Life & Health

"——*that thou mayest prosper and be in health, even as thy soul prospereth.*"
JOHN 3:1-2.

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—does it satisfy you?

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Life & Health

Published monthly by the
REVIEW AND HERALD PUBLISHING ASSN., TAKOMA PARK, WASHINGTON, D. C.

Entered as second-class matter June 24, 1904, at the Post Office at Washington, D. C., under the Act of Congress of March 3, 1879

Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of Oct. 3, 1917, authorized on June 22, 1918.

VOL. 33 DECEMBER, 1918 No. 12

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SUBSCRIPTION RATES.— One year, $1; six months, 60 cents. Remit by Post Office Money Order (payable at Washington, D. C., post office), Express order, or Draft on New York. Cash should be sent in Registered Letter. When a change of address is desired, both old and new addresses must be given. No extra charge to foreign countries.

THE RED CROSS NURSE IN FOREIGN SERVICE

All white is the dress uniform of the Red Cross nurse in foreign service. Nurses of the Army and Navy Nurse Corps wear the same uniform, with their insignia, the Caduceus of the Army or anchor of the Navy, replacing the Red Cross pin. They retain the Red Cross on the cap, however, if they have entered military service from the Red Cross reserve.

THE RED CROSS TOWN AND COUNTRY NURSE

The Red Cross nurse, in her plain blue gingham dress, with soft collar and cuffs, her panama hat, and her emergency kit, is a beloved figure in rural communities from the Atlantic to the Pacific, from Canada to Mexico. Her insignia is the Red Cross pin. She attends the sick, instructs mothers, gives the school children lessons in hygiene, and organizes health committees and clubs, carrying in her bag a new lease of life for all to whom it opens.

Photos from American Red Cross

Life & Health

HOW TO LIVE

Editor H. W. MILLER, M. D.
Associate Editor L. A. HANSEN
Office Editor G. H. HEALD, M. D.

VOL. 33 DECEMBER, 1918 No. 12

Home Care of the Sick

After Trained Nurses Are Withdrawn

Miss Miriam Long

WHAT can the woman in the home do to replace the large numbers of trained nurses that must be sent to France immediately?

This is the question now being asked by the women of America, whom the call from the Surgeon-General's office for 8,000 graduate nurses by October 1, has aroused to a sense of public duty and a desire to serve. With quick response, they feel there must be some place for them in the line of home defense.

There is a place, a very definite one, in this campaign to supply the Army and Navy Nurse Corps with nurses. The opportunity for real service, for both men and women, is almost unlimited. The responsibility of this war must not rest on the nurses alone, but on all American men and women. This is no time for "idle hands and unsatisfied hearts." There are things to be done.

The most imperative need, at present, is for a consistent conservation of the country's nursing resources. The supply of trained nurses in the country is not unlimited, and the most immediate assistance that patriotic men and women can offer is to make it easy for every unneeded trained nurse to volunteer.

If you are thoughtlessly holding the services of a graduate nurse for the care of some member of your family not seriously ill, release her, give her your blessing, and let her go where she can do the most good. Every nurse who is needlessly held, lessens our chance of victory. The thought that they are to be skilfully cared for, if wounded, means more than you realize to the boys "over there." Insufficient and incompetent nursing would produce conditions too awful to contemplate. It is your first duty to see that this cannot happen, and your second, to take the nurse's place in the community in every way possible.

The call for 25,000 nurses by January 1, and for 50,000 graduate student nurses by July 1, 1919, is a call for every woman at home to make herself able to serve in their place as far as it is safely possible.

The woman with no practical knowledge of the fundamental rules of community and health service must equip herself at once, so that she may render intelligent service in this emergency. Instruction courses in Home Care of the Sick and Home Dietetics have been provided by the Red Cross, and every woman is urged to prepare herself for usefulness to her community by attending these classes. They may be organized by groups of individuals on application to the nearest Red Cross chapter.

No woman who wishes to serve her country at this time, can afford to be ignorant of regulations for control of contagious disease and home sanitation. She cannot afford to lack an intelligent idea of what should be done in the sick-room. It is estimated that epidemic and preventable disease take a greater toll of life than war, and the infant mortality rate alone in England the first year of the war was seven times greater than the total casualties of the war for that year. It is up to every woman in the country to see that this does not happen in the United States.

The matter of community health is one of the most important problems that will arise with the departure of large numbers of nurses for France. Heretofore the health of the community lay chiefly with authorized public health agencies, employing skilled nurses, but the protection of the community health must now be the patriotic duty of the individual, a duty that calls for the watchful enforcement and promotion of all measures safeguarding public health.

Every man and woman must be his neighbor's keeper, not in an interfering way, but intelligently, under the direction of those trained in Public Health Service. In this way they will reduce the draft on remaining nursing resources, and help maintain the national standards of health. The Red Cross, in enrolling nurses for war service, has realized that to withdraw the entire nursing resources of the country for purely military duty, would create an unthinkable situation in communities at large. With this thought in mind, it has divided its service into three branches — Active Service, which means military duty in hospitals, whether here or abroad; Special Service, including those nurses whose present position in the community is essential to the maintenance of local nursing activities; and the Home Defense Group. Married nurses and those not eligible for active service because of age or physical condition are enrolled as Home Defense nurses for part or full-time duty in the communities. A chevron is issued to those enrolled for special service to distinguish them from the Home Defense Group, which is designated by a special pin.

WHERE YOU CAN HELP

1. Conserve the Nursing Resources of the Country.
2. Keep Well and Keep Others Well.
3. Guard Against Community Epidemic.
4. Train Yourself for Intelligent Service.
5. Enroll in a Red Cross Course in Home Care of the Sick.
6. Assist Nurses in Home Defense Service.
7. Enter an Army or Hospital School for Nurses.

No one would assert that the woman with little training can replace the graduate nurse in the care of a serious case, but lay women, as assistants to nurses, can help in many ways, investigating sanitary conditions, assisting with child welfare work, and in baby-saving milk stations,— interpreting everywhere possible, the principles of health.

For those who have the time and strength, there is no more desirable profession than nursing. The Surgeon-General has established the army school of nursing, in connection with military hospitals, and there are at present in the United States several thousand hospital training schools.

"It is only by a conscious and concentrated cycle of effort," said Secretary of War Baker, recently, "that we shall be able, not only to send an adequate supply of trained and equipped nurses to cantonments and base hospitals, but, at the same time, satisfactorily safeguard the civil population."

Health
and the
Soldier's Family

W. FRANK PERSONS, Director General
of Civilian Relief, American Red Cross

NEXT in importance to the question of the health of the men in our army and navy, comes the question of the health of their families. At first glance this may seem to be no different from the pressing problem of public health in general. It does involve, however, certain difficulties which are not a part of the general community health question and which are especially appealing because the devotion of soldiers and sailors to the service of their country has in many cases exposed their loved ones at home to unusual and trying conditions.

Home Service, as a branch of the work of the American Red Cross, is devoting the efforts of fifty thousand workers scattered all over the United States to the solution of the problems which arise in fighters' families. It is offering money help when that is needed and is asked for, and without ever intruding or going unasked into soldiers' and sailors' homes, it is extending a neighborliness which is reaching hundreds of thousands of wives and mothers and children every day. It represents to these families of fighters the helpfulness, the sympathy, and the encouragement which they have a right to expect from the whole American people whose agent the Red Cross is.

Money service to fighters' families amounts now to about $500,000 a month, and is rapidly increasing, but it is not by any means the most important nor the most far-reaching help that the Red Cross is giving. In communities where there is a well-developed social sense and institutions to make social conscience effective, such as hospitals, charity and health organizations, the Home Service work has been a matter of co-operation and development. But in many towns and rural communities into which Home Service has gone, there have been no organized social agencies of any sort whatever. Into these places Home Service has been carrying a gospel. It has not been the gospel of kindness,— that need not be carried into any American community,— it has been the gospel of intelligent, thoroughgoing service. One of the phases of that gospel which is of greatest importance and which has had the greatest effect upon communities where Home Service has been the first organized social movement, is organization for health.

All Home Service workers, particularly those in the smaller communities, receive from national and division headquarters printed instructions which cover among other things the elementary principles of family hygiene. It is not the thought of the Home Service directors that they can create sanitary experts in a few brief instructions, but the general ideas of prevention and care of

sickness are put into the hands of Home Service workers in such a way that they can be made the basis of helpful attention to soldiers' families.

In addition to the rudimentary instruction given in manuals, Home Service workers to the number of seven thousand have received lecture instruction during the year and a half since the United States entered the war, and these lectures have included more complete discussion of family health and management.

Home Service institutes, or schools, operated usually in connection with established colleges or universities, have given to over one thousand young men and women still more extensive training, and many of them are acting as secretaries of Home Service sections.

Nearly every Home Service section has a physician as a member of its active organization, in order that problems of illness and sanitation arising in soldiers' and sailors' families may be adequately dealt with by the committee.

These fifty thousand men and women are enlisted with the Red Cross for a purpose which may be called neighborliness,— organized neighborliness. They have no desire to intrude nor to interfere with the happiness of any family by attempting to give unwelcome aid. They are offering the sympathy and help of the whole American people, organized for the purpose in the Red Cross, to any soldier's or sailor's family in any problem, whether it be of health or anything else that a friend can serve to relieve.

"Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God." 1 Cor. 10:31.

Moral Backbone of Good Health

L. A. Hansen

THE relation of health to morals has been frequently discussed, pointing out that clean physical living may lead to clean morals. Doubtless much that has been said on this line is true, but all the deductions one may draw from the argument are not necessarily facts. We know of men professing health principles who go wrong. There are nations that may be abstemious in their living, practicing vegetarianism to the fullest degree, and yet they are reckoned heathen.

Temperance does have its place in the building of character. Self-control, restraint, denial, are elements of character building. An intemperate man cannot have patience, one of the marked traits of Christian character. Certain foods make it hard for a man to conquer the drink habit. Some foods may strengthen the animal nature of a man; but there is no certainty in taking the position that any kind of physical conduct will lead to spiritual attainments. Eating and drinking do not furnish a passport to heaven.

It is true that a close relation exists between health and morals, and that they properly belong together. But there is more certainty that good morals will lead to good health than of the reverse. A man who is a real Christian will so order his eating and drinking and other physical habits that his living will be in harmony with the moral law, and this is the true foundation of health in its fullest meaning. A man truly conscientious in the observance of the moral decalogue will sense the importance of

obedience to the laws of health, which are also the laws of God.

Recognizing that the body is the temple of the Holy Ghost will lead a man to glorify God in his body. "Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you? If any man defile the temple of God, him shall God destroy; for the temple of God is holy, which temple ye are." 1 Cor. 3:16, 17. No higher regard for the human body can be held than this sacred Scriptural recognition.

"Daniel purposed in his heart that he would not defile himself with the portion of the king's meat, nor with the wine which he drank: therefore he requested of the prince of the eunuchs that he might not defile himself." Dan. 1:8.

What greater incentive can a man have in his habits of life than the injunction given in 1 Corinthians 10:31: "Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God"? No higher aim can be presented in physical culture. No greater obligation can be urged in any health law. One looks away beyond man-made rules or laws and sees the supreme law of God and his claims. Recognition of the claim of God will hold a man straight when no man or legal enactments will do it.

The enforcement of health laws would require an officer for every man who should obey the law. The man with a conscience has a monitor that needs no help from the health officer. He is his own health officer. He knows keenly the need of obeying health laws. He does not make his own laws, does not defy the laws of others. He is a law-abiding citizen.

The genuine Christian recognizes his duty and responsibility to his fellow men. He knows he is his brother's keeper. He is a part of society, and can be counted on for doing his part. He is the best kind of man to share the responsibility of the community. He will keep his own premises clean, not only for his own sake and that of his family, but in the interests of his neighbors. He will support health measures. He will be a better citizen.

The man with a clean conscience finds no attraction in social vices. Social diseases lose much of their terror to one who is clean within, and lives it out. The surest help to a young man is a genuine Christian experience. Such a man is not a social menace.

The successful operation of many health principles in the individual depends upon moral backbone. It takes grace to resist temptation. The man held captive by drink finds himself helpless in its power. Many a man acknowledges that he cannot quit tobacco. We even see women who find it too much to give up tea or coffee. Gluttony is designated a sin by the Bible, and the man who persistently overeats in spite of his knowing better, realizes there is the power of sin back of it. Appetite has proved the downfall of many a man, and one's inclination to follow his own taste or passion can find control only in a power that is not his own.

Our habits become strong. They become so much a part of ourselves that they are identified with us. What a man does is very much what he is. To break away from himself by himself is like lifting himself by his own boot straps, — it cannot be done. There must be some other uplifting power to do it.

The one who has before him the goal of eternal life recognizes that the race is worth the running, and that to win it, he must run well. In striving for the mastery he is temperate in all things, and he keeps under his body and brings it into subjection. "Know ye not that they which run in a race run all, but one receiveth the prize? So run, that ye may obtain. And every man that striveth for the mastery is temperate in all things. Now they do it to obtain a corruptible crown; but we an incorruptible. I therefore, so run, not as uncertainly; so fight I, not as one that beateth the air: but I keep under my body, and bring it into subjection: lest that by any means, when I have preached to others, I myself should be a castaway." 1 Cor. 9: 24-27.

Daniel of old "purposed in his heart that he would not defile himself with the portion of the king's meat, nor with the wine which he drank: therefore he requested of the prince of the eunuchs that he might not defile himself." Dan. 1: 8.

The religious view of health makes it part of God's program for his children, recognizing that he desires above everything that their health shall prosper, as well as their souls. See 3 John 2. It does not regard health laws as so many exactions of deprivation, but as provisions for man's greater enjoyment and blessing. Every "thou shalt not," either in moral or physical law, carries with it a promise of something better than the thing which is forbidden.

The relation of physical health and spiritual blessing is identical in their source, and these two should run parallel in their enjoyment. One is a complement of the other. Both rest upon obedience to the laws of God. The failure to enjoy either may be traced to transgression in some way, either wilful or ignorant.

It is not a far step from physical transgression to sin in a moral sense. To one who realizes the claims of the Creator and the obligation of man to render to God the best that is in him, the indulgence in anything that disqualifies a man for the best of service becomes a sin.

The Happiness Road

It's only just a little road,
The road that leads
To happiness. It's made of faith
And kindly deeds;

Of pleasantness, of words that bless,
Of thoughts that heal;
Of very silent giving up
For others' weal.

The road that leads to happiness
Is easy taking;
Beside it grass springs fresh and green,
And buds are breaking.

Oh, there are folks from far away,
And folks we know there.
So let us two take hands some day,
And oh, let's go there!

— *Mary Carolyn Davies, in the Christian Herald.*

Life-Giving Habits

J. W. Hopkins, M. D.
Washington (D.C.) Sanitarium

HABITS are "actions or conditions which by repetition have become fixed and spontaneous." It is readily seen that they fall into one or the other of two groups, those which tend to produce health, and those which develop disease. In considering the former class, we are impressed by the wonderful truth that obedience to nature's laws does not bind or restrict. Adherence to even the most simple rules liberates us from many burdens of ill health.

A very important habit is that of retiring at the proper time, obtaining the requisite amount of sleep, and arising upon awakening. Sleep is the most necessary of nature's remedies; restoration, growth, and repair take place while the other functions are suspended or less active. From 9 to 10 P. M. is the best hour for adults to retire; children should go earlier, as they demand longer hours for sleep. In spite of many brilliant exceptions, the average person needs eight to ten hours' sleep at night, and probably one half to one hour's sleep in the daytime.

The morning cool bath must not be overlooked in this survey. It is nature's great tonic and vivifier, and in one of its modifications can be taken by the most delicate. Systematic muscular exercise habitually taken, following the cool bath, brings compound interest to the health seeker. But we find the best results in those who have trained themselves to stand and sit erect at all times, and to fill the lungs with long, deep breaths many times daily.

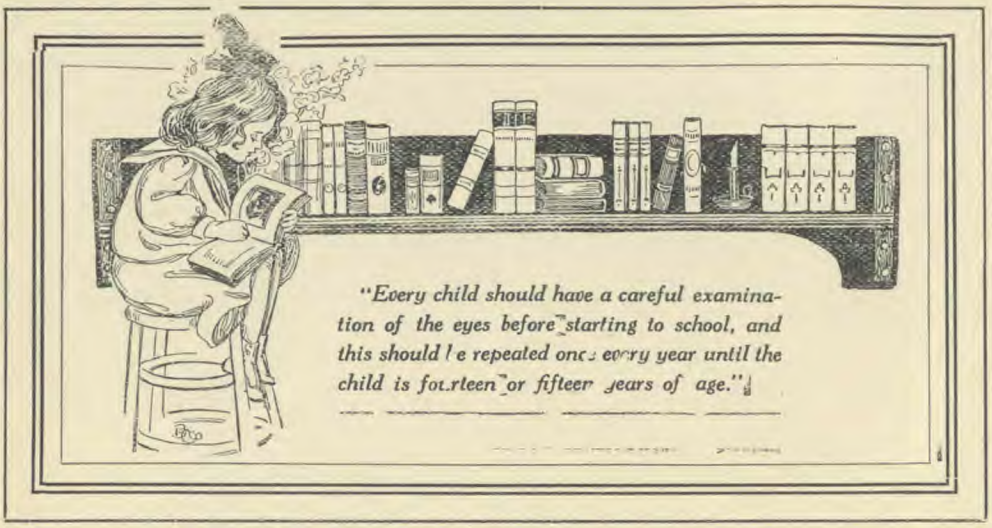
Careful hygiene at meals, including regularity of meals, thorough mastication of the food, abstinence from tea, coffee, flesh, condiments, and complex foods; avoidance of gluttony; taking of not more than one glass of liquid with the meal,— if these factors are combined with a hearty optimism and good cheer at mealtime, an excellent habit will have been created.

The excellent rule of visiting the closet immediately after the morning, noon, and evening meals, keeps the rectal reflex in healthy working order and prevents constipation. If this desire is neglected even for a short time, the call may entirely disappear.

The walking habit is essential. Walk to your work. Walk briskly. Carry your cane or umbrella behind your shoulders. Count the steps taken with each inspiration and expiration; eventually you will greatly increase your lung development.

Read good books. There are people who are habitually fiction drunkards, even as there are those who cannot do without their tea, coffee, toddy, or flesh. Cultivate an appetite for good books,— history, biography, travel,— and above all books read your Bible. A chapter from the Gospels, from the epistles, or a psalm will prove a veritable "well of life."

Last but not least is the happy habit of radiating good cheer. Most people consider happiness to be the supreme attainment of life, but forget that it does not depend upon environment or upon externals; neither does it consist in enjoyment, either mental or physical. True happiness finds its expression in self-sacrifice, in doing for others even by self-denial. All can choose to be happy. They can develop constant good cheer, and can receive the recompense in health which the optimistic spirit invariably assures.



Causes and Prevention of Blindness

No. 2

Prevention of Blindness

B. E. Crawford, M. Sc., M. D.
Chamberlain (S. Dak.) Sanitarium

FIFTY per cent of all blindness is preventable, and in the large majority of cases prevention can be effected with the expenditure of only a small amount of energy and forethought.

The importance of using every reasonable and legitimate means for preventing blindness is well expressed by Helen Keller in the following suggestions:

"Try to realize what blindness means to those whose joyous activity is stricken to inactivity.

"It is to live long, long days; and life is made up of days. It is to live immured, baffled, impotent, all God's world shut out. It is to sit helpless, defrauded, while your spirit strains and tugs at its fetters and your shoulders ache for the burden they are denied, the rightful burden of labor."

Obviously the best way to prevent blindness from eye injuries is to avoid the injuries. The number of eye accidents in many of the industrial occupations can be greatly reduced if all the workmen can be induced to wear suitable goggles to protect the eyes from intense heat and from flying particles. Many are doing this, but others object to wearing goggles, preferring to risk the loss of their sight rather than to wear eye protectors of any kind.

There are over 200,000 eye accidents every year in the industrial occupations in the United States. In one county in Ohio it is said that one eye is lost in this way every eleven days. Some accidents, of course, will happen even though every precaution is taken, but this number certainly should be greatly reduced.

Of the many hazards to eyesight perhaps none is more frequent than the practice of removing, or attempting to remove, foreign substances from the eye with nonsterile instruments of various sorts. Frequently a fellow workman em-

ploys for this purpose a soiled handkerchief rolled to a point and perhaps moistened in a mouth teeming with bacteria, a match stick which has been carried around for days in a dirty and sweaty pocket, or a toothpick which has done service in cleaning the teeth. Sometimes even the germ-laden tongue is used to remove the offending particle from the eye.

These practices subject the individual not only to great danger of serious eye infection, but also to the possibility of inoculation with some dreaded venereal disease, and should not be permitted under any circumstances.

Outside the large manufacturing centers a greater number of eye accidents occur among agricultural laborers than among any other class of workers. These accidents result from various operations necessary in the repair of farm machinery, from flying nails, staples, chips, and other objects, the careless handling of barbed or plain wire, horning and kicks from farm animals, the switching of horses' and cattle's tails, injuries from blades of corn, beards of wheat, etc. A little extra care would result in the avoidance of many of these accidents.

"The number of eye accidents in many of the industrial occupations can be greatly reduced if all the workmen can be induced to wear suitable goggles to protect the eyes from intense heat and from flying particles."

In all cases of eye injuries, however trivial they may appear, and whether painful or not, prompt and efficient medical attention is important to avoid infection and consequent loss of sight.

Blindness caused by cataract, glaucoma, ophthalmia neonatorum, and trachoma may in the great majority of instances be prevented by the employment of proper measures of prophylaxis or by prompt recourse to medical or surgical treatment.

The factors responsible for the development of the various forms of cataract are not well understood. Some cases are congenital. Others appear to be hereditary. Still others are due to various diseases of the eye, disease of the kidneys or arteries, to nutritional disturbances, or to increased blood pressure.

Many cases of cataract can be completely cured without operative measures if proper treatment is begun in the early stages of the disease. It is, therefore, a wise precaution to have the eyes examined occasionally for incipient cataract.

Glaucoma is a disease of advanced life, occurring usually after fifty years of age, and is most frequent among the Jews. While the exact cause of glaucoma is unknown, there are certain predisposing and exciting factors which should, as far as possible, be avoided. Among these are diseases of the heart and arteries, chronic constipation, rheumatism, worry, lack of sleep, insufficient food, indigestion, influenza, and depressing emotions. In all cases of glaucoma proper treatment should be

(Continued on page 370)

SPANISH INFLUENZA

H. W. MILLER, M. D.

INFLUENZA, or Spanish influenza, as the present epidemic is called, is rapidly becoming a widespread and almost uncontrollable epidemic throughout the United States. It has claimed so large a percentage of the medical profession and the nurses, and has filled the hospitals to such an extent that measures must be taken to treat it in the home. The object of this article is to inform the readers with reference to the character of the disease and its home treatment.

The cause of influenza is the *bacillus influenzæ,* which is carried through the nasal passages, and harbored in the sinuses and air passages of the mouth, nose, and throat. Through exhalation and expectoration, sneezing and coughing, this germ is expelled into the air, and if it does not find a reception in the nasal passages of some other individual, it dies in a very short time, since these organisms are easily destroyed by sunlight and air.

Quarantine is for the most part unsatisfactory in stopping the spread of an epidemic, but there are certain rules that will at least diminish the number of cases of influenza in any locality, if they are carried out.

Homes and all workrooms where two or more persons are together should be freely ventilated, and people should remain as much as possible out in the open air, instead of in closed rooms. Thus the chance of infection is lessened. All persons seem to be susceptible to influenza, regardless of sex, age, or race; but there seems to be established in the more aged classes some decided immunity, as is evidenced in the present epidemic.

For the care of one taken down with influenza, the best-ventilated room with a south exposure should be selected, preferably an upstairs room, separated as much as possible from the rest of the house. Sufficient bedding should be provided, especially warm blankets. Attendance upon the sick should be limited as much as possible to one member of the family. Outside of the room, in a convenient place, a mask should be kept, which should be placed over the nose and mouth before entering the room and left on during all the time attention is being given to the patient. If the mask is too closely woven, it is of no benefit, since the air will be drawn in between the mask and the face. On the other hand, if the mask is too thin and loosely woven, it will not afford protection. It is best to use about six layers of ordinary cheesecloth, saturated with a little listerine.

How to Keep from Getting Influenza

By the National Conference of Army, Navy, Civilian Doctors

1. Avoid contact with other people so far as possible. Especially avoid crowds indoors, in street cars, theaters, motion picture houses, and other places of public assemblage.

2. Avoid persons suffering from "colds," sore throats, and coughs.

3. Avoid chilling of the body or living in rooms of temperature below 65 degrees or above 72.

4. Sleep and work in clean, fresh air.

5. Keep your hands clean, and keep them out of your mouth.

6. Avoid expectorating in public places, and see that others do likewise.

7. Avoid visiting the sick.

8. Eat plain, nourishing food, and avoid alcoholic stimulants.

9. Cover your nose with your handkerchief when you sneeze, your mouth when you cough. Change handkerchiefs frequently. Promptly disinfect soiled handkerchiefs by boiling or washing with soap and water.

10. Don't worry, and keep your feet warm. Wet feet demand prompt attention. Wet clothes are dangerous, and must be removed as soon as possible. —*Washington Evening Star, Oct. 14, 1918.*

After a patient has recovered from the influenza, the best way to disinfect his room is to open the windows, air all the bedding, and allow a free circulation of cold air to enter the room during a period of several hours. Any room used by the patient during illness should be thoroughly aired.

Too much attention cannot be observed by those desiring to escape this disease, to avoid mingling with the crowds in public. The out-of-door life has thus far afforded the greatest freedom from the present epidemic, whereas close housing has proved to be the most fruitful source of dissemination. Avoid the use of public telephones, drinking fountains, etc.

EARLY DIAGNOSIS

Generally, most people will have had influenza one or two days before they or their friends recognize the fact. The fever often reaches 100° or 101° F. before the patient feels the severity of the ache or pain that accompanies it. It is because of this lack of early quarantine that the disease is so easily disseminated. A slight rise in temperature is often the first symptom, which may be noted by some congestion of the eyes and a red flush on the face. Often there is a tinge of headache and a little indisposition at meals. The trouble may start with a little cold, with gradual tightening in the chest, or, as it has started in some cases, by some disturbance of urination, such as going from five to twenty-four or more hours without voiding urine. Fulness in the head and dizziness are early symptoms. Sneezing and coughing occur early in the disease, and the ordinary symptoms of a bad cold during this time of epidemic should be looked upon with suspicion as the possible beginning of influenza. This early stage is the most effective time to cut short the progress of the disease, by radical treatment; in some cases this will prevent the high temperature and delayed recovery that are attendant on fully developed cases.

What to Do if You Have Influenza

By the National Conference of Army, Navy, Civilian Doctors

1. If you get a cold, go to bed in a well-ventilated room. Keep warm.

2. Keep away from other people. Do not kiss any one.

3. Use individual basins, and knives, forks, spoons, towels, handkerchiefs, soap; wash plates and cups.

4. Every case of influenza should go to bed at once under the care of a physician. The patient should stay in bed at least three days after fever has disappeared and until convalescence is well established.

5. The patient must not cough or sneeze except when a mask or handkerchief is held before the face.

6. He should be in a warm, well-ventilated room.

7. There is no specific for the disease. Symptoms should be met as they arise.

8. The great danger is from pneumonia. Avoid it by staying in bed while actually ill and until convalescence is fully established.

9. The after-effects of influenza are worse than the disease. Take care of yourself.

10. Strictly observe the State and city rules and regulations for the control of influenza.— *Washington Evening Star, Oct. 14, 1918.*

SYMPTOMS

The symptoms of the disease, when well established, are backache, restlessness, tendency to move and shift the position because of aches and pains throughout the body, and the discomfort arising from lying long in one position. Headache, either frontal or occipital, and sometimes involving both areas, usually occurs. There is sensitiveness of the eyes to light, watering of the eyes, congested eyeballs, some redness of the nose, a cough, and in some stages of the disease a retention of the urine. Oftentimes the patient will vomit bile with considerable relief. Prostration is very extreme, and oftentimes there is considerable nausea, with fever ranging from 101° to 104° F. It is an exceptional case where the temperature runs up to 104½° to 105°. All such cases are the result of failure in proper elimination, and should be given very heroic eliminative treatment. Con-

stipation rather than diarrhea is met with in most cases.

Frequent complications are: Abscess in the ears, sore mouth, bronchial pneumonia, retention of the urine, and coma, and delirium developing from uremic poisoning. The pulse is usually very rapid, especially in case of a high temperature. There is a general tendency throughout the disease toward a chilly sensation, and an abhorrence of all cold. At any time during the progress of the disease chilliness may develop and cause an immediate rise of temperature. The appetite is fair, and the tendency is to feed the patient too much.

TREATMENT

In influenza there is a constant tendency toward internal congestion and peripheral, or external, chilling. This should be studiously combated by the early use of hot leg baths, fomentations to chest, or where the symptoms are particularly those of nausea and vomiting, fomentations to abdomen. Each treatment should be followed by a witch-hazel rub or a cool (not cold) sponge. Great care should be taken during the entire period of treatment that the patient be kept under the covers, the arms and breast carefully protected at all times. In case there is a very high temperature and suppression of urine, full blanket packs, or full tub baths, with cold to the head, preferably by means of an ice-cap, and in more severe cases, cold applied at the same time to the heart, will usually bring down the temperature from one to four degrees, and will relieve the pain.

From the very first, large quantities of liquid, preferably hot liquid, should be given the patient. Strained soups, broths, hot lemonade, and other fruit juices, given either hot or cold and in large quantities, assist in the elimination of the poison produced by the germs. It is these toxins that give rise to the aches and pains and the extreme prostration. To the extent that elimination can be maintained, through hot treatments applied as suggested and repeated as frequently as necessary, will the patient be kept free from prostration, aches, and pains, and his recovery hastened.

The temperature of bronchial pneumonia will be best controlled by the use of heating compresses applied to the chest directly after each treatment and kept on for a time after treatment. Great care should be taken to keep the patient well covered at all times, but at the same time fresh air should be allowed in the room, and the room temperature should be kept cool, except at the time of treatment, when all doors and windows should be closed to prevent chilling the patient.

DANGERS ATTENDING CONVALESCENCE

The time of recovery from influenza is from two to seven days. Any case prolonged beyond a week will usually develop some complications of a serious character, generally one of those here referred to. Diet should be limited during the disease.

The one final caution is that the patient must not be permitted to rise from bed until the temperature is running normal, morning, noon, and night. The temperature, not the patient's feelings, should be the guide.

During convalescence there is almost constant perspiration and a tendency toward taking cold and chilling, and here lies the danger of developing pneumonia as a secondary infection. The consequences of such infections are too serious, and have already proved too frequent a complication, for any one to take chances on getting out too early.

Observation shows that very few living in the open air come down with influenza; but doctors, nurses, and those caring for influenza patients have proved to be very susceptible, in spite of the fact that every ordinary precaution is being taken. In a very large per cent of cases they have succumbed to the infection. Therefore, those best able and most physically fit to pass through such an infection should take the risk and care of influenza cases, rather than those who have pulmonary tendencies and other general weaknesses that might endanger their life should they take the disease.

Hydropathic Treatment for Spanish Influenza

L. A. Hansen

IN the article on Spanish influenza by Dr. H. W. Miller several hydropathic treatments are recommended. These are common treatments, and are applied in various ailments. Though these treatments are well known to many, yet a few words of direction for their proper application may be desirable.

THE FOMENTATION

By "fomentation" we mean the local application of moist heat by means of cloths wrung from hot water. It is superfluous to say *hot* fomentation, for a fomentation is, for our purpose, hot.

The best material for fomentation cloths is a half-wool and half-cotton blanket. An old blanket cut in quarters makes a good set of cloths. A woolen undershirt or an old wool shawl may be used. Towels can be used if necessary, but they are not so good as flannel cloths. The fomentation is of enough value to warrant providing a set of cloths for it as a part of the home treatment equipment.

Fig. 1. Wringing the Fomentation Cloth

The part of the body to be treated should be fully exposed. The patient's clothing and the bedding should be protected by towels or sheets. It is better to have the patient fully undressed.

The extremities of the patient should be kept warm. A foot bath may be given in bed at the same time the fomentation is given, but care should be taken to avoid steaming the bedding; better cover the foot tub with a heavy towel. Or the feet may be warmed by a hot iron, a soapstone, a brick, or a hot-water bottle.

Provide plenty of boiling water. If convenient, have a gas plate or other means of heating the water, near the room where the treatment is to be given. If this cannot be done, the water can be brought in a pail, which should be kept covered. If the fomentations must be carried some distance, they will retain their heat if tightly wrung. They should not be unwrung until being placed on the patient.

If four cloths are used, two may be used for the dry and two for the wet. Spread a dry cloth on a flat surface. The cloth to be used for the wet should be folded to the proper size and wrung from the hot water. If large enough, this cloth may be kept dry at the ends by which it is held while wringing, dipping the center of it in the water. If too small for this, it may be folded in a long towel, and the ends of the towel kept dry for holding in the hands. Remember the fomentation must be hot — as hot as can be borne. (See Fig. 1.)

Fold the wet cloth within the dry, then fold all tightly together to retain the heat, and apply to the patient. If too hot, lift it for a moment or slip the hand between it and the body. Do not hold the cloth off until it cools. If nec-

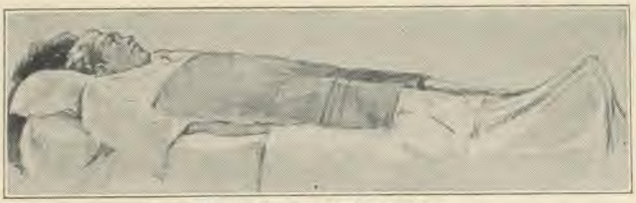


Fig. 2. Dry Cloth in Position

essary place a thickness of dry cloth on the patient under the fomentation. (Fig. 2.) This may be removed later as the fomentation cools a little. When it begins to be "comfortable," change the hot cloth, substituting another newly heated fomentation.

Instead of using two cloths each time, one dry cloth, folded, may be left on the patient all the time, simply opening it and placing within it the newly heated wet cloth, which is unwrung only when placed. (Figs. 3 and 4.) The thicker the inside cloth, the longer it will retain the heat. The heat retained will also vary with the amount of water left in the cloth when wrung. The heat can be prolonged by placing a hot-water bottle over the fomentation.

The duration of each application is usually from five to ten minutes. Three applications are generally given, the treatment lasting from fifteen to thirty minutes.

To alternate fomentations with a brief application of cold makes the effect more pronounced. The cold may be applied with a wet towel or by the hand dipped in cold water.

The fomentation should never be left on until it

Fig. 3. Wet Cloth Placed on Dry Cloth

Fig. 4. Dry Cloth Folded over Wet Cloth

Fig. 5. Wringing a

is cool, for this would counterac the desired effect.

When changing the fomentation the change should be made quickly and the part treated should be kep covered as much as possible.

At the close of the treatment cool the part by wiping off with a towel or rubbing with the we hand. Then dry thoroughly an cover to prevent chilling.

The fomentation is valuable i most forms of pain, such as neu ralgic, rheumatic, gastric, or colic It is often recommended for head ache, backache, lumbago, sciatica acute bronchitis, stiff joints, an many other affections. The appli cation should cover three or fou times the area of the pain.

Caution should be observed whe applying fomentations to a para lyzed part or to an unconsciou person, a young child, or an age invalid, to avoid burning. Sensi tive surfaces, especially bony prom inences, should be protected agains burning.

THE HOT BLANKET PACK

The hot blanket pack gives a application of moist heat to the en

from Boiling Water

tire body. The articles necessary to give it are four or five blankets, a pillow, a rubber sheet if available, three or four hot-water bottles, cold water for compresses for the head and heart, a tub or pail for the foot bath, and several towels. The treatment may be given on a couch or in bed.

It is well first to secure an action of the bowels by an enema, then give a hot foot bath. The drinking of hot water or hot lemonade will facilitate the perspiratory action in the pack to follow. Hot drink may also be given to the patient while in the pack.

Spread dry blankets on the bed or couch, letting them come up well on the pillow. Fold one blanket, single or double (the double retains heat longer) lengthwise, and wring out of boiling water. Two persons can wring the blankets better than one, unless a wringer is used. (Fig. 5.) The patient should be undressed and ready to get on the blanket as soon as it is opened. Keep the blanket folded or tightly wrung until ready to place it on the bed. Open quickly to avoid losing

Fig. 6. Patient in a Blanket Pack

heat. If wrung dry, there is little danger of burning.

The patient lies down on the blanket as soon as it is opened, and is wrapped in it. It is best to have the arms between folds of the blanket rather than next to the body. After the wet blanket is wrapped closely about the patient, bring up a dry blanket, one side at a time, and wrap about him. Next place a hot-water container between the legs, one at the feet, and one on each side. Then bring up and fold over him the other dry blankets that have previously been placed on the bed. The wet blanket must come in contact with the body clear to the chin, and both it and the dry blankets should be well tucked in at the feet and the neck to exclude all air. (Fig. 6.)

A towel at the chin will protect it from the chafing of the blankets. A cool compress (a towel wrung out of cold water) should be kept on the head, renewing as often as needed to keep it cool. It may be necessary to keep a cool compress or an ice bag over the heart.

This treatment is exhausting, and should not be too greatly prolonged or given too frequently. From twenty to thirty minutes should be the duration. One

Fig. 7. Method of Applying Cold after Treatment

such treatment a day is sufficient, accompanied by the other treatments recommended.

In taking the patient out of the pack, unwrap one blanket at a time. Give a sponge bath or a cold towel rub as the wet blanket is removed, exposing and bathing a portion of the body at a time and drying and covering the same,—first an arm, then the other arm, the chest, the abdomen, and the legs. (Fig. 7.) The back is bathed after the wet blanket is entirely removed. Keep patient well covered after the treatment, to avoid chilling.

HOT FOOT BATH

This is a very useful though simple treatment. It may be given in bed with a bucket or basin large enough to hold the feet. The deeper the vessel, the better; at least the ankles should be covered. Protect the bedding with thick newspapers or a piece of oilcloth under the tub. Cover the tub and knees with a heavy towel to prevent steaming the bedding, which would leave it damp after the treatment, and possibly make the patient cold. Keep the patient well protected from circulating air.

The temperature of the foot bath should range from 105° to 120°; it may begin at 105°, hot water being gradually added until 120° is reached, or as hot as the patient can bear. The bath is continued from five to thirty minutes. If prolonged more than five minutes, it is well to apply cold to the head.

On removing the feet from the bath, give a dash or pour of cold water, and then thoroughly dry them. Always dry well between the toes.

HOT LEG BATH

This is given much as the foot bath, excepting that the receptacle is deeper, the water reaching well up to the knees. The patient is seated, and should be well covered. A stool two or three inches higher than the bath receptacle is necessary. A towel placed over the edge of the tub, under the knees, is desirable. Begin with a temperature of about 105°, and gradually raise it.

HEATING COMPRESS

This is a compress consisting of several layers of cheesecloth or toweling, wrung out of cold water, and covered with a dry cloth or a piece of rubber cloth. It is to remain on until it begins to get warm, when it should again be cooled.

Prevention of Blindness

(*Continued from page 363*)

instituted as early as possible. Otherwise the disease is almost certain to result in complete blindness.

The most common and most constant symptoms of beginning glaucoma are a frequent desire to change the glasses used for reading and other close work, periods during which the vision becomes fogged or obscure, and the appearance of halos or luminous circles around lamp lights. When these symptoms are present a thorough examination by an oculist should be had at once.

Ophthalmia neonatorum, or baby's sore eye, is better prevented than cured. As soon as convenient after the birth of the child, one or two drops of a one-per-cent solution of silver nitrate should be instilled into each eye, and after a few seconds the silver solution should be neutralized by instilling into each eye a few drops of a one-per-cent solution of common salt. Whenever the baby's eyes become sore or inflamed, a competent oculist or physician should be consulted at once, as any delay may result in complete loss of sight.

Trachoma, or granulated lids, is likely to cause blindness chiefly because of the serious complications which frequently arise in connection with the disease. The patient should therefore be under the constant care and observation of an oculist or physician, so that all complications

may be promptly recognized and treated. In order to avoid an epidemic of the disease great caution is necessary to prevent the contagious discharge being conveyed from one subject to another.

Some of the systemic diseases, especially measles, scarlet fever, smallpox, typhoid fever, and influenza are so often accompanied or followed by inflammation, weakening, or other disorders of the eyes that those in charge of these cases should be constantly alert to recognize any signs of eye trouble and to institute the necessary treatment before it is too late to prevent serious impairment.

In gonococcus conjunctivitis we have one of the most dangerous of all eye diseases. The germs are usually transferred to the eye by means of soiled fingers, towels, or handkerchiefs. Only by prompt and efficient treatment can the eye be saved from total destruction. Every precaution should be taken to prevent the spread of the infection. The use of common towels, wash basins, etc., should be everywhere discontinued, both in public institutions and in private homes; not only as a means of preventing the spread of gonococcus conjunctivitis and trachoma, but many other diseases also.

Blindness from wood alcohol has frequently resulted from using Jamaica ginger, lemon extract, or patent medicines which have been prepared with wood alcohol. Not only should wood alcohol never be taken internally, but its fumes should be avoided, as breathing them often produces blindness.

As a precautionary measure against allowing high degrees of myopia to develop and progress unnoticed, every child should have a careful examination of the eyes before starting to school, and this should be repeated once every year until the child is fourteen or fifteen years of age. If the examination shows the presence of any considerable amount of nearsightedness, the proper correcting glasses should be worn, and the hours of study, both at school and at home, must be restricted within reasonable limits, depending largely on the degree of the myopia.

Schools of all kinds should be provided with proper lighting and heating systems. Two conditions which are to be avoided in any system of lighting are glare and heavy shadows. The blackboards and tops of desks should be of a dull finish so that they will not reflect the light into the eyes of the pupils.

All who have given serious consideration to the matter are agreed that adequate and proper lighting for all buildings or rooms occupied for industrial purposes is a paying proposition from the standpoint of the improved quality and increased amount of work done. The increased production resulting from the installation of a proper lighting system is often from eight to fifteen per cent.

Clean windows and light coloring of ceiling and walls are always of great value as an aid to interior illumination whatever system of lighting may be adopted. The appearance of the windows in many workrooms and industrial buildings would almost lead one to believe that the windows were not intended for lighting purposes. The amount of dust, grease, and grime with which the windows are frequently covered makes it necessary to resort to artificial illumination when there would be an abundance of natural light if the windows were only kept clean.

We cannot avoid living under conditions that are abnormal and more or less detrimental and dangerous to the delicate organ of sight, but we can do much to better the existing conditions, profit by the advancing knowledge with reference to the conservation of vision, and take advantage of the many helps which science has already provided for the preservation of eyesight. Nor should we forget to make use of the natural means which an all-wise Creator has so freely given to bring rest and healing to inflamed, overworked, and weary eyes; especially the changing forms and hues of midday and sunset clouds, the flowers of forest, field, and garden, and the various shades of green of grass, shrubs, trees, and growing crops.

Teeth and Tonsils

W. C. Dalbey, D. D. S.

WHEN we consider the accumulated evidence of the past few years, the position taken by a prominent medical teacher that bacterial invasion of the teeth and tonsils is the greatest present-day menace to health, is by no means unreasonable. It has been generally accepted that every disease caused by the streptococcus family of germs with their cousins the pyogenes (pus-producing) family, is made possible because of bad teeth or infected tonsils. These lie at the open portal to the body, and if they harbor disease-producing germs, infection generally follows. Absorption of infective material from root apical abscesses is not necessary, but may occur nearly as well from the spaces around teeth loosened by pyorrhea, though they may never be abscessed. Ill-fitting bridge work or crowns may also harbor millions of disease germs. The list of diseases traceable to such infection is a formidable one.

Endocarditis is inflammation of the lining membrane of the heart. Malignant or ulcerative endocarditis is rapidly fatal. This form is characterized by a high temperature and great prostration.

Fatal bacteremia is a condition in which the blood stream is full of virulent micro-organisms.

Nephritis is an inflammation of the kidney. There are many varieties.

Cholangitis is an inflammation of one of the bile ducts.

Arthritis, sometimes called rheumatism, is an inflammation of a joint. But rheumatism is a symptom rather than a disease. It is a result of infection, generally through an unclean mouth.

Thyroid diseases are nearly always traceable to mouth infection.

Arteriosclerosis is a hardening of the artery walls.

These are by no means all. A host of subvariants are attributed to focal infection from bad mouth conditions.

Dentists and physicians should begin to recognize the importance of preventive measures. But while this is true, extremes should be avoided. There is a radical class of dentists and physicians who urge that every suspected tooth be promptly sacrificed; while on the other hand, another class refuse to remove infected teeth. One should rather trust to the moderates, who can usually save many teeth that would be sacrificed by the extremist. These teeth, if not in a chronic state of disease, may, by careful treatment, prove useful for years to come.

Probably the same radical divergence will separate the tonsil-ectomist from his opposite, the conservatist. No doubt many harmless tonsils have been removed. No doubt, too, many more should be rooted out that shrink from the casual glance of the professional eye. While great care should be taken, in case either of a diseased tooth or a diseased tonsil, to kill or cure,— that is, to remove in case of doubt,— the greatest precaution should be taken to teach the patient to come before a chronic condition arises. A safe rule is, Visit the dentist or throat specialist twice a year, in the fall and spring, and between times, when the least symptom of trouble arises.

In conclusion, let it be emphasized that focal infection, dental or oral in its origin, may cause only slight, or it may cause serious or even fatal, disease of any tissue or organ of the human body; but it more commonly affects the joints, muscles, bones, heart, blood vessels, nerves, and kidneys. Pyorrhea, above all other mouth diseases, may cause infection of the tonsils, which in turn may cause systemic diseases.

AS WE SEE IT

Conducted by G. H. Heald, M. D.

SPANISH INFLUENZA, THE "FLU," OR THE "GRIP"

AUTHORITIES are unable to affirm or to deny that Spanish "flu" is the same disease as the influenza, or "grip," which spread over the entire world about 1890, and has broken out locally a number of times since. The specific cause of influenza is not certainly known. It may prove to be a filtrable virus,— a germ too small to be seen with the ordinary microscope,— as is the case in a number of other diseases. There are reasons for believing this epidemic or pandemic to be the same disease as that which has spread over portions of the earth at intervals as far back as we have any records. It is true that it seems more rapidly contagious and more severe than typical influenza, and it varies in other ways; but epidemic diseases have a way of varying from type. A rather recent example of this fact is the epidemic of pneumonic plague that prostrated Manchuria and surrounding countries a few years ago, and seemed destined, for a while, to spread over the entire earth. It was the old familiar plague, playing a new rôle.

The Spanish "flu" was raging in western Europe during the summer, and has now subsided there. In Germany the same disease was apparently present a little earlier. There, it seemed to attack almost entirely those who were too young to have been attacked by the pandemic of 1890. For this reason it was believed by some that the disease confers some immunity. Other countries did not seem to have the same experience, though in this country, the disease seems to attack by preference the young.

In the present epidemic, the onset is quite rapid, beginning with chilliness, marked weakness, pain in the head, eyes, back, limbs, and joints, and a fever ranging from 101° to 104°. The pulse is characteristically slow as compared with the temperature, and there may be drowsiness, or nausea and vomiting. Constipation is the rule, though there may be diarrhea. Later there is reddening of the mucous membranes, most noticeable in the red watery eyes, though the nose and throat are also injected, and there may be sneezing and hoarseness. The fever lasts for a few days. There is considerable prostration during convalescence. In some cases there is bleeding from the mucous membranes — nose, urethra, or bowel.

Pneumonia, a frequent complication, is the most common cause of death. There is not the marked high temperature and massive consolidation of typical pneumonia. After an initial rise, the temperature comes down to practically normal for about twelve hours, and then suddenly rises, and after this second rise, small consolidations may be noted in the lungs, beginning at the base.

The incubation period — the length of time after exposure required for the disease to manifest itself — is not known, though apparently it is quite short. The method of spread seems to be principally by the droplets thrown out by an infected person when coughing or sneezing, or speaking forcefully. At any rate, it spreads most rapidly in congested crowds, as on crowded street cars. But one should not forget the possibility of transmission by any of the avenues by which saliva from one mouth reaches another mouth, as the use of public drinking cups,

of soda fountain dishes and restaurant dishes not properly scalded, or by the eating of uncooked foods handled by influenza patients or "carriers," or by eating food without thoroughly washing or disinfecting the hands, after attending a case of influenza.

The treatment is largely symptomatic, that is, for the alleviation of symptoms rather than for the cure of the disease. Absolute rest in bed until convalescence is well established is important, no matter how well the patient may feel. Relapses following too early use of the limbs are liable to be much more serious than the first attack. Warm baths give relief in some cases. But in any case the patient is better under the care of a competent physician.

Among preventive measures may be mentioned, avoidance of crowds, isolation of patients, use of gauze masks by attendants (gauze folded into a pad of several layers, tied closely over the nose and mouth by attached tapes), disinfection of patients' dishes, and care on the part of the attendant to wash hands thoroughly in soap suds or a disinfectant solution after handling the patient. Where the attendant must mix with other members of the family, it is important to have a special garment to put on over the other garments while in the sickroom.

TO CONTROL THE PAROXYSMS OF WHOOPING COUGH

As most LIFE AND HEALTH readers have probably never seen Naegli's description of a simple manipulation by which the paroxysms of whooping cough can be controlled and the most distressing symptoms allayed, we give a description of the same as performed by Dr. Jacob Sobel, chief of the Division of Baby Welfare, Bureau of Hygiene, New York City.[1]

"I have found that a single procedure practically answers every purpose. When in front of the patient, I place the flexed index and middle fingers against the angle of the lower jaw, both thumbs along the sides of the nose and against the upper jaw, and then, at the time of the paroxysm, when the child's mouth is open, I pull the lower jaw downward and forward. If standing behind the patient, I place the flexed index and middle fingers against the angle of the lower jaw, the thumbs along its body, the remaining fingers beneath it, and then pull downward and forward."

The important procedure is to pull the lower jaw downward and forward during the paroxysm. Dr. Sobel says that he has practiced this form of manipulation since 1901, and has found no reason to change the conclusions which he reached at that time, some of which follow:

1. Pulling the lower jaw downward and forward controls the paroxysms of whooping cough in most cases, most of the time.

2. The method is usually more successful in older children than in infants.

3. In cases without a whoop the expiratory spasm with its asphyxia is generally overcome, and in those with a whoop the latter is prevented.

4. As a single therapeutic measure for the control of the paroxysms, it deserves a place in the treatment of pertussis [whooping cough], and is as successful as any single drug, or even more so.

5. Mothers, nurses, other attendants, and older children, should be instructed in its use, in order that on-coming attacks, especially at night, may be arrested.

[1] Monthly Bulletin of the Department of Health, city of New York, December, 1917.

6. The manipulation is harmless, painless, and easy of application, without any of the by-effects of drugs.

7. The only contraindication to its application is the presence of food in the mouth or esophagus.

8. Patients treated in this manner are less likely to suffer from complications and sequelæ. They emerge from the disease in far better condition, less exhausted, and less emaciated, because vomiting has been controlled.

LESSONS IN NUTRITION TAUGHT BY THE WAR

BEFORE the war the question of nutrition was rather an academic one. Professors and editors of health magazines might air their opinions as to what was what in nutrition, but there was plenty of food and it comparatively cheap, and the great bulk of the people were satisfied to eat to satisfaction and let it go at that. Whether they needed so much or whether they needed, say, such a large proportion of animal food, was a matter of indifference. The food appealed to them, and they ate it.

But the war has wrought unprecedented changes. A very considerable proportion of the earth's inhabitants are undergoing a process of slow starvation; and if we in this productive land are to fill a rôle different from that of the priest and the Levite who "passed by on the other side" of the Jericho road when they came upon the wounded man, we must give of our abundance that the starving may be fed.

We have been doing this,— lessening our consumption of certain articles — wheat, meat, sugar, butter, etc., and have attempted to eliminate wastes. Meanwhile, students of nutrition have been carefully studying and restudying to learn to what extent we may lessen our consumption of food without reaching the danger point; for, obviously, while we want to do all in our power for the babies of Belgium and France and England, we do not want to neglect our own.

A book, "The Food Problem,"[1] has been prepared by members of the United States Food Administration,— Prof. Vernon L. Kellogg, of Stanford University, and Prof. Alonzo E. Taylor, of the University of Pennsylvania. Mr. Herbert Hoover has written the preface. The book is sent out as the work of the Food Administration on this great question of nutrition.

Concerning the matter of protein this book says, "The chief concern in the diet of a growing child is not the amount of protein, but the presence of balanced protein." The balanced proteins are practically all of animal origin. "For this reason," the authors continue, "it is particularly important in the diet of the child to secure a large percentage of the intake of protein in the form of balanced protein, namely, that of milk. It is a safe rule that 40 per cent of the protein of the diet of growing children should be balanced protein obtained from animal products. In the case of the adult this may safely fall to less than 20 per cent."

"This does not mean," the authors continue, "that vegetarianism in the strict sense [without dairy products or eggs] is impossible. It is possible, but it is difficult." It is explained that with a wide variety of cereals and plants for selection one can obtain a balanced protein ration, but that the amount of pro-

[1] "The Food Problem," the Macmillan Company, New York, 1917. Price, $1.25.

tein eaten would have to be larger than if animal products were used. But with the child, the book continues, strict vegetarianism is very much more difficult than with the adult, though possible. "It is difficult, though possible, to raise a child without milk, eggs, or meat. *It is not in the least difficult, under conditions of modern markets, for an adult to practice strict vegetarianism with success.* [Italics supplied.] It is added that this would involve a bulky diet, and probably an expensive diet.

The book postulates one gram of protein per kilo of body weight as sufficient for maintenance of growth. This would be, for an ordinary adult, about 70 grams of protein daily — a little over two ounces, as against the 4 ounces supposed to be necessary a few years ago. It may be safely said that there is scarcely a meat eater that does not very greatly exceed 70 grams of protein a day. And the excess can do no good. It cannot be built up into flesh, but must be deprived of its nitrogen (which is eliminated as waste, mostly in the form of urea), and the remainder converted into sugar for fuel. Now meat protein is a most expensive kind of fuel. It is very much like breaking up your furniture and using it to warm the house — a process which may be necessary this winter if the coal does not come faster.

The question may arise, Why, then, is it necessary to send meat to Europe? The answer is that without some animal food the people there are not likely to be able to get such a variety as to balance their proteins, and they are not likely to get their minimum of 70 grams of protein daily.

In giving of our supplies, that is, in cutting down our consumption of protein to a minimum, and sending it to the half-starved of Europe, we may benefit them and ourselves. By "we" and "us" I mean those of us Americans who have been using liberally of animal foods.

HOW MUCH PROTEIN DO WE REQUIRE?

ALONZO E. TAYLOR, M. D., professor of physiological chemistry, University of Pennsylvania, a few years ago issued a textbook, "Digestion and Metabolism" (Lea & Febiger, N. Y.), which gives little comfort to those who believe in a high-protein requirement, and who argue that because people on the average eat a certain amount of protein, that is an evidence that they need it. Professor Taylor, in his chapter on "The Normal Diet," says:

> "A survey of the development of taste in foods through the centuries, and a correlation of diet customs with the available foodstuffs of the time, do not lend much color to the hypothesis that the development of customs in diet have been materially guided by the experience of the race in the concrete physiological sense. According to the best information, the following figures represent in grams the meat consumption per day in the named countries: Australia, 300; United States, 150; England, 130; France, 90; Netherlands, 85; Austria-Hungary, 80; Russia, 60; Spain, 60; Italy, 30; Japan, 25. These figures do not afford much support to the idea that the protein consumption of a race corresponds to work or metabolic needs. Practically every native race has discovered alcoholic fermentation. Is that an argument for the physiological value of alcohol? . . .
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> "The most striking statistical evidence bearing on the question lies in the protein content of milk. This, however, is not in favor of, but is opposed to, the idea of a high input of protein in the standard ration. There are marked variations in the protein content of the milk of different animals, but perhaps the most striking fact is the low protein content of human milk. The milk of canines and felines [dogs and cats] is very rich in protein; that of cattle, sheep, and goats is moderately rich, that of horses poor, that of woman probably poorest of all. Yet, of course, these various milks are adapted to the nourishment and growth of the young of each species."

Again he says:

"The leisure classes eat meats because the flavors stimulate the jaded tastes and appetite and because the cuisine of meats is more highly developed than is the cuisine of vegetables. The laborer eats protein heavily simply because he eats heavily of everything, and naturally consumes a goodly ration of albumin. The only individuals who select a heavy protein diet with the idea of its supporting qualities are the athletes. It is a fair question, since the predilection for a heavy meat ration is confined to Anglo-Saxon athletes, whether this is not the direct descendant of the old red meat and blood notion of the Englishman. Athletes in numbers in our country have demonstrated the perfect reliability of the low-protein diet for the most severe athletic contests. Masters of coursing hounds long ago discovered that meat is not the best food for the dog, but that a diet moderate in protein and rich in carbohydrate gives the longest wind and strongest leap."

Yet the chances are that these same dog fanciers are not keen enough to apply this wisdom to their own dietetics.

MAY VEGETABLES SUBSTITUTE FOR MILK?

OWING to the fact that milk is becoming scarcer and higher in price, it has been suggested that those who cannot obtain sufficient milk for growing children add green vegetables freely to the dietary. It has been supposed that in the matter of adequate proteins, vitamines, and mineral matters the green vegetables would take the place of milk.

McClugage and Mendel (*Journal Biological Chemistry*, August, 1918) have concluded from a series of feeding experiments that the calcium of vegetables is not so well utilized as that of milk, or even so well utilized as calcium carbonate or other calcium salts would be when properly administered.

While these investigators have nothing to say against the use of vegetables for their protein and vitamine content, they advise, if the vegetables be used to replace milk, that a small amount of calcium salt be administered. Part of McClugage and Mendel's discussion of the results of their experiments follows:

"The special need for calcium and possibly other inorganic salts is at length beginning to be recognized and taken into account in dietary plans. This necessity is an especially weighty factor to be considered during the period of growth. The importance of calcium as a structural element for the growing bones and teeth is one to be emphasized. Calcium has been supplied by the use of milk in the diet. Certain present-day factors — for example, the possible shortage in the milk supply and the problem of expense — raise the question as to other physiologically available sources of calcium.

"Analyses have shown that green vegetables are comparatively rich in this element, and, accordingly, additions of these substances to the diet have been proposed. . . .

"The results obtained [in their experiments] tend to show that the calcium of the vegetables, spinach and carrots, is not so well used as the calcium in milk or in calcium carbonate. Therefore it would seem that so far as the calcium is concerned, if milk were not available, the addition of a suitable calcium salt would be quite as rational a procedure as a vegetable addition. . . .

"The conclusion seems justified that green vegetables should not be used extensively as a substitute for milk as the dietary source of calcium."

QUESTIONS AND ANSWERS

Conducted by J. W. Hopkins, M. D., Washington (D. C.) Sanitarium

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Bronchial Asthma

"Please give treatment for bronchial asthma."

The cause should be ascertained and removed. Sometimes the trouble is caused by an obstruction of the nose, catarrh of the nose and throat, hay fever, bronchitis, or irritation of the ear. Diseased tonsils and adenoids should be sought for and removed. Occasionally the trouble is produced by gastro-intestinal disturbances. All irritating conditions should be relieved, and the patient should be put on an antitoxic diet. Local sprays to the throat and nose are helpful. A solution of adrenalin chloride, 1 to 10,000, will often relieve the distress. Short hot and cold applications to the chest and spine, warm baths, salt rubs, and general massage are beneficial. The patient ought to keep in the open air as much as possible, seek plenty of rest and sleep, avoid getting tired, and faithfully keep under his physician's supervision.

Diet for Flatulence

"Please give diet to prevent flatulence and intestinal indigestion."

This condition is often caused by imperfect mastication or by the retention of food in the stomach. If these errors exist, they should be remedied. Constipation should be cured. Sometimes bad teeth or tonsils are responsible for this trouble. The diet should be antitoxic and laxative. An excess of starches should be avoided, as well as an overabundance of nitrogenous foods. This condition is sometimes caused by incompetency of the ileocecal valve, thus allowing regurgitation of the contents of the large intestine to the small intestine, increasing the putrefaction and toxemia. This can be determined by a barium enema and the Roentgen ray examination. If this condition exists, use laxative foods, with mild cathartics, and take an enema at night. Special abdominal exercises and massage are also indicated.

Improvement of War Bread

"How can one improve the war bread? It is so tough."

It seems to me that war bread, if properly made, is very good, and that if anything is wrong, it is in the way you make it. A little more experience will give you better results. You might try making beaten bread, or cutting your war bread into thin slices and making zwieback. Many conditions imposed on us by the war are not burdensome, but are beneficial. We are compelled to do things which we should have chosen to do upon our own iniative long ago. In using war bread, we are taking a variety and combination of cereals which is nutritious, and which, with a little patience on the part of the unbeliever, will prove to be appetizing and delicious.

Headache

"Can you tell what causes a headache which reaches from the base of the brain to the top of the head and also to the eyes? I suffer a great deal with such headache, and am unable to do much lifting or heavy work without bringing on the pain, which starts at the back of my neck."

The headache which you describe coming on after lifting is most commonly seen in displacement of the abdominal and pelvic viscera. It is aggravated by constipation, by a slouching, relaxed position when standing or sitting, and by nerve tire. Many headaches are caused by eye trouble, but these become worse during the afternoon and after study or long-continued fine work. Many severe headaches are also caused by unhappy conditions in the home, by worry and fret. In your case I advise you to have a thorough physical examination, including a pelvic examination, and an examination of the eyes by a competent oculist.

Diet for Catarrh of Stomach

"Please prescribe a diet that will prevent catarrh of the stomach."

Gastric catarrh should be differentiated from troubles caused by ulcer, cancer, and dilation of the stomach. The diet depends upon the degree of acid present in the stomach. Individuals who have little or no acid, should not take extremely hard breads, or coarse vegetables, as parsnips, cabbage, and fried foods. They should also avoid most raw fruits, unless they are very ripe, also stewed acid fruits, and any foods containing residue which is very coarse and irritating. Rich and complex foods should be avoided. The amount of liquid taken at meals should be restricted to from one half to one pint. Soups of all kinds made without condiments or meat stock may be used. Eggs, soft vegetables, crisp

zwieback, macaroni, milk, and rice are excellent. Many of the vegetables may be served in the form of a purée, as potato or carrot purée. If the whole-grain gruels, as oatmeal or wheat, are used, it is often necessary to strain them to remove the coarse particles. Spinach, green peas, asparagus, tender celery, lettuce, and cauliflower may be used. Sweet fruits, as apples, plums, strawberries, raspberries, and pears may be used, if thoroughly cooked. Bread should be stale or used in the form of crisp zwieback. Fats should be limited, but moderate amounts of cream and butter are beneficial. If constipation or diarrhea exists, the diet must be selected with due regard to this condition. When too much acid is found in the stomach, more fats can be used, as this decreases the amount of gastric juice formed. Less variety with the meals should be taken in the acid form of gastric catarrh; warm foods and drinks are more soothing than cold. It is necessary to avoid all condiments, spices, and sweetmeats, and to decrease the amount of sugar.

Salt in the Diet

"Is it true that food should be eaten without the addition of any salt?"

Probably not. Carnivorous animals do not crave salt. They obtain an abundance with the flesh they consume. Vegetarian animals, on the other hand, crave salt, which is lacking in their food, and will travel long distances to obtain it. We cannot attribute the difference in the instincts of the animals to mere whim or to habit or to the very human impulse to do what the crowd does.

Physiological chemistry teaches that the plants generally are lacking in sodium salts and contain an abundance of potash salts. Animal tissues, on the other hand, need the sodium salts in order to function properly. When one eats potato, which is rich in potash and poor in sodium, it is natural that there shall be a craving for a little more sodium, best supplied in the form of sodium chloride, or common salt.

Some observations a few years ago, that patients with kidney trouble, and epileptics did better on a salt-free diet, led to the hasty generalization that the use of salt is in some way responsible for the onset of these diseases. The inference was not justified. There is no evidence that a moderate use of salt hastens or produces either kidney trouble or epilepsy. Salt reduction merely relieves one symptom of kidney trouble — the dropsy — by mechanical rather than by chemical means, and salt reduction in epilepsy permits the use of a larger dosage of bromides.

There is probably no good reason why a carnivorous man should eat salt, at least on his meat; and none why a vegetarian should not eat a moderate amount of salt. There are some, including Stefánsson, the arctic explorer, who believe that scurvy can be prevented by a saltless diet, without the use of green vegetables. His relation of his experiences is at least interesting, and may prove to have some foundation. Stefánsson, however, is a violent hater of salt, evidently owing to the fact that when his men use salt, they must drink more water, and that necessitates the consumption of time and fuel in melting snow or ice for that purpose. G. H. H.

Fish — Brain Food

"Is it true that fish is food for the brain?"

No. Not in the sense that it is superior to egg or milk or beans. There is no warrant for the supposition that a certain food is especially adapted to nourish a certain organ or tissue of the body.

It is true that fish is a better brain food than olive oil or cornstarch, for these foods — and this includes all fats and carbohydrates — are not built up into the living tissues, but are burned for the liberation of energy. They are the fuel, and cannot be used in building or repairing the engine.

Probably any of the complete proteins are brain foods. Milk and eggs must certainly be capable of building brain tissue. And there can be no doubt that the vegetable proteins — taken together — are capable of performing this office.

It is true, and should not be forgotten, that a restricted vegetarian dietary — one, for instance, limited to the grains, sugars, molasses, and fats, is not adequate to build healthy tissue, and the exclusive use of such a regimen is liable to be followed by distressing results. Pellagra, for instance, is brought on by the use of such a limited diet. G. H. H.

NEWS NOTES

Anthrax from Shaving Brushes

A number of cases of human anthrax have resulted from the use of infected shaving brushes, probably made from hair of cattle dead of anthrax. In a number of cases investigated, the malignant postule (human anthrax) followed the use of a *new* shaving brush. This would indicate that there should be some supervision of toilet articles, similar to the sanitary supervision of foods.

War on Rats

England has declared war on the rat. Viscount Chaplin and Lord Lambourne have issued a joint letter to all British farmers, bringing to their attention the destructiveness of the brown rat in 1908. They declare Sir James Crichton-Browne estimated the yearly damage done by these pests as $75,000,000 in foodstuffs alone. It would take the labor of thousands of men to replace the food that was destroyed by rats.

Serving Liquor to Soldiers

The new regulations governing the serving of liquor to soldiers have been made more stringent. The regulations forbid selling, bartering, giving, serving, or knowingly delivering alcoholic liquor to any officer or member of the military forces within the United States, its Territories, or possessions, or any place under its control, except to medical officers for medicinal purposes.

Placarding Whooping Cough

The city of Detroit, Mich., now requires all children afflicted with whooping cough to wear on the arm a yellow band bearing the words "Whooping Cough," and houses in which the disease is found must be placarded. Wearers of the yellow band are not admitted to places of public entertainment. Failure to wear the band on the part of one who has whooping cough is a punishable offense.

The Cost of Infectious Diseases

Scarlet fever, diphtheria, and measles cost the people of Chicago (estimated) $7,562,442 for the year 1916. Some toll to pay! And yet much of it, if not all, might have been prevented. It can confidently be asserted that this tremendous bill, which the people of Chicago were forced to pay, was due largely to their carelessness and indifference. Scarlet fever cost $2,170,459; diphtheria, $4,535,395, and measles cost $856,588; total, as stated, for the three diseases, $7,562,442.—*Bulletin, Chicago School of Sanitary Instruction.*

Wheat Not Necessary

We are accustomed to regard wheat as a more or less indispensable article of diet. It isn't. It is an article of luxury, and absolutely nothing else. Wheat possesses over oats, corn, and rice absolutely no nutritional quality for man or beast. It has no more protein, and no better protein. It has no more fat, and no better fat. It has no mineral salt better or in larger amounts; it has no more fuel or better fuel. It is just *one* of the cereals, and there isn't the slightest evidence that it is the best one, because so far as comparative tests are concerned in animals, it isn't the best one; it is very far from the best one.—*Prof. A. E. Taylor, U. S. Food Administration.*

Selling Eggs by the Pound

For several years the plan of selling eggs by the pound instead of by the dozen has been agitated among the Canadian grocers, and in some towns the system has already been put in practice. A trade journal which called upon a large number of dealers for an expression of opinion of this point states that the weight of opinion was in favor of the movement. The only obstacle in the way of a unanimous indorsement of the plan is that the "public has not been educated to buy in this way." As refuting this objection, it is pointed out that in view of the wide variation in the size of eggs the consumer would quickly realize that the system offers a fair and just basis of charge.

Do Not Overheat

Dr. James J. Walsh, physician and author, says: "Pneumonia has wrested from tuberculosis the grim honor of killing the most human beings. Man is a marine animal, seven-eighths water. He needs cool air and moisture around him. Overheated dry air makes him too susceptible to disease. In a temperature of over 68° it is difficult for men and women to exist healthfully. If Americans can be taught to live in this temperature, the number of pneumonia victoms will surely decrease. Fresh, cool, moist air is the foe of pneumonia, and persons who keep their house cool and breathe fresh, moist air need have no fear of it."

Nutrition

To the trained eye, the general appearance of the child may reveal much that is hidden to the mother. The posture, the tissue turgor, firm resistant subcutaneous tissues speak for health; flabby, nonresistant ones for malnutrition. Expressionless, tired-looking children with dark circles about the eyes need to have their diets revised, or else have grave disturbances of health. Cyanosis of the cheeks, ears, and finger tips may speak of cardiac or pulmonary disease. The bony changes in the skull of rachitic children are recognized at a glance. Disproportion between various skeletal members may reveal achondroplasia or other structural deformity.

Egg Substitutes

The report to the Pennsylvania State department of agriculture on egg substitutes, of which the examiner had investigated forty, contains the following significant language: "One of the most reprehensible ways of making money is to take some common, everyday substance, disguise or alter its appearance in some way, make a lot of exaggerated statements regarding it, and then sell it for about ten or fifteen times its market value, extolling it as an economical substitute for some expensive article. There has been no preparation of this class, within recent years, that has sprung into prominence with such rapidity as the so-called egg substitutes, and with so little merit or legitimate warrant for their manufacture and sale."

Diet Tests of Cottonseed Flour

Women students of the University of Texas recently conducted a series of experiments with cottonseed flour. These students volunteered as subjects, and for five days ate a special diet made up of cottonseed flour in combination with cornmeal, butter, sugar, and grape juice. Each subject had 100 grams, or about three and one-half ounces, of cottonseed flour in the form of bread. Results showed an average digestibility for the protein to be about 85 per cent, placing it in the same class as other cereals and breadstuffs. The conclusions of the Home Economics Departments of this university are that cottonseed flour contains a very high percentage of tissue-building material, and will replace to advantage one third of the wheat flour in ordinary diet. A bakery in New York City and another in Boston are reported to be using cottonseed flour in bread making.

Stamp Out Sugar Hoarders

Sugar hoarding is a thing which cannot be too severely condemned, especially at a time when assurance is given that it is not necessary. It is a patriotic duty on the part of any citizen who knows when hoarding is being practiced to report it immediately to the nearest local food administrator. Since sugar can be so easily hidden away, good citizens are all the more duty bound to stamp out this pernicious practice. Local administrators should secure from merchants their heartiest co-operation in attaining an equitable distribution of sugar, both for the protection of the merchant and the general public.

Gas Antidote

Chemical investigation having shown that the pits of apricots, peaches, prunes, olives, dates, cherries, and plums, and the shells of Brazil and hickory nuts, walnuts, and butternuts, make the best carbon for gas masks, the United States Food Administration has issued a call to housewives, grocers, canners, and proprietors of hotels and restaurants to aid in the collection of fruit pits and nut shells to make carbon for the millions of gas masks for the American army. Pits and shells should be dried and turned into the nearest Red Cross organization, or into such receiving stations as have been designated for the purpose.

Sirup to Replace Sugar

According to reports appearing in several Louisiana papers, the sugar shortage has encouraged planters to broaden the use of pure cane sirup, made from cane juice without taking any of its sugar. This juice is boiled to a point just below that required to crystallize it into sugar, and can be used not only for griddle cakes, sweet cakes, and candy making, but is recommended by the planters as a sweetner for coffee and tea. It is really sugar in liquid form, and on a basis of 8 cents per pound retail for granulated sugar, will yield economies from 40 to 50 per cent at a rate of 4½-5 cents a pound for the sirup. The Louisiana planters believe that pure cane sirup has a wide range of usefulness in households, bakeries, candy factories, ice cream plants, and similar establishments. They also recommend it as a part of the army ration, to be served with griddle cakes and bread.

War-Time Experience Valuable to Bakers

Harry Meyer, State chairman of the Ohio National Bakers' Service Board, predicts big things for the baking industry after the war from knowledge gained in war-time baking. "The old rule-of-thumb methods must go," said Mr. Meyer. "The baker must really know his business from the ground up, and if he will not discard his old and unsound policies, he will slowly but inevitably be pushed to the side by his studious, wide-awake competitors. I doubt if we shall ever again completely return to the use of wheat flour without other cereal ingredient in the making of the loaf. The bakery business will never again be as simple as it has been."

American Homes Too Warm

Dr. Haven Emerson, commissioner of health of New York, says: "A temperature of 68° supplies ample heat for all healthy persons. There is no question that our houses and offices are kept too warm. An undoubted improvement in the public health will take place if the American people can be persuaded to keep their houses cool enough."

Cool Air for Baby

Even a baby is warm enough in a temperature of 68°, according to Dr. S. Josephine Baker, head of the bureau of child hygiene of New York. Dr. Baker asserts that cool air and fresh air are absolutely essential to health. The writer of this note has known babies to be comfortable, healthy, and happy at a temperature below 65°—nearer to 60°.

Overheating Injurious

Dr. Abraham Jacobi, the Nestor of American Medicine, in approving the Fuel Administration's campaign for lower temperature for houses, said: "Seventy degrees is too much, —65° is ample for persons in robust health who are actively engaged. Susceptibility to disease is developed by breathing an overheated atmosphere, and if persons can be taught to keep their houses cool enough for health, life as well as coal will be saved."

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LIFE AND HEALTH

FOR 1918

Vol. XXXIII — Nos. 1-12

NOTE.— The twelve numbers begin with the following pages, respectively: January, 1; February, 33; March, 65; April, 97; May, 129; June, 161; July, 193; August, 225; September, 257; October, 289; November, 321; December, 353. Subscribers may obtain missing numbers as long as they last, to complete their files, at 10 cents a copy.

Articles marked (C) are contributed; (E) editorial; (e) editorial notes and comment; (Q) questions and answers; (A) matter appropriated from other publications, and usually abstracted or abbreviated.

LIFE AND HEALTH, Takoma Park, Washington, D. C.

DISEASE AND DERANGEMENTS

DIGESTION

CIRCULATION, BLOOD, EXCRETION

RESPIRATION

NERVOUS, MENTAL, PAIN, ETC.

SKIN, HAIR, EYES, EARS

REMEDIES

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