) Insalivation.
 - (c) Deglutition.
 - (d) Stomach Digestion.

- (e) Biliary Digestion.
- (f) Pancreatic.
- (g) Intestinal.
- (h) Peristalsis.
- (i) Absorbtion.
- (j) Assimilation.

(Tissue ferments convert digested food products into solids again.)

DIET.

1. Secured from the plant world and from the animal world.
2. Parallel between second hand clothing and second hand food.
3. Second hand food.
 - (a) Dr. MdGougan's report of meat eatinf and epilepsy.
 - (b) Dr. Roger Williams' statistics on meat and cancers.
 - (c) Dr. Haig's opinion in reference to meat diet and constitutional diseases.
 - (d) Personal observation of the ralation of meat diet to intemperance.
4. Food economics.
 - (a) Illustration of how much it costs to raise a three year old steer and how much wheat could be produced with the same effort.
5. Food Elements. (Make chemical experiment to show the difference between kettle
 - (a) Starch.....(cooked and baked starch.
 - (b) Proteids, animal and vegetable.
 - (c) Fats, animal and vegetable.....(Emulsified. (Cooking. (Frying.

(d) Sugar..... (Levulose sweetest of all sugar. Found in the blood and in fruit. When fruit becomes dry, is changed to glucose. How plants make sugar and the leaves make cellulose.)

(e) Have blocks of wood to illustrate the proportions of starch, proteids, and fats. Combinations.

6. Fats.....) Nuts.
 Albumen.....)

Starch..... (Dextrine.....)
 (Sugar.....) Fruit.
 Acids.....)

(Thus it is true that either nuts and fruit or nuts and grains will supply all the necessary food elements.)

7. Adaption of food to age, occupation, climate, seasons, health, and disease.

8. Errors in diet.

- (a) Hasty eating.
- (b) Irregularity.
- (c) Drinking at meals.
- (d) Overeating.
- (e) Improper foods.
- (g) Condiments and spices.

EXERCISE.

- 1. "Put off the old man."
- 2. Work out physical salvation.
- 3. Adam's sentence.

4. Idleness same as a stagnant pool.
5. Perspiration of horses in spring.
6. Young kitten, sweet breath. Old cat smells "catty."
Old dog must sleep in barn.
7. Obesity from lack of exercise or from lazy ancestors.
8. Less poison in blood after a hard day's work.
9. "Fool folds his hands and eats his own flesh."
- 10 Boys and girls crowd into the cities to escape working.
11. Occupation.
 - (a) Most exercise must be taken this way so important to maintain a correct position.
 - (b) Restriction of clothing prevents receiving highest benefit from exercise.
 - (c) Most people grow up in their clothes like cucumbers in a bottle.
 - (d) Breaking in a shoe means breaking in a foot.
12. How deformities are cultivated.
 - (a) Constriction of the waist accounts for feminine type of breathing.
 - (b) Bad sitting.....(Example. Farmer driving to town, hands on knees,
Lying down in a chair.
13. Correct standing.
 - (a) How to get a proper poise.
14. Walking.
 - (a) School girl walk.
 - (b) Why walking up stairs produces harm.
15. Significance of relaxed abdominal muscles.
16. Displaced viscera worse than a dislocated shoulder.

17. Corrective exercise for weak abdominal muscles.
18. Corrective exercise for lateral curvature.
19. Both sides of the bicycle riding question.
20. Games furnish good diversion. (Must deplore the brutal element that characterizes so many of the modern games.
21. Feline movements.

BATHING.

1. Physiological necessity.
2. Hot baths relieve pain but debilitate.
3. Cold baths produce pain but strengthen.
4. Neutral baths.
 - (a) Peculiar sedative influence of.
 - (b) Use in drug habits; sleeplessness, and extensive burns.

SIMPLE TREATMENTS.

1. A death cold in the chest.
2. Pleurisy.
3. How to cure pneumonia before it begins.
4. How to manage superficial and deep seated inflammations.
5. Why people have typhoid fever.

ARE WE A DYING RACE?

1. Wiser but weaker.
2. Are we tramping over the same grounds that other nations have, with the same diseases?

INFECTION AND DISENFECTION.

1. Bacteriology has taught us that we must either kill the germs or strengthen the man.
2. The significance of death dealing epidemics.
 - (a) A peep into the cellar.
 - (b) Pantry smells.
 - (c) A glimpse behind the ice chest.

HYGIENE AND SANITATION OF THE HOME.

1. Sources of water contamination.
 - (a) Organic.
 - (b) Inorganic.
2. Methods of purification.
 - (a) Sterilization.
 - (b) Filtration.
 - (c) Distillation.
 - (d) Sedimentation.

VENTILATION.

1. Air starvation.
 - (a) From ill fitting clothing.
 - (b) From badly ventilated rooms.
2. Source of contamination.
3. Methods of proper ventilation.

SCHOOL OF HEALTH.

Foundations.

1. God in nature and God in us.
2. Man is the temple of God, the sanctuary, the place of controversy and ministry.
3. Our relations to God. God is reconciled to us as soon as we are reconciled to Him. Christ in the atonement.

Home Hygiene.

Ventilation:

Methods, amount required, inlets, outlets, heating in connection with ventilation, ventilation of a cottage home, school houses, meeting houses, cellars, attics, closets.

Disinfection:

Body disinfection, room disinfection, only hot soap suds needed.

Dust.

Garbage.

Kitchen sinks.

Place under the house.

Carpets, rugs.

Beds.

Vermin.

Back yards.

Vaults.

Cess-pools.

Water supply:

Wells, cisterns, hard water, rain water, city water, ditch water, filters, distilled water, lake water.

Leaky roofs.

Moldy rooms.

Wall paper, one layer put on over another.

Laundry.

Individual Hygiene.

Diet.

Dress:

Fundamental principles.

Warmth, modesty, freedom of movement, beauty.

Evils of conventional dress.

Restraint of breathing, consequences, digestion, liver action, etc. Weakening of trunk muscles, consequences. Displacement of stomach and other organs.

High heels, insufficient clothing of the limbs. Skirt bands, belts, stiff waists.

Relation of physical culture to dress reform.

History of dress reform.

Diseases due to conventional dress.

Disorders of the stomach, liver (gallstones,) enteroptosis, pelvic diseases, general feebleness.

Bathing.

Exercise --Home gymnastics, corrective gymnastics.

Home Remedies.

Natural remedies for disease.

It is the blood that heals.

How to relieve pain, fever, general weakness, insomnia, a cold, bruises, sprains, rheumatism, constipation nervousness, malarial fevers, anemia, and other infections.

Accidents and emergencies, burns, water, massage, heat.

Christian Help Work.

Motive.

Methods.

Work to be done for fathers.

Tobacco, drink, assistance in finding work.

Work for Mothers.

Care of homes, care of children, cookery, dress, care of sick, home remedies, child culture, mothers' meetings.

Work for young ladies.

Sewing circles, nature study, Bible study, girls' clubs, special physiology for girls.

Work for boys.

Boys' clubs, anti-cigarette clubs, sewing schools, special physiology for boys.

Work for Children.

Kindergarten, kitchen garden.

What to do in emergency.

Formation of Good Health clubs, Life Boat.

Jail work, friendly visiting.

Gospel Work.

(Mem. for School of Health:)

S U B J E C T S .

Food Reform:

Fruits and Nuts Vs. Meats; Cereals, Legumes, Vegetables.

Dietetic Value of Fruits; diuretic, laxative.

Fruits as a Source of Energy; digested starch, levulose

Fruits as Antiseptics; fruit diet.

Cereals; high nutritive value complimented by cookery.

Legumes; nutritive value; modes of preparation.

Vegetables; questionable food value; require seasoning of some kind.

Seasonings; harmful; mustard, pepper, vinegar, etc.

Evils of each.

Fats; harmfulness of; pie crusts, pastry, griddle cakes, etc. butter, lard, oleomargarine.

Dangers of Cream and Butter.

Dangers of Milk.

Water.

(School of Health.)

P H Y S I C A L C U L T U R E .

1. General Ideas. Physiology and anatomy of muscles.
2. Bodily symmetry, how to develop, beauty.
3. How to be strong. Swimming.
4. How to cure weak backs.
5. How to develop weak lungs.
6. How to cure weak heart.
7. How to cure wrinkles.
8. Correct and incorrect attitudes.
9. Walking, stair-climbing.
10. Exercises for the too fat, the too thin, rheumatics, feeble invalids and children.

D I E T .

1. Foods--Man's natural diet.
2. Chemistry of food and digestion.
3. Common errors in diet.
4. Dextrinized foods.
5. The perfect way in diet.
6. Evils of conventional dress.
7. Simple remedies. Fom. etc.
8. The body a temple of --etc.
9. Simple remedies,--cold water drinking; fevers etc.
10. Diet and intemperance, tea, coffee, alcohol, small beer, etc

COOKING SCHOOL.

1. Dainty and digestible desserts.
2. Relishable and wholesome soups.
3. Light and toothsome breads without yeast, leaven baking powder, soda ammonia or saleratus.
4. Meats and meat substitutes.
5. Mushes and something better.
6. Vegetables.
7. The Reason Why of the New Cookery. Gen . prin.
8. Invalid foods and infant diet.
9. Fruits, their uses, how to cook and serve.
10. Nuts and nut products.

SCHOOL OF HEALTH.

Foundations.

1. God in nature and God in us.
2. Man is the temple of God, the sanctuary, the place of controversy and ministry.
3. Our relations to God. God is reconciled to us as soon as we are reconciled to Him. Christ in the atonement.

Home Hygiene.

Ventilation:

Methods, amount required, inlets, outlets, heating in connection with ventilation, ventilation of a cottage home, school houses, meeting houses, cellars, attics, closets.

Disinfection:

Body disinfection, room disinfection, only hot soap suds needed.

Dust.

Garbage.

Kitchen sinks.

Place under the house.

Carpets, rugs.

Beds.

Vermin.

Back yards.

Vaults.

Cess-pools.

Water supply:

Wells, cisterns, hard water, rain water, city water, ditch water, filters, distilled water, lake water.

Leaky roofs.

Moldy rooms.

Wall paper, one layer put on over another.

Laundry.

Individual Hygiene.

Diet.

Dress:

Fundamental principles.

Warmth, modesty, freedom of movement, beauty.

Evils of conventional dress.

Restraint of breathing, consequences, digestion, liver action, etc. Weakening of trunk muscles, consequences. Displacement of stomach and other organs.

High heels, insufficient clothing of the limbs. Skirt bands, belts, stiff waists.

Relation of physical culture to dress reform.

History of dress reform.

Diseases due to conventional dress.

Disorders of the stomach, liver (gallstones,) enteroptosis, pelvic diseases, general feebleness.

Bathing.

Exercise --Home gymnastics, corrective gymnastics.

Home Remedies.

Natural remedies for disease.

It is the blood that heals.

How to relieve pain, fever, general weakness, insomnia, a cold, bruises, sprains, rheumatism, constipation nervousness, malarial fevers, anemia, and other infections.

Accidents and emergencies, burns, water, massage, heat.

Christian Help Work.

Motive.

Methods.

Work to be done for fathers.

Tobacco, drink, assistance in finding work.

Work for Mothers.

Care of homes, care of children, cookery, dress, care of sick, home remedies, child culture, mothers' meetings.

Work for young ladies.

Sewing circles, nature study, Bible study, girls' clubs, special physiology for girls.

Work for boys.

Boys' clubs, anti-cigarette clubs, sewing schools, special physiology for boys.

Work for Children.

Kindergarten, kitchen garden.

What to do in emergency.

Formation of Good Health clubs, Life Boat.

Jail work, friendly visiting.

Gospel Work.

Some considerations which make an office assistant more efficient.

1. Greet the patient with cordiality and enthusiasm, manifesting a very cheerful, willing spirit to be of service.
2. Listen to all complaints attentively, taking nothing for granted, giving the patient the benefit of every doubt in his complaint, and report such to the head of the Dept.
3. Be solicitous of the patient's welfare, manifesting an interest in his complaint and feelings and transmit the same to the doctor in charge.
4. Be helpful in assisting patients in and out of wheel chairs and in and out of the door and inquire of them if there is any other service you can render.
5. Express enthusiastic optimism and encouragement, telling the patient you have seen "many similar cases get well," or similar phrases.
6. If a patient manifests restlessness for having to wait his turn, suggest that he can keep some other appointment first, and return later at an hour when there would not be so many ahead.
7. Follow up all discouraged patients and all patients suffering unusual distress by calling on them in their rooms or making inquiry over the telephone before the close of the office hours.
8. Make a study of emphatic phrases and illustrations to be used in answering questions and encouraging patients.
9. Pay strict attention to telephone calls. Answer courteously, always soliciting an opportunity to serve the patient and follow up the request to make sure it has been attended to. Much depends upon the manner in which a telephone message is answered. If the patient asks for the doctor who is busy and cannot answer, be solicitous and offer to take the message or render any other service you can.
10. Cultivate the thought that "love lightens the burden of labor," and instead of considering it a duty to serve, look upon it as an opportunity to do good.
11. Never allow yourself to consider a patient a crank, but think of him as a sick individual deserving of sympathy and help.
12. When patients are waiting in the waiting room be thoughtful of their comfort as to temperature, drafts, etc. A very weak person should be encouraged to lie on the couch. Such little attentions are appreciated by sick people.
13. In order to be physically able to do this, an office assistant must look after his own health and practice what he preaches--in other words, live biologically.

Mrs Irene
Mrs Emma Hicks and *Thomas*
Dr. Martin's ofc.

DUTIES OF AN OFFICE ASSISTANT.

The first aim of an office assistant must be to justify that title, and to care for the office and its work in such a way that any request of her doctor, be it for a report, a prescription blank, a tongue depressor, or what-you-may, can be cared for promptly and accurately. This sets the doctor's mind at rest from detail and enables him to give all his attention to the professional aspect of things, and also provides an atmosphere of efficiency and security which does much to reassure the patient. An assistant who takes this as the starting-point in her work must inevitably subordinate her own personality and importance to that of the doctor and still more to that of the institution. By holding in her own mind absolute confidence in the principles and practice of the Sanitarium she will develop a serenity of thought which will manifest itself in her manner and so communicate itself to the patients whom she contacts.

We must at all times keep in mind that these patients are sick people, that many of them feel bewildered at their unaccustomed surroundings, and that their queries must not be answered in any cursory fashion. When one is accosted by a patient and asked where is a certain room or department, it is not enough to say "At the end of the hall," "Just beyond the elevator," etc. Turn and walk a few steps with the questioner, and do not leave him without some landmark to help him on his way. This does not involve much conversation. In fact, it would appear wise at all times to leave conversation to the patient, the helper serving as a good listener. When drawn into conversation, let us by all means radiate cheer, optimism, and a kindly interest, BUT

Duties of an Office Assistant. #2

take care not to discuss symptoms, treatments, nor other aspects of the patient's complaint. We must develop a technique of evading these topics. This can be done by deftly changing the subject and leading the questioner's thought to some positive side of our work, - to an article in the Sanitarium News, or to the pamphlets which all patients - and helpers - should read. No opportunity should be lost of stressing the delights of the outdoor gymnasium, the evening programs, the occupational therapy department, the reading-rooms, etc. In all of this we must bear in mind, as previously mentioned, that these people are ailing and also away from home, give each one the impression that he or she is "the only patient," and then they'll stay with us and derive full benefit, and eventually leave us in such a condition of body and mind as to serve as missionaries each in his or her own environment. In short, let us learn every day more and more of the Sanitarium's value to humanity, and be proud of our opportunity to carry the torch.

July 19, 1938

July 20, 1938

Dear Doctor Kellogg:

Complying with your request for opinions and suggestions by office assistants as to how we may contribute toward the satisfaction, contentment, welfare and good-will of patients during their sojourn in the Battle Creek Sanitarium, I respectfully submit the following:

It seems to me that any person intelligent and efficient enough to obtain and hold an office position, must also possess the intelligence to realize that courtesy first of all, and an evident willingness to be of service to the patient when and wherever possible, are just as much a requirement of their duties as are the duties they are expected to perform for the Department Head with whom they are associated.

If there is any question or doubt as to whether or not office assistants understand their responsibilities and duties along these lines, why not appoint some qualified person to conduct monthly or quarterly classes in office ethics? I understand that this has long been the routine in many institutions, and especially is it carried out in most department stores and other enterprises in order to insure courtesy and an air of efficiency and willingness on the part of sales clerks to be of service to patrons. Most secretarial courses now include a class in office ethics, and I believe that every nurses' training course includes a class in this subject.

I believe however, that any initiative attempt on the part of the office assistant at direct, or even apparent "sales talk" would be more or less offensive to the majority of patrons. But I am certain that manifesting a sincere loyalty to the institution and its principles whenever the opportunity presents itself casually, and maintaining an attitude of sympathetic but cheerful and friendly interest, efficiency, and evident willingness to be of service in any way possible, and of course COURTESY ALWAYS, will enable any office assistant to sell the Battle Creek Sanitarium and its ideas and principles. At least, this procedure should succeed in establishing in the minds of most of our patrons the fact that every department of the institution has the welfare and best interests of each individual patient at heart at all times.

Yours sincerely,

Mrs. Fred Wildenberg,
(Dr. VanderVoort's Office)

In a time when national emergency demands increased efforts from every individual, when almost impossible physical exertions are expected from aviators and tank crews, the problem of fatigue assumes a position of great importance; for only through a better understanding of the causes of fatigue it can be hoped to achieve an appreciable increase in the endurance, and thus more efficiency and productivity. Medicine may contribute therefore to national defense by a study of the factors which cause or remove fatigue, thus easing the burden of those who today work hardest in the industry and armed forces. The purpose of this paper, therefore, is to review the physiological and pathological processes in so far as they pertain to the conditions under which fatigue sets in, and how and to what extent the onset of fatigue can be reduced or postponed.

In the last few years the problem of fatigue has been approached and presented from various points of view. The recent studies of Margeria, Christensen and Atzler are selected to give a review of the principles of this problem.

Roudolpho Margeria deals exclusively with the symptoms of fatigue. His definition is that "fatigue is a lessened readiness of the muscular system to perform work and a certain general discomfort." He finds that in fatigue the period of contraction of muscle fiber is prolonged, as a result the frequency of contraction is slowed down. He holds the general view that this is caused by the creation of acid products of metabolism which at first stimulate more rapid contraction, but later impede contraction by accumulation. In periods of rest these waste products are removed by means of oxidation, and the desire to work is restored. Although he emphasizes that the essential physiological process of glycogen division at the muscle fiber takes place anaerobically, he still thinks that the function of O_2 - supply is decisive in fatigue. Several other authors, including Helmut Boehme, Isac and Matthews, and Isac, Matthews and Yamanaka share this view and even go a step further.

①
Plants supply all
subs needed

Order of nature,
Plants store energy
Animals use it.
Machines

Primitive trees with
coaxing

A food harvest
of vegetables



②

A natural food
factory for cell
dome up in water
in wool.

Everything there

茶

Silanus

FOOD IS FUEL

1. Plants supply all substances needed.

Order of nature.

Plants store energy.

Animals use it.

Machines.

In primitive times this was true.

2. Plants supply not only substances for repair and fuel, but marvelous regulating substances.

3. A natural food - dainty parcel done up in waterproof.
Everything there.

FOOD, AIR AND THE BATH.

It is more than passing strange that in our curriculum of study for the youth of our land, a subject as vital as the preparation of food should have so wholly escaped us. While I would be the last to curtail the so-called higher branches of learning, must I admit that because a thing is common it must necessarily be cheap and unimportant. Why do we neglect the things within our easy reach, whose very nearness implies the universality of their need and application? In a word, our exceptional gifts are striven for, while we ignore the lavishness of those in which all humanity participates- the chemistry of common life:

Food ranks as a prime factor in a healthy civilization. We have isolated cooking schools for the isolated few who attend them, but even in these we appear to have inverted the order,- we eat for twenty years or so, and then proceed to find out how to prepare it. How would it do in our public schools to teach the common ~~branches~~ sense of chemistry, its application to our eating and drinking? Its commonness should be like the plays, the amusements, till the child knows practically the results most common to chemical action, and will almost unconsciously apply them.

We have cookbooks galore, all the way from the administration to the Mississippi boat, but no good cooking. When the woman was asked to give her recipe for a much commended cake, she began by saying: "A thing full of books are full of recipes intended to bear the same relation to food that formulae do to mathematics. The error is a fundamental one. While mathematics is an exact science, cooking deals with constantly varying conditions, change being the only constant thing about it. Therefore judgement founded on

A HISTORICAL TESTIMONY TO THE VALUE OF TOTAL ABSTINENCE.

McGregor, "Superintendent Surgeon" of the British Army in Egypt, writing to his friend, Dr. James Curry, of Liverpool, relates a circumstance which he considers very remarkable, and in which he thought Dr. Currie would be interested, on account of his advocacy of water as a remedy in disease. McGregor was an experienced army surgeon, had served in all parts of the world, and was an accurate and reliable observer. His interesting statement is as follows:

"After crossing the great desert in July, 1801, from a difficulty in procuring carriage, no ardent spirit was issued to the troops in Upper Egypt. At this time there was much duty of fatigue, which for want of followers was done by the soldiers themselves; the other duties were severe upon them; they were frequently exercised, and much in the sun; the heat was excessive; in the soldiers' tents in the middle of the day the mercury in the thermometer of Fahrenheit, stood at 114 deg. to 118 deg., but at no time was the Indian army so healthy."

Before finishing this, write a little booklet on

WHAT MAKES THE BUSINESS MAN *fired*

Before finishing this, write a little booklet on

WHAT'S THE MATTER OF THE AMERICAN BUSINESS MAN?

Get Wiggam article.

Other articles.

Lit. Digest, May 1930

616.861

(Good Health.)

A KEELEY-CURE VICTIM.

There recently died at Joliet, Ills., a Dr. Curtis, who is said to have prepared most of the Keeley literature. He was a chronic inebriate. He had been "cured" several times at the Keeley Institute, to which he was recently refused admission.

Please return with any suggestions opposite names or subjects

PRELIMINARY LAY-OUT FOR SPECIAL APPENDICES FOR REVISION OF

HOW TO LIVE

Possible Writers

Possible Subjects

- Dr. John F. Anderson
- Dr. George Blumer
- Dr. Emil Bogen
- Dr. Walter B. Cannon
- Professor Russell H. Chittenden
- Dr. Charles B. Davenport
- Dr. Harold S. Diehl
- Dr. Louis I. Dublin
- Dr. Haven Emerson
- Dr. George J. Fisher
- Prof. Irving Fisher
- Dr. Eugene L. Fisk (deceased)
- Leonard Hill (London)
- Arthur Hunter
- Dr. Thaddeus P. Hyatt
- Dr. Edmund Jacobson
- Dr. John Harvey Kellogg

- Dr. George W. Kosmak
- Lutoslowsky (Warsaw)
- Prof. E. V. McCollum

- Dr. Horace Newhart
- Dr. Thomas Parran, Jr.,
- Dr. Mazyck P. Ravenel

- Avoiding Infection
- Dangers of Quackery & Patent Medicines
- Effects of Tobacco
- Effects of Emotions on Health
- Protein Requirement
- Eugenics
- Avoidance of Colds
- Lessons of Mortality Statistics
- Effects of Alcohol
- Exercise
- Mastication (from old appendix)
- Shoes (from old appendix)
- Care of Skin & Clothing
- Overweight & Underwiehgt
- Care of the Teeth
- Relaxation
- Bowel Movements
- Merits & Demerits of Meat
- Coffee & Tea
- Posture and Chairs

- Maternal Hygiene
- Deep Breathing
- Merits & Demerits of Meat
- Vitamins

- Hearing
- Sex Hygiene
- Avoiding Infection

Professor Leo F. Eettger
Dr. Frederick R. Rogers
Mary Schwartz Rose
Dr. Arthur H. Fuggles
Prof. Henry C. Sherman
DR. William F. Snow
Prof. C.E.A. Winslow

Acidophilus
Exercise
Diet
Mental Hygiene
Diet
Merits & Demerits of Meat
Sex Hygiene
Ventilation
Eye Sight
Recreation
Nose & Thorat
Sleeping Outdoors
Focal Infection
Salt -- Its use & abuse
Merits & Demerits of Sugar
" " " " Milk
" " " " Fruit
" " " " Bread &
Cereals

The following persons are at present members of the Hygiene Reference Board but not included among those mentioned above. Their names may suggest what subject, if any, they might write on authoritatively in a way of use to laymen working to gain help in practicing individual hygiene:

Public Health:

Dr. Donald B. Armstrong
Dr. Robert H. Bishop
Dr. Livingston Farrand
Dr. J. C. Geiger
Dr. S. S. Goldwater
Harry H. Moore
Dr. William H. Park
Dr. W. S. Rankin
Dr. M. J. Rosenau
Dr. Joseph W. Schereschewsky
William Jay Schieffelin
Henry Vaughan

Medicine & Surgery:

Dr. Edward R. Baldwin
Dr. Alexis Carrel
Dr. Kendall Emerson
Dr. Seale Harris
Dr. E. L. Keyes
Dr. John Herr Musser
Dr. Edwin E. Osgood
Dr. Leonard G. Rowntree
Dr. Hugh Hampton Young

SCHEDULE I.

GENERAL INDICATIONS OF GOOD HEALTH

	Normal Counts	Counts
1. Sense of fitness and well-being.	10	
2. Good appetite and relish for food.	10	
3. Sufficient sound, regular and refreshing sleep.	10	
4. Absence of undue sense of fatigue after muscular effort.	10	
5. Readiness for and enjoyment of mental work, - regularity in attendance at classes, with lessons well prepared.	10	
6. Optimistic mental state.	10	
7. Freedom from attacks of headache, pain, faintness, giddiness, colds, sore throat, indigestion, bilious- ness, etc.	10	
8. A clean tongue, sweet breath and freedom from malodors	10	
9. The absence of any marked bodily deformity or defect or history of grave disease.		
10. Evidence of efficient vaccination (Shick's test). Perfect score	10 100	

In filling out the blank the figures written in should show as nearly as possible the degree to which the normal condition is reached or maintained. For example, a good appetite for every meal every day will be shown by 10; no appetite at all by 0; a fair appetite most of the time by 5; an appetite for dinner and supper but none for breakfast, 7.

i
 OUTLINE FOR PHYSICAL CULTURE COURSE

Right and Wrong Attitudes.

Wrong attitudes in sitting (Forward sitting
) Stoop sitting
 (One side sitting
) Relaxed sitting
 (Rocking chair sitting.

Wrong attitudes standing (Projecting chin
) Flat chest and round shoulders
 (Hips forward
) One side standing.

Wrong position in lying (Bolsters or high pillows.

Incorrect walking (Heel stepping
) swaying gait
 (Stiff gait
) Broadening base
 (Weak kneed

on toes

PHYSICAL BEARING.

Methods of correcting wrong attitudes (Standing attitude
) Sitting attitude
 (Walking poise

~~Health~~ health gymnastics (For the purpose ~~of~~

1. To improve heart action
2. To improve breathing
3. Strengthening muscles
4. To encourage blood and bone making
5. To correct wrong attitudes.

Heart and lung work (Walking
) Heel raising
 (Knee bending
 (Stair climbing
) Hill climbing

IMPORTANCE OF ~~STRENGTHENING THE~~ NATURAL BREATHING

Abdominal reservoir--experiment.

- Blood pressure
- Bicycle riding
- Rowing
- Swimming
- Running

THE DAYS WORK.

~~Days work generally~~ (eight hundred tons
) Necessary muscle work two hundred tons, or
 (walking nine or ten miles.

772 work units equal one heat unit.

Walking 20 feet is equivalent to raising the body 1 foot.

An ounce of fat equals 1000 heat units.

An ounce of starch or albumin equals 500 heat units each

Ascertain the patient's weight

$772 \div W$. equals number of feet patient must lift his
 own weight to do mechanical work equivalent to 1 heat unit.

Divide this by 5, because when the body works, four units of
 energy are consumed in heat production when one unit is con-
 sumed in mechanical work. So the formula stands: $772 \div W 5$.

This must be multiplied by 20 to indicate the number of
 feet which must be traveled; so the final formula will be

$\frac{772 \times 20}{W 5}$ equals distance to be traveled by
 patient to burn one heat unit.

To ascertain the amount required to consume one ounce
 of fat, multiply by 1000; to consume one ounce of starch or
 albumin multiply by 500.

Example: Suppose the weight equals 200 pounds. Then
 we will have $772 \times 20 \div 200 \times 5$ equals 15 feet for one heat

unit. This multiplied by 1000 gives the number of feet required to consume one ounce of fat, 15,000 feet, or about three miles.

RESISTIVE EXERCISES

Stretching Exercises.

Series of corrective exercises:

(Note. These exercises to be taken by means of a wall and chair, and the floor. The wall and the chair and the floor take the place of a trainer)

- Wall exercises
- 1. Wall standing, breathing
 - 2. Wall standing, heel raising
 - 3. Wall standing, arm raising
 - (a) Forward raising
 - (b) Sidewise raising
 - (c) Circumduction
 - (d)
 - 4. Wall standing, head backward bend, touching the wall. Heels raised, chest raised.
 - (a) Stand a foot length in front of the wall
 - (b) One foot against the wall the other foot forward. Reverse.
 - (c) Heels and hips touch wall.
 - 5. Wall standing, abdomen compressed, breathing

Sitting exercises.

- 1. Correct position
- 2. Stretching exercises
 - (a) Side muscles (right and left)
 - (b) Back
 - (c) Rocking exercise
 - (d) Foot movements.
- 3. Abdomen compressed breathing.

Lying exercises.

- 1. Leg raising--breathing
- 2. Feet support, trunk raising--breathing
- 3. Prone lying head raising

HOUSEHOLD GYMNASTICS

Sitting (San chair, rocking chair)

Stair climbing

Sewing machine

Knitting

Kneading bread

Sweeping

Scrubbing

House cleaning, washing windows

Making beds

**Carrying (Basket of clothes
A baby, water)**

Washing

Ironing

Picking up things

Carpet sweeper

Dusting

Lifting

For men--Farm Gymnastics

Chopping

Shoveling

Hoeing ~~and weeding~~

weeding
Piling wood

~~**Rolling**~~

Sawing

Planing

Sitting
F

BARS

Temp. 99.1 - 99.2
 98.6 - 98.6
 98.3 - 98.9
 98.4 - 98.1
 98.6 - 98.6
 99.1 - 99.
 97.5 - 98.4
 98.7 - 98.3
 98.7 - 98.7

Pulse 84 - 84
 84 - 93
 64 - 76
 80 - 85
 76 - 80
 84 - 84
 74 - 82

C. T. 11 1/4 - 11 1/2
 12 3/4 - 12 3/4
 10 1/2 - 11
 8 1/3 - 9 1/2
 11.5 -
 12 - 14
 10 - 10.5
 10 - 9 3/4

Surf. 94 - 94
 temp. 95 - 98.2
 94 - 95

Sensa-1 1/4 - 1
 tion.

Ergo-gram. 135 - 174
 15 (166 - 126
 30 (146 - 133
 76 - 101
 120 - 113
 135 - 174
 120 - 130
 166 - 210
 240 - 205
 74 - 45
 160 - 195

~~vibration~~ Vibration
~~beat~~ to heart.

30 min

CHAIR

98.2 - 98.6
 98.8 - 99.8
 98.8 - 99.6
 99.2 - 98.8
 98. - 98.6
 98.3 - 98.3
 99.2 - 99.1
 99.1 - 98.8
 99.8 - 98.4
 98.6 - 99.
 98.6 - 99.6
 98.6 - 99.2
 98.9 - 99.2
 98.8, - 99.2

Pulse

68 - 74 } 15 times *min.*
 80 - 96 } *30 min*
 88 - 78
 80 - 80
 70 - 80 Rigid sitting
 80 - 92 Relaxed "
 92 - 88 Standing sidewise.
 72 - 76
 82 - 88
 72 - 68
 72 - 84

C. T.

10 3/4 - 10 3/4
 12 1/4 - 14 1/4
 12 - 14

Surf. temp.

99 - 91
 96 - 96

Sensation. 1 - 1

114 - 121 5 min.
 116 - 120 5 "
 117 - 130 20 "
 120 - 123 5 "
 91 - 94 5 "
 92 - 97 10 "
 91 - 95 10 "

No sensation.

THE CODE OF HEALTH

1. Breathe Only Pure Air. Live, work, play and sleep in the open air as much as possible and secure pure air indoors.
2. Eat Only Wholesome Food. Eat and drink biologically - fruits, nuts, grains, vegetables, especially greens, milk and other dairy products. Avoid meats - flesh, fish, fowl - also adulterated and other unwholesome foods.
3. Evacuate After Each Meal. Evacuate three times daily, or after each meal. If necessary take an enema at bedtime. Prevent putrefaction and offensive stools by changing the intestinal flora. Avoid drug laxatives. Use laxative foods and food accessories rich in bulking and vitamins.
4. Masticate Thoroughly. Chew solid and semi-solid foods until smooth and nearly tasteless. Sip liquid foods slowly.
5. Proper Daily Exercise. Exercise sufficiently each day to induce perspiration and moderate fatigue. Walk more; ride less. Hike, swim, bicycle, work out of doors. Use "The Health Ladder."
6. Maintain Correct Posture. Hold the chest up when sitting, standing, walking, and so far as possible when at work. Do not slump.
 Sit with chest held well to fore,
 Feet placed squarely on the floor.
 Stand head erect and lowered chin,
 Hips held back and stomach in.
7. Rest, Relax and Recreate. Take proper rest by change of occupation, recreation and relaxation.
8. Sleep Eight Hours, more if necessary.
9. Bathe Daily. Take a cold water or air bath every morning; sun or light bath once a week if possible; soap and water bath twice weekly.
10. Avoid Poisons. Avoid alcohol, tobacco, tea, coffee, condiments and the habitual use of drugs of any sort.
11. Avoid Unclean and Infectious Contacts. Special dangers - persons with colds or other infections, visits to toilets, infected foods and food handlers.
12. Cultivate Amiability, Optimism, Contentment and Poise.
13. Avoid Petulance, Anger, Worry and Fear. Cultivate composure.
14. Concentrate. At least twice daily, in silent seclusion, for five or ten minutes, concentrate the mind intensely upon physical, mental and moral betterment. Note and follow the suggestions you receive.

Dr. John Harvey Kellogg

Ed. for Good Health.

Where Are the Healthy Young Men?

The result of the medical examinations which have been made for the purpose of determining the fitness for military service of the thousands of young men who have been volunteering for service in the army and the navy within the last few weeks have been the subject of wide newspaper comment, and have arrested the attention of a large number of serious and thoughtful men and women in all parts of the country. These examinations have brought out the astonishing fact that on an average of about one half of all the stalwart young men who have volunteered for service in defence of their country have been found, on examination, to be so seriously affected as to be unfit for military service.

Here we have another decided evidence of physical deterioration. What does it mean that more than half of the most vigorous young men in the country are suffering from tobacco heart, weak lungs, and other defects, to such a degree that they cannot endure the hardships of ordinary military service, which now-a-days does not begin to compare in severity with the demands made upon the soldiers who compose the armies of ancient Rome and Greece? The significance of this fact cannot be misunderstood. It means that race deterioration has advanced to an astonishing degree, and by comparing the results of the present examinations with those made thirty five years ago, when the Union Army was being recruited, it is evident that within the past third of a century there has been a decided advance in a downward direction.

We may possibly be growing wiser, but we are as certainly growing weaker. The almost universal use of tobacco among young men, the extensive use of wine, beer, and alcoholic liquors of other sorts in all classes of society, the neglect of physical exercise, the vicious and dyspepsia producing diet to which young men and young women are subjected in boarding schools, college dormitories, hotels, boarding houses

as well as their own homes, together with soul and body destroying vices of various sorts, are making rapid inroads upon the constitution and the stamina of the race.

We note that certain senators and other politicians are complaining that the army regulations are too strict, but Dr. Sternberg, the surgeon-general of the army, a man of unquestioned fairness and integrity, assures the public that there has been no change whatever in the regulations. Evidently the change is in the men. It is about time that the leaders of our government and of society awaken to the fact that it is impossible to make good soldiers and equally impossible to make good men, out of the sort of rubbish which is spread upon the average table, that sinewy, enduring muscles are not developed in the saloon, the billiard hall, or at the card table, nor at other sedentary occupations, as loafing, watching the issues of a horse race or a base ball match, or strutting down the avenue with a cane and a blooded pup, or extracting nicotine from a cigarette or a well filled Meerchaum pipe.

At the present rate of deterioration, it will not be long before this country will be running an even race with France on the road to national decay. France has abandoned all attempts to keep her military standard up to the level of sound physical development, having lowered her standard of height two centimeters, or four fifths of an inch, within ten years, and is struggling with the problem of how to prevent depopulation. There is reason for believing that the same problem would be confronting us here in this country were it not for the incessant contribution of citizens of foreign countries, and the consequent infusion of new life into the old communities which are the most active centers for race degeneration, by the importation of the robust and hardy peasantry of Germany and Scandinavia, whose simple habits have thus far prevented any marked degree of physical deterioration.

We must awaken to the fact that race deterioration is going on in our very midst to an alarming extent, and that the only remedy which

can possibly be of any service to check this tidal wave of destruction which threatens the annihilation, not only of the nation, but of the race, is thorough going reformation of the health habits of the individual. Municipal, state, and national sanitary laws, regulations, and reforms are of the highest value, but are incompetent to deal with this appalling question. Environment is a matter of the highest value in the cultivation of health, but will not compensate for the infraction of the known laws of physiological existence by the individual.

Simple Life I
(From "Les Misérables," p. 13.)

One day the bishop delivered the following sermon at the cathedral:

" My very dear brethren, my good friends, there are in France thirteen hundred and twenty thousand peasants' houses which have only three openings; eighteen hundred and seventeen thousand which have only two openings,--the door and the window; and, lastly, three hundred and forty-six thousand hovels which have only one opening,--the door. All this comes from a thing called the door-and-window tax. Just place poor families, aged women, and little children, in these houses, and then see the fevers and sickness! Alas! God gives men fresh air, and the law sells it to them. I do not blame the law, but I bless God. In Isère, in Var, in the two Alps, Upper and Lower, the peasants have not even wheelbarrows, but carry manure on their backs; they have no candles, but burn resinous logs and pieces of rope dipped in pitch? It is the same through all the hilly part of Dauphiny. They make bread for six months, and bake it with dried cow-dung. In winter they break this bread with an axe and steep it in water for four and twenty-hours before they can eat it. Brethren, have pity; see how people suffer around you!"

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3. Immutability of the natural law.

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 - (a) Mouth.
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 - (d) Pancreas.
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2. Five digestive fluids.
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(Tissue ferments convert digested food products into solids again.)

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5. Food Elements. (Make chemical experiment to show the difference between kettle
 - (a) Starch.....(cooked and baked starch.
 - (b) Proteids, animal and vegetable.
 - (c) Fats, animal and vegetable.....(Emulsified.
(Cooking.
(Frying.

(d) Sugar..... (Levulose sweetest of all sugar. Found in the blood and in fruit. When fruit becomes dry, is changed to glucose. How plants make sugar and the leaves make cellulose.)

(e) Have blocks of wood to illustrate the proportions of starch, proteids, and fats. Combinations.

6. Fats.....)) Nuts.
Albumen.....)	
Starch.....((Dextrine.....)
	(Sugar.....)
Acids.....)) Fruit.

(Thus it is true that either nuts and fruit or nuts and grains will supply all the necessary food elements.)

7. Adaption of food to age, occupation, climate, seasons, health, and disease.

8. Errors in diet.

- (a) Hasty eating.
- (b) Irregularity.
- (c) Drinking at meals.
- (d) Overeating.
- (e) Improper foods.
- (g) Condiments and spices.

EXERCISE.

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2. Work out physical salvation.
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VENTILATION.

1. Air starvation.
 - (a) From ill fitting clothing.
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Cereals; high nutritive value complimented by cookery.

Legumes; nutritive value; modes of preparation.

Vegetables; questionable food value; require seasoning of some kind.

Seasonings; harmful; mustard, pepper, vinegar, etc.

Evils of each.

Fats; harmfulness of; pie crusts, pastry, griddle cakes, etc. butter, lard, oleomargerine.

Dangers of Cream and Butter.

Dangers of Milk.

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7. Simple remedies. Fom. etc.
8. The body a temple of --etc.
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SCHOOL OF HEALTH.

Foundations.

1. God in nature and God in us.
2. Man is the temple of God, the sanctuary, the place of controversy and ministry.
3. Our relations to God. God is reconciled to us as soon as we are reconciled to Him. Christ in the atonement.

Home Hygiene.

Ventilation:

Methods, amount required, inlets, outlets, heating in connection with ventilation, ventilation of a cottage home, school houses, meeting houses, cellars, attics, closets.

Disinfection:

Body disinfection, room disinfection, only hot soap suds needed.

Dust.

Garbage.

Kitchen sinks.

Place under the house.

Carpets, rugs.

Beds.

Vermin.

Back yards.

Vaults.

Cess-pools.

Water supply:

Wells, cisterns, hard water, rain water, city water, ditch water, filters, distilled water, lake water.

Leaky roofs.

Moldy rooms.

Wall paper, one layer put on over another.

Laundry.

Individual Hygiene.

Diet.

Dress:

Fundamental principles.

Warmth, modesty, freedom of movement, beauty.

Evils of conventional dress.

Restraint of breathing, consequences, digestion, liver action, etc. Weakening of trunk muscles, consequences. Displacement of stomach and other organs.

High heels, insufficient clothing of the limbs. Skirt bands, belts, stiff waists.

Relation of physical culture to dress reform.

History of dress reform.

Diseases due to conventional dress.

Disorders of the stomach, liver (gallstones,) enteroptosis, pelvic diseases, general feebleness.

Bathing.

Exercise --Home gymnastics, corrective gymnastics.

Home Remedies.

Natural remedies for disease.

It is the blood that heals.

How to relieve pain, fever, general weakness, insomnia, a cold, bruises, sprains, rheumatism, constipation nervousness, malarial fevers, anemia, and other infections.

Accidents and emergencies, burns, water, massage, heat.

Christian Help Work.

Motive.

Methods.

Work to be done for fathers.

Tobacco, drink, assistance in finding work.

Work for Mothers.

Care of homes, care of children, cookery, dress, care of sick, home remedies, child culture, mothers' meetings.

Work for young ladies.

Sewing circles, nature study, Bible study, girls' clubs, special physiology for girls.

Work for boys.

Boys' clubs, anti-cigarette clubs, sewing schools, special physiology for boys.

Work for Children.

Kindergarten, kitchen garden.

What to do in emergency.

Formation of Good Health clubs, Life Boat.

Jail work, friendly visiting.

Gospel Work.

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SCHEDULE I.

GENERAL INDICATIONS OF GOOD HEALTH

	Normal Counts	Counts
1. Sense of fitness and well-being.	10	
2. Good appetite and relish for food.	10	
3. Sufficient sound, regular and refreshing sleep.	10	
4. Absence of undue sense of fatigue after muscular effort.	10	
5. Readiness for and enjoyment of mental work, - regularity in attendance at classes, with lessons well prepared.	10	
6. Optimistic mental state.	10	
7. Freedom from attacks of headache, pain, faintness, giddiness, colds, sore throat, indigestion, bilious- ness, etc.	10	
8. A clean tongue, sweet breath and freedom from malodors	10	
9. The absence of any marked bodily deformity or defect or history of grave disease.		
10. Evidence of efficient vaccination (Shick's test). Perfect score	10 100	

In filling out the blank the figures written in should show as nearly as possible the degree to which the normal condition is reached or maintained. For example, a good appetite for every meal every day will be shown by 10; no appetite at all by 0; a fair appetite most of the time by 5; an appetite for dinner and supper but none for breakfast, 7.

SCHEDULE II.

PHYSICAL CONDITION

	<u>Normal Counts</u>	<u>Counts</u>
1. General Nutrition	4	
2. Development (Muscles (Bones (Physique (Figure	4	
3. Nervous System	4	
4. Skin	4	
5. Lungs	4	
6. Heart	4	
7. Digestive Organs	4	
8. Kidneys	4	
9. Pelvic Organs	4	
10. Endocrine Glands	4	
11. Eyes	4	
12. Ears	4	
13. Nose and Throat.	4	
14. Teeth	4	
15. Feet	4	

PHYSICAL TESTS

1. Strength	4	
2. Posture	4	
3. Lung Capacity	4	
4. Heart	4	
5. Blood (Chemical (Count (Hemoglobin (Serological	4	
6. Kidneys (Urine (Efficiency	4	
7. Intestinal Motility	4	
8. Intestinal Flora	4	
9. Metabolism	4	
10. Intelligence test	4	
Perfect score	100	

This blank will be filled out by the school physician.

SCHEDULE III

HABITS TO BE AVOIDED OR CORRECTED

	<u>Discounts</u>	<u>Discounts</u>
1. The use of tea, coffee, Coca-Cola or cocoa.	11	
2. The use of tobacco in any form.	12	
3. The use of alcoholic beverages in any form.	11	
4. Excess of protein--meat.	11	
5. Excess of cane-sugar--candy	11	
6. The use of pickles--vinegar, pepper, mustard and other hot sauces and condiments.	11	
7. Eating too much or too little	11	
8. The habitual or frequent use of drugs--aspirin, hypnotics, laxatives, etc.	11	
9. Worry, fear, anger.	11	
Perfect score	0	

The markings of this schedule should show the degree to which the habit concerned is indulged. For example, if tea, coffee, cocoa, tobacco or alcohol in any form is used habitually, mark the full count; if occasionally, 5. If continually worried or fearful, the full score (11) will be marked; if occasionally worried or angry, mark according to frequency.

Mental Hygiene

Mental Hygiene

Do not worry. The Power that made us can and does take care of us. There is no need to worry. The Intelligence that controls and energizes heart and lungs can rule our destinies and with our co-operation will lead our lives in ways where "all things work together for good" to us. Worry kills. Hope inspires, uplifts. Cheer up.

Do not become self-centered. Avoid thinking or talking about ailments or other unpleasant things. Cultivate altruistic ideals and wholesome and optimistic thoughts.

Exercise self-control and restraint in all things. Work uses energy moderately, the passions and the emotions, enormously.

Take a vacation when you dream about your work.

Discard tobacco, alcoholic beverages, "tonic drugs" and other nerve foollers. They are poisons which lessen efficiency and shorten life.

Avoid nostrums and patent medicines. The habitual use of any drug is harmful. The most eminent physicians are now agreed that very few drugs have any real curative value. The essential thing is right habits of life.

Antisepsis of the Mouth.

So long as the mouth is swarming with microbes, which is always the case when the tongue is coated and the teeth are uncleanly and presenting unfilled cavities, thousands of germs are carried down into the stomach with every mouthful of food or drink swallowed. The first step toward asepsis of the stomach, and a most essential thing in the treatment of indigestion, is mouth cleanliness. Modern researches have shown that nearly all diseases of the mouth, as well as a large share of the diseases of the stomach, are due to the action of germs which find a lodgment there. The mouth is peculiarly exposed to the attacks of germs, as it is located at the very entrance of the body, and a portion at least of the respired air passes through it, and the germ readily finds lodgment about the tongue, cheeks, between the teeth, and elsewhere. The mucus secreted by the glands of the mucous membrane lining the mouth is to some degree antiseptic in character, and possesses to some extent germicidal and germ-destroying properties. When the mouth is kept clean, this disinfecting mucus is capable of thoroughly protecting this portion of the body against the attacks of microbes, but when particles are left to lodge between the teeth, the germs, finding abundant soil in which to grow and multiply, become so numerous that the poisonous substances which they produce, neutralize the antiseptic mucus to that it becomes powerless for protection. Meat, more than all other foods, is injurious in this respect, for the reason that its fibers lodge between the teeth and are not easily removed, and for the further reason that it furnishes a kind of soil in which germs grow with the greatest rapidity and develop the most virulent properties. It is thus apparent that thorough cleanliness of the teeth and mouth is one of the most hygienic measures. This fact becomes still more apparent when we remember that the act of eating or drinking and the frequently repeated act of swallowing to clear the throat from mucus,

a practise which can not be too much deprecated, are the means of carrying down into the stomach any microbes which may be present in the mouth.

There are certain microbes, also, which seem to have their habitat in the mouth, particularly those of diphtheria pneumonia, and consumption. It is not known that these germs propagate outside the human body, except under artificial conditions; but they find ready lodgment in the mouth, and are often present there in persons apparently enjoying perfect health, waiting the opportunity when a severe cold or some other depressing agent shall, by reducing the resistance of the body, enable them to obtain a stronger foothold, and to manifest their presence by the characteristic symptoms of diphtheria, pneumonia, or some form of tubercular disease.

General Topics.

HEALTH CRUMBS.

Don't worry.

Don't hurry. "Too swift arrives as tardy as too slow."

Don't overeat. Don't starve. "Let your moderation be known to all men."

Court the fresh air day and night.

"O, if you knew what was in fresh air!"

Sleep and rest abundantly. Sleep is Nature's benediction.

Spend each day less nervous energy than you make.

Be Cheerful. "A light heart lives long." Think only healthful thoughts.

"As a man thinketh in his heart, so is he."

"Seek peace and pursue it."

Work like a man; but don't be worked to death.

Avoid passion and excitement. A moment's anger may be fatal.

Associate with healthy people. Health is contagious as well as disease.

---Selected.

How To Live To Be Strong.

Jess Willard, heavy-weight champion, tells in a recent article how successful boxers must live. "Keep away from cigarettes and keep away from drink," he says. "Chew your food until your jaws ache. If you had a nice fire going, you wouldn't throw in coal until you smothered it, would you? That's what you do to your digestion when you swallow food without chewing it.

"Fat doesn't come from eating too much. It comes from chewing too little. A hog gets fat because he doesn't use his teeth.

"Stay out in the open air as much as you can. Breathe deep. The best training in the world is to fill your lungs and then hold your breath as long as you can. It doesn't take any gymnasium to do it in, either.

"And brush your teeth after every meal! I couldn't see any sense in it when I was a boy, but my mother made me do it. Now I know that seventy-five per cent of all sickness comes from bad teeth.

"Keep tobacco and whiskey out of your system, chew your food, brush your teeth, breathe deep, and take moderate exercise in the open air. Any boy that does these things will be ready for any sort of hard athletic work when he gets to be eighteen or nineteen."

Mr. Willard is against athletics for a boy under eighteen years of age.

WHAT MAKES A MAN TIRED?

A New York banker, consulting a physician at the Sanitarium, asked a question which is of great interest to thousands of business and professional men. He said, "Doctor, what makes a man tired? I am tired all the time. I get up in the morning tired. I haven't any pep. I have lost my appetite for work. I am not sick. The doctor can't find anything the matter with me. I am just tired. Now what makes a man tired any way?"

"Sometimes it is work," said the doctor. "More often it is something else."

"I am sure that is right," said the banker, "for often I am more tired in the morning than I am at night."

"That is a very common observation," said the doctor.

One
~~"Another~~ thing that makes business and professional men tired is the office chair. Bad posture, chiefly due to badly constructed chairs and seats, is a common cause of chronic and disabling fatigue. There are many other things which make a man tired, such as worry and smoking," said the doctor, "but I'll give you a little booklet that you can read at your leisure, and you can get extra copies if you wish at the extension department of the Sanitarium. Ask for booklet, "What Makes a Man Tired?"

Fatigue due to work is dissipated by sound sleep, which is Nature's method of recharging the storage batteries of the brain and nerves. Fatigue is the signal that the

nerve batteries need recharging. Insufficient sleep leaves the batteries incompletely charged, and hence the tired feeling. Eight hours' sleep is the normal requirement. Men who, like Edison and Napoleon, spend but four or five hours in bed, take naps in the day-time totaling three or four hours more.

And the sleep must be sound, undisturbed by noise, in which, as scientific experiment has shown, lessens the restorative value of sleep even when the sleeper is not awakened. Evidently, drugs which prevent sound sleep are harmful and sleep-producing drugs are also harmful because the sleep which they produce has not the restorative value of sound, natural sleep.

A tired feeling that is not relieved by sleep is toxic fatigue. Dr. Lee, professor of physiology in Columbia University, found by experiments on animals that the malodorous substances which develop in the colon are powerful fatigue poisons. When they were injected into an animal, even in minute amount, the creature at once became tired. The coated tongues and foul breath of many tired persons, show the source of their fatigue to be deficient elimination. In such cases, proper regulation of the diet will effect a speedy cure of the insomnia. A chronic tired feeling is a danger signal which should not be neglected. A premature breakdown in health is the logical result of neglect. The cause must be found and eliminated by a change of habits. If you desire, the Health Extension ^{Department} of the Battle Creek Sanitarium will send you on application a copy of a little booklet in which you will find helpful suggestions. Ask for booklet about that tired feeling.

See p. 1-

HHB

HOW LONG SHOULD CHILDREN SLEEP?

Dr. Foster of the University of Minnesota has discovered that children under six months need fifteen hours' sleep a day. Eleven hours prove sufficient for children seven years of age. Care should be taken to secure for a child all the sleep it needs since growth occurs mostly during sleep.

Rooms are Damp.

as well as ordinary living rooms, should be warmed.

Unheated rooms become in winter time condensing chambers. The steam and moist air from ^{the kitchen, laundry and other} warmer parts of the house are drawn into such places and the moisture is condensed upon carpets, curtains, furniture and bedding. In the construction of a house, care should be taken that the kitchen and laundry are so placed that the steam arising from cooking and laundry operations will not readily find its way to the other rooms of the house.

Every house, factory, or other indoor place should be provided with efficient means of ventilation. ~~Quote from man or some other book on~~

ventilation.

How to Sleep Out - 45

There are now ^{available various} ~~all kinds of~~ appliances to facilitate the out-of-door life at night.

There is the sleeping porch, constructed from an ordinary porch by enclosing with tent-cloth curtains to afford some protection from high wind and snow.

Then there is the fresh-air tube, by which the window opening may be extended, so to speak, to any part of a living or sleeping-room.

The window tent is another device which enables the sleeper to keep his head out-of-doors while the rest of the body is inside.

Open windows allow the winter hurricanes to fill the inside of the house, chilling everything and everybody, and hence are not an unmixed blessing; but better to open windows wide at night than to stifle in foul air.

Feeble folks may avoid possible discomfort from cold by taking a hot-water bag, a Japanese fireless heater, or some other heating device to bed with them. The latest and best of all devices is ^{the} a thermo-electric ^{had or} blanket, which may be placed either over or under the sleeper. By simply touching a button the heat may be turned off--warmth on tap, like water or gas!

5

DIRECTIONS FOR MAKING A PERSONAL HEALTH SURVEY

Schedules I, III and IV are to be filled out by the subject himself, noting the following points with reference to the several schedules:--

Schedule I.

1. To make 10 counts, one should enjoy uninterrupted good health, with a sense of fitness for his tasks and of complete physical and mental well-being. An occasional interruption of this state of physical beatitude would require a marking ^{of} 9, 8, or 7, according to the frequency of the loss of fitness. A person who feels always below par should mark himself zero.
2. An uninterrupted good appetite and relish for every meal, merits 10. If appetite is good for lunch and dinner only, mark 7. If a keen appetite and relish for food are never experienced, mark zero.
3. One who rarely wakes in the morning feeling refreshed and prepared for his day's duties, or who does not, on the average, sleep more than six hours, should mark 5. One who is really suffering from insomnia, will make still lower marks, according to the degree of loss of sleep.
4. A marked lack of endurance and great fatigue after slight exertion calls for a marking of 2-5. A person should be very strong and well to merit 10.
5. To merit the full 10 counts, one should have an uninterrupted appetite for study or other mental work and a normal degree of efficiency.
6. The full count of 10 calls for a placid cheerful state of mind under conditions justifying such a mental state, and a reasonable degree of adaptability to adverse conditions.
7. If frequent attacks of colds or other illnesses occur, the

marking should be 5. The constant presence of headache or of any one or more of the illnesses named, will require a zero mark.

8. If the tongue is coated and the breath odorous, or if unpleasant body odors are constantly present, mark zero. If only occasionally present, mark accordingly.

9. Any bodily defect of which the individual himself is conscious, such as hare-lip and eye squint, defective speech, pigeon-breast, curvature of the spine, club-foot, flat-foot, the effects of rickets in infancy, a history of typhoid, smallpox, unusually severe attack of scarlet fever, diphtheria or measles or recognized tubercular infection of lungs or bones, will reduce the counts to 5 or even zero, according to the number or gravity of the defects or diseases.

10. The absence of vaccination will demand a zero mark.

Schedule III

1. The habitual, or daily use of any of the articles mentioned calls for II counts; the occasional use, 5. Only total abstinence merits zero.
2. Habitual use, 12; used on very rare occasions, 5; total abstinence zero.
3. Habitual use in any form, II; a social glass on rare occasions, 4; total abstinence, zero.
4. Regular and daily use of meat in any form, fish, flesh or fowl, II; occasional use, 5; if never used, 0.
5. The free, practically every-day use of candy, II; occasional, 5; rarely and small quantities at meal time, 0.
6. Habitual use, II; occasional, 5; if never used, 0.
7. Habitual eating to such excess as to cause a marked fullness or discomfort, or eating less than needed, II; occasional indulgence to excess, 5.
8. The habitual use of any drug, II; frequent use, 5 or more, according to the degree or frequency.
9. Worry, morbid fear, frequent fits of anger require II; if occasional occurrences, lessen the counts according to frequency.

Schedule IV

A careful reading of the booklet, "The Simple Life in a Nut Shell" or "Biologic Living" will aid in determining the proper markings for this schedule. Only one who follows all the rules laid down implicitly will be entitled to full counts and 100 per cent.

1. One count should be deducted for neglect to use, daily, in sufficient quantity, bran or other roughage; I count for neglect to supply iron, lime and vitamins by the free use of greens; I count for irregularity in the taking of meals and I or more counts for other infractions on the rules of right eating. 6 counts are merited only when one is strictly and without interruption carrying out the full program of biologic eating.

2. Thorough mastication requires chewing the food until it is reduced to a smooth, semi-liquid form. If the food is swallowed carelessly, mark 0; if chewed to a moderate degree after the usual fashion, mark 2. The full count of 5 is only merited by one who makes a conscientious and habitual effort to masticate each morsel properly.

3. The full complement of liquid required is six glasses. Deduct I for each glass omitted.

4. If once a day only, 3; if every other day, I; if only by the aid of mineral waters or other medicinal water, or by the aid of an enema, 0.

5. The full count requires eight hours' sleep ^{an} on open sleeping porch or balcony or out-of-doors. For eight hours in bedroom with widely opened windows, mark 5. If bedroom is unventilated, even in the winter-time, mark 3. For each hour of sleep less than eight, deduct I count. Five hours' sleep in an unventilated room, if habitual, will merit 0.

6. Systematic, daily exercises for half an hour to an hour is required by all persons not engaged in active, muscular pursuits. The exercise should be active and of such a character as to correct the

effects of bad posture, or deficient breathing occasioned by the daily occupation as well as to give the muscles adequate exercise. For this purpose, a definite and suitable program should be followed. If such exercises are taken faithfully every day, mark 6; if half the days, 3; if rarely, or not at all, 0.

7. Fatigue, when due to work, is Nature's demand for rest and the demand should be obeyed. Toxin fatigue due to constipation and drug habits is relieved by exercise, as is also nerve and brain tire due to work. The habit of relieving fatigue by drinking tea or coffee or coca-cola is pernicious and destructive. The markings should indicate the extent to which the duty to rest when tired is observed physiologically.

8. To merit 6, a correct posture should be habitually maintained in sitting, walking and working. The posture of the average person, man, woman or child, is so bad as to require a zero mark. Only one who conscientiously maintains a correct posture, that is, the upright bearing of the soldier habitually, is entitled to the full marking of 6.

9. If a cold air or water bath is taken on rising every day, mark 6; or make lower markings in proportion to the degree of neglect.

10. If this rule is observed only occasionally, mark 0.

11. To merit a mark of 6, the teeth must be kept in the best possible condition under the direction of a competent dentist. If only occasional inefficient care is given the teeth, mark 0.

12. Indicate the degree to which this requirement is met.

13. Full breathing requires the use of the whole chest. This is only possible when the posture is correct and the clothing is loose. When the chest is held high, the breathing will take care of itself. Full, deep breathing should be encouraged by exercises which bring

the lungs into vigorous play, such as running, skipping, swimming, etc.

14. By recreation is meant a change from the usual occupation, diversion, including the weekly rest-day which may or may not be recreative.

15. For safety, it is necessary to avoid as far as possible all contact with infectious materials. Special care is necessary in visiting the toilet. The hands must always be washed immediately, with soap and water. All public toilets are dangerous. Colon germs have been found on the hands of 30-50 per cent. of all people examined, so shaking hands is sometimes hazardous. Coughing and sneezing project highly dangerous germs into the air and may spread contagion and diphtheria, influenza, pneumonia and other grave diseases. The mouth and nose should be covered during coughing and sneezing. Avoid the proximity of people who often sneeze. It is not to be forgotten that it is one's duty to protect others as well as himself.

16. Optimism, good cheer and amiability must be cultivated as a duty to one's self as well as a social obligation. Very few can claim a perfect score.

17. Compliance with this rule will lead to scrupulous care in relation to everything pertaining to biologic life as well as the items above mentioned.

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Infectious

Skin germs,
nose germs
mouth germs

Germ carriers,
Typhoid, drinking water
Paratyphoid
diph.
proseminia
Streptococci

decayed teeth
pyorrhea
abscess

Sore eyes
Trachoma
Venereal diseases
flies

Malaria, plague, etc. Insects & vermin

Colitis
Fiberculosis
meat & eggs, ^{years} - ^{inclusion} mullorin
Tapeworm, colitis

Barbers itch

~~gentle~~

~~Hand paper~~
Coughing
Sneezing

~~pecking nose~~
~~biting nails~~
Combing
Showering
bitls
books,

Combs in
mouth, cut
crushing glass
" familiar
" vipers.

CHAPTER I.IMPORTANCE OF HEALTH.

Health is a condition in which the entire body is in perfect working order.

When in health, one feels no pain, no ache, no lameness, no distress of body,- just abounding life and vigor; or as one little boy defined it, "just feels good all over".

Man, fresh from the hand of his Creator, had perfect health. That he does not now always have good health is due to lack of proper care on the part of some one, quite generally himself.

Our bodies are more intricate, delicate, and wonderful in their make up, than a watch, or any fine machine made by man, and require much greater care to keep all the parts in health.

Once impaired, the body cannot be restored to it's first soundness.

The health of the body is often injured by breathing bad air, by the use of bad foods and drinks, and by many bad habits, which if we know about them we can avoid.

To know the right things to do for health, and knowing to do them is most important. Health does not come to us by chance, but by our obedience to Nature's laws. The rose gardiner, who every week in the warm weather, loosens the soil about the plants, keeps them well watered, weeds them, and keeps them free from insects, because of his care and attention to these things which roses need, will have larger and more beautiful blossoms, and his bushes will become so strong and so thrifty that they can endure without harm, the frost

and the cold, when the winter season comes around.

The boy, who every day takes pains to give his body the right kind of care, can grow good health, and as with the gardiner's roses, the more culture, the better health will result. With good health, his body will become so full of vigor (vital power) that it can resist the disease as the strong rose plant resists the frost.

It pays to cultivate health, not only because we thus banish sickness to a great extent, and so do not have to suffer with headaches colds, and other ills, and stay out of school and miss our lessons, and many good times, but also with health:-

- (A) We get more fun out of life.
- (B) We can accomplish much more with mind and body.
- (C) We can do this with greater ease.
- (D) We can earn more money; gain greater benefits.
- (E) We shall live longer.
- (F) We shall have a more useful life.
- (G) We can give more pleasure to those around us.
- (H) We can have more beauty and symmetry of body.
- (I) We shall be more cheerful and happy.

It is not the weak and sickly who win the race.
Health is the great aid to success. The kind of men who fight

their way to the front ranks of their calling, are men of strong body. Not even wealth is of so great value as health. If we have health we can earn money, but with money alone we cannot buy health.

By right living is the only way to health. Somewhat depends upon how our ancestors and parents lived before we were born, but mostly health depends upon the way we ourselves live.

Illustration of
a beautiful and
symmetrical child.

Very few persons have perfect health. Some have good health much of the time. Many have only a fair average, but everyone should aim for a 100% mark in health, as well as in other things. By right living ill health can be avoided.

When ^{Theodore} Mr. Roosevelt was resident he asked Mr. Irving Fisher, a teacher in Yale University, to find out how many people in the United States were sick from diseases that might have been prevented. It was found that there were three million people in the United States sick all of the time, and one half of this number (1,500,000) need not have become ill if they, or someone else had not been careless regarding the laws of health.

If someone should give you a beautiful present would you treat it carelessly and spoil it, or would you take good care of it, and keep it nice as long as possible? Ought we not to take such care of our bodies as to keep them in that perfect and beautiful condition in which our kind and good Creator gave them to us?

salt but it contained also other ingredients, other impurities in such large amount that the salt could not be extracted profitably. It was so expensive a process to get rid of these impurities in the water that it was impossible to make a profitable salt industry there. What to do with this well, they didn't know. I remember very well, for several years various men tried to exploit it. I was very well acquainted with one man who spent several years there and ^{really} got the thing started. This effort finally succeeded through advertising in creating a great reputation. People went there to be treated for rheumatism and a good many people got well. I was talking with one man who gave baths at such a place and he thought the reason people got well there was because they stopped drinking whiskey and began drinking water instead; and another reason was that they got relieved of some impurities of the skin. He said he found half a pint of dirt in the bottom of the tub after giving one man a bath. People are benefited by baths in these hot springs. If they had taken hot baths at home, they would have been benefited just the same. We had a patient here who had a bottle of water sent up ~~to~~ here from Mt. Clemens. As soon as it got here we had the package opened in the office, he raised the bottle to his lips and took a good mouthful of it. The directions are: to put one tablespoonful into a tumblerful of water and sip it slowly. He drank it straight from the bottle and it was a very unpleasant dose. He ~~threw~~ threw the bottle straight across the room. He had had enough of mineral water. Mineral water is simply minerals or drugs in solution and the most common ingredients of mineral waters are common salt and sulphate of ~~magnesia~~ magnesia--two very common drugs. The sulphate of magnesia gives the mineral water a slightly bitter taste. These waters are unquestionably the most popular of all mineral waters because they produce activity of the bowels and this is what the great majority of people are drinking mineral waters for. It is to stimulate the bowels to activity and they do this but the effect of taking these minerals, day after day, week after week, and month after month is to wear out the stomach, to disturb the function of the stomach so that it is no longer able to produce the proper amount of gastric juice. By and by comes colitis which is an extremely common result from the use of these mineral waters. Colitis is almost universally present in people who have long made use of mineral water and it is now

recognized as a cause of colitis. The last time I was in Vienna, I found Dr. von Noorden take a very strong stand against the use of mineral waters because of their proneness to produce colitis. The desire that some people have for water that has a bad taste or a bad smell is very strange, indeed. There seems to be a popular notion that the thing that will make people sick when well, is the very thing that will make them well when sick. I wish you would all read a paragraph that you will find in the last number of the Ladies' Home Journal from Dr. William Othler. You can find the same paragraph in the Encyclopedia Americana in an article by Dr. Othler, the great American physician now of Oxford, England in which he tells of the new school of medicine and how the modern doctor very rarely recommends drugs and has very little use for drugs. He tells how the medical profession thirty or forty years ago thought it very necessary to use drugs for almost ~~an~~ everything, and even still he says, "We have to use drugs sometimes in order to fix the patient's faith upon something. The patient must be made to believe that if he continues taking medicine long enough it is somehow going to cure him, and people still have so much confidence in drugs that some people have to have a dose of medicine in order to inspire their faith and confidence." One doctor told me sometime ago that if he did not give medicine, his patients would run away and go to a doctor across the road and why should he allow the other doctor to give the patient his bread bills or his little harmless doses and get the fees when he could have them just as well. Dr. Othler calls attention to the fact that about twenty-five or thirty years ago experiments were made by eminent physicians in Vienna with all the various drugs. They were tried in various ways. Experiments were made upon people and upon animals and the uselessness of almost every drug known was thoroughly exposed. Dr. Billings of Chicago some years ago when the American Medical Association held its annual meeting at New Orleans in his presidential address said to the thousands of doctors there assembled, "Drugs do not cure disease." He said, "There are only three drugs in the whole materia medica that are of any use in the cure of anything." Those three were opium to cure pain, mercury to cure a nameless disease and, quinine to cure malaria. I am not going to say there are no other medicines that might be sometimes useful. Simple charcoal is a useful

remedy. Bismuth is a very useful remedy to allay irritation. We are coming to learn that the ~~injury~~^{interior} of the body is not so very much different from the exterior and things that are useful upon the exterior are often useful upon the interior. Powdered bismuth is very good, indeed, to relieve irritation either exterior or interior. We sometimes apply ointment, cold cream to the skin to allay the irritation of sunburn. We apply ointment of various kinds. We are now finding out that vaseline is just as good for the inside as for the outside. In the form of paraffin oil which is simply a liquid vaseline, we find a very useful lubricant for the inside of the body, so we are discovering that those drugs which are useful are not those which are absorbed into the blood and circulated through the blood to the tissues but simply those which act in a mechanical way upon the interior of the body or the exterior.

Q--Is there any cure and what treatment would you advise for one who has prolapsed stomach and colon?

A--Yes there is a very simple cure. Apply the right kind of a spring supporter. A radical cure is to develop the natural support of these internal organs. There are two reasons why the stomach and colon are prolapsed. One is the membrane which suspends the colon is elongated. The colon is attached to the mesentery which is like a sort of fringe or a border to the thin membrane which is attached to the back bone and the intestine is arranged around the edge of this membrane. When this membrane which supports the colon becomes elongated that allows it to drop down. This is usually the case in prolapse of the colon. That cannot be remedied in any possible way, but as a matter of fact, the great injury does not come from the prolapsed position of the stomach or the colon. We used to think the stomach or the colon could not empty because it was low lying in the abdomen. That is now known to be quite a mistake. X-ray observations made in our own laboratory in thousands of cases have shown that the change in position really does very little harm, that the mere lowered position does not produce any very considerable degree of hindrance, but there is something more about this that is very important. The pendant colon produces a constant strain upon the

sympathetic nerves. A membrane that supports the stomach and the ligaments have nerves and blood vessels funning through the colon and these nerves when the organs are loaded and pendant and improperly supported are constantly under stress. You know ^{how} your arm feels sometimes when you are trying to carry a heavy bag to the depot, the bag gets heavier and heavier, even if you had a one-pound weight suspended ~~through~~^{to} a single finger and it was hanging there for hours it would become almost endurably painful. The same thing is true of these internal conditions. Whether water or food taken into the stomach undigested and unabsorbed lying in the stomach or the colon causes a strain which after a while becomes almost unendurably distressing. Usually the pain is not felt in the intestine or in the stomach but between the shoulders or in the lower part of the back. It is felt as a dull ache, a dragging sensation around the ~~knxx~~ loins , a feeling of weariness and depression. One of the consequences of this condition of the stomach and colon is the accumulation of blood in this part of the body. The portal circulation is capable of holding all the blood in the body. That is why people faint sometimes. When ones face turns pale and he faints, it is because his blood has run away into the abdomen. All in the world he has to do to get relief is to compress the abdomen. I will show you this because it is a very useful little trick. Suppose you begin to feel faint when you are sitting up. I was giving atemperance lecture many years ago and I was describing on a black board how a drunkard's stomach looked and there was a man in the back part of the audience and I saw three or four big men carrying out a big man. When he saw what the inside of a drunkard's stomach looked like as a result of whiskey, he was so disturbed that he fainted dead away and they had to carry him out. Ladies sometimes faint away as well as men. Suppose a lady says to a lady sitting next to her, "Oh I am going to faint away". The lady next to her immediately shouts for help. Everybody has to get out of the way ~~ix~~ ~~xxxx~~ to give her a chance to lie down on the floor. The floor isn't a nice place to lie upon and it may not be very clean. In this way it can be done much more effectively. Cross the hands low down over the abdomen, then bend over keeping the knees together. That compresses the abdomen and drives the blood right up into the head and you are relieved because of the crowding of the blood into the head.

You can do it instantly. We also use this principle in surgery. In one case in which I removed an enormous great tumor from the leg, when we got through the operation and the patient was taken out for a dressing, pretty soon the nurse called me and the patient seemed to be dead, had every appearance of a dead person. There was no pulse, no heart beat and no breathing. Knowing what I have told you, I simply gave very strong compression upon the abdomen at once. The blood at once came back to the face, the face flushed and the heart began to beat and the patient began to breathe and live again. The patient had been really dead. You say that may have been an accident. Well I thought so too, so I withdrew my hands and at once the face blanched again, the pulse ceased and the breathing ceased again. So I immediately had two nurses make hard pressure upon the abdomen and the blood came back and the heart began again and we had no further difficulty. I at once arranged a large rubber bag over the abdomen and tied a bandage around it and then inflated the bag full of air and ~~it~~^{this} compressed the abdomen in the most effective way and the patient had no further trouble, so you see the importance of the regulation of the blood supply between the abdomen and the head and other parts of the body. A great many times a person complains of feeling a little faint or weak or dull or drowsy or incapable of doing work ~~under~~ after dinner. The reason is simply that after ~~as~~ taking food into the stomach, a large amount of blood is poured into the stomach to help digest the food. This quantity of blood removed from the circulation is so great that there is not enough left to keep the brain active. That is what produces this sensation of faintness. Such a person should lie down after a meal and remain quiet for a little while until the equilibrium of the circulation has been ~~reestablished~~ restored. Many people have a weak depressed feeling all the time. This is because there is too much blood here in the portal circulation. When you go to bed at night, do not sleep on your back, but sleep on your face. I had a letter from a very eminent college professor a week or two ago in which he said, "I am sleeping on my portal circulation and apparently getting very great benefit from it." It was Prof. Fisher, who is here so often and talks about his case so readily in public and everywhere and appreciates so much the great advantages he has gotten from these simple life principles that I am sure he would not object to

my telling you that he is sleeping on his portal circulation and he said he is getting great benefit out of it because he finds when he sleeps on his portal circulation that his brain is more vigorous, he gets more benefit from sleep, the brain is more active during the day and he can get along with less sleep. In order to sleep on the portal circulation effectively, it is necessary to have something pressing against the body, so it is well to lie over a little hard cushion or pillow. One of these little leather cushions that are used about automobiles a great deal is exactly adapted to this purpose. Another thing of perhaps even greater importance for persons who have to be on their feet a great deal is the wearing of an abdominal supporter. The ordinary supporter is of practically no use. It constricts the body. The main pressure is upon the hips. What is necessary is something which will lift like the hand, which will make firm pressure. The advantage one gets from these supporters is not so much in holding up the stomach and the colon, although there is some advantage in that in taking off the strain from the sympathetic nerves, but the great advantage really is the compression of your portal circulation. It prevents the filling up of these large vessels which are immense in size. I have seen veins in this part of the body distended with blood as big as my finger, so when there is a loose condition of the abdominal muscles so that they are weak and flabby flaccid as they often are in sedentary people, particularly in women because of improper clothing, the wearing of rigid garments that hold their ^{bodies} ~~body~~ rigid so that there is no opportunity for exercise of the muscles or for development of these muscles, such women suffer greatly from this cause. The over accumulation of blood in the interior of the body--this is one of the causes of colitis also. A chronically congested state of the colon is one of the causes of chronic constipation; it is one of the causes of gallstones. Women have colitis four times as often as men and it is probably because of the difference in their clothing. I remember a traveling man some years ago came here complaining of a pain in his right side. Some doctor thought it was due to appendicitis. The appendix was removed but he was not benefited. He didn't know what the difficulty was. For two years he had been an invalid and had to give up his position because

he could not carry his bag of samples in his hand. After he had been here a very short time, I noticed his shape. He had a protruding lower abdomen, a characteristic shape of a person with weak abdominal muscles, so I brought out a little supporter with a pad behind and a steel spring and a pad on either side in front. I applied it and the man looked up in great astonishment. He said, "Why, doctor; that relieves me perfectly. What a fool I have been! Why I have been going around three years with my hand in my pocket holding my stomach up and why didn't I think of that before." The steel spring did it for him, so he didn't have to carry his hand in his pocket after that. The very next day he rode fifteen miles on a bicycle. He took his bag of samples in a few days and marched off and I have hardly seen him since. I know there are scores of people who come to this institution who have troubles of this kind which they think must be due to some serious trouble with the kidneys and effects that they attribute to various internal ailments that can be completely and perfectly relieved by the application of this simple spring supporter. One says "Don't this supporter make the muscles weak?" No, because they prevent the muscles from being over stretched and completely tired out by the continuous strain upon them. Give the muscles a chance to recover their tone by taking off the excessive weight from the internal organs. The important thing is to compress the abdomen and allow the blood that is congested here get into the general circulation and travel to parts where it is very much needed. If you have ever attended an exhibition of the turnberein you will see that they always wear a tight belt around here. ~~It~~ ^{They} makes the belt firm and tight not simply to protect the muscles there but they unconsciously do it in order to crowd out of the abdomen the excess of blood and get it into the muscles where they need it. The indian goes out on a hunt and if he
14535 does not find anything to eat he takes up a notch in his belt. If he doesn't find anything to eat the next day, he takes up another notch. He keeps his belt tight all the time because in that way it keeps the blood from accumulating in this region of the body. I do not believe in tight lacing of the chest, but the bandage applied below is quite a different thing. It is only when the muscles become weak that these supporters are of value. It is not to apply a bandage but

a spring supporter which lifts only in front without constricting the sides at all. A lady came to me yesterday and she said, "Doctor, you prescribed a supporter for me but I simply cannot stand it. It gives me so much pain." She said, "I know I cannot wear it because it give me so much pain." I said, "Let us see what the trouble is." SO we put the supporter on. The lady sat down in a chair. "Now," she said, "it hurt me so I could not endure it." I said, "All right, I see why it hurt you. You are sitting on it. Just ^{simply} straighten up and see how you feel then." She straightened up and said, "Why it is very comfortable. It is all right now." I said, "That supporter is constructed that way on purpose so that when you get out of position that supporter will tell you that and make you straighten up." Of course that remark was a slight exaggeration. The supporter is made to be as comfortable as possible but when a person gets out of position, it immediately begins to crowd and press upon sensitive points and that is a suggestion immediately to take a right attitude to raise the chest to a proper position, then the supporter is a perfect fit and a real delight and comfort.

Q--When the appendix is not normal, can it be made normal by any kind of treatment?

A--A sick appendix may get well as well as a ~~sick~~ sick finger. A sick appendix generally does get well. Every person who has appendicitis had had appendicitis a great many times before he ever noticed it. He had some slight discomforts due to disease of the appendix but he did not notice it, but it is only after the appendix has been sick a great many times and after it has been inflamed and diseased a great number of times that it by and by becomes so bad that your attention is called to it. The appendix that has to be removed is infected, and the mouth ^{of it} has become closed and the inflammation taking place inside of it causes the accumulation of pus and other material which is likely to break through into the abdomen. This is the danger from a diseased appendix. That is the only reason why the appendix is particularly dangerous when in a state of inflammation, because you do not know what is going to happen, so when the appendix becomes diseased to such a degree that you are conscious of a constant soreness in that region or frequent attacks of pain, it ought to be removed because it is a hopelessly diseased appendix. It has been sick and has gotten well scores and scores of times before

you ever knew anything about it, but when it comes to the point that you are conscious of it all the time and have a severe attack ^{then} ~~and~~ it is getting to be a serious matter and you ought to have it removed.

Q--Does the copious drinking of pure water produce or increase obesity?

A--It depends upon what you are doing. If you are eating ~~heartily the~~ ^{heartily the} drinking of water will help to increase obesity, but if you are eating a spare diet or a diet especially intended to reduce weight, then the free drinking of water helps to reduce the weight, carries off the waste material of the body.

Q--About how long will it take to cure a headache of a whole month's persistence due to autointoxication?

A--Such a headache can usually be cured in four days if the patient will do exactly what he is told to do. There may be some slight relapses but in the majority of cases there need not be any serious relapse and in the course of two or three weeks, a person ought to say "good-bye" to such a headache forever. This institution is a veritable cemetery of headaches. I believe there are at least a million headaches buried here. Of course, I mean past, present and future headaches. There are constantly among our patients some scores of patients who came here to be relieved of headaches. There is almost no malady I know of that is more distressing than headache. I had headache myself for twenty-five or thirty years. Headache really changes one's character and disposition. It affects one's business and social relation. Chronic headache is a very serious matter and these headaches are practically all of them toxic. A day or two ago I found a patient with symptoms that indicated something more serious than ordinary headache. The X-ray examination showed that a little tumor had begun to develop in the brain where the woman had had an injury some years ago. I hope we shall be able to relieve it without any serious operation. Every case must be studied carefully, of course, and there are exceptions. 99 out of 100 of all headaches that we encounter at this institution are due to the absorption of poisons from the colon. A coated tongue, a bad breath and an unhealthy complexion are tell-tale signs of chronic toxemia to which headache is really due.

Q--Is chewing tobacco as bad as smoking?

A--Sometime ago we had a patient here who had been in the habit of smoking and he promised to stop smoking. He had stopped smoking but I discovered some little time afterwards that while he did not smoke, he would put a cigar in his mouth in the morning and before night that cigar had entirely disappeared. It kept getting shorter and shorter and shorter. In other words, he actually ate that cigar. I do not see any improvement over smoking in that. I doubt if there is any at all. I think it may be a few shades worse. The only advantage I can see about tobacco chewing, is that a person who chews gets most of the ~~benefit~~ tobacco himself, whereas a person who smokes, makes other people smoke along with him. There is nothing so depressible to me as to have to do second-hand smoking, that is to have to follow along after an old smoker and take the smoke he has already smoked and inhale it whether I want to or not. Perhaps on a still summer's night when the air is delightful and you think what a fine evening this is, you start out to walk down the street and some smoker has been ahead of you and polluted the atmosphere of the whole street. Certainly there will come a time when we will get so civilized that we will have a law which will prohibit any man from smoking in any public place. Smokers will be confined to certain precincts. If a man ~~has~~ ^{wants} to retire to some secluded spot and smoke himself to death, he will be allowed to do it, but he won't be allowed to pollute the fresh, clean, sweet air that Nature gives us and to make it impossible for anybody in his vicinity to get a sweet breath.

Q--What is good for erysipelas?

A--A patient with erysipelas should stay in bed, drink at least a gallon of water a day, -two gallons would be better--and to apply in the early stages of the disease clothes dipped out of cold water every five or ten minutes. After a day or two when the bright red blush has given place to a dusty hue, then hot applications should be applied instead. In the transition period hot and cold applications may be used. It is a good thing to put ^{on} ichthyol upon the surface of the skin.

Q--A man who smoked from five to eight cigars a day up to fifty years

of age and his physical condition demands a let-up, is it safe to deprive him of tobacco entirely at once? Some physicians advise smoking one cigar after each meal under these circumstances. What is your opinion and advice?

A--I have never yet known a physician to advise a smoker who had evidently done himself damage by smoking, to smoke one cigar after each meal unless he was himself a smoker. It is only physicians who smoke that give advice of that sort, and I think physicians who smoke are disqualified from giving an opinion upon this subject. They do not know themselves the really injurious effects of tobacco. There is no possible harm in ceasing to do any evil thing. ~~just as~~ ^{just as} soon as you like, just as suddenly as you please. What possible harm would come to a man who has been accustomed to lie and to steal if he suddenly stopped? Would one imagine that one should gradually taper off his stealing or lying? Might it not be a great shock to his moral nature, to suddenly stop lying and stealing? The habitual use of tobacco or any other poisons or poisonous drugs is a sin against the body; it is a crime, a damage against the body. How can any possible harm come from ceasing at once to injure the body. When people go to prison who have been accustomed to the use of opium which is a much more enslaving drug than tobacco, he is not supplied with opium or with morphia; he is shut up in a cell and he has to fight it out. Of course, he feels very wretched and miserable. He would like to have something done to relieve that misery, but misery is not going to kill him. The thing that happens to him when the drug is withdrawn, is simply begins to come to himself, and he finds out what his real condition is. Opium hides that condition from him. The same thing is true of tobacco. Tobacco is a narcotic like opium. If he is tired and smokes, he doesn't feel tired any more. If he is hungry and smokes, he doesn't feel hungry any more. If he is worried and depressed about his business affairs and he smokes ~~and~~ ^{then} he doesn't feel worried or depressed any more. His business does not worry him because for the time being he is stupified, narcotized by the drug and does not appreciate the situation as he did before. A man suffering pain, takes opium and he does not feel pain any more but the injury and the pain are there just the same and the cause of the worry is there just the same and the lack of food is there just the same. Tobacco simply deceives a man

as to what his real condition is. There is no possible good in it. It was once supposed to be a useful drug and it was prescribed in the materia medica, but to-day you won't find tobacco mentioned in the materia medica. The medical profession have thrown it out of the materia medica as a useless and harmful drug and the time is not very far ahead when the medical profession will throw out alcohol in just the same way. Alcohol is just exactly as useless as a drug as tobacco is. It is perfectly safe for a man who smokes whether one or one hundred cigars a day to stop smoking at once. He will, of course, be unfortunate a little while, but he will be surprised to see if he abstains from it how quickly the hankering for it will disappear. To taper off slowly the use of any ~~xxx~~ kind of drug is a good deal like having your leg amputated by inches instead of having it ~~gaxxxixxax~~ cut right off. The majority of people who undertake to taper off, after tapering a little while in that direction, begin to taper in the other direction again and taper on instead of off, so never get entirely rid of the drug.

Q--Is it injurious to sleep directly after eating?

A--It is not a good plan to sleep directly after eating but it is a good plan for some people to rest. Persons who have pain after eating should always rest for a while. Many persons find themselves very greatly ~~xxxxxxxxxxxx~~ refreshed by ten minutes' sleep after a meal. That does ^{absolutely} ~~xxxxxxxx~~ no harm at all, but to sleep one or two or three hours after a meal is a very injurious practice. The stomach does not contract as rapidly when one is asleep. The gastric juice is poured out just as rapidly when one is asleep as when one is awake. I am satisfied that this is one of the causes of the extreme prevalence of acid dyspepsia or hyperhydrochloria. More people suffer from this trouble than from any other form of gastric disorder. Persons who complain of gas in the stomach generally have an excess of acid; persons who complain of pain, heart burn and so on have this excess of acid. It generally preceded gastric ulcer, duodenal ulcer and gastric cancer and I think the late dinner, the after theater supper. The practice of eating late at night is a common cause, in fact the most common cause and the most active cause of this condition, especially the eating of meat at these times. One can eat whenever he is hungry if he eats the right thing. It is just as proper for one to eat

when he is hungry as to drink when he is thirsty, but it is important to eat the right thing and the right thing if you are going to eat just before going to bed or late at night is fruit. There is an old adage, "Fruit is golden in the morning, silver at noon and lead at night". This is entirely an error except with reference to morning. Fruit is golden for breakfast, for dinner and is double golden, I think it is pearls and diamonds for supper. It is far more important to eat fruit for supper than it is to take it for breakfast because taken at supper it will tax the digestive organs so little that there will be no burden to the body during sleep. Many of you do not sleep well because you eat so much supper. You would all be better if you took breakfast at eight o'clock and dinner at three o'clock if you did not eat another thing. When I eat any place at six o'clock, I feel the effect of it right away. You say, "Well what's the use? I pay for this supper, why shouldn't I eat it?" It cost you more to eat it than to go without it as a matter of fact. I recommend that those of you who think you must have suppers, to eat fruit. Do not eat bread and butter; do not eat pie and deserts; do not eat vegetables. If you want to eat any vegetables at all, let it be a simple potato, soup or potato puree, but if you eat much butter with it or anything in the shape of rich food like pie crust or cake, it will lie in your stomach for hours and hours and disturb your sleep. You will have a bad taste in your mouth in the morning and you won't have any appetite for breakfast. You say you have an "all-gone" feeling if you don't eat. If you find it is late at night that you have that all-gone feeling, if you go without supper at night, you will find in the morning that when you wake up that instead of having a worse "all-gone" feeling, the "all-gone" feeling will be all gone. If the goneness is due to a congested, irritated state of the stomach, the walls of the stomach coming together produce that irritated condition. Drink a glass of warm water or hot water and it will disappear. The next morning you will find the feeling has ^{entirely} disappeared and you will have a keen appetite for breakfast and will get far more good out of it. If you would go without your suppers, you would get twice the benefit you are now getting. You would get well quicker and get away quicker, so the institution won't profit by this advice but you will profit. I feel all the time that we are doing you wrong in ~~keep~~ feeding you three meals so

near together. When we had only two meals a day, three-fourths of our patients would insist on having a tray sent to their rooms in the evening, so the inconvenience was greater, so we compromised by allowing the evening lunches to be served in the dining room and it swelled out into a six o'clock dinner. I know that everybody who takes this hearty late meal is being damaged by it, so I am going to hammer away at this thing and warn everybody at least so that you will know in eating a hearty supper you are doing yourself harm and you ought to acquire the habit of taking breakfast and dinner and making these the principal and omit the supper or take a very light meal. If you eat anything at all, it should be fruit. You know the truth of what I am telling you. Dr. King visited us once at a time when he was connected with the Clifton Springs Sanitarium. He said to me, "Dr. Kellogg, what do you do for your patients to make them sleep at night?" He said, "The worst trouble we have is to make our patients sleep." He said, "To tell you the truth, I suffer myself in that way. I do not sleep at night." I said, "It is a very simple thing. Send them to bed without supper." He said, "Do you think that will do it?" I said, "I know it. I have studied this thing for so many years that I am sure that is the principal reason why we have so very little trouble here getting people to sleep at night because we send them to bed without any supper." He said, "I accidentally missed my supper last night and I did sleep better." He stopped a few days with us, slept soundly every night, and he was convinced, as I have been for many years, that the going to bed supperless is the very best prescription you can possibly make for insomnia. The reason is very, very simple. When you have food in the stomach the process of digestion goes on all right because the secretion of gastric juice is automatic like heart action. You don't have to tell your heart when to beat. The stomach does the same thing. If there is food in the stomach it makes gastric juice whether you are awake or asleep and digestion goes on although it is a little slower because the stomach does not empty itself as it does when you are awake. The reason is that lying still

in bed your breathing is more quiet. The act of breathing assists in the process of conveying the food along the intestine. When one is trying to digest a meal and the blood is surging into the abdomen and the sympathetic nerves are congested and active, they are all the time sending reflexes up to the brain so while one can digest well while he sleeps, he cannot sleep well while he digests. The reason is that this great abdominal brain which is closely associated with the cerebrum is all the time sending up messages to the brain and stimulating and exciting it and that is the reason why one cannot sleep very well. Most people who eat hearty suppers dream horrible dreams and don't know anything about the dreamless sleep of childhood. The dog lies down, goes to sleep after eating and he dreams. He begins to snarl and to growl. He is having all kinds of fights in his sleep and is having an awful time. Anyone of you who will try this experiment, cut down your supper, make it consist of fruits and a little rice, perhaps, and Laxa or Laxa Biscuit or a tablespoonful of bran mixed in with the rice, some simple thing of that kind instead of the hearty food you have been eating, you will find it will make a wonderful difference. If you go to bed without any supper at all, but two or three glasses of hot water, it will be better still. You will make of it by just what you miss make for supper. You will get sweet, unrefreshing, undisturbed sleep that is worth twice as much as the sleep you get when the stomach is struggling with an undigested meal.

Q. Are Epsom Salts of advantage in treating diabetes?

A. Not especially. These salts stimulate the skin and may possibly be some benefit because they will make it possible to give the bath at a lower temperature. A person can take a bath that is quite heavy with these salts at 70° where he would require 80° without the salt. One can bathe in sea water without discomfort at a lower temperature than in fresh water. One can get the cold water by rubbing the skin with ~~sixking~~ slocks wet in cold water or the cold shower or some other way. The application of mineral baths to the surface of the body has no effect upon the blood because

minerals are not absorbed at all to any extent through the skin. The amount absorbed is so extremely small it requires the most refined chemical analysis to show the salts absorbed.

Q. What is Kaffir Tea?

A. It consists of the leaves and buds of a shrub which grows upon the highlands in South Africa. It is known as red bud down there. It has the aroma of tea without the tannic acid and without the theine which gives it a very important advantage. It is used very extensively in South Africa as a substitute for tea so it is absolutely harmless. If one wants to get rid of the tea and coffee appetite, it is just as well to discard it entirely and not take any substitutes at all. I do not recommend Minute Brew or Kaffir Tea or substitutes of any sort for harmful things. The best way is to cut the things right out entirely. If one is in the habit of taking caramel cereal, Postum and Minute Brew, and cannot get them, he will take coffee for the time being because he must have his accustomed flavor, you see. As a matter of fact, it is better to discard these things entirely.

Q. Does not the form of man's teeth indicate that he should eat meat?

A. No. It indicates the very opposite. Why? Because they are not like the teeth of the dog. They are like the teeth of an ape. They are identical with the teeth of the higher ape with one exception, the canine or eyeteeth which are longer in the ape than they are in man which indicates that man must be even more frugivorous than the ape is and even less carnivorous and less a meat eater than the ape is.

Q. What do you advise for one who has been paralyzed and has a weak heart?

A. I would recommend a diet consisting chiefly of fruits and vegetables. Coarse vegetables particularly should be used freely.

Bread should be taken sparingly. Potatoes should be used largely instead of bread and use fruits and fresh vegetables of all sorts very freely.

Q. What should we do after getting home to prevent intestinal inactivity?

A. A person who is suffering from chronic inactivity of the bowels should be sure before he goes home that the difficulty is mastered. You must be sure you have established a regimen that you can pursue at home with success ^{because} there is nothing so bad as the accumulation of poisons in the one's interior, especially these colon poisons. The use of tobacco, whiskey, and wine, if ordinarily used, is not half as bad as these colon poisons. I am not talking about the gutter drunkard but the ordinary use of wine and beer as people ordinarily use those things, it is not half as bad as to allow the colon to remain filled with these horrible poisons continually being absorbed into the blood and poisoning the whole body so it is a very important thing. Before you go home, if you have trouble of this kind to be absolutely certain that the difficulty is mastered, so you can manage the thing at home. Do not go back to the use of drug laxatives, cascara, salts, senna or any of those things because they will certainly make the difficulty worse. They will intensify the colitis, increase the absorption of poisons and the difficulty altogether. When I visited VonNoorden's clinic the last time, I said to his assistant, Professor Faulka, "What does Dr. VonNoorden do in obstinate cases of constipation?" VonNoorden and others in Vienna are not narrow, contracted men but are open minded, scientific men who are continually making researches and observations and drawing scientific conclusions from them so I have been endeavoring to keep in touch with them for many years. It is our custom to send someone to Europe to visit the different clinics every winter to pick up bits of information that will fit into our program and assist us in solving our problem. I said to Dr. Faulka, "What does Dr. VonNoorden do in very obstinate cases of constipation?" "Diet" he said. I said, "Suppose

you have tried all kinds of diet and still the patient is no better, what then?" "Diet", he said. "Just Diet? But I said, "Suppose it is a desperately obstinate case and diet fails entirely, what sort of medicine do you use?" "No medicine at all, simply diet." "Why, Doctor," he said, "nothing is so bad as the chronic use of laxative drugs." That is all the encouragement I could get from Dr. VonNoorden's clinic for the use of any drug of any kind under any circumstances. Nothing is so bad as the chronic use of laxative drugs. Suppose a patient had a surgical operation. Of course, he said, under those circumstances the use of a laxative drug to make sure that the bowels are thoroughly emptied may be advisable but to cure constipation drugs of any sort are extremely damaging. You say what about agar-agar, Colax, Bran and Paraffin? They are not drugs in the ordinary sense but are supplementary foods which do the body just what food ought to do. Agar-agar supplies extra bulk. It is cellulose. It is practically the same thing as what you find in beets, carrots, lettuce and fresh vegetables generally. In Paraffin Oil we have clearly mechanical substance which acts as a lubricant and in that respect takes the place of lubricating mucus which Nature supplies but which is not supplied in sufficient quantity in cases of chronic constipation. We have to supply an artificial lubricant and in Paraffin Oil we have something absolutely harmless. Bran is also available and it is one of the most valuable of all remedies. See that every member of the family gets an adequate supply of bran. That ought to be at least a heaping tablespoonful at every meal. When you cook the breakfast cereal put in about one-fourth bulk of bran and you will like it better. Corn meal mush is a very constipating food but with one-fourth bran added to it, ^{it} is more palatable than in the ordinary form and it is laxative instead of being the opposite.

Q. May a man of sixty-three reasonably expect to escape Bright's disease if he can keep his blood pressure below 175 and keep himself free from constipation?

A. Such a man probably has Bright's disease already. That is one of the first symptoms of Bright's disease. High blood pressure indicates the approach of Bright's disease long before casts, albumin or any other urinary symptom makes its appearance. Nevertheless, the disease can be arrested, held at bay, although it may not be entirely prevented even though the kidneys have become diseased. Fortunately one can get along with two-thirds of one kidney if he lives carefully. I remember one case in which I removed a large kidney with a stone in it, half as big as my fist. The one kidney left did more work in the next twenty-four hours than both kidneys did the twenty-four hours before.

Q. What are the dangers of a blood pressure of 190?

A. There is no danger from the blood pressure. It is not the pressure that does the harm. I have seen people go on months and months and months with a blood pressure of 300. I never saw anybody who got any injury from high blood pressure. The thing that does the harm is the thing that makes the high blood pressure. The thing that makes the high blood pressure is poisons circulating in the blood which set up a degeneration of the blood vessels. It is because the blood vessels of the brain or some other part become weakened, rotten I almost say, brittle, and lose their strength so that they cannot resist the pressure of the blood that does the harm. I have seen apoplexy occur when the blood pressure is only 125. It was because the arteries in the brain had become injured to such a degree that they could not resist the ordinary normal pressure. That is what does the harm. It is the degeneration of the arteries and the softening of the arteries that makes the trouble and not the high blood pressure. A person with a pressure of 190 ought to do something to get it down. The only thing that will get the blood pressure down safely is the removal of the cause of the blood pressure and when one removes the cause of the blood pressure, he will at once remove the cause of the degeneration of the blood vessels, you see. He will stop this process of

degenerating at the same time that he gets the blood pressure down and so while this high blood pressure is something of a disadvantage, still we should always remember that the blood pressure is never any higher than it needs to be. In your condition you must have high blood pressure in order to keep you going and it is a mistake to lower the pressure without at the same time removing the cause of the high blood pressure. I once had a blood pressure of 175 and I was scared for a few minutes. I removed the cause and my blood pressure came down to 110 and that is where it is now. The occasion was this. I was attempting to revise an improvement of the instrument with which to take the blood pressure so as to get a more accurate test of the diastolic pressure which at that time was very hard to get. I was testing it out and one of my assistants was helping me and I found my blood pressure 110 and I was making some little adjustment of the apparatus and left the bandage on my arm and a few minutes afterwards, half an hour perhaps, I found it 175. I said, why, it must be I made a mistake. Is it true I am getting old so fast as that, that my blood pressure which was 110 is rising like that? I took it again and found sure enough it was 175. Then I realized that I had deprived my arm of blood by having the band on for so long a time and had notified my brain and my brains had notified my heart that more pressure was necessary to get the blood to the tips of my fingers so in order that those fingers should not suffer and be damaged the heart had raised the pressure to 175 in order to get the blood to the tissues of my hands so ^I it should not suffer any injury. Every organ of the body is being watched over to see that it has the proper amount of blood. If the kidneys are diseased and the arteries contract the proper amount of blood cannot get through and long before Bright's disease shows itself or any other symptom, it is indicated by this rise of blood pressure which is necessary in order to get the adequate supply of blood to the kidneys.

Q. What foods may be avoided by one suffering from high

blood pressure?

A. Bouillons, meats of all kinds, fish, flesh and fowl, Meat extracts and all those things are particularly bad because they are poisons which circulate in the blood and stimulate the processes which cause congested vessels.

Q. Can the sinusoidal current be applied beneficially in colitis?

A. Yes. It affects the muscles only. It does not affect the interior.

Q. What are fibrous vegetables?

A. Nearly all kinds of garden vegetables are fibrous. The potato and the sweet potato are almost the only exception. Some fruits are fibrous also. The potato is a constipating food and so one should eat coarse vegetables with it.

Q. Is it advisable to drink while eating?

A. The ordinary patient can take a glassful of water while eating. It should be taken a little at a time.

Q. What would you do for a boy nine years of age suffering from hay fever?

A. For immediate relief the only thing is to take the boy away to some other locality where the particular weed that produces the pollen which produces this fever does not occur. A good deal progress is being made in curing this disease at the present time. If a person goes into a cold room he is almost sure to be immediately relieved. We have had this summer a number of persons suffering with hay fever who were made entirely comfortable by going into a cold room. A person sits in there for half an hour in the evening and then goes to bed and sleeps all night in perfect comfort. It has also been discovered that the vaccine can be prepared from the pollen of plants which produce the hay fever and this can

be injected under the skin and will relieve the paroxysms of the disease in a wonderful way. By extracting the pollen with alcohol it is possible to obtain a substance which, injected under the skin, will give almost immediate relief from the paroxysms.

Q. What is good for phlebitis?

A. Rest in bed, warm applications and careful bandaging. Massage must be especially avoided because it may dislodge a little clot which may travel to the heart and produce fatal heart block.

Q. Will the bran and cellulose needed for a laxative diet irritate the inflamed membrane of the colon in a case of colitis?

A. No, but just the very reverse. It produces no irritation at all. It is the decomposing fecal contents of the colon which produce the irritation.

Q. What position is best for the body while sleeping?

A. It doesn't do much good to try to tell people what they should do when asleep. It is more than I can do to get people to do what they ought to when awake. It is a good plan, however, when one goes to sleep to lie toward the right side. If one has a weakness of the left lung, for example, it is better for him to lie on the left side so as to give the right side perfect freedom of movement. If one has pain in the right left leg it is a good thing to lie upon the left leg. The pressure will relieve the pain and the extra warmth will generally relieve the pain. There is no definite rule. One should sleep in the position in which he is comfortable. He should not sleep in such a position that the chest is flattened. It will be a great advantage for the majority to sleep on the face over a pillow to compress the abdomen and keep the blood in better circulation.

Q. Do intestinal and colon troubles cause the food to ferment in the stomach?

A. No, but they do cause the stomach to make too much acid and that is what makes the pain and distress in the stomach. It is swallowed. It is not formed by fermentation.

Q. Can one have serious adhesions from an abdominal operation of twelve years standing?

A. Yes, it is possible.

Q. Is lower Florida too low an altitude for one suffering with anemia?

A. Anemia is not materially affected by altitude.

Q. What is the cause of low or weak acid in the stomach and the cure for it?

A. When one has typhoid fever the amount of acid formed in the stomach is diminished. Babies always have hypopepsia as fever patients do. Persons who are exhausted by overwork and loss of sleep generally have too little acid in the stomach. Persons who have inactivity of the bowels to such a degree as to produce any loss of appetite sometimes have deficient acid but in the majority of cases such persons have an excess. Persons who have had gastritis so that the gastric glands have degenerated have a deficiency of hydrochloric acid. Those cases in which there is a deficiency of hydrochloric acid are in the majority of cases those in which there has been once an excess of acid and the glands had to do so much work they became worn out and exhausted. In such cases or in cases of apepsia there is really nothing much to be done. The most important thing for persons who have too little acid and a slow stomach but still have some acid, they should chew the food very well. Persons who have no acid at all may take hydrochloric acid in the form of acesone a combination of the acid with protein, a very valuable remedy in such cases.

Q. What is the best way to reduce the blood pressure of

a man 38 years of age with a pressure of 138?

A. Probably this patient has been in the habit of smoking or using tea or coffee or even meat. These and inactivity of the bowels are the usual cause of too high blood pressure in such a case. Sometimes specific blood disease will produce high blood pressure. This is quite a common cause in young persons.

Q. Is it a condition of the system which causes the crystalline lense of the eye to harden in a cataract or is it from local causes?

A. It is a condition of degenerative changes. It is one of the inconveniences of old age. Another inconvenience which comes from old age is stiffening or hardening of the lense which does not amount to cataract but it becomes hard to such a degree that it does not yield to the action of the muscles which change the thickness of the lense in accommodating the eye. A girl of sixteen came in for examination. Our Dr. Colver examined her and found her eyes were presbyopic, that is, she had the eyes of a woman of fifty-six years of age. Her eyes were thirty years too old. She was suffering from chronic intestinal toxemia and was placed upon a proper diet and in a few weeks her eyes had become of proper age. This is one of the tests for intestinal toxemia. By the adoption of a non-flesh dietary, an antitoxic diet, it is wonderful how the eyes do become young again and the senile symptom disappears. This is a very good proof of how the skin can be made younger. If the eyes can be made younger the whole body can be made younger. This oldness or senility of the eyes is simply an evidence which can be easily gotten at of the senility of the whole body. If the eyes are ten years too old that means in general that the body itself is ten years too old. It means something should be done right away to ^{combat} prevent this old age process. It can be combated in the most effective way. I have seen people made ten years younger and twenty years younger in the course of a few weeks by giving Nature an opportunity to recuperate. It

is the handicap the body is laboring under that makes changes and old age. By adopting the simple life and co-operating with the natural forces of the body, this old age process may be arrested and a wonderful rejuvenation can be secured. That is worth while. You can be youthful as well as healthy and we will find the fountain of perpetual youth in obedience to Nature in simple living.

END.

Several kinds of fatigue

Toxic fatigue -- all narcotics and opiates

Fatigue normally due to work

A transient fatigue, indicated by rapid breathing is due to the accumulation of the toxic products of work

The body is like a power plant. The energy used in work is derived from the food we eat.

Food is burned in the body releasing energy just as coal and oil are burned in a locomotive.

The original source of energy is the sunlight.

Energy received from the sun is equivalent to one-third of a horse power continually received by the whole earth's surface.

This energy is captured by the green parts of plants and stored up in the form of food,-- starch, oil, sugar, etc. and also protein and other vegetable substances. It may be regarded as energy in cold storage.

Certain vegetable substances are edible, that is, they serve as food for man and other animals and by the process of digestion vegetable food substances are in part transformed into animal tissues, the animals themselves acting as power plants which consume the food and breaking it up into its original elements release the energy originally derived from the sun which is set free as work, heat, and electrical energy.

The end products of combustion taking place in the body are poisonous matters like the ashes and smoke produced in the firebox of a locomotive. The chief of these is lactic acid produced by every muscular action, half a pint a minute.

Lactic acid is burned by oxygen and thrown out of the body through the lungs as carbon dioxide. To consume this rapidly oxygen is stored in the tissues. It is brought by the arterial blood from the lungs.

As soon as the oxygen stored in the tissues is consumed, the person working begins to get short of breath and breathes more rapidly, and if his activity continues gets blue in the face because the oxygen in the blood as well as the tissues has been used up and lactic acid accumulates in the tissues and paralyzes them so a man is no longer able to work.

When these tissue poisons are washed out, however, he is immediately rested and can begin work again.

The working mechanism of the body consists of two elements, the muscles, or moving parts, and the nerves, or activating parts.

The impulse to work comes from the nerve center.

The nerve center is like a storage battery. It stores up energy in the form of minute granules which are like the briquettes of a tar and coal dust which the fireman tosses into his furnace to replenish his fire.

Energy granules can be seen with the microscope. They are numerous in a rested cell but scanty in a tired cell.

The granules are consumed during work and accumulate during sleep.

There is a center in the medulla oblongata, the upper end of the spinal cord, known as the fatigue center. Its function is to produce the sensation of fatigue and an indisposition to work when the nerve batteries are run down and need to be replenished. Recharging takes place during sleep.

Normal fatigue is the result of work.

There are different kinds of work, not all of which is productive.

The animal body is the most economical and practical of all known working mechanisms. Nevertheless most of the energy produced is consumed in internal work and is not available for continuous external activity.

For example, if a man consumes 3,000 calories, the food value equiva-

~~Life~~ Life is a miracle

The miracle of life is as great a mystery to-day as when science first began the quest for a solution of its problems. ~~The physicists,~~

The physiologists, the physi-
cists, the chemists, can tell us what happens when a muscle acts, when food is digested, or heat produced, but they cannot tell us how it happens. The ultimate secrets of life remain un-
solved. The only explanation is God, the great creative mind.

the Infinite Personality,
everywhere present and
everywhere at work.

The same power that out of
a single minute cell built and de-
veloped the complete human body with
its hundred trillion brain cells,
its 25 million million blood
cells, its 4,000,000 kidney
cells, thousands of millions
of other cells, must continue
its creative activity, rebuilding
repairing and reconditioning
cells worn and exhausted by
work, and recreating cells

that die. The same power
 that made the first man made
 you and me and ~~us~~ stays
 with us to keep us alive.
 In kidney cell, after working
 one hour, rests nine hours
 for repairs. Dr. Holmes in his
 beautiful poem about the
 heart says "No rest ~~that~~
 throbbing slave may ^{apt.}
 If however guessing ^{his} task"
 Next he was mistaken, the
 heart rests a few tenths of a
 second after each beat, in
 fact, more than half the time.

for necessary repairs.
 The brain rests during
 sleep, at least the conscious
 part of it, though the part
 by which the creative
 thinking is done, the sub-
 conscious, seems to work
 more effectively when we
 are asleep than when
 we are awake.

The Creative life is
 always at work within
 us while we are alive. The
 moment it departs from us,
 we are nothing but dust.

The apostle Paul's declaration, (5)
"In whom we live and
move and have our
being" is a theological
statement of a scientific fact.

Hence, you see, we are
not left to wander, in a
world full of pitfalls and
dangers seen and unseen,
with destructive enemies on
every hand. We have in
the subconscious, the
place where ideas are
created, a point of contact

with the Infinite where
 through ^{which} we may find
 guidance, and refuge. ~~With~~
 Hence the invitation, "Come
 unto me, all ye that are
 weary and are heavy
 laden and I will give
 you rest." is not ~~mere~~
~~imagery~~, it is a ~~board~~

~~fact~~
 spiritual imagery, it is
 a matter of fact
 an announcement that
 the definite Personality ~~is~~
 has provided a refuge for

(7)

to which we may
glee for comfort and
guidance. And prayer is
the avenue of approach,
the means of contact,
not mystically, but as
really, as actually, as
any facet of our daily
existence

*

The miracle of life is as great a mystery today as when science first began the quest for a solution of its problems. The physiologists, the physicists, the chemists, can tell us what happens when a muscle acts, when food is digested, or heat produced, but they cannot tell us how it happens. The ultimate secrets of life remain unsolved. The only explanation is God, the great creative mind, the Infinite Personality, everywhere present and everywhere at work.

The same power that out of one single cell built and developed the complete human body with its hundred trillion brain cells, its 25 million million blood cells, its 4,000,000 kidney cells, thousands of millions of other cells, must continue its creative activity, repairing and reconditioning cells worn and exhausted by work, and recreating cells that die. The same power that made the first man made you and me, and stays with us to keep us alive. A kidney cell, after working one hour, rests nine hours for repairs. Dr. Holmes in his beautiful poem about the heart, says,

"No rest that throbbing slave may ask,

Forever quivering o'er his task."

*

But he was mistaken; the heart rests a few tenths of a second after each beat, or, in fact, more than half the time, for necessary repairs.

The brain rests during sleep, at least the conscious part of it, though the part by which the creative thinking is done, the subconscious, seems to work more effectively when we are asleep than when we are awake.

The Creative Life is always at work within us while we are alive. The moment it departs from us, we are nothing but dust. The apostle Paul's declaration, "in whom we live and move and have our being," is a theological statement of a scientific fact.

In a previous page -
Find it.

Thus, you see we are not left to wander alone in a hostile world full of pitfalls and dangers seen and unseen, with destructive enemies on every hand. We have in the subconscious, the place where ideas are created, a point of contact with the Infinite through which we may find guidance and solace. Hence the invitation, "Come ye unto me, all ye that are heavy laden, and I will give you rest," is not spiritual imagery; it is an announcement that the Infinite Personality has provided a refuge for us to which we may flee for comfort and guidance. And prayer is the avenue of contact, not mystically, but as really, as actually, as any fact of our existence.

to the heart every time it ought to beat, ~~beat, beat, beat, beat.~~ If you

listen to the heart you can hear it ~~speak.~~ ^{Lub} ~~Luff~~ tup, ^{tub} ~~Luff~~ tup, ^{Lub} ~~Luff~~

tup, that is the song of the heart. It goes on singing this song

forever, but behind the heart there is ~~a pacemaker.~~ ~~there is~~ a power,

a will, a personality ~~behind the heart~~ that tells it when to beat and

how hard to beat. ^{about} Physiologists now recognize this fact, ~~message~~

~~is given to the heart.~~ ^{and} We have a means by which ^{they} we can make that

message visible. ^{an} We have ~~a little~~ instrument called the electrocardio-

graph, and if you take the two electrodes in ^{your} the two hands, one in the

right hand and the other in the left hand, ^{it} it will write down on a strip

of paper that passes in front of a little opening, the message that is

Frog
slap

Dup

being sent and so you can see it. ~~This is what it looks like (illustrating).~~

This record is made by ^{the} an electrical current which is produced by the

message that travels down over the heart. Here is the heart, we will say

(illustrating). Here is the vena cava, the large vein. Here is the

little center from which the message comes, and this little center sends

down a message. It travels down to the heart, first to the auricles

and then it comes on down to the ventricles and it is distributed all

~~about the heart, to every part of the inside of the heart, and by read-~~

ing this electric record here we can tell just what is happening.

~~Sometimes it happens that an obstruction develops here. An ob-
struction is formed so that the message is interrupted and can not go
down to the ventricles. I remember a case of that sort under my care
some months ago, in which the message could only go this far (illustrating).~~

This is the lower part of the heart (illustrating), the ventricle, which

exercises the greatest force and propels the blood all over the body. The

auricles simply drive the blood into the ventricles below and then when

they contract they drive the blood out all over the body. This message

was interrupted right there and the consequence was we did not see this

X

~~curve, but instead this was the sort of curve we saw because the message here was interrupted (illustrating).~~ So we know that there is a personality ^{directing} talking to the heart, instructing the heart and telling it just what to do; and the same personality presides over the stomach and over every other organ in the body.

We can readily see ^{then} that there are two personalities at work in the body because we find ~~these~~ two classes of organs, the voluntary ~~organs~~ and the involuntary. ~~Now,~~ ^A all of the voluntary organs are under the control of the human will; but the involuntary organs, the heart, the lungs, the stomach, the liver and parts of the nervous system, these are all under the control of another will, and the proof of it is the fact that when the human will retires, is asleep, for example, so that we are unconscious, still the heart goes on beating right along. That shows that there are two personalities ~~constantly~~ at work.

We have two kinds of motion, ~~involuntary motion and voluntary motion.~~ ~~The work of the heart is an involuntary motion.~~ ~~At~~ ^T the involuntary functions are not under the control of the human will; they are ~~under the~~ control ^{ed by} of the creative will, ~~that is~~ the personality

7
that takes care of the heart and ^{it} that regulates the heart, ~~it is the~~

~~same power that made the heart.~~ The same power that created the heart

takes care of ^{it} ~~the heart~~ and keeps it going. It is like a ~~delicate~~
marvelous machine made by an engineer, and ^{so delicate that} after ~~the machine~~ is made

^{he} ~~the engineer~~ has to stay right by it to keep it running. Nobody else

knows how to make it go. That is ^{true of} ~~what happens in~~ the body. The same

power that made ^{it} ~~the body~~ has to stay with it and take care of it.

You say that the body was created with the power to re-
create itself and go on and so developing a race. But this is a
mistake, my friends. There is a power, not ourselves, that is con-
stantly at work building and creating, repairing and curing when
disease threatens. This power is continually at work. We have the

proof of ^{this} ~~it~~ in what we ^{know of} ~~see in~~ the development of a human being.

Starting with one little cell smaller than the head of a pin, this

~~little~~ cell divides and develops into an adult human being. It is not

possible that the ^{cell} ~~thing~~ itself should accomplish this ~~thing~~. There

is a building process going on and if you ~~can~~ watch it through a

microscope you can see movements in the cells and parts within the

cells. They are moving back and forth with the precision of a body — See p. 8.

of soldiers. They move in one direction, then another direction,

by and by separate, then gather together in groups, and it is all

done with the order of a body of ~~soldiers that are on dress~~ ^{men in a military} parade.

See last line, p. 7.

Now, ~~this shows there is going on in the body this continual~~ ^{an example of creative work} creative work. We see ~~evidence of this~~ in the blood, ~~for example.~~

below

~~We have~~ ^{there are} In our bodies 25 million million red blood cells. It is the red blood that makes the cheeks rosy and the lips ^{red} pink. It absorbs

oxygen from the lungs and carries it everywhere throughout the body.

It is the same power at work that keeps the heart going continually,

as Oliver Wendell Holmes said in his lovely little poem about the

heart, "No rest ~~is~~ ^{throbbing} this ~~thrumming~~ slave may have." ^{ask for ever quivering} ~~No rest!~~ It goes ^{per its task} on forever so long as life lasts. ^{his} ~~It~~ ^{This} is because the power that made it

stands right by it ~~and~~ ^{ing} gives it ~~its~~ orders.

~~There are~~ ^{Of the} 25 million million red ^{blood} cells in the body, ~~and~~ a million million ^{or 30} of them die every day because each cell only lives 25 days.

^{Every month} ~~In 25 days~~ the entire mass of blood within our bodies, ~~somewhere~~ ^{the} about one-fourteenth the total weight of the body, ~~is made new.~~ ^{dis and is created anew} If we are

^{you weigh} 140 pounds, we have ten pounds of blood, and all this blood is made new ^{Every month. This that} every 25 days. ~~That~~ means a million million blood cells are created

next page

every day. ~~That~~ ^{This that} means eight million blood cells die every second

of our lives and eight million ^{new} blood cells are created to take their

places. This is not a ~~fairytale~~ ^{supposition} I am telling you, my friends. It ~~is~~ ^{it is}

is ~~simply the~~ ^{an} actual scientific fact. Every physiologist knows that

the blood is being continually created and that the same thing is

going on with other cells ^{though less rapidly.} all throughout the human body. It takes,

in other words, the same power to keep us alive that it took to make

the first man and to make us. ~~That power continues at work within~~

~~our bodies, building and rebuilding and repairing just as long as we~~

~~live.~~ ^{It is this that makes it} That is why it is possible for a sick man to get well. Getting

well is a process of ^{re-creation.} ~~reconstruction.~~ ~~It is making the old sick body~~

~~over.~~ The old sick body has to be torn down, carried away and

thrown out, and a new body built in its place. This ^{creates the} ~~process requires~~

^{demand for} ~~the taking of food.~~ We eat and supply material that has been lost,

~~has died and been carried away.~~ We have to eat our own weight every

month, ~~perhaps more than that.~~ Many people eat more than that. I

remember one man ^{who} weighed after dinner and weighed five pounds more

than before dinner. So I think it is a moderate estimate to say that

we eat at least our own weight every month of our lives. We take this

~~food into our bodies to take the place of portions of the body that~~

~~have died and have been cast out.~~ So this re-creating process is

that goes

~~going~~ on continually, ~~This~~ requires the presence within us of an

infinite personality ~~that is constantly at work.~~

It is not unreasonable

~~It is not extraordinary~~ to conceive of an infinite person-

believe in an

ality, We can conceive of infinite space, ~~or we try to.~~ We can not

picture to ourselves ~~an infinite space,~~ ^{it} but we can recognize it ~~as~~ *to be*

a fact that space is infinite. There can not be such a thing as a

border to space because if we try to think of a border we immedi-

ately raise the question, What is on the other side? What is beyond

that? And yet we think there must be an end somewhere. There must

be a limit to space somewhere. When we try to conceive of such a

limit, we immediately think "What is beyond that?" So we see we can

not think of such a thing. It is either a boundless space or a limited

space. You can not conceive of either one. They are not within the

power of our finite minds to comprehend.

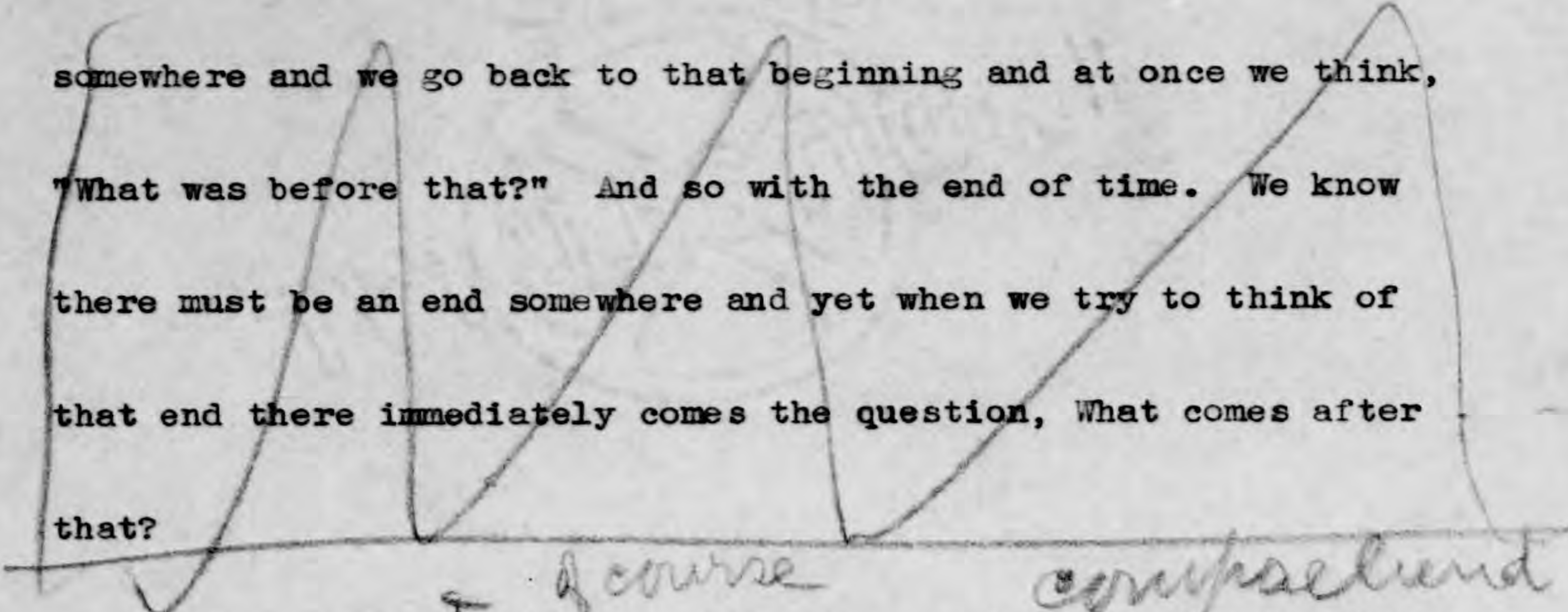
The same thing is true of time. We ~~believe~~ *know* time to be infinite.

or ending

We can not imagine such a thing as the beginning of time. We ~~try to~~

~~think of it and immediately we think there must have been a beginning~~

somewhere and we go back to that beginning and at once we think,
 "What was before that?" And so with the end of time. We know
 there must be an end somewhere and yet when we try to think of
 that end there immediately comes the question, What comes after
 that?



So you see ^{of course} it is impossible to ~~conceive~~ ^{comprehend} of infinite things.

They are beyond us. ~~They are outside of our comprehension and~~

~~And of course this the~~
~~the same thing~~ is true of ~~this~~ infinite personality. We can ~~not~~
 form ^{no} ~~any~~ conception of its shape or its size or any limitations ^{physical}

of any sort because it is infinite. ~~Now, perhaps that is a diffi-~~

~~cult idea for you to take in and the~~ difficulty ^{of} accepting this
~~idea, is the fact that we have not a clear idea of personality.~~
^{it is because we do not}

We think of personality as connected with ~~form.~~ ^{some special}

~~form or shape, preferably human, perhaps~~
~~this is an error as I learned from~~
~~I will tell you of a little experiment I made that convinced~~
~~an experiment, many years ago, of which~~

~~me that was not true. Sixty-one years ago I was in a physiologic~~
~~laboratory making experiments with animals, studying their tissues~~
~~microscopically and also making various experiments to study the~~

~~functions of the human body. One day the Professor gave me an ex-~~

~~periment to do which distressed me very much. He gave me a large~~

its character, its personality, its wisdom, its form, its many attributes, although we cannot measure them.

form or shape, preferably human, perhaps this is an error as I learned from an experiment, many years ago, of which me that was not true. Sixty-one years ago I was in a physiologic laboratory making experiments with animals, studying their tissues microscopically and also making various experiments to study the functions of the human body. One day the Professor gave me an experiment to do which distressed me very much. He gave me a large

^{large}
 frog and a pair of shears. "Now," he said, "you must take these
 shears and cut off this frog's head," ^{which I very reluctantly did,} ~~That was one of the hardest~~

~~things I ever did in my life.~~

~~I had an unusual experience some years before when I was a boy
 about ten years of age. I was one day driving the cows to water and
 I had a whip in my hand with a long lash and I used to crack the whip
 occasionally to encourage the cows. I did not whip the cows, but en-
 couraged them with a sharp crack of the whip. On passing along the
 road I saw a robin sitting in a big tree. I said to myself, "I will
 see how near I can come to it." Of course I had no idea of trying to
 hit it. So I gave my whip a turn and cracked it loud. The cracker
 at the end of the whip hit the little robin on its head and it fell
 over dead. I was smitten with such remorse and distress I think as
 I never experienced in my life before. I fell upon the ground and
 sobbed and sobbed and on my knees promised God I would never kill
 another thing as long as I lived, and I have not. I even walk around
 the cockroaches. I confess I had to kill one or two mosquitoes, but
 even that I hesitated about.~~

~~To cut that frog's head off was the hardest thing I ever did,~~

Then
~~but by shutting my eyes I cut it off.~~ The Professor said, "Lay the

frog on the table." So I laid it on the table and, to my great sur-

headless turned over and sat up
 prise, this frog ~~behaved~~ as though it were alive. ~~It sat up.~~ I felt

~~obliged to it. The frog sat upon the table just as well as though it~~

then "strike this I did"
~~had a head.~~ The Professor said, "Hit the table." So I hit the table

high out
 and the frog leaped ~~out~~ into the middle of the room, ~~it was quite a~~

~~large room~~ - and fell upon the floor on its back. It immediately

It apparently did not miss its head
 turned over and sat up ~~again~~, as before, ~~apparently as live and happy~~

~~as when it had its head on.~~ Then the Professor said, "Stamp upon the

leaped straight ahead.
 floor," which I did, and the frog ~~jumped~~. The Professor said, "Stamp

leaped leaping
 again," which I did, and the frog ~~jumped~~ again and continued ~~jumping~~

as I stamped,
 until it reached the side of the room. ~~I continued stamping and every~~

~~time I stamped it leaped against the wall, butting its bloody headless~~

~~body against the wall. I can see the red spot it made on the baseboard~~

then
~~this very moment.~~ Well, the Professor ~~then~~ said, "Bring the frog back

to the table," which I did, and laid it on its back. "Now," the Professor

handing
 said, "Rub a little acid on its stomach," and ~~gave me~~ a bottle of acetic

I did as ordered, the frog
 acid. ~~I rubbed this on the frog's stomach,~~ and immediately ~~it~~ brought

up its hind feet and began rubbing its stomach as hard as it could to

^{the acid} wipe it off. ^{then} ~~The Professor~~ said, "Put the acid on its left thigh."

I did ^{so} it and the frog brought up the right foot and rubbed it off ~~the~~ ^{its}

left thigh. Then the Professor said, ^{"now"} "Hold down the right ^{leg} thigh."

Well, I wondered what this frog would do when I held it ^{leg} down. I ex-

pected to see it struggle to get away, but instead, to my great amaze-

ment, it ^{twisted up and rubbed its left thigh} ~~simply rubbed~~ its left leg with the tips of its left foot, ~~and~~

^{the toes of} ~~rubbed~~ the acid off its left thigh. Think of a headless frog performing

an act like that. ~~If I had had my hat on, I should have taken it off.~~

~~I said, "Here is something very surprising."~~

^{the mystery of} ~~This experiment followed me for many years. How could such a~~ ^{puzzled}

thing happen, a frog with its head off and without a brain, performing

all ^{such} ~~these~~ ingenious acts? ~~I could not understand that phenomenon until~~

^{found the explanation} many years later ~~when I read~~ in a very learned German work on general

physiology, by Professor ^{Verworn.} ~~Fehsborn~~, an eminent physiologist, ^{he said,} referring

to the experiment I have just described, ~~(it is a classical laboratory~~

~~experiment),~~ "This experiment proves that the frog has personality in

its spinal cord."

^{There was} ~~It gave me a new conception of personality. Personality does~~ ^{necessarily imply a human being.}
~~not mean a person, a man or a woman. It does not mean that sort of~~

~~thing at all.~~ It means the possession of the power to will and to do, ^{to execute} and to think and to plan, ~~That is why the Professor recognized the~~

~~presence of personality in the spinal cord because those acts showed the frog was adapting itself to an emergency. It was doing something, perhaps, it had never done before. I can not imagine that frog had ever used its left leg in the way it did. It certainly was an extraordinary adaptation of means to an end.~~

~~Now we see that~~ ^{It is evident that} the essence of personality is not form or shape;

but it is the expression of will, of design, of a plan. Go into the

woods and you find a nest, you know behind that nest there ^{was a person-} ~~is~~ a builder, ^{ality.}

~~somewhere.~~ The nest would not be there if there had not been a builder

to plan the nest and to make the ~~nest~~. So when we see a human body, we

know that behind it there is a personality, and this personality is working

in harmony with the human personality. We are dual beings. Our bodies are

controlled by a human personality and a creative personality, ^{working together.} ~~the power~~

~~that made us, the infinite personality, if you please.~~

We believe in infinite space and in infinite time. Why should not we believe in an infinite personality as well? We have the same proof for one as we have for the other. We know space exists because

we can measure a portion of it. We are in contact with it and we have

evidence of its existence. We know time exists, infinite though it

^{is} ~~may be~~, and beyond our comprehension, and yet we know that time exists.

and we We believe in time. We recognize it and this is ^{equally of} ~~also~~ true with refer-

~~ence~~ to the ^I Infinite ^P personality. We know that ~~this~~ ^{it} personality exists

because we see the evidence of its work, in every flower, in every

tree, in every cloud, and in every sunset, we see evidence of the ex-

istence of ^{the} ~~this~~ Infinite ^P personality with an infinite power to work, with

an infinite sense of beauty and of artistic taste. We see all of this

exhibited in nature all about us.

~~Perhaps some of you are wondering what these remarks have to do~~

~~with our subject. But first of all I think it is important that we~~

^{be fully convinced} should recognize the fact that there is a personality ^{not simply a law, or a mechanical} behind, a power ^{agency}

^{But an Intelligence, a Mind,} that works not only for our moral welfare, but for our physical welfare

as well, ~~as that our lives depend upon the working of this being.~~ We

have infinite evidence of it, ^{power and its beneficence} ~~in every flower~~, in every living thing,

animal or vegetable. In all the inanimate world about us we have proof

of the existence of this Infinite ^C Creative ^P power continually at work.

^{the cosmic rays are proof that} Dr. Millikan tells us that, even matter is being created continually.

The important question to the average man who thinks about spiritual things and the here and hereafter in a serious way is, Does this great ^{personality} ~~have anything to do with me personally?~~ ^{pay any attention to} Is ~~it interested in me?~~ If I am in trouble, is there a place where I can go for help? ~~That is a great question, I am sure, for serious thinking people.~~ Perhaps you have been so brought up you ~~would never have~~ ^{doubt} entertain any ~~apprehension~~ on this point. ~~You never had a doubt.~~ ^{of so,} You are fortunate, if you are. ^{but} There are ~~a great many~~ ^{millions of} frivolous people ^{who have no faith.} ~~in the world, nowadays and they are spreading throughout the world, a spirit of unbelief and a spirit of skepticism.~~ ^{atheism is} I think ^{feel sure} the number of people ~~that~~ are in the habit of praying today is much smaller than ~~it~~ ^{in my boyhood} ~~was~~ when I was a boy. ~~When I was a boy,~~ there were family prayers every morning and every evening in almost every home. Today I think ^{that daily} the family prayer is ~~rather infrequent~~ ^{rare} in homes, and ^{that} the number of people who believe in ^{the efficacy} prayer at the present time is, ~~I fear,~~ comparatively small.

I was talking with a lady the other day and she was in great despair. She had no hope she was ever going to get better. She had been ill a long time. She thinks she is never going to get well. I

~~think she will. She was afraid she would not.~~ I asked ~~this~~ lady if ^{a the other day}

she was a church member. "Yes," she said, "I belong to the Episcopal

Church." The next question was "Do you pray regularly?" "No," she re-

plied, "I don't pray ^{at all}. I gave up praying a long time ago." "Why did you

give up praying?" "Because I found it did not do any good. I did not

get any answers to my prayers."

That is a very great mistake and the thing I want to show you

tonight is that every one ^{of you who prays here} has ~~had~~ very definite and very positive

answers to prayer, and that there is a source to which you can go and

be sure of getting an answer if there is an answer.

~~I must begin by telling you of a~~ little incident that occurred

~~in my experience~~ several years ago. I was sitting in my study at work,

alone. It was rather late twilight, ~~just beginning to be a little dark.~~

~~Sudden~~ ^a very shrill sound came ^{through open} in the window, ~~a very shrill shriek,~~

~~very high pitched, almost beyond the limit of hearing, it was so very~~

~~shrill, and then another and another, and another.~~ My man, who was

~~sitting near me,~~ ^{An assistant} seized a staff and ran out and found a ^{large} blacksnake

~~several feet long~~ swallowing a ~~tree~~ frog. It had one of the frog's

hind legs in its mouth. The little frog ^{had about} whirled ~~around~~ and seized

the snake's head and was hanging on and shouting with all its might for

help. It was astonishing how loud a noise so small a creature could

make. My ~~man~~ ^{assistant} put the staff upon the snake's neck, and ~~opened~~ ^{The snake opened} its mouth

and the little frog hopped off three or four inches and remained quiet

resting for several minutes, showing no fear,

there, evidently recognizing the fact that help had come, ~~and that it was~~

~~no longer in danger.~~ ^{Soon} After resting a little while, it hopped off in the

grass happy,

and disappeared. It prayed, and its prayer was answered.

That little frog was praying. That cry of distress was a prayer

just as much as any prayer ever uttered. ^{Every cry of distress is a prayer} But you say that ~~it~~ ^{that the frog} was calling

other frogs to come to help it. Did you ever see a frog ~~to~~ help

for help?

another frog. Frogs don't know enough to help one another when they are

said you ever see a frog hopping off to help another frog

in trouble. ~~The~~ frog was calling to its ~~maker~~ ^{maker} for help. It was not

calling to ~~my man~~ ^{me} for help. It did not know ~~my valet~~ ^{that I and my helper were} was sitting in ~~near?~~

~~my study with me.~~ It had never heard of ~~him.~~ ^{us} It was simply calling for

~~help,~~ ^{inherent} obeying an instinct.

Every creature that has a voice calls for help when it is in

trouble. Did you ever think of that? The more you think of it, the more

you will be sure it is a fact. Every creature ^{with a voice} ~~that has a voice~~ calls for

~~help when it is~~ ^{when} in trouble, ~~it~~ utters a cry of distress. You recognize

The appeal for help is characteristic, you hear
 the cry when it comes. You ~~knew~~ the creature is in trouble. If a dog
 barks ~~in the night~~ you know by the ^{character} nature of its bark whether ~~the dog~~
 is in trouble or ~~whether it is~~ making trouble. If it is making trouble,
 it has one voice, ~~and~~ if it is ^{has} in trouble it is another voice altogether.

~~When you hear a man, if you will listen a moment, you know whether~~
~~he is praying, or whether he is, quarreling, or whether he is exhorting.~~

~~You know by his voice, and this cry of distress has a characteristic~~
~~sound.~~ When you hear a ~~little~~ baby cry, you know whether ~~that~~ ^{it} baby is
 sick and suffering or whether it is having a tantrum. ^{by the sound of its voice} It is an entirely

~~different sound.~~ And so ^{the} this voice of prayer, ^{the instinctive appeal for help,} ~~my friends,~~ is character-
^{real} istic. ~~It is the call that is made by every creature when it is in~~

~~trouble.~~ It is not ^{simply a} calling on other creatures ^{for} to come to help it. It
^{of course} ~~might be a man and a man might~~ ^{or some other intelligent creature} make such a call, but if there is no human being
 about and a man is ^{waddy} in ~~trouble~~ ^{pain} and distress he cries out ^{instinctively,} ~~just the same.~~

I will illustrate this principle by a circumstance which occurred
^{a few months ago} in the London zoo, ~~a~~ little chimpanzee became a mother, ~~and~~ when she saw
 the little baby chimpanzee lying on the floor, she was terribly frightened,
^{and} ~~she~~ fled to the remotest corner of her cage, ^{jittering} ~~at once~~ chattering with fear.

little one

until the ~~little one~~ cried. By and by the ~~baby~~ whimpered. Down came the mother with a great bound and placed the little one to ^{her} ~~its~~ breast and mothered it in real human fashion. To whom was that baby crying

when it whimpered? ~~To what was it speaking?~~ To whom was it appealing? *obeying an implanted instinct,*

It was appealing to its **Maker**. When the mother heard that cry, the

within her mother instinct ~~was aroused instantly~~ and ^{she} instantly ~~she~~ responded. *That feeble cry was to the mother an imperative command that was the call of prayer.*

to go to their relief of her offspring. It was an

You will perhaps remember the story of Hagar ~~when she took her~~

who took her little son and went out into the desert because Sarah was jealous of her

and Abraham cast her out. The little boy was crying and she could not

bear to hear him cry, ~~so she~~ laid him down behind a bush. ~~she found~~

she went ~~a bush. She was hunting for water, in the Sahara desert where I have~~

heard the voice of the lad." Hagar traveled many miles myself, so I know just what it looks like. It is

formed a spring of water and the lad was ~~a great sea of sand, nothing but sand. Where you see a bush, you know~~

saved and became the father of a great nation ~~there is water. Never a blade of grass grows anywhere unless there is~~

water, a spring or water from some source. So when Hagar saw the bush,

she knew there was water. She came to the bush, but could not find the

well. She knew there was a well there somewhere, but she could not find

it. Why? Because the wells in the desert are dug down, some of them,

emphatical whisper.

Not finished

very deep, and they are covered with a flat stone. Otherwise they would fill up with sand which is continually in the air. There are whirlwinds which churn up the sand in hills until enormous dunes are built and make waves like the waves of the sea. A flat stone is put over the well and sand drifts over it. Hagar was hunting for the well. If she had not laid the little one down behind the bush she would not have found the well. While she was roaming about trying to find the well, she hit her foot against the stone that covered the well. She brushed away the sand and there was the well. "And God heard the voice of the lad," not Abraham's prayer or Hagar's prayer.

a God-implanted

When one cries out for help, he is obeying instinct. Every creature in trouble calls for help. My friends, that instinct is within us. Whether a man believes in God or does not, when he is in trouble, he cries out, *he prays. And* ~~He~~ *if there is help for him, he will get it.* ~~may not cry for God to help him.~~ He cries out in distress and it is the

~~cry of distress that appeals to his Maker.~~ "God heard the cries of the

~~lad" the Good Book says. That is the way it is with all of us when we are~~

Every groan, every cry of distress is a prayer, an ~~in trouble. When we cry out for help we are appealing to our Maker.~~

There is within our bodies a special ~~I can point out to you the very mechanism within our bodies~~

As I have shown you, through which prayers are heard and answered. ~~As I told you a little~~

within us

~~while ago, demonstrated, I think, there are two personalities, within~~

~~the body.~~ The human personality presides over all voluntary acts, and

~~the creative personality which keeps~~

~~I am going to ask you a question. I should like to have some~~

~~Now I will raise a question.~~

~~of you answer this question if you can. Where do ideas come from?~~

What is the origin of the new ideas

~~Where do we get our ideas? Where do ideas come from? I asked a professor~~

~~and concepts, that come leaping like meteors~~

~~from Columbia University some time ago that question. He said, "We~~

~~once asked this question of a professor of psy-~~
~~chology from a great eastern university,~~
~~make them, of course."~~

"Well, now," I said, "Professor, I am very short of ideas to-

day and it would be of great assistance to me if you would make a couple

~~of good ideas for me. I should appreciate it very much."~~ ^{over} ~~So the~~

~~professor began looking for ideas. He looked about the room and all~~

~~around and by and by ^{made a movement} with his hand, and then with both~~

~~hands, and by and by perspiration was just standing on his brow, but he~~

~~did not find a single idea. He did not make one. So I finally said,~~

"Professor, you can not make ideas. Ideas are new creations and you

can not make an idea any more than you can make a flower." Ideas come

into our ^{conscious} brains, already made. Don't you ^{sometimes} say, "An idea ^{struck} hit me"? Don't

you say, "An idea popped into my head"? I have heard people use that

expression, sometimes. Don't you say, "An idea just occurred to me"?

the heart keeps reminding the head
every month's mind keeps it alive by
inserting outside particles
he replied "but instead of them yourself"

when asked

Haven't you heard people say, "Where did you get that idea?" "It came out of the blue." What does ~~it~~ ^{that remark} mean? It came from somewhere outside of ~~my~~ ^{the} consciousness. ^{Q/} I think everybody ^{means that the idea one must} recognizes the fact

that ideas originate outside of the consciousness, but not outside

of us. Ideas originate in ^a the part of the brain known as the sub-conscious, ^{which is known to be located in the} ~~There are certain ganglia that are~~ found at the base of ^{by pro-} ~~the brain~~ ^{the brain}

~~that are connected with the sensorium.~~ The back part of

the brain is called the sensorium. That is where ~~ideas, memories~~ ^{sensations sight pictures}

^{sound memories of} and pictures, ~~of our~~ experiences all are stored. ~~They are all stored~~ ^{up in the sensorium, and} ~~these ganglia~~ ^{subconscious centers} send little threads of nerve

fiber into all parts of the sensorium ~~so they are~~ ^{and thus} in touch with every-

thing that is stored ~~at~~ there. This is the subconscious, ~~This sub-~~ ^{seat of the}

~~conscious is the place where the unconscious~~ ^{operative} thinking is done.

There are two kinds of thinking done in the brain. There is

^{mental activity,}

the ordinary ~~thinking~~, which ~~simply~~ takes ideas and ~~juggles them~~, combines

them into sentences, plans, etc. That is the conscious thinking. Then

there is the unconscious thinking, the creative thinking that is carried

on in the subconscious. You have often had an experience that demonstrated

this. You were thinking of something at night, some problem perhaps, when

you were a ^{student} ~~boy or a girl~~ in school. You ~~remember~~ you worked hard on the problem ~~and~~ ^{until} you were so ^{weary} ~~sleepy~~ you could not keep your eyes open any longer and went to bed, ~~and~~ ^I in the morning you ^{when} ~~woke up~~ ^{awoke} and had a solution to that problem which you ~~could not work out~~ the night before, but ~~in the morning it~~ was ~~all~~ solved. ~~I wonder how many of you had an~~ ^{ever} experience of that kind? Why, ~~half the hands in the audience were raised.~~

^{The subconscious,}
~~What does that mean? It means your unconscious mind, or the creative~~
 mind ~~that works in the subconscious,~~ had been working while you ~~were~~ ^{slept, and} ~~sleeping.~~ ^{solved the problem.} That is what it means. You have had that experience, I am sure, every one of you. You have had social problems and moral problems you could not answer at night, but in the morning ~~it was~~ ^{they were} all clear.

^{most}
 These morning thoughts are ~~so~~ important, ~~I have many a time said~~
~~to myself, "I am going to write down all my morning thoughts."~~ ~~I have~~
~~started to do it a good many times, but I have been kept so busy I did~~
~~not keep it up, but~~ I always have a tablet with me when I go to bed and
 every morning when I waken, if I ^{have} had a refreshing sleep, I ~~find my mind~~
~~is full of ideas and I have to~~ ^{get a star shower} write them ^{down} as fast as I can, so they will
 not get away. I have practiced ~~that~~ ^{this} for many years. The best ideas I
 ever got ~~I get~~ ^{come} in the morning.

q. It's here;

Now, what have we ~~got~~ to do with the subconscious? I have just

of the mind on something you need 26

at night. Concentration is real prayer. ~~I will show you how to make~~

We do a great deal more praying than we appreciate.

~~use of these principles in everyday affairs.~~ Suppose you ask this

~~Sometimes we~~ question. You say, "I wonder whether this is right? I wonder whether

I ought to do this or ~~whether I ought~~ not? I must think about ~~that.~~ ^{it.}

To whom are you asking
What ~~are you doing~~ when you say that? You are not ~~making a decision.~~ *asking*

the question of yourself because you know you do not know.
And What are you doing when you are ^{supposed to be} thinking? You are ^{simply} waiting ^{for an answer.} By and by

answer
the ~~idea~~ comes. Where does it come from? You do not make it. It comes
the creative power, not ourselves,
from the subconscious. It comes from ~~this power,~~ not our human personality,

~~not ourselves, but outside of ourselves,~~ but working within our bodies.

The same power that keeps the heart going *does this important thinking* ~~is carrying on this thinking.~~ *for us.*

Our greatest psychologist, the late William James, a professor at
University, taught this in his books.
Harvard, ~~had this same idea.~~ If you read ^{his} book, "Some Religious Experi-

ences"-- I happened to run across it a short time ago-- you will find that

Prof. Wm James
he recognized the subconscious as the seat of religious emotion, because *of conscience.*

this is because it is the source of ideas,
he recognized the fact when we say, "Now I wonder what is right?" that we

of creative thinking.
are calling the subconscious into action. That is the same thing we do

when we say, "Now I wonder what is the best thing to do about this?"

I wonder what I had better do?" and we wait. We are not making any ideas

and we are not making the answer. Of whom do we ask that question? When

When

right

we say, "Now I wonder what I ought to do about that? What is best to do?" ~~When you ask that question~~ whom are you asking that question?

You are not asking it of yourself because you know you do not know.

You are conscious of the fact that you do not know and that it is why

you raise the question, so you certainly are not going to a source you

One does for information to one who does not possess the information sought.

~~know does not know the answer. You are raising the questions and asking~~

perhaps unconsciously, though none the less effectually,

~~it of the great source of wisdom. That is where you get your informa-~~

~~tion. By and by the answer comes and it comes from the subconscious,~~

~~where the involuntary thinking is done, where the creative thinking is~~

done, and that thinking is done by the power that made us, by the power

which the Christianⁿ calls God, and the agnostic calls the unknowable.

~~It is certainly the great creative intelligence we are talking to.~~

Cap?

the soundness of this teaching

~~Let me give you the final proof of this thing which I believe you~~

~~will all recognize.~~ *now* First let me raise this question, How can we get

help from this source? ~~There is a very systematic and a very efficient~~

~~way of getting help from this source of wisdom that I have tried to~~

~~place before you. It is by concentration. By concentrating the mind,~~

we open the door into the subconscious, and we put a problem up to ~~the~~

~~subconscious to ask it to find a solution, for us by concentration.~~ *asking for*

power

We are asking the question not of ourselves, because we do not know,

but we are asking the question of the power that made us, ~~and so the~~

~~way to bring this function into activity is to concentrate the mind.~~

When we ^{we set the subconscious at work.} concentrate upon ~~the~~ subject in which we are interested, and in prayer

we have the most intense concentration, because when we are in trouble,

~~and we have tried everything, else and we do not know what else to do, and~~

~~now~~ the stage of consciousness is ~~empty, it is not kept active, it is~~

~~all empty waiting for the answer. "What shall I do? What shall I help~~

~~me?" We make this appeal and if there is help for us, that is the way~~

to get it. ^{ask} I am not going to say that everything we ~~call~~ ^{ask} for, we ~~are~~ shall

~~going to get because it may be impossible. The power that presides over~~

~~us and within us, this power must be consistent. It must be consistent;~~

~~hence~~ ^{some} If we ask for a thing that is inconsistent, that is unreasonable,

~~that is~~ ^{and impossible or} likely to do us harm, we ~~won't~~ ^{will} get it. ~~We won't get help in that~~ ^{of course.}

~~way.~~ ^{But not} So, as I said before, prayer is simply intense concentration. I

~~won't~~ ^{much} say simply intense concentration, because it is more. The more faith

we have, the more intense will be the concentration, and the more certain we

will be of getting results.

You say, "This is a new philosophy. I do not know whether it is

sound or not." I am going to give you simple proof of it which I think

you will recognize. If there never had been any food, would there be any

hunger? Evidently there would not be. If there were no water and never

had been any water, would there be any thirst? ^{Certainly not.} Now, my friends, if there

were no ~~such thing as a~~ ^a great source of help to which we can appeal when

in trouble, ~~would there be a universal instinct to~~ ^{cry out to} call for help when we are

in trouble? ~~If there were no help, would there be an instinct planted with-~~

~~in us to call for help when we are in trouble?~~ I am sure you can see, my

friends, every one of you, ^{that} it is impossible there should be such a thing

~~as a~~ ^{innate leading every creature with a voice} universal instinct to call for help when in trouble if there is ^{were} no

^{great Helper on whom} ~~help upon which to call. You see that is an utter impossibility.~~ So the

fact that this universal instinct exists, that every creature calls out with

a voice of distress and appeal when it is in trouble, ~~that~~ is absolute proof

^{that} ~~there is a source of help, and that is the way to get the help.~~ ^{Helper and help when or destiny calls for it.}

^{We are not simply driftwood, mere creatures of chance.} Now, my friends, won't you apply this to yourselves? Concentrate

your mind upon the thought of help. You can help yourselves and this is the

real mind cure, if you please. This is the real faith cure. The real cure

comes in concentrating the mind upon the things that are likely to help us.

Appeal for help. Call upon your maker for help. You may say, "I do not

believe in your kind of God." It does not make any difference at all about that. It does not make any difference whether you be-

lieve in an Episcopal God, ^a or Methodist God or ^a Baptist God. The *are the real basis of differences* different conceptions of God ~~make the difference in theologians~~

That is what theologians ~~are~~ quarreling about, ~~the different con-~~
~~ceptions of the Divine Being.~~ It does not make any difference what

kind of being you believe in. The fact remains the same that there *an infinite power that is ready and able to help,*
as per Joseph not ourselves, is ~~power for help.~~ Cook said, "A power ^{rich bodies} that works for righteousness,"
that works for healing, that works for comforting worried souls,

and that power we can all appeal to and we can be sure to get ~~all~~
the help there is. *for us, and not through any*

~~I thank you.~~

arbitrary or mystical means, and cooperatives'
but through a normal functioning
of the human mind and the
relative mind working naturally,
consistently and harmoniously. for
~~the betterment of every individual~~

in the paper

So you see there is sound
 sense and consistency in
 the exhortation of the Apostle
 "pray without ceasing" for
 we have constant and
 very pressing reason for
 calling for help. Every
 decision we are called upon
 to make, every problem
 we have to solve, dawn^s
 upon the consciousness of an
 idea, or perhaps a group
 or a procession of ideas,

the products not of our
 human thinking, but of
 the creative thinking, the
 action of the Infinite Intelligi-
 gence upon the subcon-
 scious. When one ^{really} realizes
 this great fact, it makes
 every moment sacred,
 and one sees actual fact
 rather than sublime imagery
 in such ^{expressions?} in the
 Psalms, as, "Thou art my refuge"
 "A shelter in the time of storm,"

"The shadow of the Almighty"
 "a very present Present Help,"
 a voice behind you, saying
 "thus is the way, walk ye
 in it," "a shade upon thy right
 hand." "Leave your burdens on the Lord"
 "The presence is not
 an evanescent thing that
 comes and vanishes but
 a constant, inseparable ~~part~~
 reality so long as life
 still animates us.

Here is a very practical
 suggestion that will lead you

into a most delightful ex-
 perience; when you pray
 at bedtime, just before closing
 your eyes to sleep, make a
 note of things upon which
 your mind concentrates,
 the help ^{for which} your heart most
 earnestly ^{yearns}. The next
 morning note the ideas that
 come bounding into your
 mind when you first
 awaken from sleep. Es-
 pecially after a good and

refreshing night's rest.
 You will probably be
 surprised to find how
 many answers for
^{bedtime} prayers you receive. The
 trouble is we may for
 things and ^{then} forget that
 we prayed, and so do not
 recognize the answer. The
 answer may come months
 or ^{even years} later. Prayer is the divinely
 appointed means of keeping

in touch with Heaven and
 the beneficent Guiding Hand
 that made us and
 kept us in life. We
 may well obey the
 exhortation of the apostle
 to ¹¹pray with ceasing.

The expired breath, delicate test papers which may tell him instantly the nature of the poisonous eliminations present, and acquaint him with the nature of the vital disturbance which is taking place.

The further developement of bacteriology will, unquestionably, furnish to the common practitioner, means of diagnosis of which he now has only the ~~mearest~~ suggestion, or a very imperfect use. A pin point thrust into the blood, the urine, ~~discharges~~ or some other bodily fluid, secretion or excretion, will enable the expert, by the aid of a culture tube and an incubating chamber, to determine in the course of a few hours whether the myriads of microbes which have invaded the body of his patient are those of cholera or simple diarrhoea; cholera infantum, or dysentery; cancer, or malignant ^{tumour} carcinoma, tubercle, or bronchial catarrh; typhoid, or some other continued fever. Indigestion may be discovered to be more properly attributed ^{able} to the kind and quantity of microbes which a person swallows than ^{to} the viands which he eats, and the first duty of the specialist in stomach troubles will be ~~not~~ ~~to~~ to ascertain not only the symptoms of indigestion which his patient suffers, but the size, appearance, mode of growth and conditions of life of the ^{bacteria} ~~microbes~~ which have preempted the territory of his alimentary canal.

through inquiry ~~in~~ other avenues of knowledge. ~~The~~ microscope, although now considered practically perfect, may through some new discovery, make such prodigious advancement that it will be able to reveal invaluable information concerning the blood, secretions and various structures of the body, normal and abnormal, which are now only guessed at or not ^{even} dreamed of. Some specialist in the future may, with a microscope in hand, be able to read the physiological history of an individual from a single hair, noting the periods of vital depressions in the circular furrows ~~of the watten-~~ ^{and} uated portion of the capillary shaft ~~and find the period of the vital flood tide by the swelling and vigor of the stronger portions of the growth.~~

Chemistry, to, may lend such aids to the investigation of the nature and causes of disease, as the medical man of the present day may wish for, but cannot realize. Physiological and pathological studies are certainly indicating that the most toxic ~~ous~~ excrementitious elements of the body are not the urea, uric acid, carbonic acid gas, etc., to which such potent energies for evil have so long been attributed, ^{but those} ~~The~~ far more subtle substances which ^{are} present chemical reagents do not enable us to study with any degree of accuracy. The time may come when the medical investigator may sit by the bedside of his patient and apply to the secretions of the mucus membrane, skin, kidneys or the vapor of

medical man

In these particulars the physician of the future will enjoy a great advantage. ~~For~~ ^{begin} the physician of the present day, embarrassed by the limitations of his means of getting direct knowledge concerning his patient, ~~whatever be his means of obtaining information,~~ ^{often} becomes himself the means of darkening counsel and, unless fortified by long experience in the same sort of mental acumen, which qualifies a member of the legal profession for the cross-questioning of an expert ^{witness} ~~upon the witnessstand,~~ ^{- Examine} is almost certain to be led by his patient into pathological labyrinths, from which the father of medicine himself, aided by the accumulated knowledge of more than two thousand years, would scarcely be able to find his way out.

The present mode of examination no doubt misleads the patient as well as the physician, and evidently, in many cases, by his investigation and daily questioning, does his patient incalculable injury in the very attempt to benefit him; as for example, when the doctor feels his patient's pulse, looks grave and watches his watch, and silently notes its regular pulsation, the patient waits with almost breathless attention and watches every changing expression of the doctor's face; then, when the ceremony is finished, says anxiously, "Does my heart beat doctor?" "O yes, a little weak but it will soon be better." "But is it all right, doctor", nervously exclaims the timid and apprehensive patient? "Certainly,

his daily visits, and takes an inventory of the symptoms, the patient gathers them all up with scrupulous care, cautious that no one shall escape and, if possible, serves up, ^{each day to his physicians} for the doctors' delectation some brand new flavor in the mouth, some fantastic, strangely colored muscae volitantes recently discovered, a newly located crick in the back, or some strangely new sensations in the head.

It has often occurred to me that our present mode of investigating diseases ^{is} ~~has~~ in the highest degree calculated to cultivate and stimulate the patient's morbid imagination and furnish material out of which his depraved fancy can easily conjure new sufferings, new symptoms and new maladies.

The typical medical man of some generation to come, will, ~~I believe~~, make up his diagnosis from facts obtained with much less of suggestive questionings and ceremony than that of the present day. He will antagonize rather than encourage, ~~by~~ the method of his investigation, that self-centering disposition which, with many chronic invalids, is not ~~only the~~ ^{merely a} consequence but the chief support of their maladies.

Stop here for a moment.
 The practical medical man of a hundred years hence, in his dealings with the sick, will have a firm grasp upon ~~all~~ principles which are at the present time ~~to~~ frequently ignored, if ^{indeed} their true merit is comprehended by the average practitioner. He will, I apprehend, hold somewhat different notions concerning disease, its nature and its proper management, than those which largely prevail at the present day. In his management of the sick, his ~~theme~~ ^{aim} will not always be to cure the patient's disease, but to cure him. He will give much less attention to the specific medication of specific maladies, and more attention to the study of nature's methods, in the elimination ^m ~~Materia~~ ^m ~~Morbi~~ and the correction of morbid states in the relation of disease to the human system. The fact will be appreciated that there is such a thing as curing a disease without curing a patient; that disease is to be encouraged when its aim and tendency is evidently remedial. With this thought in mind, the practitioner will endeavor not to thwart nature's purposes, but to understand and facilitate the natural

beneficent is ~~now~~ ^{now-a-days} quite ~~ignorantly~~ ^{frequently} ignored. The well-informed medical man of the future will not only know this fact, but will gauge his methods by it. If his patient has what we call a fever, he will first of all seek to know its cause, and to aid nature in her efforts for its removal. He will ascertain what nature is trying to do and offer his services as a helper instead of simply undertaking to paralyze the remedial process by means of ^{toxic} antipyretics, and ~~antiphlogistic measures~~. He will keep in mind the fact that a remedy possessed of such power as to be able to paralyze the heat controlling centers of the brain, must naturally at the same time disable those nutritive processes upon which the repair of the body and the maintenance of its vital functions intrinsically depends. The medical man will give at least as much attention to *materia alimentaria* as to *materia medica*. He will find less use for nervines, tonics, stimulants, hypnotics and anodynes than the average practitioner of to-day. Stimulants he will look upon as false props, useful in emergencies, but highly deceptive in their impression of increased vigor which they create, since their ultimate effect is to diminish rather than to augment vital energy, a whip to flagging nerves which need rest instead of labor; a sort of bellows by means of which a smoldering vital flame may be fanned into a brilliant combustion, but at the dear cost of consuming more rapidly the precious remnant of material upon which it feeds.

Nervines and tonics will be regarded ^{as} convenient "nerve foolers" which find a useful means of affording temporary relief, but can

seldom be relied upon as a means of permanent cure. Worn out livers will be reclaimed to usefulness, not by the aid of cathartics and cholagogues, but by giving them a rest from those gross habits in diet, and otherwise, that have forced ^{them} ~~it~~ to exhaust ^{their} ~~its~~ energies in a vain effort to remove from the portal blood the harmful substances swallowed in the shape of condiments and concomitants, along with an excess of wholesome articles of food.

The chronic dyspeptic will ^{not} be treated ~~not~~ as a man whose stomach is a mere pouch, like his pocket, in which food substances may be artificially dissolved by the aid of pepsins, pancreat^{ics} ~~ants~~, ^{malt} extract ~~of~~ ~~lager~~ beer, and trypsin; ^{not} ~~neither~~ ^{is} ~~can~~ a mixture of peptones, peptogens, phosphates and hypophosphites ^{can} be made to take the place of natural food digested in a natural way. Not that these useful agents will necessarily be discarded, but that they will be relegated to their proper place, ^{that of expedients} ~~Merely extras~~ to be relied upon only as a temporary aid in those vital emergencies which involve a partial or complete shut ^{ting} ~~down~~ of the digestive machinery for repairs. Medical diet^{ics} ~~ics~~ will become more nearly an exact science than at the present day, and will extend its borders to not only those disorders which are supposed to involve chiefly the stomach, but all maladies in which a marked disturbance of nutrition is manifest.

The neuralg^{ist} ^{of the future} ~~ist~~, while ~~perhaps~~ recognizing a ~~vastly~~ greater number of nerve maladies than are included in the nosological tables of the present day, will, perhaps, be able to reduce to simpler form the equation which balances causes and effects in the

production of the very ^{ied} phenomena presented in the maladies of nerve and brain. Possibly he may find that disordered or disabled nutritive functions plays the chief part in the production of numerous maladies which are now attributed to obscure or unknown causes.

X The alienist of some generation ~~soon~~ to come, will, in my opinion, find himself employing in the treatment of the insane a very different method from that now generally pursued. For incurables, and dangerous lunatics, the present method of incarceration in a great institution, ^{which might be} justly termed a Therapeutic machine, will do well enough, but in our estimation the ideal method of treatment of the ~~incurable~~ insane which the future will present, will be one in which each individual will receive the benefit of all those therapeutical agencies such as massage, rest cure, electrical applications, ^{etc.}, which the broken down, nervous invalid, whose mind may not be affected, is ^{now} able to receive. And in addition he will be surrounded not with companions ~~at~~ conditions suggestive of mind disorder or mental deterioration, but by such conditions ^{as} ~~that~~ will be likely to exert upon his mind the most wholesome and sanitary influence.

X Without further attempt at particularizing, let us assure ourselves that ⁱⁿ the good time coming in ~~the~~ medical science, which at the present is only forshadowed, ~~will find that~~ the treatment of the sick will, to a large extent, consist of what might be termed "health culture," a scientific training of the whole body, out of the ways of physical wrong-doings into the paths of physical

uprightness, out of conditions of disability, weakness and suffering into conditions of vigor, strength and physical comfort.

The man who is "dead in trespasses and sins," to use a Scriptural phrase, or at least is tending toward the grave, will be put through such a process of grooming and dieting, exercises, and regenerative processes that he will verily be "born again," or at least reconstructed to such a degree that he becomes a new man; not with his old maladies antidoted, or driven out of him, but cast off as a serpent sheds its skin, or left behind in the process of growth and vital progress which has been carried on.

When that medical era arrives in which medical men shall manage their patients upon ^{principles} ~~processes~~ such as these, and when the public shall have become sufficiently civilized and intelligent upon these subjects to recognize the difference between being well and simply "feeling well," between obscuring the symptoms of a ^{malady} ~~disease~~ and eradicating the ^{disease} ~~malady~~ root and branch, between making a tired liver work by lashing it with Blue Mass, or liver pills, and getting a renovated liver ready to do its work without the application of a ^{goad} ~~goat~~, when the people as well as ^{the} ~~the~~ medical advisers come to understand that there is no such thing as antidoting by medicines, or baths, or by any other means than regimen reform of bad habits, ^{and physical} ~~a~~ regeneration ~~of~~ the results of physical transgression, then we may feel sure that physical ~~tippling~~ ^{the} tippling will become a less frequent vice than all medical men at the present time know it to be. Then ~~the~~ quacks and ^{the} nostrum vender will cease to flourish like ^a ~~the~~ green bay tree, and rational medicine

will advance as long a step in the respect and esteem of society as did the science and art of surgery when it left the environments of the bath house and the barber shop, and established itself in the more respectable quarters of the private professional office ^{and} ~~or~~ the public hospital.

The thought is growing in the ^{the} minds of medical men, that ^{of to-day} ~~some-~~ ^{sometime} ~~time~~ the medical men who come after them will sustain to the community at large a very different relation from that which they now sustain. At the present time the hour of sickness is the Doctor's opportunity; indeed, ^{it is} about his only ^{chance} ~~opportunity~~ for the display of skill, or for the winning of bread for himself and family. An unusually healthy season means "hard times" for the doctor unless he has previously laid in a liberal store, (which Doctors seldom do,) or adopts some foreign means of ekking out the meager professional ^{business} from casualities or obstetrical services.

Among the ignorant it is even supposed that Doctors eagerly long for epidemics and hanker for opportunities to show their skill in setting broken bones, and binding up the mangled limbs resulting from a railroad smash up. Of course no intelligent person, who is acquainted with the self-sacrificing life of the average medical man, will entertain such a derogatory opinion of the profession. But it has more than once happened that when epidemics have prevailed in ignorant communities, the resident medical men have been subjected to mobs of violence under the suspicion that they have poisoned the wells, or in some mysterious manner brought about a universal calamity.

I clam no originality in the thought that the position the medical man should occupy is that of Conservator of ^{the health} ~~the public~~ ~~health.~~ *of his patients.*

Is it not the experience of every practitioner that in at least one-fourth of all the cases to which he is professionally called, his services would have been unnecessary providing his advice had been sought and followed at an earlier period? Then when disease has done its work, when its ravages have perhaps been such that at the best but partial recovery can be secured, it is too late for medical science or skill to offer that ~~aid~~ ^{assistance}, which, if assistance had been earlier sought, might easily have been given.

The beneficent triumphs of preventative medicine have achieved for our profession far greater laurels than ^{the} most brilliant successes of surgical or purely medical skill. To prevent the jeopardy of life is far better than simply to rescue the maimed and mangled victim from the jaws of death. Is it not a worthy aspiration for the future of our profession, that the time shall come when ~~human enlightenment and professional attainments shall have reached a point in which~~ the general enlightenment of civilized communities shall have attained a point which will cause public opinion to demand that the model medical man shall be not merely a minister of the sick chamber, too often a helpless looker on where death is wresting from the home its chief support, a father, its loveliest flower--a daughter, or its tenderest bud--an infant, but ^{that he shall be} the protector of the individual, the home, and the community; a wise sentinel whose duty it shall be to warn, advise, and admonish for

health's sake, all within his sphere of influence. When that golden age for Doctors shall dawn upon the world, medical men will be paid not for their services to the sick, but for keeping the well in health. And the value of their services will be estimated not by their skill in snatching back intended victims from the yawning jaws of death, but by their success in keeping the dreaded monster at a comfortable distance.

When relations of this sort are established between medical men and their patrons, sanitary science, or what has been called preventative medicine, which for a century has slowly trudged along an up-hill road, supported only by the ~~generous~~ ^{frugal} appropriations of States or the ~~general~~ ^{general} patronage of philanthropists, will make marvelous strides in the varied directions in which the modern studies and progress indicate the possibilities of still further ~~advance~~ ^{advance} demands. No industrious medical man need look forward to such a time as one of professional idleness. Let us glance for a moment at some of the lines of work in which a man occupied in serving the public ~~good~~ ^{as a guardian of health} may be engaged. First of all we ~~should~~ ^{will} say it ~~will~~ ^{should} be the duty of such a medical man to inspect the homes of all his patrons, to look carefully into cellars, pantries, closets and garrets, to search ~~in the~~ ^{into all} neglected corners and out of the way places; to inspect sinks, drains and water supplies; to protect the lives of his immediate patrons by aiding in steps to secure a public water supply, ^a general and efficient sewerage system, and the abolishment of vaults, ~~open~~ cess pools, accumulations of barnyard or other filth, the prevention of the

contamination of the water supply of animals as well as of human beings, To see that proper laws are enacted relating to the sanitary construction of houses, churches, hospitals, lecture halls, factories, and other buildings, with special reference to proper heating and ventilation. Such a medical man will instruct the members of the families under his charge in individual hygiene. He will inspect their dietaries and suggest modifications suited to individual habits, temperament, and constitutional tendencies. He will advise respecting clothing; will remonstrate against the deforming or restricting fashion as regards the clothing of men and women. His professional stand, ^{ing} as well as his pecuniary gains, depending upon the freedom from sickness, the excellence of physical development and the longevity of his patrons, the medical man will naturally follow the members of the families under his charge to their various avocations. He will see that wholesome conditions surround them while engaged in their daily labor. ~~The~~ children he will follow to the school room. He will insist upon the training of the body as well as of the mind. He will demand in the children the training of the eye, the hand, and every muscle and every faculty, as well as the simple attainment of success in letters, mathematics, music, or other abstract studies or polite accomplishments.

Looking to the good of his success ^{ing} in the profession, as well as to his own interest, he will pursue lines of study for the purpose of finding out the possible relations which exist between ante natal causes and post natal deformities or disabilities of

mind ^{and} or body. He will see that the expected mother has at least as fair a chance ^{for} of developing ^{healthy offspring} progeny as the highly bred, imported bovine, or the thoroughbred whose colt is expected to lower the record of Maud S. or Jay Eye See. He will study the influence of heredit^{is} ~~upon~~ those who come under his care. If he finds a boy with a consumptive pedigree, or a girl with an inherent ^{idea} bias toward lunacy, he will certainly not frighten the youngsters with the assurance that the one must certainly die from a slow decay of the lungs, and that the other will probably end her days in ^a the mad house, but will see that these unfortunate individuals are supplied with those special advantages which may enable them to outgrow their hereditary tendencies. In other words, he will make the consumptive boy spend an hour a day in the development of his lung capacity, and will prescribe for him an occupation which will offer him no temptation to commit suicide by leaning over an office desk ten hours a day, or inhaling the dust of ^{the} cotton mill, or the noxious vapors of the chemical laboratory. For the ^{mentally} erratic girl he will prescribe such a course of mental and moral training as shall develop the will, ^{and} create a fine physique, and ^{well} see that she is in life surrounded with such conditions as will maintain high health, and avoid the risks of lower ^{ed} nerve tone. By this means, ^{subordinate} ~~moral~~ tendencies as regards disease may be extinguished, and hereditary maladies cease to occupy so prominent a place in the mortuary tables.

Perhaps under the wise guidance of such a medical adviser we shall cease to hear of women as the "weaker vessel," since our

coming medical men will discover, from a study of the statistics, that out of the same number of human beings of each sex under five years of age, the death of males in this country exceed the deaths of females by 6%, and that between the ages of 5 and 10 years the death of males exceeds the death of females by 8%, ^{and} while between the ages of 10 and 15 years the large excess of fatality in males is reduced to 1.3-4%, ^{while} and another step brings him face to face with the remarkable fact that between the ages of 15 and ~~30~~²⁰ years, of an equal number of males and females in this country, the death of ^{fe} males exceeds the death of males by 35½%. For the suggestion that this may be due to the perils of maternity, it will be at once met by the fact that of an equal number of males and females between the ages of 15 and 20 years, of foreign birth, the excess of deaths is on the side of the males by 25%, making a difference of 60% in the fatality of native girls between the ages of 15 and 20, and girls of foreign birth of the same age.

The student of this subject will also note that below the ages of 5 years the number of native males exceed ^{that of} the native females by 30%, while between the ages of 15 and 20 years the native born females exceed that of males by ^{only} 1-7%, ~~owing to the fatality of females between the ages of 15 and 20,~~ while between the ages of 15 and ~~30~~²⁰ the number of native males exceed that of the native females by 6%, owing to the enormous fatality of females between 15 and ~~30~~²⁰ years of age.

Looking into this subject, the coming medical man will insist

that there must be existing in the habits of ~~the~~ individual to which this enormous preponderance of fatality at a special age must be due. Very likely he will find chiefly among the factors which produces this result, the baneful influences of those fashions which demand constriction upon the waist. Certainly the coming medical man will be an inveterate enemy of corsets, stays and constricting bands. And it is to be hoped that his position will be sufficiently authoritative to enable him to demand compliance with the conditions under which he undertakes the supervision of the public health.

The medical sanitarium of the future, not satisfied with finding human beings as they are, will seek to make them better by insisting upon the application to the human race of those principles which the Pigeon fancier and the Stock Breeder have long practiced with such wonderful success in the modification and improvement of the species which they have undertaken to mold.

He will first of all insist that the marriage of inebriates, consumptives, epileptics, and persons suffering from grave general defects, shall be prohibited by law. Possibly he may succeed in urging this principle further to the extent that the professional thief, and persons convicted of gross crimes, shall also be prohibited, ^{the employment of those functions} and all cases which will perpetuate in progeny their criminal instincts.

The earnestness with which medical men in the coming age will engage in the study of all possible means of preserving health and prolonging life, will lead to the investigation of numerous

problems which are ^{now only} ~~already~~ beginning to formulate themselves in the minds of those who make a special study of this branch of science. The possibility of fortifying the body against the encroachments of contagious and infectious diseases by possible modifications of the principles of vaccination and inoculation. The practicability of combatting microbes of one specie with microbes of another specie by some experimenters already shown feasible in the case of certain forms of pathogenic germs, and the discovery of chemical medicines by which noxious microbes which may have invaded the body may be destroyed without the destruction of the individual. These and similar problems will be made the subjects of attentive study, and it is to be hoped will meet with a satisfactory solution.

But time will fail us to undertake to follow out all the numerous lines of thought which is opened up in the direction of future development and progress in medical art and science. I have only undertaken to present a few of the thoughts which have interested me in connection with this subject, and which seem to me worthy of consideration. ¶ But one thought more in conclusion, ~~if the work of the coming medical man is to be something in the line of what has been indicated, is it not the duty of the medical men of the present day?~~

^{picture} If the ideal of the medical man of the future and of his work which has been sketched is a true one, is it not the duty of the medical men of the present day to undertake even now to enlarge ~~his sphere of usefulness in the direction~~

his sphere ^{usefulness} in the directions indicated? Should he not by his intercourse with patients, seek to foster a public sentiment which will raise the profession to a higher plane of work, which will demand of the physician that he shall be much more than a mere purveyor of pills, a healer of disease, a medical mechanic or an expert therapeutic; that he shall represent in ^{his} work the art preservative as a feature even more prominent than the art curative, that he shall carefully garner from the laboratories of the world of science all that pertains to the welfare of mind and body, and shall prepare himself to be a wise and ready counsellor in all that makes for healthful, happy, noble manhood and womanhood. Then will ^{the} calling come to be the greatest and noblest of all great and noble professions, a work the most beneficent, humanitarian, and uplifting, of all pursuits, our influence upon a day and generation incalculable for good and glorious results, and a reward, a measure of ^{the} respect and confidence, ^{from fellow men of their} esteem and gratitude such as is given to no other class of men. X Close. X

Finally, my friends, members of the Calhoun County Medical Society, permit me to express to you my sincere ~~thanks~~ gratitude for the kindly motive which prompted you in placing upon me the important trust of Chairman of this Society during the last year. I have endeavored to do my best to promote the welfare of the Society and good feeling among its members during my term of office and to discharge my duties to the best of my ability. I am conscious of many short-comings, as doubtless are also you, but if I have in any measure merited your approval I shall feel very amply

rewarded for the little labor I have found time to do in the
 interest of our association. <sup>Hoping that these suggestions may command your
 would agree</sup> I thank you for ^{your} kind for-

bearance and ready co-operation which have ~~secured~~ secured to our
 Society some degree of prosperity during the year past, and trust
 that the future may ~~still~~ witness still greater progress and
 prosperity.

as regards the ^{future work} ~~of the Association~~
 Permit me to suggest, that we
 ought to do more in the direction of the
 education of ~~our~~ the citizens of our community
 in relation to our work, and as one
 means of attaining this end to
 urge that at our next annual
 meeting a public session
 shall be held at which ad-
 dresses calculated to ^{instruct}
 and ~~educate~~ in interest the
 non-^{medical} ~~professional~~ classes of society
 may be delivered by those upon
 whom this duty shall be laid
 by the association.

DR. DRYDEN: I believe this work has been founded on firm principles, and that truth is its foundation, ^{and} I believe that we shall see that those who come here for the purpose of getting a better understanding of these principles will never be sorry for it. There are many who come to us to learn these principles from us, and they ask us all sorts of questions: How to live; How to be made better both physically and spiritually. Many of those who come here are sick of the ways of the world, and who believe that we have something here that they have not gotten hold of. Many patients come in and tell us of their experiences, and that they wish to be made better physically, mentally and spiritually, and it is a source of great comfort to feel that we are able to do something for them,--to point the way to a better life in every respect. So I will say to all of you Be of good courage, for we believe that the Lord is our leader.

DR. EGGLESTONE: It seems to me that this is the best hour of my life. It seems to me that now I am going to have a holiday, for I feel that when I am helping to prepare others for this work, each one of them will help a thousand more, and the little that I can do is not a sacrifice, but my greatest joy. It seems to me that if I were not engaged in this work, life would not be worth living. I don't think I ever could be content with being separated from this work, it is so dear to me, and I am glad that it is time for ~~us to go~~ us to go to work again in this particular line of the work. --But it is getting late, and I prefer to give the rest of my time to Dr. Kellogg.

DR. EVANS: I am gratified at seeing what a nice class of young men and women we have here, and I am looking forward to this year's work with a good deal of pleasure. Just one thought: We ought not to put off our work until we get through our course. Our work begins now. We ought to work all the time. And, as we go about our work, let us pick up the

practical things. Book-knowledge alone does not amount to much; it does not count for much--except in examinations--and then it counts. The things, which counts is that which we really know. So, while going through this medical course, I hope to be able to help you to pick up the practical thing bringing you in contact with sick people where you can help them, while picking up these practical things. So let us have for our motto this year, "Work rather than study (?).

DR. E. O.

DR. F. OTIS : I feel that it is a privilege to be able to say

that, during the time that I have been connected with this work and trying to follow the principles inculcated in the American Medical College, that I do not regret that I have ever been connected with this work, or have ever taken these principles for the guide of my life.

I have been interested in looking over the results of our college work. But while talking with a friend of mine about what these principles have done for various members of the college, we felt that, unfortunately, there are some connected with this work, and who are ardent exponents of it, who really have not known where we stand, and we have not known just where they stood. I have felt that if we could be more definite, and more decided in our views, and in relation to these principles, how much better it would be for us. I think this would help us to be more firm in our future life-work.

I love these principles better every day. I was pleased to hear it mentioned by some of the members of the faculty, while calling attention to a statement in a prominent medical journal,--that "Properly trained Seventh-day Adventists do not eat meat," and that they "refrain from the use of tea and coffee" and other drinks of that nature; that they are a perfectly temperate people. I appreciate that admission, and I feel that when the world and the medical profession are beginning to know what constitutes a

true Seventh-day Adventists, any one of us who would not stand up for these principles, even under trying circumstances ought to be really ashamed of themselves, and that it should be a very serious matter indeed which should bring any of us where we would deny them.

So far as our work is concerned, I desire to apply all my energies to it, in making out of it all that I can for the benefit of the student. That is what I tried to do, when I first started in the work, although failing in some respects. Some methods must be readjusted, and some suggestions which have been made by those who have a good understanding of things, will be followed, and I trust we will now be able to take hold and get what there is offered to us here.

I was surprised, on entering a prominent school (the Johns Hopkins Hospital), to find how difficult it was to do anything. The janitor practically ruled the place. Certain privileges were offered us by the professors, but if the janitor didn't see fit to give them to you, you couldn't get them. Everything was for delay, and it took weeks to do what you could do in one week with a little freedom. We have some opportunities for practical work that are lying before us here,--if we could only see them--and sometimes I wish our students could visit the various schools and see how few ~~what~~ opportunities there were in them for practical work, and then they would feel like taking hold more energetically and earnestly in getting what they could of this kind of work here,--and I feel sure that it is the desire of all our students to do that. But it is only the great amount of work to be done that makes it possible for us to accomplish all that we wish. In fact, when we complete our medical work in college, we see that there are greater things before us, and may be, more or less to our surprise, that we have entered forever upon a student's life, and that if we do not study harder after we have completed our course in college, we

will practically fall into the background. I hope and trust that we will be able to assist and direct in this work. I would like to say that it would be well to form little groups or circles in our studies of various subjects, which will make it very interesting and profitable, and that we may be able to accomplish what is expected of us.

PROFESSOR PRISCOTT: I was in that Board-meeting to which Dr. Paulson has referred, in which it was decided to establish a medical missionary college. It had been in my mind before that time, and I have taken a personal interest in the work of the school ever since it was established, although, for the greater part of the time I had been out of America while the work has been carried forward here.

There is just one thought, in connection with this work, that I wish to emphasize, and that is this: It is worth a great deal ~~to us~~, to be able to recognize truth early in life, --to recognize it and accept it when we find it, regardless of outward circumstances. If you wanted to do your work in an institution which could make a large display of buildings, and much outward paraphernalia, you could doubtless find them elsewhere; but if your purpose is simply to find truth, and to avail yourself of its advantages and benefits, I don't know of any place where a young man or woman could take up this work with the same promise of success as here. I think principle is worth a great deal, and truth is worth a great deal, and to be able to recognize truth, and the value of it, and to receive it because it IS truth, rather than because of any particular setting it may have, --this, it seems to me, is true wisdom.

In this time in which we are living, I am looking for the greatest revelation of truth that has ever been made in the earth since Christ was here in person, --truth that will enlighten the whole earth, and truth which will pertain to the wellbeing of the whole man. So that this work with which

we have been connected, some of us for a number of years, to me stands for the fullest ~~revelation~~ revelation of truth pertaining to the welfare of man that has been made in the earth since Christ was here to teach in person, and I recognize it as a privilege to be associated with such a work. And I was thinking, while others were speaking, that the difference between your ages and mine does not seem very ~~great~~ great, and yet this is the span of life that is to determine your whole course in the work, and to start right, and to start on the right foundation, and to have an opportunity for a preparation for such a work as you have here, it seems to me is one of the rarest privileges that ever comes to a young man or woman.

I am always glad when I hear reports of success in this work, and I am also glad that there are so many who have the opportunity of preparing for such a field of usefulness as is open before those who have the privilege of studying the whole truth,--the truth that God has revealed to us for this time --the truth concerning soul, body, and spirit, and truth that will be a blessing to every one who may receive it.

MR. OSSIG : It is easy enough to be good and pleasant when life goes by like the shining of the sun, but it is not so easy to be so, when trial comes and everything goes dead wrong. So, in this Institution, when we go out into the world, we must stand up for our principles regardless of what others will say. We should have the courage to speak the truth, no matter whether the whole world is against us or not. We should live in the right way,--not because Dr. Kellogg or any one else says so, but because we are convinced that it is the only way to live.

Another thing I would like to say,--Should you ever change your ideas and leave this work, I wish you would leave the Institution quietly, and not speak or work against it. Some say, "I would like to do this or that." But we should ask ourselves, "Is it right to do it?" and "Is this

the best way to do it?" We must not become so degenerate that we cannot be guided by our instructors any more. We must ask the reason of things, and we must be guided by the Word and the Spirit, and not by the flesh.

I can say, with Dr. Egglestone, that if I were not connected with this work, I would not consider my life worth living. Once I thought my life amounted to nothing, as I had not done the work that I ought to have done, and contracted disease. One thing that helped me get back to health was the desire to live to do some good in the world. A few years ago, when I came to Chicago to become a medical student, I was asked why I wanted to become a physician. I said it was not because I wanted to fight other physicians who were wrong in almost every respect, but to teach them how to treat disease, and to teach people how to live, how to become healthy, and stay so. Of ~~that~~ course there are other reasons why I wanted to become a physician..

I am glad that I ever came to this Institution, and that I found it to be a Christian institution. When I came here,, almost the only things that I knew about these people, was, that they were vegetarians and practiced bathing. But I found something more here, and I am proud to be connected with this Institution.

I hope each one of you will treat your body right, because the body is the temple of the Holy Ghost. The better, and stronger and healthier the better you will succeed in your work. I wish also, that you may all be strict vegetarians. We have no right to take the lives of animals; it is very wicked to do, as we cannot give them back their lives, and it is wrong to take the lives of animals, for other reasons. Vegetarians are stronger, and have greater endurance physically [I don't know how it is, as to the mental part) than the one who eats meat...It is wrong to take life, and (as has been remarked by a good authority), "He who does not respect the life of an animal will not respect the life of a human being." This

also is one reason for wars which have taken place; and I hope that Jesus Christ will come soon, and make an end of wars, and of killing, ^{and} that peace will forever reign.. (Applause .)

CHAIRMAN : When I very reluctantly urged Br. Ossig to go ^{West} ~~west~~ for his health, I was fearful we would never see him again. And when I ~~saw~~ afterwards saw him in the ^{West}, I felt certain that we would never see him in our school again; for, after struggling six years with this dreaded disease (consumption), and after obtaining reasonable health, after doing some arduous work in the Laboratory, he suffered a severe relapse. Dr. Lindsay told me that he became so feeble that he could barely climb up a little hill behind the house. But he would ~~climb~~ ^{climb} up there and lay in the sunshine a large proportion of the day. He stuck to his principles, and each time he went out and climbed the ^{mountain} ~~hill~~ he became stronger, and he soon challenged me to run a race with him, ^{down the mountain,} and I found that his wind was better than mine, and he passed me. He finally developed into a seasoned athlete. At College View I asked some one how Br. Ossig was getting on, and the answer was, "Oh! he is a crank. He climbs the mountains and runs--you ought to see him run." Every body in Boulder that Br. Ossig can run. He wasn't running for sport,--he was running for life,, and he was struggling to build himself up. He said, "Of course I want to live, but I want to prove to the world that these principles can cure me. I want to prove to the world that there is power in these principles--" and I think that that is what urged him on. His diet was very plain,--a few simple things, a little bread and some nuts and other simple food-- just the simplest and plainest food composed his diet, so that he might have the purest blood. So he has now come back to us, strong and hardy--I don't think there is a more healthy person in the room than he. He is a demonstration of the power of these principles, and I wanted him to stand up before you, so

in this brother what power there is in these principles. Now is there any "medicine," including "Cod-Liver Oil," that will do that? ("No.") So here is a miracle that has been wrought; and I hope that Br. Ossig's experience in getting sick and in getting well will be a lesson for this school; that you will take warning, and not get sick; and if you do, that you will struggle for life and health until you find it. When Br. Ossig proposed to come to this school, I urged him not to come, because I was fearful that he might not be able to stand the ordeal; but when I met him at College View on his way here, I had no fears. A few months ago, I urged him to take work in the Boulder College in the medical department. But he said, "I want to come back to your school. If I go to that school (the University of Colorado), I will have to associate with people who do not believe the principles that we believe, and I want to come back to the American Medical College where I can associate with men and women who hold these principles sacred, as I do." And he is here, because he considers this school so good that he can take a little risk in selecting it. It would have been less expense for him to stay there and get his education in that school, which is an excellent one,, than to come here. There was also a beautiful climate there, and a climate in which he could feel sure that his health would be good. But he was willing to take the risk of coming back here in order to have the advantages of this school and its associations.

Br. Ossig learned these principles in Samoa, and inquired his way here, being attracted to us by the fact that we were vegetarians. Br. Ossig can tell you how he struggled for life, and how he got it, and we are thankful to God that he was able to come back here, strong and hardy and healthy. And I hope that you will become as strong and healthy as he is, by your method of living in this school, before you leave it. I am trying to have him become a missionary of health here, and that you will follow his example

until you become so strong and hardy that disease cannot get hold of you.

If one has become the victim of disease, and by following out these principles he is healed and has formed the habit of resisting disease, how much easier it will be to keep disease out of the body. If we follow this course, we shall not present pale faces, lean, wasted, and wizened figures, such as are so common around us, but be like Br. Ossig who has stood up before you here. Br. Ossig was once worse off than any of you, and now you see what a strict adherence to the laws of life and health and the principles of truth have done for him.

This is a most encouraging moment to me. It is encouraging to me to look around me and see this company of students. These young men and women, I feel, are determined to adhere to these principles; they have come here because they love these truths, and I hope there is not one who has come here who has not that purpose and motive. I trust that it is the love of truth that has brought you here; that you haven't come here ^{just} to become doctors. If you have, I hope we shall find you out, so that we may encourage you to go to some other place. Because this is not an institution for making doctors,--it is not a "doctor-mill." There are many doctor-mills where doctors are ground out by the score,--where diplomas are granted as the result of paying so much money and passing so many examinations. This is not that sort of school at all. In the first place, there is no charge made for diplomas, or for tuition in the school. The faculty of the school are not paid by the students for their services; it is a school in which the instruction is absolutely free. In fact there is not quite enough paid by the students to pay the running expenses of the school. The Sanitarium has borne a large part of the ^{running} expenses of the school. But I trust none of you have come here because this is a cheap school. It is not a cheap school. You are asked to pay more, and to give more for attending this school than are the students of any other school for their attendance. *tuition*

because you are asked to give your whole life to this work, and to the spreading and promulgation of these principles and this truth. That is the reason the tuition is free. The faculty and the members of the teaching force here are mostly employed in professional duties so that they earn a small salary, but they give the majority of their time and make an extra effort, in order that you may be prepared to do the same thing that they do; but they don't do it for pay. I am sure that money would not hire the member of the faculty and the rest of the teaching force to do this work.

While Dr. Paulson was speaking, I was mentally looking back to the beginning of this medical college. I remember when it was first spoken of. It was about thirty-five years ago when this college was first spoken of. At that time, there was a sort of health-reform convention held in this city, and there was a doctor (Dr. Trall) from the East, and he said, "Why don't you have a ^{medical} college here? You ought to have a medical college here, and you might as well have it as not." When a sanitarium was talked of, it was thought by some, that when that was established, a medical college might be established with it; but I thought that was impossible. Some ten years later, Eld. Haskell said to me, "Why don't you have a medical college?" I said, "We can't have a medical college, for we have no reputation, and if we sent out graduates, they would not be recognized by the medical profession. We don't want a hygienic college, for we are not strong enough to carry on such a work. It would cost a good deal, and it ^{would} require a great deal more talent, ability, ability and patience than we have." We didn't have a school and time went on. Dr. Paulson in New York, with other students, were thinking and praying about it, and I was thinking of it at the same time, --there seemed to be a sort of mental telegraphing between us, for we didn't have any written correspondence about it; but Dr. Paulson was praying about it and I was thinking about it at the same time.

The reason of this thinking and praying in regard to the establishment of a medical college, was this: We had collected a company of thirteen medical students,--and that was more than we had ever had before at any one time, in the history of the Institution--we had never had more than six or seven at one time; at that time there was not more than six or seven Sanitarium doctors in the world--physicians practicing these principles. Well, we had this company of thirteen students, and more wanted to come in. We opened up a building in Ann Arbor, a sort of boarding-house--so that our students might be together and strengthen each other, and be able to stand up against the influences about them. I used to go down there to see them, and to see that they were not led astray, and to assist in fortifying them against the influences that surrounded them. I don't think it was very necessary to do that, because that thirteen seemed to be able to take care of themselves,--but we were fearful.

Well, as time went on, we began to find that there were difficulties. There were difficulties in regard to our work in Chicago, and in Ann Arbor. After a while there were so many students who came in, that we had not room for them. So we made some improvements to our buildings, but it became apparent that we would have to put up a large building. We had a considerable patronage in Ann Arbor, and the thirteen students assisted in various ways. Finally about thirty-thousand dollars were invested, and we concluded to have a medical school of our own,--in fact we had already started one because we found that the school in Ann Arbor was teaching some things that were not necessary, and failed to teach some things that our students ought to know. A class in hydrotherapy was started, and ^{our} ~~the~~ students at Ann Arbor were not taught hydrotherapy, and did not know what to do. So they applied for an opportunity to come and attend our summer medical school.

So our medical school was begun, and it was recognized at Ann

Arbor. One Professor there, sent a young man who was going to be his as -
sistant the next year,--he sent him here with a letter to us, asking that
he be taught here the things that they did not teach in Ann Arbor, allowing
him only three weeks for such instruction. We taught him what we could in
that time, and he learned ^{among other things,} that there was a lot of things that he didn't
know. One year, at the close of the school-year, Professor Dunstan (?)
announced that it was best to send some of their students to ^{the} Battle Creek
Sanitarium, to learn things that they did not teach, for he had an assistant
who had done so, and he found that they knew a lot of things that he had
never heard of. So he advised the class to come up here and spend the
summer with us, so we made up our minds to start a summer medical school.
One year we took in eight or ten Ann Arbor ~~students~~ medical students, but
we found that that was not a profitable thing to do, because these students
brought in principles and ideas not in harmony with our work, and an in-
fluence that was not altogether wholesome,, so it was not wise to take in
such students. We also found that our students after spending four years
at Ann Arbor, had failed to learn some necessary things, and had learned
some things that might better have been left out. So, taking everything
into consideration, we made up our minds that the best thing to be done,
would be, to start a medical school.

Another thing that led us to take this course, was the fact that
it was plain enough to be seen that this work was going to take on a great
demand,--and these ^{coming} demands ~~came~~ to us from different parts of the earth. So
We found that it was necessary to increase the number of those who would
have the benefit of the medical school, and we made up our minds that by ad-
vancing money to students, a much larger number would be reached and ~~re-~~
~~ceive the benefits of the school~~ taught. That was really the origin
of the medical college.

to do, was to stand by the name, "The American Medical Missionary College, --" that we would give it that name and stick to it. I felt that this name was going to be against us, because the medical profession, in general, don't take very much stock in religious things. The great majority of the medical profession may be called irreligious; as a rule, they do not believe in churches; they consider them, in general, as hypocrisy. I think the majority of medical men, at least a large proportion of them feel that way, so I thought our name would increase our difficulties.. We felt that our name was against us, nevertheless we made up our minds to stand ~~for it~~ by the name, "The American Medical Missionary College." If we had not taken this course, the question would have arisen, "What is the purpose of this school?" And undoubtedly the answer would have been "This school is established for the purpose of propagating Battle Creek fads." And for two years, we were held up, by some, in that light. Finally, in the third year of the existence of the school, the question was brought up in Philadelphia, and we were admitted into the American Medical Association, and there was no opposition.

So, after two years' persistent ~~opposition~~ and bitter opposition, a sudden change came. The Lord raised up a man (I had never met him nor had any correspondence with him) but when the question came up before the medical profession as to whether the American Missionary College was a scientific school, he said he was satisfied that it was a scientific school, and a good school, and that he was acquainted with some of our students, and that he was satisfied that this was a reputable school, and that it should be recognized. So the Lord helped us in that respect, and we were recognized. And all the way along, there has been a providence attending our efforts in this work, until we have no fears as to whether this school has a right to exist or not. We feel that Providence has decided that this school has a right to be here.

I am glad that we did not try to start a college before we did. If we had started it twenty years before we did, it could not have been recognized as a scientific regular medical college,-- we would not have stood any chance whatever to have received recognition. The consequence would be, that every one who graduated from our school would have been denounced as a sort of quack, or "irregular," and we would have been deprived of many of the privileges which we now enjoy. The Lord knew what was best for us, so he opened the way for us. At first there seemed to be nothing but a stone wall before us, but when we got to it, we found just space enough to get through, and not a bit to spare. I have been thankful that the Lord has brought us thus far, and that we see before us better prospects than ever. This summer I have been abroad, and have had an opportunity to visit some other medical schools, and to compare our standard with theirs, and I find that the American Medical Missionary College is not lagging behind. Our instructions, **advantages** and **facilities**, in most particulars, are really superior to those of most medical schools; there are very few that are superior to ours. The great medical college of St. Bartholomew's, in London, has no laboratories that begin to compare with ours. Other laboratories, though famous, do not compare at all with ours-- they are greatly inferior to ours. When in Berlin, I spent considerable time with Dr. Ewald, and spent some time in his laboratory to see if I could ^{get} hold of some new points, and I found that his laboratory for the study of ^{the} stomach analysis of stomach fluids and gastric digestion, was absolutely insignificant when compared with the facilities afforded by our laboratory in this respect. The work itself was very far inferior to ours. So our students have no reason to **feel** that in attending this school they are depriving themselves of advantages obtainable in other schools, or that they would be better nourished, from a medical standpoint, in other pastures. I don't know of any other place where your advantages would be any

better, or, indeed, where there is such an opportunity for studying scientific medical truth as here .

The world is making progress. I have been glad to find a wonderful increase in interest in physiologic therapeutics . In Berlin, ~~the~~ ~~xxxxxxxxxxxxxxxx~~ the Imperial University has a Chair in Hydrotherapy, which is filled by the eminent Professor Brieger, who is a physiological chemist who studied up hydrotherapy; he visited the different hydriatic establishments in Germany, and even spent some time with Pastor Kneipp. He is Professor of Hydrotherapy in the Imperial University of Berlin. I found him very enthusiastic upon that subject. He spoke of Ewald and others who used drugs in the treatment of stomach troubles,--he said, "I call those fellows, 'tube-specialists,'" because he does not think it necessary to use tubes in treating stomach troubles, and that most of them could be treated with water. There is also a Chair of Massage in the Imperial University, under Professor Zabledowsky, who has a massage clinic every day, and you will see several scores of people there every morning receiving treatment. I find that they have some of our methods there. As soon as I was introduced, I found that the doctors were already acquainted with me; every one of them knew me , in the hospitals and colleges because of the electric light bath,--they call it the "Kelloggische Lichtbad." They are much interested in this matter of "Light-therapy," as they call it . But there is no particular credit due to us ; it is because of the principles which the Lord has given us, that we have been able to build up a work in hydrotherapy which is a little ahead of anything else in the world.

There is a chance for a great deal of improvement. We have only just begun to lay the foundation stone, so to speak, in view of the opportunities for advancement and improvement along the lines upon which we

have been working for so many years .. The Lord has helped us to build up this work, and the opportunities for advancement and improvement are simply wonderful,--I cannot express them . But the fact is, there is more progress right ahead of us, that we can see, than we have made, up to the present time . I am overwhelmed, every day of my life, with the things that I can see which can be done by way of improvement in all departments of our work,--improvements in our methods, and improvements in our system. And the thought came to me this morning, "How is it possible to do all these things?" I hope some of you are going to help us in this respect. There has been a wonderful expansion of our work during the last fourteen (?) years. At the beginning of that time, I had to work almost alone, with the exception of Dr. Lindsay, as the other doctors did not stand with us,--in fact, Dr. Lindsay and myself were the only physicians in this Institution for years and years who fully believed in our principles; so we had our faith and patience tried many times. And now, to see so many who are taking hold of these principles, is, I assure you, a wonderful encouragement to me . And almost every day I wonder (and the thought comes to me with a great deal of force), if the time has not nearly come when my work is done. I used to think that if the Lord would only let me live until these principles were recognized, and others were raised up to carry on the work, that would be all I would ask. So, as I find that I am going on, year after year, I am surprised that I am alive. For I feel that I have a great deal more life than I ever asked for, and more than I ever dared to expect.

I feel most thankful that I have seen this development of our work and that I see you all coming here to engage in this work, and I feel that you will be loyal to it . Some of you are going to prove to be pillars in the work,--I feel sure of that--and therefore other sanitariums will be started and ably and successfully conducted by these graduates of this

medical college.

Dr. Holden has spoken of the fact that our institutions are being worked by ~~the~~ graduates of this school. Now we could not have had these splendid institutions if it had not been for this school,--if it had not been for this medical college we would not have had these institutions which are so filled with patients that there is hardly room for them and multitudes who have been relieved in them, could not have been helped. We hope to see yet greater opportunities, and the great thing before us, is to stand true to our principles, be loyal to these principles, and build up and maintain the character of the school--and, above all things, to maintain its character as a reform institution.

It does not require so much courage to-day to stand up for reform as it did thirty years ago,--and I am rather sorry that that is so, because times of persecution sometimes develop the spirit of true loyalty,--in fact we have to be sometimes persecuted a little that we may be the better able to appreciate the things that we are standing for. I was reading in ~~a~~ ^a Medical Journal yesterday ~~morning~~ ^{morning}, two or three paragraphs which reminded me of the great change which has taken place in the medical profession in their attitude towards us. Some of you will remember Dr. Wathen whom I introduced to you one day. He is President of the Kentucky School of Medicine, Louisville, Ky., which is one of the best known ~~medical~~ colleges in the United States. This doctor has a worldwide reputation as an abdominal surgeon; he has been known as an eminent surgeon for more than a score of years. He came here as a patient. He came here as a patient, and was in a very feeble condition. Within three weeks he returned home having made a good recovery. Since then, I have received a letter from

him, in which he states that he gained one and one-half pounds per day while here, and that he has gained forty pounds since leaving the Sanitarium; that he was himself again, and had not been in better health and strength for twenty years.

A short time ago (May 13, 1902), there was a paper read before the Louisville Clinical Society, by Dr. Coomes ~~of~~ on Dietetics, in which he discouraged the use of flesh. Quite a number of doctors discussed the question, one of them saying he was sorry for the writer of the paper, as he seemed to be a case of "Haig's disease," and that he must have the gout. This was ^{intended as a sort of slur} because the writer was partial to the teachings of Haig who discourages flesheating, as being the source of uric acid and rheumatism. There was quite a number, however, who endorsed the writer's views, and a few opposed him. Some spoke quite strongly against the paper. But the last to speak on the subject was Dr. Wathen, who remarked as follows: (Extract from remarks of Dr. Wathen.)

"Theory is all right as far as it goes, but practical observation is of far more value. I assume that I have had opportunity of observing this question more than all of you combined, having recently spent three weeks among a class of people who use no meat at any time, and it has positively demonstrated to me that meat is unnecessary,--that the healthiest people in the world never eat meat; that those who have the most beautiful complexions, who are the most enduring in their work, who are the most amiable in their disposition, who are the least addicted to the use of whiskey, wines, opiates, sexual excesses, etc., are those people who do not eat meat. It has been demonstrated that persons who have been addicted to the excesses I have mentioned, while upon a meat diet, have entirely abandoned them while living upon an exclusively vegetable diet, but returned to the excesses when a mixed diet was again resumed.

No well trained Seventh-day Adventist eats meat, and you will not find healthier people in the world than these people, nor people more free from excesses of all kinds. I had occasion to observe, at Battle Creek, Mich., for three weeks, the nurses, the doctors, the medical students, nor have I ever seen brighter medical students in my life, nor have I seen such healthy looking people as they are, and not one particle of meat do they eat. I lived among them for three weeks without any meat. I did not want, or feel the need of meat, and I gained, while there, one and ~~one~~ half pounds per day. Vegetarians are the most enduring people in the world; the laborers on the coast of Spain unloading vessels work longer hours and carry heavier weights than meat-eaters, and they never eat any meat.

The question of vegetarianism is a large one. You must prepare these things properly. Take, for instance, some of the cereals: We cook oatmeal between thirty and sixty minutes and think it is ready to be served, whereas, at Battle Creek, they cook it at 300° F. for three to six hours, and when prepared in this way, it is easily digested and nourishing. Many of the Battle Creek products are already predigested, so that they are readily assimilated.

As to the question of milk: In my own person, in 1880, I lived for ten days on an absolute ~~diet~~ milk diet. I did not even take a drink of water during that time, and I gained over a pound a day. You can live almost indefinitely on milk.

Protose, made of the gluten of wheat and peanuts, is a substitute for meat. It is easily digested, easy of assimilation, and nutritious, and, when properly prepared, you can eat enormous quantities without ill effects.

One of the most admirable dinners I ever ate was at Dr. Kellogg's where no meat was served, the cooking being done with vegetable and nut oils, instead of lard and grease."

The thing that surprises me is, that there was not a word said in opposition to these remarks. Another surprising thing was, that they were published in a medical journal without any adverse comment. This must have weight with the medical profession. And the fact that the editor of a reputable paper and the Dean of a medical college should make such statements before a medical society, to go on record,--it shows that he has great confidence in these principles, and great respect for the work that is carried on here. When such a man is willing to take his stand by our side in this work, we ought not to be ashamed of these principles. ("We ought to be proud of them.") Yes. I have sometimes felt that there were some among us who really felt a little ashamed of these principles,--especially when they went away. They are inclined to hide their principles and leave them at home, for fear some one would find that they endorsed them. But we don't any of you are going to be that sort of people. Br. Ossig has said a few words to you to-night that I know are uppermost in his heart, because every time I meet him he says the same thing to me. He says he feels troubled, worried and distressed because he sees some doing what they ought not to do, and he is thoroughly right about it. We need to let these principles get down deep into our hearts. This is an institution, ^{established} not ~~merely~~ for the purpose of preparing students to be doctors, but to prepare young men and women to go out into the world as reformers--as champions for the truth. This is the thing we are to do--go out into the world and teach truth. The whole world about us is lying in darkness and wandering about in ignorance, without guides and going astray,--what a terrible spectacle it is!

Providence has brought us here, and given us an opportunity of having our hearts and heads filled with this truth, and I hope that none of you, while here, will fail to grasp large things, not being content to learn "Physiology, Anatomy," etc., and the technical things taught in the text-

books, but lay hold of the great things, the principles which are held here--the fundamental principles which have been the foundation of **All** this work, and out of which this work has grown, and out of which it sprung. This work is not based on wealth or personal influence; it is based on principles,--and they are principles which are needed in every part of this great and "enlightened country," so-called--but it is really a benighted country. Men have wandered so far away from God that they don't know how to live. They don't know, about eating, for instance, as much as a horse. I am sometimes tempted to say of men, that they have lost their horse-sense. These principles are needed in every civilized land, and in every heathen land--and perhaps they are not so much needed in heathen as in civilized lands--for the heathen are not so far away from God, in their habits of life, as a rule, as are the people of civilized lands...

There is an abundant opportunity for going out into the world and teaching truth. Calls are coming in from every side from this and from other lands. Br. Conradi asks for brethren ... Egypt is waiting. A lady physician is wanted in the Orient. There is a great opportunity for woman's work, for there are some ~~lines~~ lands in which it is impossible for men to ~~work~~ ^{labor} in certain lines of missionary work. There are two physicians wanted for Germany, three for Denmark, and three for New Zealand, and they are wanted immediately ("And one for Vancouver.") And two doctors are wanted for Canada, right away. So here is a call for eight or ten physicians,--and where are we going to find them? In our own country we need such help,--men and women who are Christian physicians are wanted; they want reform physicians. I fear there has sometimes been, in our school, too much professionalism; I hope we won't find so much in years to come as in the past. We want Christian reformers; and if we are that, we can be sure

that there is great need for us in the world, and great opportunities before us. . .

Winds Horns
of Dr Kellogg
Residence

Opening of
Am. Mus. Mus.
College (Heli)

HOW TO HAVE GOOD HEALTH

Dr. Will Durant, whose fame as a philosopher and scientific professor, popular lecturer and author of The Story of Philosophy, a best seller, and of numerous other important works, after receiving a copy of How to Have Good Health, writes as follows:--

"I have asked permission to review this book because I am an almost fanatical admirer of Dr. John Harvey Kellogg; which perhaps renders me unfit to review it.

"I first met the Doctor in 1927, when I stopped for two days at the Sanitarium in Battle Creek. He found that I had a blood pressure of 146 at the age of 42, when I should have had about 123; and I found that the Doctor had a blood pressure of 116 at 76, when an old saw would have allowed him 176. I was impressed by his ruddy health, his multitudinous energy, his clear eyes and skin and mind; and I began to pore over his large book, The New Dietetics. I could stay with the Doctor only two days; but it was long enough to lure me into the idolatry of health. I took his book with me as a colossal vade mecum; followed its precepts for three weeks, ate like a Buddhist, and played Thoreau even in the cities. In that short period my blood pressure fell to 126, and my tongue shed its ancient coating. Though I was barnstorming the West on a heavy lecture tour, I felt the intoxication of health as I had never known it before.

"Alas, I relapsed. How could I keep my virtue in a world filled with such merrie devils as meat and fish, coffee and tea, whiskey, wine and beer? The animals of the field once again faced the executioner in order that I might have a he-man's food; and the social compulsion to drink forbidden alcohol was too strong for my weak spirit and my willing flesh. The blood pressure began to mount again and my tongue became coated.

"And now the Doctor, patient with my sins, and always willing to exchange dietetics for philosophy, has sent me, in return for a pessimistic volume of mine, his new book, How to Have Good Health Through Biologic Living, as if to remind me of the proverbial relation of the liver to life; health is the only cure for metaphysics. Here the wisdom of one of America's wisest and kindest men has been brought into handy form; here shall you find a guide to sunlight, good food, healthful clothing, a godlike cleanliness, and restful sleep. I have read every word of its five hundred lucid pages. I propose, by the grace of biology, to follow as long as I can The Way described in this little masterpiece of exposition, this simple and kindly introduction to the highest of all arts-- the art of life.

"I recommend it to the reader, not as an expert to a layman, but as one wanderer and wayfarer to another. There are pages in the book which will not win our assent; certain elements--like posture may seem to be unduly stressed, and the Doctor may not appear to weigh sufficiently in the balance the genial pleasure given by the ferocious poisons which he prescribes. But let me be modest; the Doctor has thought these things out before I was born; his Sanitarium was 12 years old when I alighted upon this reckless planet. If only I can work as hard, and think as clearly, at eighty-one as he does today, I shall look back with calm forgiveness on the errors which guided me so well. Health is the greatest gift, and the Doctor has given it to over a hundred thousand men and women from every continent. He deserves well of his country."

I have no suggestions to offer. I want to say that we enjoy the GOOD HEALTH very much in our home.

GOOD HEALTH is a most valuable and interesting magazine that should be in every family and carefully read.

I am at present a charity patient, or at least a charity subscriber and the GOOD HEALTH magazine is sent me complimentary for a few months having been a patient at the Sanitarium recently. I am very fond of it and will mail check soon for a year's subscription.

The Question Box is fine for anyone if they watch it every month they will see something sometime that will appeal to them and help them to fight their ills.

If the magazine could be sold at \$1.00 and slightly smaller in volume, would not the increased subscriptions and the higher advertising returns make it possible to sell at \$1.00 per year and thus make the teachings more effective by a large subscription increase. I think it would do so.

I regard the GOOD HEALTH magazine as the most authoritative of them all and usually the most readable although at times some of the articles appeal to me as not quite adapted to a real health magazine. I should like to see some articles by Dr. Kellogg on rheumatism, a disease so prevalent and so generally misunderstood. The magazine has been of almost inestimable value to me during the many years I have been privileged to read it.

All those subjects seem to belong in this very good magazine. I appreciate GOOD HEALTH and should not want to be without it.

I read the magazines quite thoroughly and find them instructive and interesting.

The articles published in recent issues of GOOD HEALTH about the effect of tobacco on the human system, etc., have been interesting to me and have been "passed out" to do real good. Cigarettes are so commonly used here among High School students that any correction that can be made certainly is needed. I hope for more good articles on similar subjects.

All the subjects mentioned are interesting to one. It is hard to choose between them though I always turn first to the Question Box for I learn much from that. I also enjoyed very much the gardening articles. The only suggestion I can make is that you give us a little more of it each month.

The information relative to goiters and treatment was most interesting.

Your paper is very helpful in every way.

I think the last number of GOOD HEALTH unusually interesting. I don't know that I have any suggestions to make.

Have found your magazine very helpful and interesting. Don't think I have any suggestions to offer.

You asked me if the last number of GOOD HEALTH was interesting. I find them all interesting, every bit of them. I read every line. I don't see room for improvement. I don't see how I lived 46 years without reading it. I wouldn't like to be without it now.

I am especially interested in dietetics, eugenics, and hygiene. Also articles on tobacco and alcohol are good. The Health Question Box is ably handled and is a source of much pleasure to me. Keep up the good work.

I do not have any suggestions to make. Usually I read the entire contents of the magazine taking first the Question Box and Professor Kellogg's editorials, then Medical Science. Since I am entering my 82nd year some articles in the nature of things do not appeal to me as strongly as if I was younger. The best indication I can give of the value I place upon GOOD HEALTH is the fact that I have for several years subscribed and paid for three copies annually for members of my family in addition to my own.

- I find GOOD HEALTH interesting in every way.

All the articles interest me. Really have no preferences. I like the journal very much.

- I am finding the GOOD HEALTH magazine very interesting.

Every article was a gem. I have every number on file. I loan them, but one, as would not give the last one away it is missing. Go to (ti), as you have done. Crucify sugar and meat habits. They should be the 18th amendment to the 14 pointers for GOOD HEALTH.

- I enjoy GOOD HEALTH very much.

GOOD HEALTH is intensely interesting to me as it now appears. A larger magazine with more extensive publications would be appreciated even more. I never miss reading any article.

? A fine magazine ^mand with you in every way.

I have learned a good deal through GOOD HEALTH magazine, and have my health improved in following out some of the great instructions in your magazine.

I had never thought of criticising the magazine very much, but if I made any criticisms or suggestions it would be that so many health articles seem to be written for the rich or people of leisure or sedentary habits and so few for the active hard working folks. To one who is working at hard physical labor the physical training, exercise, sports, etc., seem hardly applicable. When one works in the field and feed lots all day, out door life and such like stuff seem hardly applicable.

I think the best remark I can make is that I am enclosing \$2.00 for another year's subscription to GOOD HEALTH. GOOD HEALTH magazine really advocates good health. I am thankful I am a subscriber.

I do not think I could offer any suggestions that more light could be given on combating disease in a general way as well as those of old age. Also the exposure of health and food fakirs is very beneficial. GOOD HEALTH is certainly of great value to all who wish to be informed on Biologic Living.

First with me come the editorials. I did not know where to begin checking. I had not given the improving of GOOD HEALTH any thought, thinking it was perfectly alright.

I like to have some periodical come into my house and home which will serve as a constant reminder to care for the human body properly. Your magazine does that. How about a department of home treatment for various common ailments, best preventive measures to be included. I find all numbers interesting.

Indeed everything in each number of GOOD HEALTH is interesting and instructive. I wish the book could be in every home. I am most interested in wholesome diet, for because of the lack of knowledge as to what it consists of the people are suffering from constipation which I believe to be the cause of our ills. Had I known when young what I have learned from GOOD HEALTH I would not be an invalid now.

Perhaps I am more interested in the more scientific discussions or reports than many because I am a trained nurse. However, from the standpoint of general interest I believe all the departments are good. However, I have long had one feeling which I have hesitated to put into words: that is, that the editorial discussion of the eating of meat and also the use of tobacco would be more effective if it was more restrained. Now a tobacco user, like my husband, who does show the effects of its use though he won't admit it, just glances at the headlines, after having read one or two previous articles, and says, "Well, they are damning the American Tobacco Company and the Meat Packers some more."

I have no suggestions to offer, but wish to say that I am very much interested in GOOD HEALTH. Best wishes for your continued success.

I think the magazine is very good as it is, with such a variety of information.

I would omit mountain climbing, gardening and baseball for your health. These are only fillers and the space should be filled with medical matter.

In telling people what to eat you never make any distinction between people who are in good health and those who are sick, and between those who take plenty of exercise and those who are confined to office work.

Your article in the May GOOD HEALTH exposing the fakir, Mr. Christian on his wine and alcohol was wonderful. I believe if more of this patent medicine would be investigated we could get legislation to be more rigid in enforcing the pure food laws.

Every number interests me. I read every word and pass my books on to some one else. I wish more would read them, then profit by the reading. I saw in our local paper how very much more meat was eaten in 1923 than in 1922. Had I not been a reader of GOOD HEALTH I would have believed it.

I find many good suggestions in the GOOD HEALTH magazine.

I am well pleased with the GOOD HEALTH magazine as it is and believe I could not improve it. I enjoy it every time when it comes and so does my family.

I hardly feel able to give any suggestions worth while. I have found your magazine quite interesting.

I should like to hear rheumatism discussed. Suggestions for moral training of children and physical basis for same.

The material in the whole magazine is so interesting that I have difficulty in making a selection. I might suggest, however, that an article by Dr. Kellogg on the chiropractic fad that is sweeping the country would be very interesting at this time. A friend of mine, a farm laborer without even a high school education, studied a correspondence course for three months, got a "diploma" and is now making more money than any two regular physicians here. He proclaims that he can cure anything from a sore toe to a case of hydrophobia by spine treatments and there are hundreds who believe him.

Articles on diet for health and what foods and combinations affect the system in certain tendencies of diseases.

The above five subjects are subjects I am most interested in, though all of them are of good merit.

Very difficult to offer any suggestions, as every number of Good Health is read with the greatest interest. It is a magazine of great value to the promoters of the "Frances E. Willard Memorial, National Physical Betterment Bureau. We take pleasure in recommending it in our correspondence.

I think your subscribers desire to learn more about the effects on health of artificial butter color, cheese color, sulphured dried fruits, and the drug preservatives used in canning vegetables and other foods. In the May Good Health I have read seven articles: "Why Abraham Lincoln was Melancholy", "The Teachers Opportunity", "Fooling the public about Coffee", "The Eugenic Ideal", "Psychology of the Colon", "Explanation of the Action of Insulin", and the Editors Question Box. I found them all highly interesting.

As a rule I read the Question Box first, and then begin at the beginning and read through. I do not feel competent to offer suggestions.

I would like a discussion of when disease is a healing or curative process, as I believe fevers and diarrhea are said to be. More important I would like a continuous discussion as to delusions people possess as to what cures disease. The ordinary minds reasons thus: I was sick, took medicine, got well, therefore medicine did it, or, I took treatment therefore treatment did. I interviewed hundreds of people in the Southwest who attributed their better health to a change of climate when a gentle cross-examination revealed, in most cases that it was a change in the mode of life which really did. I know of a chiropractor who caroused, etc., then sobered up, took treatments, got better and he KNOWS (?) treatments did it, etc. Christian Scientists have better health than the average; resisting epidemics more successfully than people generally. They think "Science" does it however. I would like a fuller showing of what fools people and how they are deluded.

If my students do not become subscribers to Good Health, it is not my fault.--Through frequent quotations of Good Health. This shows, in part, my appreciation of Good Health. Suggestions: More articles on Public Hygiene, Especially settlement work in connection with industrial and commercial establishments. More material on Hygiene, and History, history of medical subjects or its influence on history. More deductions showing interrelation of mind, and body, etc., thus necessity of biologic living. Finally vigorous continuation of anti-meat campaign.

It is the best health book I ever read and I will take it as long as I can, and I have others to read it. My health is in good shape since you told me how to live. I would have liked to have read it years ago.

The Health Question Box is doing better service to the Public in general than any other line.

The present issue is the first I have seen, so I can only give my impressions of this one number. My own preferences would be for more straight to the point constructive things; and not so many negative ones. You have five articles that weigh against tobacco, including the to me uninteresting one about the American Indian. I think a great deal of space is wasted in the article on the Avocado. I venture the opinion that this article has little interest for the great majority of folks that read your magazine. For myself, I should like to see articles on exercise (well illustrated), at least one such in every number. I should like to see articles on the various forms of bathing and the kind of bathing most beneficial in given circumstances, in short, definite, instructive, helpful messages.

Being an optometrist, I know your writers do not keep up to date on eye testing, since frequently the idea is expressed that an oculist should be consulted in such cases. The optometrist is the specialist of eye specialists, since his work is confined to one thing—refraction. Yet, you think the class without training is the better. The medical school once tried to belittle dentists, but only a fool would go to an ordinary M. D. for dental work. The case is as strong for optometry as for dentistry as dentists do it. I feel that it is a lack of full information, rather than a deliberate desire to misrepresent facts, that cause this attitude. So, I write freely, and trust my words will be received in as friendly spirit as the one in which they are written.

Have no suggestions at present. Have not been enjoying good health for some time, so my thinking power is at present very low.

Your advice with article on the valuable properties of lemons has been tested by many and found beneficial. Why not have frequent articles on the value of suggestion in very many cases of ill health.

Please accept many thanks for your articles of interest.

As a graphic way of calling attention to what is happening to our own family stock, it seems to me there is not enough attempt nowadays to keep up the popular interest in genealogy, with its stimulations of interest in kindred matters. So far as I can learn there is not now a single periodical in the country which carries a genealogical department.

I find every number of Good Health interesting and am interested in all subjects mentioned.

I find all your issues of more or less interest. Last number loaned. I didn't or haven't cared for the articles on strange fruits or plants.

I love every part of the Good Health, and feel that we cannot do without it.

I find many good suggestions in the Good Health Magazine.

I consider that the value of Good Health would be still further augmented by accounts of personal experience of the results of biologic living. Points are stressed to do this and that, which is one side while the other side resulting from following such points are not brought out. The person in search for better living needs concrete facts, definite examples as to what has been achieved by following the regime so ably advocated by GOOD HEALTH.

Have nothing to say except that I desire all the information I can get on the above subjects as far as your magazine is able to furnish same.

I would like to suggest that an article on practical psychology from the viewpoint of Good Health could be added to give your readers the information what effect the emotional feelings has on the body. This would serve the same purpose as your articles now do, to guide control and direct the mind of your readers from an angle that some of them would not get otherwise.

Maybe it would not be out of place, during the actual wave of race prejudice and hatred to touch the sinister effects on health, both moral and physical of these obscure and primitive feelings of human race.

Believe you should cover such diseases as Brights, Diabetes, and Heart trouble. That is, give their causes, and what is necessary to keep them in check, or effect a cure.

I think an interesting subject would be the Blunders of Surgery, and The Narrowness of the Medical Association. I understand it is trying to repress the Chiropractors and Physical Culture Methods. I enjoy much Dr. Kellogg's editorials, especially his sledge hammer blows at meat packers, and tobacco.

I think occasional articles describing actual cures or cases of health building in connection with the Battle Creek Sanitarium, or outside of it, as a result of following Dr. Kellogg's teachings would be both interesting and helpful. A story of that kind sometimes proves an inspiration to one discouraged with his own health conditions.

The information concerning discoveries and research is especially interesting because it is authentic and serves as a guide in checking the reliability of other published statements of medical discoveries in which the layman has no way of detecting the truth or falsity.

A permanent list of a balanced vegetarian diet (mentioning alternate foods) for new readers would be helpful, listing in this diet as many raw bulky foods as are easily obtainable in a greater or less degree throughout the year. Such a list would immediately interest those suffering from malnutrition or digestive disturbances and would be of value to people who would not take the trouble to write for the information contained therein.

If Laughter "Doeth good like medicine" would not a little humor (Nonsense) now and then be relished by the best of men? (which includes women too).

I have never visited Battle Creek Sanitarium yet, but some of my daughters have. Your dieletic system is mine also.

I would suggest that you put Good Health on the newsstands, similar to the method that Physical Culture does. Good Health is superior to Physical Culture, and should be placed in all Public Schools, Protestant Churches, Y. M. C. A's, and Public Librarys. I enjoy every article published in Good Health. Long may it live. Hit hard, meat, coffee, tobacco, and intoxicating liquors.

All the numbers of Good Health are interesting. Dr. Kellogg's editorial articles are sure to be read, and I like to see the signatures of the authors at the close of the editorial. I consider the present cover of the magazine very attractive. I would like to see Battle Creek ideas spread by the newspapers, as I believe they reach the largest number of readers.

Good Health is always interesting, because it prints the facts, and you learn more about how to live by reading Good Health than in any other magazine.

We like the Good Health magazine very much.

Good Health is so full of good advise and personal hygiene, that it is difficult to select any one subject treated on which to compliment you.

I am delighted with all the subjects treated by Good Health magazine, and look forward to its coming each month.

We find helpful information in nearly all departments, and appreciate the understandable language in which nearly everything is written.

Say, after starting to check the suggested above, I find I could check them all, so think it best not to make any further reference to the most interesting subjects. All are good.

Many articles are interesting to everybody. I am most interested in how a woman living a sedentary city life can keep well, and how a man in such environment can keep well and work hard, taking comparatively little exercise.

Your magazine is helpful.

I always look forward to next months copy of Good Health, as one of the treats in the magazine line. It always has so much of interest in it that I wouldn't like to miss one copy. I hope I will always be able to afford subscribing for this magazine.

~~Years~~ For many years, I have been a subscriber to the Good Health magazine. Years ago I was at the Sanitarium for my health, and have been living strictly up to what they do there. Best wishes to Dr. Kellogg, Assistant Editor, and all the rest.

Smite Nicholas Murray Butler, "hip and thigh" with the best things you have to say as the reason for enforcing the eighteenth amendment.

These are the three articles which I read first, and fourth of interest to me is "Scientific Methods of combating diseases" and old age.

I have been a reader of your excellent magazine for the past 12 or 15 years. I find its departments all so interesting and helpful that it is difficult to select ones which interest me most. It is invaluable to me, as I consider you are making a remarkable contribution to the upbuilding of national health.

Find all numbers of Good Health interesting and instructive.

The thing most needed is the rearing of children in the country. Their health is neglected to a great extent. All children should be examined by competent physicians every year. Look up on this subject, as I am interested in childrens health. The country is the place to raise children.

I have been a subscriber to Good Health for fifteen years, and have found all the numbers not only interesting but instructive. It would be presumptuous in me, a layman, to offer any suggestions for improvement. I think the articles on diet, nutrition, foods, and exercise are the foundation of Good Health. I am eighty one past and thanks to Good Health I have more vitality, vigor, and endurance than ninety per cent of persons of my age. I think the Question Box is a valuable source of health information.

All the articles interest me very much, but those I have checked interest me the most.

Right now, I wish I had some short, concise articles on the feeding of children over a year. Also an article telling in a very simple way just why flesh food hurts. My two girls are 15 and 12 years, and they have never tasted any flesh food. We do not use lard or any vegetable geletine. I would like to pass on in a scientific manner what I have tried out for our family.

Good Health is all very interesting to me. Keep up the tobacco articles. They are vreatly needed. I receive many compliments on raising my three sons, all grown to manhood with no bad habits. Two are occupying prominent positions, the youngest, 21 years of age is a Junior in Oberlin College. This I attribute much to their being raised according to Good Health.

On account of my aged parent being quite ill, I was unable to read the last number of your Good Health magazine, but I can assure you that your magazine has always very interesting to myself, my parent, and members of his household.

The most helpful things to me are short views of scientific articles, especially when reference is made to the original work. One leads a busy life who tries to be modern in all the departments of hygiene. In the subject which I teach to Normal School Girls, Good Health saves much hunting, besides being very readable for my students.

I believe I cannot suggest any improvement. The magazine is very good.

"Good Health" is the best health book I have ever read and I will take it as long as I can, also let others read it. My health is in good condition since you told me how to live. I would like to have started reading it many years ago.

Have enjoyed reading your magazine very much. I believe everyone of the subjects listed above hold for interesting reading, and one should benefit greatly from the educational standpoint. Wishing "Good Health" every success in the future,

I am very much interested in your magazine and have obtained much good from each publication.

Thank you. Health Question Box cannot be omitted. It is doing better service to the Public in general than any other of the above.

I have been interested in all the articles mentioned above.

The person in search for better living needs concrete facts, definite examples as to what has been achieved by following the regime so ably advocated by "Good Health".

I have no suggestions to offer. Read the magazine with much interest and I am getting some good from it. Was my privilege to be in your institution on two occasions for treatment and always got good results.

Of all the Magazines I get, "Good Health" is the one that I enjoy the most. I look forward to it every month, and therefore I will not check any of the above subjects as I like all of the articles very much. I derive a great benefit from "Good Health" and sincerely hope that the articles will be the same and will bring health and happiness to all who read them.

We are very much interested in "Good Health" magazines advice and wish you a long and good success. Enjoy "Health Question Box".

Have nothing suggestive to make, only would like to know more about the above subjects.

I have nothing to suggest at present. I enjoy reading "Good Health" and have for the past years.

I am very much interested in all the subjects, for it is my line of work of nursing.

You have the best things to say.

Think I owe old age largely to your helpful advice.

I have checked your subjects in which I am much interested and especially interested in "Health Question Box".

Should also be interested in an article on Nervous diseases, and their causes and cures.

I have read only two numbers of "Good Health" and have enjoyed them immensely,

especially your fight against "dope" in the shape of tobacco, coffee, etc. These copies are so full of interesting material that I have read every line of it, and do not feel myself capable of suggesting any change, as I feel you could not possibly make it any more interesting and attractive to the reading public.

Would like to know which book you publish, that would let me know how to prepare the Sanatarium diets, and recipes.

✓ All your articles are of interest to me, but I have checked four especially.

Would like to see more articles in your magazines as to the value of electric light baths and massage.

✓ I am well along in my 77th year, and am trying as best I know to care for my health. Am interested in imparting anything I can for the good of my posterity, and of those with whom I am associated.

"Why Abraham Lincoln was Melancholy"? Impressed me very much. Hit the "Health Fakirs" and hit them hard, why not have monthly housecleaning for the body, as well as Spring Housecleaning?

I enjoy very much Dr. Kellogg's editorials, especially his sledge hammer blows at meat packers and tobacco.

Dr. Kellogg's teachings, are both interesting and helpful.

The information concerning discoveries and research is especially interesting because it is authentic and serves as a guide in checking the reliability of other published statements of medical discoveries in which the layman has no way of detecting the truth or falsity.

ITEM FOR ARTICLE ON SUNSHINE

ANCIENT USE OF SUNSHINE

THE SUN BATH HAS BEEN KNOWN AND USED FROM THE MOST ANCIENT TIME AS A POTENT MEANS OF HEALTH PROMOTION. THE AVAILABILITY OF SUNSHINE IN LARGE AREAS IS HIGHLY UNCERTAIN, AND ITS INTENSITY EXCEEDINGLY VARIABLE. THESE FACTS HAVE PREVENTED ITS PRACTICAL USE TO ANY CONSIDERABLE EXTENT EXCEPT IN SPECIAL REGIONS WHERE CLIMATIC AND WEATHER CONDITIONS ARE UNUSUALLY STABLE.

MODERN SCIENTIFIC RESEARCH HAS DISCOVERED SOURCES OF ULTRA VIOLET LIGHT WHICH ARE EVEN MORE POWERFUL THAN THOSE RECEIVED FROM ^{THE} SUN, WHICH ARE GREATLY REDUCED IN INTENSITY BY FILTRATION THROUGH 500 MILES OF ATMOSPHERE AND ESPECIALLY BY THE PRESENCE OF DUST AND OTHER PARTICLES IN THE AIR.

MODIFICATION OF CARBON ELECTRODES BY ADDING MINERALS OF VARIOUS SORTS.

GET SAIDMAN'S ARTICLE (Archives Physical Therapy, Nov. 1939) This has been sent for.

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200

Country air and garden work are Nature's specifics for restoring the harmony of care-worn minds, and Candide's motto: "Enfin, il faut cultiver son jardin," has proved a saving article of faith in the life of more than one great man wandering at the brink of pessimism. Xenophon had his Arcadian hunting lodge, Felix Sylla his fruit gardens, Frederick the Great his Sans Souci, Voltaire his Ferny orchard-farm, Goethe his Weimar garden-cottage, where they could take refuge to restore their mental health and re-confirm their conviction that life, on certain terms, is after all, worth living.

--Dr. F.L.Oswald, Good Health, Nov., 1889, p. 322.

Put with Napoleon article
"garden"

Tobacco

"Pope Innocent XI. refused to sanction the promotion of any priest who had acquired the filthy habit, which King James I., in his 'Counterblast to Tobacco,' describes as a 'custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in its black, stinking fumes nearest resembling the horrible Stygian smoke of the pit that is bottomless.' A Swedish chancellor did not hesitate to denounce tobacco-smoking as a 'crime against nature.'"

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"The alleged 'philosophic tendency of tobacco smoke,' is a fiction of its victims. Equanimity, to be sure, is the noblest fruit of wisdom, and the tobacco-smoker seems to preserve his stoicism under trying circumstances; but his calmness is that of lethargy rather than of moral strength. Tobacco and opium have unmanned the once heroic Moslem; tobacco has added laziness to the vices of the narrow-minded, but once anything but sluggish, Spaniards."

"The traveler Kohn mentions a town on the lower Danube where the local bullies thought it an excellent joke to seize a stranger and force him to down a glass of their vile intoxicants; but the brutality of that outrage is fully equalled by the insolence of cigar-smokers, who invade every pleasure-resort of our American cities, and oblige hundreds of ladies and children to swallow a dose of their gaseous poison."

Felix L. Oswald, M.D., Good Health, 1889, p. 34.

"There are plants like the Nicotiana tabacum and the palma-Christi, or castor-bean, that would need no fence, if it were not for the possible admixture of cattle-attracting weeds. Starvation of the deadliest North Dakota table-land type would not tempt a cow to masticate tobacco leaves. Billy-goats, omnivorous enough usually, will leave cigar stumps severely alone. Caged monkeys, in urgent need of a pastime will pick them up, smell them, drop them with a grimace, and rub their hands against the edge of the seat-board."

--F.L.Oswald, M.D. *G. H., 1896, p. 1-*

p. 47. Appendix

Illustration of instruments used by Admiral Henry for exercising different parts of the body.

Description of instruments.

p. 48.

Admiral Henry

"The Admiral's stomach and bowels had long been in a very bad state; hard, painful, when touched, and often disordered; but by working them in bed, with a bone rounded at the end, in each hand, digging into the stomach as much as possible, particularly about the navel, and making the two instruments meet among the bowels, as much as they could be forced to, the stomach is thus rendered so strong, that it will digest anything."

Constipation

p. 48

"The mouth, in general, and under the tongue, ought to be treated in the same manner, either with the back of a dessert silver spoon, or with tools made from the handles of old tooth brushes. The roof of the mouth, also, should be thus rubbed, which prevents the swelling of the uvula, and sore throats."

p. 51

"In regard to exercise, he was constantly in motion, and never sat down, except when reading, or at meals. The use of ^(stones) ~~the~~ tools, which ensures the free circulation of the blood, renders any other sort of exercise less necessary."

200

"As to sleep, he went to bed at nine o'clock, when he had no company staying with him, and used his instruments in bed for a couple of hours. He seldom slept above from four to six hours, and if by accident he took more repose, he did not feel so well afterwards. He got always up with pleasure in the morning.

"Thus it appears that Admiral Henry, with a view of preventing and curing disease, took more liberty with the human frame, than probably any man before him ever attempted. The result was, that Admiral Henry, at the age of above 91, had all the activity of middle age^{*}: had got the better of several disorders with which he was afflicted; - and attained as good a state of health as any man in England."

Cms

* "In a communication dated 1st March, 1823, he thus described his state; "I never was better, and, at present, likely to continue so. I step up and down stairs with an ease that surprises myself. As to gout, and similar complaints, they dare not approach. I have gone through every disorder that man can go through, but plague and fevers, and here I am in very good condition. I eat and drink most heartily - my digestion is excellent, and every food agrees. I can walk three miles to Tenterden without stopping."

G.H.

"A singular mode of applying cold water within doors was practised by the Earl of Panmure, who died in January, 1782, aged 82. He was accustomed, till a short while before he died, every morning previous to dressing, to raise himself naked from his warm bed, and instantaneously to wrap himself in a sheet just dipped in cold water. It is well authenticated that by adopting the same method, a person recovered strength from a long-continued state of debility and relaxation of constitution."

X

200

"This is the purest exercise of health,
The kind refresher of the summer heats:
Now when cold winter keens the bright'ning flood,
Would I, weak - shivering, linger on the brink.
Thus life redoubles."-- Thomson.

"How ably has Shakespeare described the healthy old man!"

Though I look old, yet I am strong and lusty,
For in my youth I never did apply
Hot and rebellious liquors in my blood;
Nor did I, with unbashful forehead, woo,
The means of weakness and debility;
Therefore my age is as a lusty winter,
Frosty, but kindly.

As You Like It, Act II. Scene 3

200

" Old Parr's advice was, 'Keep your head cool by temperance, your feet warm by exercise; rise early, and go soon to bed; and if you are inclined to get fat, keep your eyes open, and your mouth shut'".

" Others say, that the latter part of this maxim was, 'Never eat till you are hungry; nor drink but when nature requires it.' James Donald, an old man, who lately died in Dumbartonshire, aged at least 95, and some imagine above 100, informed the Author, that he made it a rule to walk at least two miles every day, either out of doors, in good weather, or within, in bad."

200 ~~Colon~~ ~~Hyg~~
184

"A very great difference is observable in different constitutions, in regard to the evacuations by stool. It is said of one man that he went but once a month; another had twelve stools every day for thirty years, and afterwards seven in a day for seven years, and, in the meantime, did not fall away, but rather grew fat."

X

1-4-22

SENECA

In the early days of the Christian era there lived in Rome a man whose life was so pure and his teachings so ethically sound that many believe he must have been a disciple of some of the early exponents of the Christian doctrines. The name of this man was Seneca. He was certainly one of the sanest of the sages of his time. Living under the corrupt Nero, he sought to stem the tide of moral corruption which for a time carried everything before it, and readily gave up his life rather than surrender or debase his ideals. Seneca's philosophy so much resembled that of the Teacher of Galilee that if he was not actually a disciple, he carried a torch which was lighted at the same celestial fire. Said the wise and noble Seneca, "Religion consists of two things, -to seek truth and to do good." Can a better definition be found?

HEALTH FIRST

No greater thing can be done for the promotion of the welfare of the American boy than to give him a better body. The American girl is more in need of health improvement than the American boy. Herbert Spencer said "the first essential for success is to be a good animal." American boys and girls are sadly lacking from the standpoint of health, as shown by the fact that of our twenty million school children more than three-quarters show pronounced physical defects. Nearly all children have decayed or infected teeth and an increasing number have defective sight, weazened body, shaky nerves and defective minds. There is a growing multitude of backward children. The draft examination showed that the average American has only the intelligence of the thirteen year old boy, barely above the level of well-trained imbecility. Professor Osborn has shown that we have lost two and a half inches in stature since the Civil War. Something is eating us up. Our national vigor is being undermined. Doubtless a thousand influences are contributing to our destruction. We are carrying a terrible load. The hereditary effects of alcohol are doubtless one cause of our decadence. Wrong feeding, lack of exercise and various unwholesome habits are doubtless in part responsible for our physical decadence, but certainly not the least of all the enemies of human life and health responsible for the human wreckage which we see all about us is the tobacco habit. The cigarette is a monster octopus which has all but swallowed the American boy and now has its evil eye on the American girl who seems to be rapidly following, a victim to this smoke monster.

Smoking has become the national dope habit. The great tobacco companies claim that nine-tenths of all men are smokers. Last year Americans smoked sixty billion cigarettes. More than twelve hundred cigarettes

for every man and boy in the United States. This year the number of
cigarettes smoked will be increased by several billion for old smokers
are always smoking more cigarettes and new victims are being ensnared.

2

Parents and teachers must fight this evil which threatens to
destroy the rising generation of boys and girls. Most of the fathers
are smokers and so we can only look to the mothers and teachers of Amer-
ican boys for help to combat the tobacco plague which is blighting the
budding manhood and womanhood of America. Parent and teachers' associa-
tions should start and organize a campaign against the cigarette and
cigar and should make active war upon the tobacco habit and fight it
just as we would fight an invading army from Mexico or a swarm of locusts
or an epidemic of cholera or plague or any other pest. We have too
long tolerated without protest the smoke and grime and stench of tobacco,
and worse than all the cross which it inflicts upon boys and girls who
are growing up to be the future citizens of the greatest country the
world ever knew. We are no longer in the dark about the character of to-
bacco and of its baneful effects. Once regarded as a valuable medicine,
vaunted as a panacea by Sir Walter Raleigh in advertising the product
of his great tobacco farms in Virginia, tobacco was long since excluded from
medical text-books as a remedy because so many deaths resulted from its
use. It is too dangerous to be permitted to enter the sick-room. Oxalic
acid and hundreds of other drugs far less poisonous than tobacco, bears
upon its label a skull and cross-bones, and the words, "POISON, BEWARE,"
and such drugs are kept on the top shelf in the medicine closet out of
sight and out of reach of those who might be injured by them. But cigar-
ettes, ~~are~~ far more poisonous than any of these drugs, ^{and} equalled only by

prussic acid in its potency, are put up in packages bearing beautiful pictures and alluring names, and every small boy is permitted to help himself ad libitum.

Tobacco is a heart poison, a kidney poison, a liver poison, a brain poison, and a soul poison. It stupefies the brain and benumbs the conscience. Tolstoy said when he was a smoker he "never felt a twinge of conscience after the third whiff." The medical director of one of the greatest life insurance companies in the world, told me that he had after careful study, arrived at the conclusion that ten per cent of the deaths of smokers are the result of the use of tobacco. This means that tobacco kills not less than fifty or sixty thousand people in this country every year and the number of victims is increasing from year to year. The number killed outright is small compared with the number of lives which are shortened and rendered less efficient by this baneful drug.

A few years ago Professor Farnam and Irving Fisher of Yale University, with other distinguished scientific men, organized a committee to study the effect of tobacco. This committee has expended several thousand dollars in conducting researches upon the effects of tobacco, some of the results of which will be published in the near future. These researches have already brought out some most startling facts, for example, Professor Hooker, of Johns Hopkins University, showed that young rats that were permitted to inhale tobacco smoke when six weeks old were one only half as large as they should be at that age. At the request of the committee an extensive research is being carried on at the Sanitarium by Dr. Roth and his associates to determine the hereditary effects of tobacco. Hundreds

of rats are being employed in these experiments. One of the effects already demonstrated is that tobacco not only hinders the development of the young, but greatly limits the birthrate. In other words, tobacco is a race poison.

The only hope for defeating the campaign of destruction which the great tobacco companies are actively pushing all over the civilized world will be found in an organized counter-campaign against this monster evil, the prime movers in which must be the mothers and teachers of America.

THE PERFECTED POSTURE CHAIR

By John Harvey Kellogg

There's something wrong with the chairs. Everybody knows it. The chair manufacturers have confessed full knowledge of the imperfections of their wares in their constant but unsuccessful efforts to meet the public demand for better seats, especially in theaters, churches, schools and offices, to say nothing of homes. The Posture League has carried on a lively and fruitful educational campaign for a reform in our chairs, but even its seal of approval has not been able to conceal the fact that something still is lacking in the best posture chair models which have heretofore been produced. But the perfect seat has at last arrived. Here it is.

At the first glance, you may not see any difference in the new chair from the ordinary best models. But sit down in it and you will meet a real surprise. Such perfect comfort you never before experienced in a chair. You try to find its secret by relaxing, a crucial test for a seat. To your surprise, nothing happens. You don't slump! You remain exactly where you were; it holds you in perfect sitting posture, chest up, head well poised, abdominal muscles taut, and experiencing a sense of perfect comfort and rest.

A minute examination reveals the particular feature in which this chair differs from any other ever made. It is a support provided for the upper dorsal spine by which the chest is held forward. This support is supplied by means of a pad or an equivalent bulge in the stuffing if the back is upholstered, whereby the chest is held forward.

After nearly fifty years' study of posture and seats, I think I have at last discovered that while many elements enter into the perfect chair, the support of the upper dorsal spine is the master key which solves the problem and perfects the physiologic chair.

The idea of a support between the shoulders will probably strike you as absurd, but only because you have in your mind the picture of a misshapen upper back instead of a normal one. If you will examine the upper back of a well formed and not over-fat person who is sitting or standing in correct posture, you will observe that there is a depression, a distinct hollow or furrow between the scapulae or shoulder blades. When the upper back rests against a straight or curved chair back of the usual sort, the shoulder blades are between the ribs and the chair back, so that the spine is held forward, and does not contact the chair back, leaving a space in the center between the shoulder blades. So long as the shoulders are held back by a voluntary effort, this space is maintained. When one becomes tired and allows the muscles to relax, the shoulder blades slip forward, the shoulders droop, the upper dorsal spine recedes until it rests against the chair, and the chest drops and flattens. And something more happens. As the chest flattens, the diaphragm, stomach, liver and other viscera are pushed down. With the increase of the posterior upper dorsal curve, the anterior lumbar curve lessens, the lower spine straightens, and the lower abdomen bulges.

For complete rest when sitting, the body must be supported in its normal balanced posture and without muscular effort; that is, with complete relaxation. The normal curves must be maintained, to avoid displacement of the viscera, injurious strain upon the ligaments of the spine and a handicap of the heart.

When the body is held in an erect posture, there is a perfect balance between the anterior and posterior, muscular and ligamentary structures of the trunk and the vertebral column. The weight of the head is supported by the bony spinal column. The muscles which connect the head with the collar bone, or clavicle, and shoulder blades, or scapulae, are called upon to do nothing more than to balance the head upon the spine, which requires little effort. But when the trunk is permitted to fall under the influence of gravity, that is, when the head drops, the shoulder blades slide forward, allowing the upper dorsal spine to fall back, a severe and unnatural strain falls upon the costotransverse ligaments and other of the posterior ligaments and muscles of the neck and trunk.

Long continued strain of these parts is a common cause of backache, neck ache and certain forms of headache. These miseries are not only prevented by the interscapular support afforded the upper spine by the Perfected Posture Chair, but are quickly cured.

It is most gratifying to note the change in facial expression of a tired desk worker after sitting in one of these chairs, even for a minute or two, and to listen to the exclamations of satisfaction and relief.

Another serious injury from the stooped posture induced by the ordinary chair, is the extra work required of the heart. The apex of the heart is attached to the diaphragm, while the base is attached to the spine at the upper part of the chest.

When the diaphragm is in its normal position, arching high in the chest, the heart rests upon it easily in an oblique position; but when the diaphragm is depressed by the flattening of the upper chest, the apex of the heart is dragged downward, so that the heart

is put under strain, and at each beat is compelled to lift against the heavy weight of the liver, stomach and other organs attached to the under side of the diaphragm, thus wasting its energy and lessening its efficiency in supplying blood to the brain and maintaining the general circulation, and laying the foundation for chronic disease of the heart and lungs.

The injurious changes in the shape and posture of the trunk result from the receding of the upper dorsal spine. So long as this is held forward, the normal figure is maintained. By placing a proper support between the shoulders, the spine is held forward, the shoulder blades are held in place by gravity, and the weight of the head is carried by the spinal stem and thus the muscles are relieved. The lifting of this load of work off the neck muscles, gives a new and relieving sense of complete rest and comfort in sitting so striking as to be almost incredible until experienced.

The accompanying cuts show the principle applied to an opera seat and an office chair.

These new chairs have been installed in the assembly room of the new library building of the Battle Creek College and have received universal and most enthusiastic approval.

J.H.K.'s Thesis, in graduating from the
Bellevue ^{Hospital} Medical College, — 1875

WHAT IS DISEASE?

original
in black box
in scrap book

A very superficial glance at the pages of history is sufficient to convince even the most skeptical individual that the subject of disease has ever been a common center about which have clustered the superstitions of the ignorant, the speculations of the curious and the profound interest of the learned. A more critical analysis of the records of the past reveals the fact that from the remotest periods of human existence down to the present enlightened age, this same subject, with its associated results, has formed an important element in the foundations of human governments. Perhaps we are not going beyond the truth in saying that almost the whole superstructure of ancient mythology grew out of the prevailing notions of the nature of disease and its causes. Certain it is, at least, that the numerous creeds and religious dogmas which have at various times obtained among mankind have been greatly influenced, if not wholly molded by the co-existing beliefs relating to disease and its causation.

Religious teachers have ever found in the popular dread of disease a powerful means with which to enforce their doctrines, whether true or false. Quacks and charlatans have found a fertile field for their nefarious operations. And philosophers, both ancient and modern, have by this theme been afforded an inexhaustible subject for the exercise of the most subtle reasoning, and severest logic.

Previous to the time of Hippocrates, diseases were un-

iversally regarded as malignant entities sent by malicious or infuriated deities. That illustrious physician and philosopher was the first to discover the relation of cause and effect between physical agents and disease. He first pointed out the fact that diseases owe their origin to the transgression of certain laws, the observance of which insures health. As a talented writer remarks, he "gave death blow to superstition," although some vestiges of that noted impediment to progress still remain at the present day.

Although we cannot attempt to defend the particular theory advanced by Hippocrates or his followers in defining disease to be a disarrangement of the humors of the body,-- a disproportionate amount of blood or phlegm, or bile, according to the season,--it is evident that his idea was fundamentally correct in attributing disease to certain derangements existing in the body, resulting from extrinsic physical causes.

As we do not purpose to attempt in our limited space a review of all the various theories of disease, we shall only refer to some of those which seem to accord most nearly with the prevailing scientific notions of the nineteenth century. Perhaps Socrates, the martyr philosopher of Greece, came as near the truth as any ancient writer when he declared in simple phrase that disease was a "disarrangement of the body." This definition certainly excluded any conception of a mysterious entity as the source of the phenomena of disease.

The renowned Sydenham, observing that most diseases ended in recovery, often leaving the patient with health greatly improved, concluded that disease was "an effort of nature to

get rid of some noxious material. He, consequently, held that these efforts are always salutary in character, and that the duty of the physician was to aid them, or, at least, to do nothing to hinder them.

Two centuries later, we find in our own time, quite a variety of definitions for disease. One declares that diseases are simply "perverted life processes"; another says, "perverted physiological action"; another, "abnormal vital action"; and still another, "morbid processes." All of these definitions embody essentially the same idea, although the phraseology of some of them might be questioned. They all represent disease as being an action or process in some essential particular different from that which occurs in the body in health. It is noticeable, however, that neither of these definitions includes any reference to the primary object of disease, or its ultimate results, which were the leading ideas in the definition given by Sydenham. These very interesting questions seem to be studiously avoided; and it is especially concerning these points that the writer wishes to inquire. Hence, he would respectfully invite the consideration of the following questions:--

Is disease a process intrinsically destructive and malign, or is it in purpose conservative and remedial?

In considering this question, it is necessary that we should carefully discriminate between the causes and results of disease, and the disease itself. It is equally important to distinguish between the primary objects of disease and the incidental results. Observing these precautions, we may arrive at some correct solution of the problem.

If we observe carefully the phenomena of disease, we find that the living system is the active agent. If a foreign body be thrust into the living tissues, an inflammation speedily ensues; the obnoxious body is soon loosened by the absorption or disintegration of the parts in immediate proximity to it, and it is surrounded by a copious fluid of a thick, creamy character, the distinct object of which is to float away the offending matter.

Again, if a sinapism be applied to the skin of a living animal, a blister soon appears beneath it, which is undoubtedly the result of the defensive action of the system--of the tissues whose molecular life is endangered. Finding themselves in close contact with an irritating substance, they throw out a layer of serum beneath the epidermis, thus protecting the more delicate and essential parts by sacrificing that which is of less value, and destined to be cast off as useless in a short time even if preserved.

In each of these cases, the living system is active, the cause of the disease, passive. The splinter driven into the flesh did nothing, except as a mere mechanical body. The tissues found it encroaching upon them, and they set about expelling it; and this act of expulsion was the disease. Was not this an effort at repair, or remedial effort? So with the siapism. It did nothing. The tissues raised a blister to protect deeper parts, which was certainly a most admirable conservative measure. They threw water upon the fire occasioned by the presence of the blister. This, then, was remedial effort, even though a portion of the body may have been destroyed. He would be counted a wise

general who should by a brave sally save one-half of his army from starvation in a beleaguered city even though he sacrificed the other half in the attempt; for, had he done otherwise, all would have perished together.

In the cases supposed, for illustration, the sliver in the flesh was not a disease; neither was the sinapism a disease, nor, indeed, can we fairly claim that the blister itself was a disease. The process by which the sliver was expelled constituted the disease of which it was the cause. The vital process which produced the blister was the real disease which was occasioned by the sinapism, and which resulted in a blister. As before intimated, these relations of cause and effect are sometimes overlooked, or reversed.

The inflammation which accompanies the healing of wounds, and which is as properly termed disease as any other inflammation, is indisputably remedial in object. Under the influence of adverse circumstances, the object may not be attained; but this is due rather to the malign influences attendant to the malign influences attendant upon the case than to the intrinsic badness of the vital effort.

Fevers and general inflammations, although their causes are much more subtle and obscure than the cause of traumatic inflammations, are commonly supposed to be caused by the presence in the system of some poisonous irritating, or unusable material. Can it be doubted, then, that these diseases are merely efforts of nature to rid herself of noxious encumbrances? If it be granted that this view is correct, then it will also be granted that this large class of diseases are remedial in character.

It is true that these remedial efforts are often unsuccessful, and seem to result disastrously. This is not proof, however, that they are not salutary in object. It only indicates that they require direction and management. Nature is not intelligent, and does not reason; she only acts according to certain established laws. She may be so impetuous in her resistance to morbid agents that she will damage irreparably the individual she attempts to cure. Here is where the skill and science of the physician are admirably displayed. Nature's efforts must be watched and controlled.

If the foregoing deductions are legitimately drawn, may it not be truthfully said that disease is a friend, rather than an enemy, as it is usually regarded, although, unquestionably, a friend that requires surveillance? Should we not rather fear and declaim against the causes of disease, since the latter is only an effort to prevent damage, or to repair that which has already occurred?

There are many other points of deep interest connected with this subject, which we have necessarily left unconsidered in the foregoing pages. We have made no reference to certain chronic affections, as anemia, chlorosis, cancer, tuberculosis, etc. It may be inquired how these can be called remedial. We can only say in reply that many of these morbid conditions and processes are possibly not primary, but secondary in character, being the ulterior results of some antecedent affection.

I was asked by the professor of psychology of Rollins College to visit his class. He said, "Perhaps you would like to ask this class some questions," and I said, "Yes, I would be glad to." So this is the question I proposed, "Where do ideas come from?" It was most interesting to see the members of the class begin to look at one another and to look about the room to find an answer, and I glanced at the Professor and I found his jaw dropped. So I discovered that that was a subject they had not discussed.

Don't you think in the subject of psychology we ought to study that question? Isn't it fundamental? Aren't you dealing with ideas? I presume you have already studied it here, but I wanted to say a few things to you that may be necessary for us to consider this question a little. I have looked through a good many books on psychology and I have not been able to get any light on this question of where ideas come from, and really it is a very important question. The things I want to talk to you about today are based on two fundamental concepts: The first is the essence of personality. Now, I am not talking about what we call charm, an agreeable personality or that sort of thing, but something deeper than that. What is the essence of personality? What constitutes a person, if you please?

Personality-- the quality of being a person with power to will and to execute and to think and plan and design. What is the essence of that? That question puzzled me for a great many years.

I made an experiment just 60 years ago right now. I was working in a physiologic laboratory taking post-graduate courses in physiologic research and the professor gave me a problem one day which I disliked very much. It shocked me. He gave me a frog and a pair of shears. "Now," he said, "cut off that frog's head." Well, I had great abhorrence to taking life of any sort, especially unnecessarily, and I shuddered and my knees shook and cold chills were going up and down my backbone, and I was very much distressed, but there was nothing else to do.

He said, "Be sure to cut his head off behind his ears because I want to get rid of his brain entirely." So I cut off his head as quickly as I could and laid the frog down on the table. Of course I thought that was the end of that frog. He was dead. But when I put him down on the table, to my great astonishment he turned around and sat up just as naturally as though nothing had happened to him.

The Professor said, "Strike the table." So I hit the table a smart blow and that frog hopped into the air clear into the middle of the room

and fell upon his back and immediately turned over and sat up again looking as dignified as a frog could with his head off. The Professor said, "Stamp on the floor," which I did. The frog jumped at least 18 inches. "Stamp again." It jumped again and kept on jumping, as I stamped upon the floor, in a straight line right straight ahead until it reached the wall, and then when it reached the wall as I continued to stamp upon the floor continued jumping, butting its bloody body against the wall. I can see that little spot on the wall this minute. I can see just the shape of it. It was just that shape (illustrating). Well, its body hit the wall. I can see it right on the base board. It made a very profound impression upon me.

The Professor said, "Bring the frog to the table. Now turn it on its back and put some of this acetic acid on its stomach." I did that and immediately the frog brought up its feet and began rubbing the acid off with its toes. That was a most surprising thing for a headless frog to do, wasn't it? The Professor then said, "Put the acid on its left thigh," which I did, and it came up with its right foot and began rubbing it off of its thigh." The Professor then told me to hold its right leg down. It simply twisted up its left leg and rubbed

it off with the tips of its toes.

I could not solve the problem of how a headless frog could perform such an intelligent operation until years later I read a work by Professor *Venworn*, an eminent German physiologist. He said, "This experiment (it is a classical physiologic experiment) proves that the frog has personality in its spinal cord." Well, that explained the problem at once. I got a new view of personality.

Personality is not a thing that belongs only to creatures that we call persons. It does not belong only to men, women, boys and girls; it belongs to anything that has a will, anything that has the power to execute a purpose, anything that has the power to plan.

Now, ^{if} you ~~will~~ find a bird's nest in the woods and you know there has been a nest builder there. If you find a house there has been a house builder. So wherever we look about in nature we see evidence of planning and design and we know that there has been a personality at work. Is it possible for us to avoid that conclusion? When we look at a flower and see its color and form and all the marvelous evidences, we may say, of ingenuity displayed in designing this flower and perfecting and developing it from a little seed, is there any escape from

the conclusion that there is a personality behind it that is intelligent and planning and designing and executing? In other words, that there is a will at work.

Now, how many of you feel that that is conclusive? that that is a sound conclusion? I should like to see how many of you feel that. Hands up high. I see every hand in the room is up, so I conclude that you are intelligent personalities.

Now, an important question which arises right here is What sort of being is this thinking power that is behind all the phenomena of nature? That is a question that has been discussed for ages. There are different conceptions that men have of this great creative power that Christians call God and the Hebrews call Jehovah. The differences of opinion, the different concepts men have, have led to all sorts of theological discussion; in fact, I think all theological controversies, if you trace them down to the foundation, you find they all grow out of the different concepts men have of divinity. The savage worships trees and mountains and stones and wood images, etc. and various objects of nature. The Parsis, followers of Zoroaster, worship the sun. Some years ago we had here at the

Sanitarium a gentleman and his wife, a wealthy man from India, a Parsi. When Persia was conquered by the Mohammedans they captured a large number of Parsis and carried them into India and they are known as Parsis there. They are real Parsis who have adhered to their original beliefs and customs and have refused to intermarry with the Hindus.

Well, this gentleman was what is known as a sun worshipper. But he said to me, "Doctor, people ought to know better than to call us sun worshippers. We do not worship the sun; we worship the power behind the sun, not the sun. We only recognize the sun as the most glorious symbol of this great creative power from which we all spring."

We see personality, then, is the power to execute, to will, to think, to design and to plan and execute a purpose. That is the essence of personality. And so when we see the expression of a personality all about us in nature everywhere, extending away off into space and the most distant stars, the most distant nebulae so far away that two or three hundred million years are required for a ray of light to travel to this world at the rate of 186,000 miles a second and yet visible through our largest telescopes-- we have here an evidence of the

infinity of power.

Then there is the great infinity of space that is associated with this great creative power. We do not hesitate to believe in space. We try to think of a boundary of space. Professor Einstein a few years ago announced that he had solved the mystery of space was circular and if you went straight ahead and continued on you finally would come back to where you started. That was his idea. But he has given it up. I never could accept that thing. I felt it was not credible and I was very glad to see recently that Professor Einstein has given that idea up and he had to return to the former status in which he must admit that he cannot fathom the mystery of space.

When we think of space and try to conceive of a boundary we are immediately met with the idea, What is on the other side? We say to ourselves, "Why space must have a limit somewhere. There must be a boundary somewhere." Then we imagine we have reached that boundary and at once comes up the question, What is beyond that? So you see it is inconceivable, it is impossible for us to think of the infinity of space.

The same thing is true with reference to time. We say there

must be a beginning of time, but at once we are assailed by the thought, What was before that? When we think of an ending of time we are met at once with the question, What comes after that?

So we have to give it up. We cannot think of infinite things and the reason we cannot think of infinite things is that we are finite. All our thinking consists of comparison, ultimately. Our means of measurement depend upon what we know of other things that we are familiar with. We hold up the things we know against new things that we are encountering. We have not anything with which to measure infinity. Now we do not doubt the existence of space because we cannot fathom it and we do not doubt the infinity of time. We do not doubt that because we cannot measure it. We accept it because we are in contact with it and have proof of its existence.

In the same way we have to accept, and we may accept with just as much reason, the infinity of personality; but we cannot form any conception of an infinite personality or of its physical properties because it is infinite, so we simply turn our faces away from that and think only of the infinity of power we see all about us and the infinity of wisdom. We look out in nature and see the infinity of form,

for example. The infinity of power is something marvelous. I wish we had time to talk about that, but we have not.

Now, we come to this question, What is the relation of this infinite creative personality to us? In the first place this personality has created us. Every one of us is created a new being that started with one little cell and that little cell divided into two and from two into four, and kept on dividing, and after a time there came an unfolding and development until finally the adult man and adult woman ^{are} is produced. Each one of us is due to an act of creation. This creative intelligence that made the first person and the first plant is continually at work. Each person is the result of a creative act and not only when one has attained complete development is the creative work carried on, but it must continue. It takes the same power to keep us alive that it did to make us. The process of creation goes on continually. A study of physiology shows us the truth of it. For instance, we have twenty-five million million blood cells and these twenty-five million million blood cells are destroyed at the rate of a million ^{million} every day. In 25 days they are all gone and new ones have taken their places.

A million million blood cells die every single day. Figure it up and see how many that would make every second. I think it would be somewhere about 8,000,000 blood cells every second die and their dead bodies are carried off through the liver and spleen and other emunctories and new ones take their places. Each one of them is the result of a creative act and so creation goes on within us.

If we tear our skin, in a little while new skin forms. A creative process starts, something that was not going on in the skin. That is one of the most marvelous things I know of, the repair of a little cut or wound. Every physiologic act is the result-- we may call it a miracle. It requires creative intelligence to execute it. Even the movement of a muscle requires a marvelous transformation in the muscle itself. We have not time to go into that, but if you will study the physiology of exercise you will be amazed to see what an intricate process it is and how it can only be executed by creative wisdom.

Now, when we find that this creative intelligence is at work all about us it becomes a matter of tremendous interest. What has that to do with us? Now, as I have just been remarking, we see wonderful evidence of this creative intelligence at work. Here is the heart working,

for example. Every heart beat requires an order. When we want our hands to move we send an order, and so when the heart beats it is because it receives an order to beat. Where does the order come from? The physiologist says it comes from the pacemaker? But what is the pacemaker? That is simply the phrase that the physiologist uses to cover his ignorance. Once a second there comes to the heart from a little point called a node on the vena cava an order to beat. If it were not for the pacemaker the heart would simply be a quivering muscle. When the heart muscles are contracted, they contract in a rhythmical way, and so if the heart was excited in an ordinary way, we will say without some provision made for unified action, the heart would simply be a mass of quivering tissue. Instead of this all these fibers work at once because there is a director that has the heart under control and sends an order to all these fibers that comes at the same moment so that they all work together and that makes the action of the heart effective.

You have seen a gang of men working lifting on some heavy object. The foreman will sing, "Heave ho, heave" or something like that. Sometimes they have a chant.

I shall never forget my experience in the East among the Arab boatmen. They always sang when they work. They sang when they were rowing together so as to keep up perfect rhythm. On one occasion, however, I found they were praying. They were calling upon Allah, and I asked my dragoman about it. He told me about it. They were praying very earnestly because the wind had come up and waves were rolling high. We had to go through a very narrow place. A short time before I went through this narrow gate a boatload of Americans with 20 people went down. The boat swerved a little and hit a rock and all were drowned. There was a great deal of danger in going through the gate. As we approached the gate with what fervor they prayed. Louder and louder and more earnestly their chanting prayer was repeated and we finally got through safely. A few weeks later I came back through the same gate and they did not pray. They were singing instead and having a very happy time. I asked my dragoman why they did not pray. "Don't you see it is a pleasant day today? There is sunshine and no wind blowing."

People pray when they are in trouble and that is the proper time to pray.

Now there is so much to say on this subject I shall not be able to tell you all about it today, but I want just to give you a few points more.

We see abundant evidence of this personality at work in our bodies-- in the heart and lungs and liver and stomach and all through our bodies. We find that there are two kinds of actions, actions that we control ourselves and actions that are carried on without our control. We have nothing to do with the heart beating and we have nothing to do with digestion. We cannot control these so-called involuntary functions. It is the voluntary functions we control, but the involuntary we do not control.

These actions require a personality. Each one must have a personality sending out an order and hence a will manifested by a personality within the body. So we have, you see, within us two wills, a human will and another will. We have two personalities, the human personality and another personality at work. They are both operating in the body. The voluntary functions our human personality executes, but the involuntary functions are executed by the creative will, by the same will that creates trees, the same power that enabled us to grow from a little cell up to our present development and that cares for us while we sleep. Most of the functions of the body, and, in fact, most of its activities are carried on

by this creative personality. I wonder if I have made this clear?

I hope that most of you are interested in the subject, though I see some that seem to be rather indifferent, perhaps tired from a long day's work. But I want you to think of it, my friends, because it is a fact of tremendous importance, the fact that there are two wills in the body.

We have these two different kinds of functions, the voluntary and involuntary, and among others we have two kinds of thinking, voluntary and involuntary. That is the point which I want especially to impress upon you. Now, we suppose that the voluntary thinking, our conscious thinking, is carried on by the front lobes of the brain; but there is another kind of thinking that is involuntary. It is not controlled by the human will, but it is controlled by the other will that is working within us, and that is called the subconscious. The subconscious or sub-consciousness is where thinking is done that our own wills have really nothing to do with. That is perhaps a new thought to some of you, the two kinds of thinking, the voluntary and involuntary thinking, the human thinking and creative thinking, thinking that is associated with the same power or as a result of the action of the same power that made us and keeps

us alive.

This is quite important because it helps to answer the question where ideas come from. Ideas are a creation. They are created. They must have material out of which they are made, but they come from the creative thinking. The human thinking may be creative in the sense in which it puts various materials together and makes a new thought structure; but here is a kind of thinking that brings out absolutely new concepts, what we call ideas, and we all have to recognize the fact that these ideas strike us. They come to us already formed. We do not make them.

I asked a Columbia professor some years ago-- he happened to be here at the Sanitarium. I said to him, "Professor, where do ideas come from?"

He said, "We make them, of course."

I said, "Professor, I am very short of ideas. I wish you would make a couple of good ideas. I would appreciate it very much."

So he began and looked about. Pretty soon he began to rub his head. Pretty soon he was rubbing his head with both hands and he continued to make a desperate effort to make a couple of good ideas but he did not succeed. That was three years ago and I have not got those ideas yet.

We do not make ideas. Ideas come to us already made and they come out of this subconscious, out of this idea factory, if you please. They come up from the basal ganglia, the so-called subconsciousness, and that kind of thinking is done by the creative will. It is carried on by the same power that operates the liver and the stomach and all the other involuntary functioning organs.

One wonderful thing about this involuntary thinking is ^{that} it goes on while we are asleep, just as lung action and heart action does. These processes all go on while we are asleep, and so the subconscious works, this unconscious thinking, this creative will that is within us carries on the work while we are asleep and does not depend upon our human wills at all. That is the reason you wake in the morning some time and find a problem solved that you had been working on hard the night before and could not make any headway with, and wake in the morning with a solution. The first thing you wake up you have an idea that has been worked out while you were asleep. That is the result of thinking that has been going on while you are sound asleep.

Now, just one word or two more to end this up. What has this to do in a practical way with our daily lives? It has this to do: It is

a place we can put problems up to and get solutions. The way to do it is by concentration. By concentrating the mind upon a subject we put it into the subconsciousness. If we think hard of a thing in so doing we impress it upon the subconsciousness and the subconscious takes that problem and works it out for us if there is a solution.

So it is very important that we should spend time every day in concentrating our thoughts on things that we are interested in. I wish I could impress that thought upon every one of you here. I wish I could impress upon you the importance of taking note of your first thoughts in the morning. Keep a little diary. Write it down. You will be surprised to see what a large proportion of your best thoughts come to you the first thing on waking. Somehow sleep puts us in condition for doing good thinking and it gives our subconscious an opportunity to work without interruption.

Now, we can not only put problems up to the subconscious, to put material into the subconscious mill, so to speak, to be worked out for us, but we can appeal to the subconscious for help. We may go there for help. If we do not know how to solve a problem, by concentrating the mind we can open the door into the subconsciousness and give an opportunity for the solution to come out, and that is what we do when we earnestly pray.

~~That is what we do when we pray earnestly.~~ That is the way that prayer gives us help, because we may look upon the subconscious as a holy shrine, a place where the creator and creature can come in contact. Why, my friends, it is a wonderful thought that the power that made us has established in our brains a place where we may actually come in contact with our creator. So there has been put into every creature that has a voice the instinct to make an appeal, to call for help when in trouble. People make formal prayers, but that does not count. The prevailing prayer the Good Book says is the prayer when one is in real trouble and does not know what to do and needs help. When one is in that attitude of mind, the subconsciousness is clear of extraneous things and there is an opportunity for the subconscious to send out an appeal for help and for ideas to emerge into the field of consciousness.

When you pray, watch and see what happens. People often get answers to their prayers when they do not know it. It is worth while to pray because there is a power that can answer, and I want to convince you that there is a power that does answer our appeal and we get it through the subconscious. It is a purely physiologic process. It is just as natural as that we should breathe, we should pray when we are in trouble. We often

pray when we do not know it. "Prayer is the heart's sincere desire" somebody said, so when we have an earnest yearning for something that is praying. God recognizes that as praying. It opens the door in the subconscious, and if there is help for you there it can come out. Every creature that has a voice has an instinct to make an appeal.

I have seen many instances of that. On one occasion a few years ago there was a shrill shriek coming in through the window. My man, Mr. Hodges, who was in the room with me took a staff and ran out and found a black snake four feet long swallowing a little tree frog not more than two or three inches long. He had one leg in his mouth. The little frog had whirled about and seized the snake's head and was shouting for help. He was crying for help with a very loud voice. It was amazing that this little frog could make such a big noise. And the help came. He was praying, in other words. That little frog was praying and his prayer was answered. The man put his staff on the snake's neck and opened his mouth and the little frog took out his leg, hopped a few inches, stopped to rest and got his breath and ^{went} when off in the grass happy. His prayer was answered and his life was saved.

All creatures that have a voice appeal. They appeal for help.

They call for help when they are in trouble, and this is the thing that is very impressive, the fact that there is a characteristic quality in the appeal. When you hear a dog barking you know when he is in trouble. You know whether he is angry or whether he is in trouble by the sound of his bark. It is a universal language.

I was in Paris, France, just 50 years ago now. I happened to be in Paris and I felt rather lonesome. I could read French but could not talk it. My wife was with me. We both read French readily but could not speak it. We had not had an opportunity for practice. I heard a baby cry in the next room. I said to my wife, "There is an American family which has just come in. I just heard a baby cry a regular American cry." But I was very much disappointed a little later to find it was a French baby. The French baby cried just as an American baby did.

It is the universal language, this language of appeal, and other animals recognize it. If in my room with me there had been an intelligent dog, he would have heard that appeal and would have answered it. Don't you think he would? He would have barked and begged to be let out to answer that appeal for help.

Here is just one point more I am going to give you, my friends, and that is the final proof of the soundness of this view. If there was no food in the world and if there never had been any food would there be any hunger? What do you say? "No." Well, now, if there was no water and never had been any water would anybody be thirsty? Would there be an instinct to seek water if there was none and never had been any? Certainly not.

Now, my friends, think of the significance of this question I am going to ask you. If there was no source of help would there be a universal instinct to call for help when in trouble? Would every creature that has a voice appeal for help when in trouble? This thought strikes so deeply into my soul that I can never restrain my emotions. The creator that made us and made other creatures has given to each creature the privilege of appealing for help and the instinct to call for help, and if they do not get help there is no help for them; but if it does get help it is through the medium of an appeal. The appeal does not inform the creative intelligence of anything because it knows everything, but it is simply the avenue through which the help comes. The appeal opens the door into the subconscious and that lets out the

help, don't you see?

The appeal that little frog sent out-- the little frog was not sending out an appeal to other frogs. I never saw one frog going to the assistance of another frog, did you? That little frog was not calling upon a frog for help; it was appealing to its maker.

✓ So you see, my friends, the great God that made us did not set us afloat to drift about and make the best of our situation, but stays right with us, stays right by us and opens the door for help.

✓ I am in trouble so many times a day I have to pray a great deal and I want to give you this thought because I want you to form the habit of prayer. It is a simple physiologic thing. There is no superstition about it. You may have any theory you please about this divine being we call God. It does not make a bit of difference. It is the act of prayer that helps. Your philosophy may be anything. It does not make a particle of difference what it is. It is the act of prayer itself, the call for help that is the thing that brings help. ✓

I thank you for your attention and beg your pardon for keeping you a few minutes past your time.

HEALTH HINTS FOR BUSINESS MEN

How to have a clear head.

How to sleep when one can't. Taking sleeping medicine to induce sleep is like giving a baby paregoric to stop its crying when it has a pin sticking in it.

Keeping well and fit and efficient, full of pep, initiative and zest for work is like running a business. First of all, attention is necessary. If a man allows his business to run itself, you know what happens to it.

Health could be allowed to take care of itself. Would be regulated and maintained automatically if we lived under normal conditions. Unfortunately, in civilized life, we are in an artificial and abnormal environment. Born in the open, bathed in sunshine, kissed by the fragrant breezes of the forest, we imprison ourselves in houses, offices and factories, where we breathe dust ^{and} germs and suffer from house diseases, tuberculosis, pneumonia and along list of affections.

We are surrounded by pitfalls which we must warily avoid, for death is a specter ever walking in our midst, dogging our footsteps and watching for an opportunity to ensnare us.

The case of Jones, who could eat everything and did eat everything; got cancer of the stomach. Removed his stomach, after which he gained 16 pounds. Better off with no stomach and wholesome

food than a stomach abused with indigestibles.

Case of Arkansas man. Stomach abused. Returned to bad diet. In a year wired me to come and operate on him. Declined. Three days later died on the operating table.

Talk about margin of safety... Vital reserve.....

Ways to spend it.

Leaks in business.

Increase in production.

Ways to improve business.

Necessity for good credit.

Compare body to machine, etc.