Health hints and health talks / by E.R. Pritchard.

Health Hints

E. R. PRITCHARD

HEALTH HINTS
AND
HEALTH TALKS

BY

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The Greatest Wealth is Health

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DEDICATION

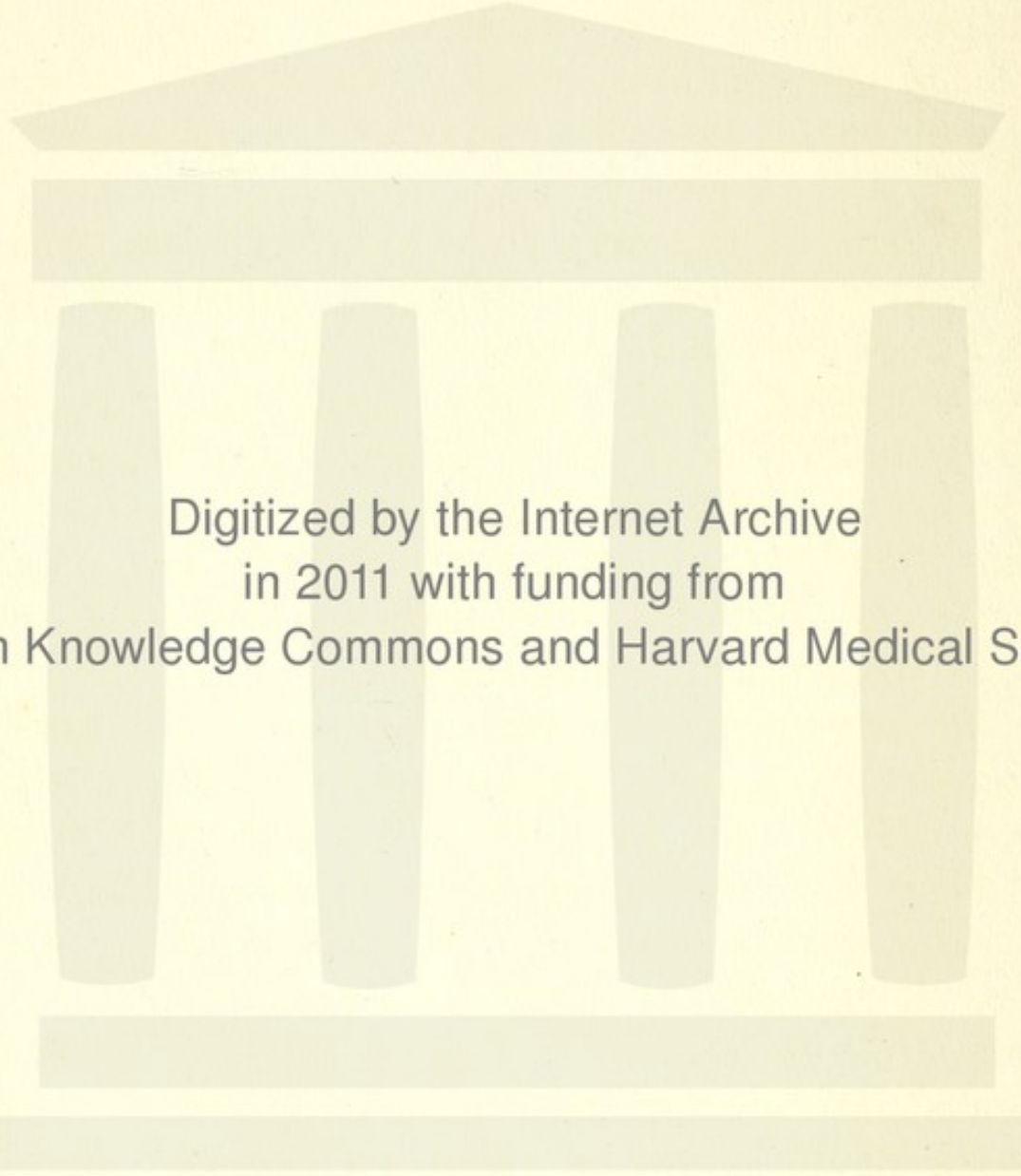
TO THE MEMORY

OF

DR. FRANK W. REILLY

well known as Sanitarian and Humanitarian; whose life was mainly devoted to the popularizing of health knowledge as a means of lessening disease and suffering among his fellow beings; and under whose tutelage I received my training in municipal health work, this poor expression of mine is gratefully and affectionately dedicated.

E. R. PRITCHARD.



FOREWORD.

The greatest wealth is health. The health of a people is its most precious asset. Health is priceless and yet without price. Therefore health knowledge, the knowledge that enables us to avoid needless sickness, is without doubt, the most valuable knowledge we can have.

In "Health Hints and Health Talks," this sort of information is given in language so plain and simple that all may understand and profit thereby.

These "Hints" and "Talks" were originally published in newspaper form as a part of the Educational and Publicity work of the Chicago Department of Health. The "Hints" appeared daily in the Chicago Tribune; the "Talks" in the main in class and neighborhood weeklies and daily papers.

It has been conceded that they did much good in helping people to more light on the all-important matters of Health and Sanitation. Especially gratifying have been the words of approval from both physicians and laymen who have expressed hearty appreciation of the benefits derived therefrom.

They are now offered to a wider circle of readers in the hope that they will be of aid in still further spreading the glorious Gospel of Health, a Gospel that stands for the abolition of needless diseases and death, and for the highest ideals of human health and happiness.

HEALTH HINTS

HEALTH TALKS

HEALTH HINTS

GOOD RESOLUTIONS.

Resolved, That I will take the best possible care of my body; that I will seek to know more about my body and thus be able to give it proper care; and that I will try to aid others in getting the knowledge that will help them to conserve their physical health and vigor.

TRY THIS PRESCRIPTION.

Take a hopeful, cheerful view of things. The bigger the dose the better. Don't worry over anything, whether you can help it or not. If you can help it, do it, but don't worry. Get out of the office if possible. Eat good food and plenty of it, including milk, cream, and eggs. Sleep at least ten hours out of the twenty-four and in a room with the windows open. Take exercise every day out of doors, but not enough to make you tired.

For those who are "all run down" and in a fair way to get "good and sick" the above prescription will usually start them on the high road to health and happiness.

LIFE SAVING STATIONS.

The national government maintains life saving stations for the rescue of those in danger of drowning. Why is it not just as important that it establish life saving stations for the rescue of men, women and children from the preventable diseases, such as consumption and typhoid, which are now costing so many lives?

These life saving stations should take the form of schools and institutions for the dissemination of knowledge on health subjects and of sanatoria for the treatment of tuberculosis. It is high time our legislators were waking up to the fact that the people are more interested in protecting the public health than they are in the tariff question.

SUNSHINE.

Sunshine is one of nature's great life-giving forces. It is, as scientists will tell you, the one great natural enemy of all microbic or contagious diseases. Germs of diphtheria, consumption, or typhoid are quickly and surely killed by direct exposure to sunshine.

To exclude it from our homes or from any indoor habitation is a crime against health.

OPEN AIR LIFE.

Get out of the house whenever you can. If you have only a little leisure time at your command spend it out of doors. If you are compelled to stay in, open doors and windows and make your indoor surroundings as nearly outside surroundings as is possible. Also, when the house has been pretty well closed all winter, spring is the time to open it up and let the sun and air have access to every room in it.

There is nothing like fresh air and sunshine and outdoor exercise for promoting bodily vigor and mental contentment.

OVEREATING.

Health officials will tell you that, following our feast days, such as Thanksgiving, Christmas, and New Year's, there is a noticeable increase of sickness among adults, to say nothing of stomach-aches among the children. Pneumonia and apoplexy are diseases often caused by over-indulgence in eating. If those of sedentary habits only would take long walks in the open air after partaking of a hearty meal their health would be improved and their lives lengthened.

PLAYGROUNDS.

The playground, where the children of a city's congested districts can have exercise, air, and sunshine, is an important factor in promoting child health. Especially is it of value as a means of preventing tuberculosis. The public playground movement is growing; throughout the country, city authorities are providing for their establishment and maintenance.

It often happens that in the congested districts, where playgrounds are so greatly needed, land is hardly to be had for this purpose. In such instances there is usually the chance for the private philanthropist to help out. And those who can afford to aid in a movement of this kind should not overlook the opportunity to do so.

EATING AND DIGESTION.

"Digestion waits on appetite and health on both" is a maxim old and true. From this it is clear that the appetite should be keen and natural —that is, not forced by rich foods and highly spiced condiments. There is no better way to get up a good appetite, a keen, genuine hunger, than by exercise in the open air and sunlight.

Then when the meal hour comes let it be a full hour instead of twenty to thirty minutes. See to it, too, that the conversation at the table is of the bright and cheery sort. Take plenty of time and chew your food thoroughly and this, with plenty of outdoor exercise, will preserve both your appetite and digestion and keep you well and vigorous in both body and mind.

PROMOTING PUBLIC HEALTH.

Last year a certain state legislature appropriated $70,000 for stamping out disease among the domestic animals of the state and $10,000 for the prevention of tuberculosis among the people. And yet in this same state the money cost of consumption amounts to $8,000,000 each year. Other legislative bodies, including even the congress of the United States, are guilty of the same sort of inconsistency—putting it mildly.

It is time for the people to demand of their legislative servants that more fitting recognition be given to health matters and more money appropriated for the work of promoting and protecting public health.

MONEY FOR HEALTH.

The chairman of the ways and means committee of the lower house of congress states that 70 cents out of every dollar of the government revenues are expended to provide for expected wars or to pay the bills for war that have already taken place. And yet this is a so-called era of peace! Let us see: The navy costs the people, approximately, every year the tidy little sum of $122,000,000, the war department $95,000,000, and $165,000,000 are spent in payment of pensions. All this vast sum, aggregating $382,000,000, will be expended on account of wars.

If only the national government could see its way clear to devote, say, 10 per cent of this vast sum to the stamping out of tuberculosis in this country, and keep it up at the same rate for the next ten years, how much might be accomplished in the saving of human life and in adding to the sum of human health and happiness!

CONTROL OF CONTAGION.

When a case of contagious disease has been reported to the proper health authorities the next step is a careful inspection for the purpose of

establishing quarantine and a proper protection of the community. These measures are often looked upon as an undue and unnecessary hardship by those upon whom they are enforced. But when properly enforced they apply to all alike; and upon this fair and impartial enforcement is based what may well be called the "Golden Rule" of community health, which is, that each citizen should be as willing to do as much to protect his neighbors' children as he would demand that they be compelled to do to protect his.

CURE FOR BILIOUSNESS.

Spring is the time of year when many people complain of biliousness. This means that during the winter months most of us are on a pretty heavy diet of meats, gravies, puddings, etc., and that we have kept it up too long.

A good cure is to go to a lighter diet, with more of the fruits and vegetables and less of the meats, sweets, and fats. Try this, together with plenty of outdoor air and exercise, and your case of biliousness will soon disappear.

CONDITIONS THAT BREED DISEASE.

Dirt, dust, and darkness are alike favorable for growth and propagation of germ life. Dark closets, damp basements, and dust laden rooms are dangerous for this reason. Light, fresh air, and cleanliness, then, count for much as factors that make for health.

Before one can possibly contract a communicable disease two things are requisite—the presence of the germs that cause it and the condition of the body conducive to their growth. So, by maintaining cleanly conditions as to both our indoor and outdoor surroundings and by keeping our bodies strong and healthy, we can, to a large degree at least, secure immunity from communicable diseases.

REST AND SLEEP.

Time is divided into day and night. The day time is intended for our activities and the night time for our rest. The best time to sleep is when all the world is asleep. The sleeping room should be dark during the hours of sleep, as darkness is conducive to rest and sleep. But do not forget to open the windows.

ABOUT BEDROOMS.

We spend one-third of our lives in bed. For this reason the bedroom is an important factor in our physical health and vigor. The sleeping room furnishings should be few and simple in character. There should be no carpets for the collection and retention of dust. The bed may be either of wood or iron, but the plainer the better. The floor should be of hardwood. The walls and ceilings should be calcimined rather than papered. This will necessitate more frequent decorating, but the processes of washing the surfaces and calcimining are cleansing and insure perfect renovation. There should be windows opening to the outside air and these should be opened whenever the room is occupied. In the morning the room and bedding should be thoroughly aired. Do not forget to open the windows in the day time nor to run up the shades and let in all the sunshine possible.

CITY AIR.

City air is at all times filled with all sorts of impurities—that is, foreign substances held in suspension. It is only by its constant renewal

that such an atmosphere can maintain even a relative degree of purity.

City air is never as pure as that of the country. But with proper regulations as to the construction of buildings, conditions that would otherwise become intolerably bad may be improved. This means that even where ground is scarce and valuable due attention should be paid to matters of light and ventilation. And tenements of the cheaper class should not be permitted unless the all important matters of light and air space have been amply provided for.

WHO BLUNDERED!

In a certain city in this union there were in one year over 1,500 deaths from typhoid, 6.8 per cent of the deaths from all causes. The health officer of this same city in his annual report says: "This deplorable result was due to the negligence of the people in not heeding the warnings of the health department, in which it called attention to the polluted water supply and urged that all water be boiled before using it for domestic purposes."

GENERAL INDIFFERENCE.

General Indifference is not a good general to have in command in matters pertaining to health. It is not under such leadership that victories in the battle against disease and dirt are won.

In communities where General Indifference is in the saddle there is likely to be a prevalence of diseases that are easily and surely preventable by the application of modern sanitary methods. In such cases, too, the people themselves pay the penalty.

But with General Intelligence and General Alertness running things, there is practically certain to be freedom from the known preventable diseases with the equally certain accompanying saving of money and of human life and suffering.

CONTROL OF CONTAGION.

One of the most important services performed by city governments is the municipal control of contagion. Such control, when wisely and intelligently directed, is of incalculable value to the people from the dollars and cents standpoint alone, to say nothing of the humanity side of the question. The important phases of municipal

control are: Reporting, inspection, quarantine, disinfection, and, in some cases, care and treatment. The first requirement, and which is all important, is that all cases of contagion be promptly reported to centralized health authority. To illustrate: Suppose that typhoid fever breaks out in a family that has been using water from a contaminated well. If the case is promptly reported it is certain that the source of the infection will be discovered and the further spread of the disease promptly checked. Left unreported, it is equally certain there will be more cases and probably a neighborhood epidemic, with its attendant suffering and loss of both lives and money.

VALUE OF LIGHT.

Light is necessary for the growth and development of substantially all the things that are necessary to our welfare and at the same time it is hostile to all our microbic foes. This is why dwellings should be well lighted. Sleeping rooms as well as living rooms should be flooded with light all day long.

THINK THIS OVER.

School children are made up of the sick, the sound, the dull, the bright, the weak, and the strong. It is certainly not a carefully thought out system of education that requires the performance of the same tasks by all, regardless of their physical and mental condition. A due regard for the health of the child will mean that it be asked to do no more than it is able to accomplish without impairing its physical powers.

Intelligent and continuous medical school inspection will tend, in time, to correct in a large degree these defects in our present system of public instruction. It will also mean much in increasing the efficiency of our schools and in promoting and protecting the health and lives of the children.

PLANT SOMETHING.

When the growing season is at hand why not plant something? No matter how small the piece of ground may be it can be made to produce things of use and beauty. As a matter of both health and economy there should be no idle or waste land.

The piece of ground that is not needed to produce fruits or vegetables should be utilized for growing flowers. In this way unsightly city back yards and vacant lots can be made to yield enough fresh vegetables to supply hundreds of tables and at the same time furnish healthful and profitable employment to those of any age or sex who can be induced to accept it.

It is a mighty good scheme for idle hands and idle lands to get together.

GOOD CURE FOR THE BLUES.

Nature study in connection with outdoor walks is a mighty good cure for the blues and for worry. When walking cultivate the habit of seeing things. Birds, flowers, insects, the trees with their marvelous variety of foliage, all have their lessons to teach. And if we only get into the habit of studying the messages they have for us both the blues and the worries will vanish as if by magic. Walking clubs might well be named "Don't Worry" clubs, because their members are busy enjoying themselves, studying nature, and finding out how she does things.

SIGNS OF PROGRESS.

A hundred years ago smallpox was humanity's greatest scourge. In Europe the woman whose face was not scarred with the marks of this dread disease was considered beautiful, while those who died with it far outnumbered those who survived. The death rate among children was frightful. Today smallpox is almost unknown, save in communities and among those who will not vaccinate.

Yellow fever in the south has ceased to be the terrible scourge it once was for no other reason than that the insanitary conditions that produced it have been abolished. So cholera, a filth disease, has been practically wiped out in all civilized countries. What has been done with the diseases mentioned can and will be accomplished in time with all the known preventable diseases.

AIR INFECTION.

There is much talk just now about air infection and with some widely opposite views. When it is all simmered down, however, it turns out that the sanitarians are pretty close together after all. For it appears that they are agreed that air is a carrier of certain disease germs. And

it is in this sense that air infection may take place. The sputum from a consumptive person, dried into dust, still contains the germs, and these may be carried by the air. So with the germs of other diseases that are known as bad air diseases.

The best sort of protection is pure air and plenty of it.

TEACHING HYGIENE.

A place should be made in the curriculum of every school and college for courses in public hygiene. It is as important for the state to see to it that the people are educated along these lines as that they shall know how to read and write. And especially is it essential that the teachers of the land be equipped with the knowledge to enable them to instruct their pupils in the primary principles of personal and public hygiene. It is in our schools that the children of today should be taught about the dangerous communicable diseases and how to prevent them; also how to protect themselves from those that are known to be preventable, and, in turn, to impart this valuable information to others.

CARRIERS OF DISEASE.

Mosquitoes and flies are recognized carriers of certain infectious diseases. For this reason a war of extermination must be waged against these dangerous little pests. This can be most effectually carried on by destroying or abolishing the places where they breed.

As is well known, stagnant ponds, cesspools, rain barrels, and low lying moist grounds are breeding places for mosquitoes. Flies breed mainly in manure piles and garbage cans and garbage dumps. The abolition, then, of the places and of the conditions under which flies and mosquitoes are propagated will mean their extermination.

Meanwhile, until this can accomplished, protect your homes by carefully screening all doors and windows. And be sure to get them in early before "fly time" gets here.

DON'T DO THIS.

Beating rugs on the rear porches of flat buildings is a bad practice. It is both annoying to your neighbors and dangerous to health.

The better way is to take them into the back

yard or to the nearest vacant lot, where the dust will not blow into other people's windows. Better still, send them out to a place where they can be cleaned by improved and sanitary methods. But, above all, do not inflict on your neighbor a nuisance that you would not wish him to inflict upon you.

KEEPING CLEAN.

A little Jewish girl, at the request of her teacher, wrote out the following reasons for keeping clean: "It induces perfect health. Uncleanliness causes the spread of disease, which endangers others. By keeping neat and tidy we make other people happy. If a person has a neat appearance others will follow his example. If we are clean we can live longer and better lives."

Pretty good little essay on personal hygiene, is it not? And, better still is the fact that along with other things there are some teachers in our public schools who are not neglecting an exceedingly important part in the training of children—that of cultivating habits of personal cleanliness and neatness.

HOW TYPHOID IS SPREAD.

Typhoid, one of the most loathsome of the many diseases with which human beings are afflicted, is spread in many ways. It is essentially a filth disease. The dairyman who supplies your milk may have an infected well. His cans and bottles are washed with the infected water and this means that the milk will be infected. A person sick with what is known as walking typhoid may spread the infection broadcast. A polluted water supply is not infrequently the source of a community epidemic of this disease.

Flies are recognized carriers because of their habits and because of their presence in the homes. And yet typhoid is one of the recognized preventable diseases. Destroy or abolish the source of infection and the spread of the disease is stopped at once. This means that milk, water, and food must be kept untainted, and the dangerous little house fly must be kept out of all places of human habitation.

And remember that every death from typhoid is due to some one's carelessness that, in this day of intelligent sanitary administration, is little short of criminal.

MOUTH BREATHING.

The nose is the organ through which the air should pass to reach the lungs. This is true of both men and animals. Experiments made with guinea pigs, rabbits, and dogs have abundantly demonstrated this fact. A guinea pig with both nostrils closed died within twenty-four hours. Partial closing of the nostrils resulted in death in from five days to three weeks.

If you are a mouth breather, that is, if you find it difficult to breathe through your nose, the wise thing would be to consult your family physician without delay. And this "hint" is valuable.

BIG MONEY COST.

According to Prof. Irving Fisher of Yale, the "money cost of tuberculosis, including capitalized earning power, exceeds $8,000 per death." The deaths from tuberculosis, all forms, in Chicago for 1908 were 3,934, involving, according to Prof. Fisher's estimate, a money cost of $31,472,000. In St. Louis the deaths from consumption are, approximately, 1,500 each year, meaning a cost to that city of about $12,000,000.

The figures of these two cities, as indicating the stupendous money cost of tuberculosis for the entire country, are also eloquent as emphasizing the need of more money being spent for prevention. They should also serve to emphasize the fact that money spent along these lines always yields magnificent returns on the investment.

TENEMENT DANGERS.

Those who are studying consumption are coming more and more to realize the danger of house infection as a means of spreading this terrible disease. This means that the rooms occupied by tubercular patients must be thoroughly disinfected before change of occupancy. The instances are almost without number where persons free from the disease have developed it within a short time after moving into houses wherein there had been one or more cases of consumption.

It would be a wise and safe rule that all houses be thoroughly disinfected, aired, and sunned between the departure of the old tenant and the incoming of the new.

CAUSE AND EFFECT.

Cause and effect are not always so close together as to be readily traceable. The infected well on the dairy farm and the case of typhoid in the city may be widely separated as to both time and distance. It requires a careful investigation, many times, to locate the source of the infection and thus prevent a further spread of the disease. The important first step is that all cases of typhoid be promptly reported in order that the health officials may locate the cause without delay.

MUNICIPAL HOUSE CLEANING.

Every one knows that when spring puts in an appearance the housewives all over the land are attacked with the house cleaning fever. This means, if it means anything at all, that the women are, by instinct and training, better sanitarians than are the men. The average woman has a horror of dirt, the average man is not so particular. This is why, perhaps, our cities are not kept cleaner.

When spring comes why would it not be a good thing, and conducive to health and comfort, for

city officials all over the land to get the clean-up craze? Why would it not also be fine if every citizen should be stricken with the same fever?

One thing is certain, in the event it should become violently epidemic, and that is, there would be a mighty big improvement in the general health conditions, to say nothing of the beauty and sightliness of our cities as they are today.

CONTACT CASES.

The one principal source of infection in contagious diseases is the patient. It is almost wholly by contact that contagion is spread. Just at this time health officials are giving closer attention to this as a factor in spreading disease than to any other. Thus when a child is stricken with scarlet fever or diphtheria the first thing after having established quarantine is to look after the "contacts."

This means that every child that has come in contact with the sick child must also be quarantined and kept under strict surveillance until it has been determined that it is safe for it to mingle with the well. Wherever this plan has been

tried it has resulted in reducing the number of cases, and if generally followed it is evident that in time there will be no such thing as epidemics of the communicable diseases.

GERM IMPLANTATION.

It is definitely known that unless tubercle bacilli have been implanted in the human body a person cannot possibly have consumption. It is known also that these bacilli thrive on tissues that are broken down or have lost their normal functions.

The breathing of impure air, the inhalation of tobacco smoke, overfeeding as well as lack of proper and sufficient nourishment, intemperance, and loss of sleep are all predisposing or contributing causes of consumption. And of these bad air may be and generally is a direct cause through being laden with dust containing the germs.

So seek the sunlight, get as much fresh outdoor air as you can. Walk erect, breathe deeply, eat plain, nourishing food, and the chances are you'll be healthy and happy and your days long in the land of the living.

HEALTHY DWELLINGS.

Dwelling places that are damp, lacking in sunlight and fresh air, and overcrowded are peculiarly favorable for the propagation and development of consumption.

Statistics furnished by the health officials of Paris show that in eleven years of 106,308 Parisians living in 820 houses 11,500 died of consumption. This would mean that the death rate in these houses was 9.83 per 1,000, while the death rate from tuberculosis for the entire city is only 4.95 per 1,000. These figures show, in a most conclusive manner, the important part that good housing facilities play as a factor in promoting public health.

SANITATION VS. MEDICINE.

It is sanitation, not drugs, that promotes health and lengthens human life. There are medicines that alleviate pain and assist nature in the cure of disease, but good sanitary surroundings, good food, and right living are the all-important factors in keeping people well. And this is saying no word against the physicians or the value of their services to humanity.

VALUE OF FRUIT.

An Arabian proverb says: "Fruit is gold in the morning, silver at noon, and lead at night." But even taken in quantities for the evening meal it would be far better than the rich meats, gravies, and puddings that so often form the 7 o'clock dinner.

As a rule the American people eat too much meat and not enough fruits and vegetables. Especially does this apply to city dwellers and to those of sedentary habits.

For those who work hard at physical labor and out of doors the meat diet is not so harmful, and there is little danger of overnutrition. But the office man and those employed indoors and at the lighter occupations would be better off with less meat and more fruits and vegetables.

BAD LEGISLATION.

The legislature of the state of Montana has stricken tuberculosis from the list of communicable diseases. This it did in 1907, but the people of the state are now waking up to the serious character of the blunder then made.

It is difficult to see how a backward step of this kind could have been taken by even so dense a body as a state legislature. The wonder is that the people of Montana stood for such action; that they did so was due, no doubt, to the fact that they knew nothing of it. At all events, it is safe to say the blunder will be rectified at the earliest possible moment.

NATIONAL INDIFFERENCE.

It is a sad commentary on a nation's general intelligence that it is indifferent and slow to act in pushing legislation that tends to protect the public health. It is still a more serious reflection upon its power and greatness when the few health measures that are enacted into laws are not enforced, but are allowed to remain dead and inoperative on its statute books.

The microbic foes of man must be hunted out and exterminated. Food supplies must be kept pure and free from dangerous adulterations; water supplies must be protected. In short, all the agencies that make for health must be employed and kept ceaselessly at work until the known preventable diseases are conquered.

DANGEROUS SUMMER RESORTS.

Many summer resorts are beautiful places, rich in scenic loveliness, good food, good air, and plenty of sunshine. But many of them are insanitary and dangerous. For years the health officers of Chicago have noted an increase in the number of cases of typhoid during the months of September and October, and all directly traceable to the summer resorts.

There is urgent need of intelligent sanitary administration at these places in the way of state inspection and supervision of water supplies, with stringent regulations against their pollution. Whenever this is done all over the country there will be a marked decrease in the death rate from the king of filth diseases, typhoid.

SUMMER RESORT WATER.

In all cases where pollution of the supply of drinking water is suspected, it should be boiled for twenty minutes before using. Cool the water so treated by placing ice around and not in the vessel containing the water. By doing this, possible pollution from using impure ice will be avoided.

Many people do not like the "flat" taste of boiled water. This can be removed by a simple process of aeration. Tie several thicknesses of cheesecloth over the jar containing the water that has been boiled and place in the open air. In a little while it will be as sweet and palatable as before treatment.

NASTY AND DANGEROUS.

Let us tell the plain truth about the nasty little insect known as the house fly. He delights in filth of every kind and character. But, unfortunately for human beings, he has also an equal delight in sampling all the good things we eat. This is why he is so dangerous. He will leave his feast on the carcass of a dog to sail into your dining room and help himself to the butter, milk, cake, fruit, or whatever there is on the table that suits his palate. Manure piles, outhouses, and garbage cans are the places where he comes into existence. From these he carries his disease breeding filth into the home. Study his habits a little and you'll see to it that he is kept out of your home.

WASH YOUR VEGETABLES.

All vegetables that are not peeled or pared before cooking should be carefully washed. This applies especially to lettuce, cabbages, cresses, greens, etc. Berries should also be carefully washed and cleansed before being served. Apples, peaches, and pears should be pared before being eaten, as being exposed to the air on street corner fruit stands fruit comes in contact with all kinds of germs. It is also quite possible that the dealers handling them may convey the germs to the fruit and in this way spread disease.

WOULDN'T BE TAUGHT.

Recently one of the Chicago tuberculosis institute nurses saw an emaciated man with a cough spit profusely on the sidewalk. She asked him if he did not know he ought not to do it. "You shut up; I know how to spit," was all the answer she got. At the same time the man pulled a sputum flask, such as is used by consumptives, out of his pocket and flourished it in front of the nurse.

This was in a congested quarter of the city. That sputum contained millions of germs. They

are now in the dust of the air, and the chances are that some one will breathe them. That man knew the danger and possessed the means to prevent it. He is one of that class of consumptives who will not be educated. The enforcement of the anti-spit ordinance is the least that public sentiment ought to demand in such cases.

VALUE OF VISITING NURSES.

The value of the work performed by the visiting nurses in their neighborhood visits cannot be overestimated as an aid in stamping out consumption and in helping to promote community health. It is the visiting nurse who comes into close touch with home conditions and is thus able to give the family needed advice as to the care of the patient in such a way as will prevent the spread of the infection to other members of the family.

The field of usefulness that the visiting nurses are now working in is broadening every day. And with this opportunity for more extended effort is coming a more general recognition of the value of the services they are rendering to the public.

PROTECTION OF WATER SUPPLIES.

The protection of public water supplies is one of the most important functions of any authority which is charged with the duty of safeguarding the public health. In most states there are laws already on the statute books which prohibit pollution of streams and bodies of water used for community water supplies. But in most of these states these laws are dead letters for lack of enforcement, the trouble being that after passing the laws the lawmaking bodies failed to appropriate any money for the purpose of carrying them into effect.

That this is true is evidenced by the typhoid death rate in towns and communities where this king of filth diseases should long ago have reached the vanishing point.

AUTO VS. "BIKE."

The automibile is a great invention and an excellent mode of conveyance. But for real health value it does not compare with the once popular and now discarded bicycle. Many men and women found both pleasure and health in country tours on their wheels. And while some had

the "scorching" fever and rode in a fashion that was dangerous to themselves and to others, they were few compared with the many thousands who gained physical health and vigor through the proper use of the bicycle.

Walking clubs are fine for both health and recreation; but it would be an excellent thing for the people if "cycling" should again become as popular as it was a decade or more ago.

COMMUNITY HEALTH.

A community has no right to demand that sanitary measures for the protection of health be enforced against a neighboring community until such community provides and enforces similar measures for its own protection. Therefore, to enforce intercommunity or interstate health regulations, all the interested parties must have both the disposition and the means for maintaining a recognized standard of efficiency in sanitary administration.

It is only by co-operation of this kind that measures for the protection of the public health can be made most effective.

AN INSIDIOUS FOE.

Consumption is usually an insidious disease, slow in its development and taking considerable time, often months, before any material changes in the bodily health of the patient are manifest. Then only will come the noticeable loss of vigor and appetite, decrease in weight, and more or less coughing, which are its characteristic symptoms.

The important matter is that of early diagnosis. The sooner the curative treatment is begun the more certain it is that the patient will recover. There is no need either that there be change of climate. Consumption can be cured as easily and as certainly in Illinois as in New Mexico. Good food, fresh air, and sunshine are the principal agencies that will do the work.

CONCERNING CONSUMPTION.

Every person is exposed to the danger of taking the germs of consumption into his own system; and many harbor them a long time without knowing it. It is a matter, then, of the utmost importance that every man and woman and every child of grammar school age should know some-

thing about consumption. They should know in what manner and under what conditions it is oftenest contracted; and, what is still more important, should know what manner of living and surroundings is most certain to insure immunity from it.

They should know that the germ is found in the sputum (spit) of consumptives. Hence spitting in the street cars, in public places where the dried sputum is likely to be blown about by the winds, is dangerous. No less dangerous is the careless spitting in stores or workrooms and in the home. Ofttimes you will see a person spit on a rug or carpet, where it is soon absorbed and dried into dust. Later it is stirred into the air and in this way is taken into the air passages and the lungs.

A HOUSE DISEASE.

Following up the thought of the importance of every one knowing something about consumption, there is suggested, naturally, the matter of surroundings which have so much to do with the health and comfort of us all. A noted

medical authority says that consumption is a house disease and a bad air disease. Taking this statement in its full meaning, indoor air, as most of us have it, is dangerous. A man engaged in an outdoor occupation may contract consumption, but the chances are he did not get it while out of doors. Nearly all the probabilities are that the infected indoor air of the home was responsible.

It seems pretty clear, then, that in the matter of indoor surroundings air—fresh, pure air—is of the first importance. The next requisite would be that there be plenty of it, and, perhaps, after this, just a little more fresh, pure air, with all the sunshine thrown in that you are able to get.

YES; WHY NOT!

If consumption is a preventable disease why not prevent it! Well, there are a good many "whys" just now. But when the people, the whole people, are once thoroughly aroused and determined that it shall be stamped out the question will surely be answered and answered as it should be.

Education is to be the all powerful agency that will solve the whole problem and eventually win

the fight. This means that we must keep right on repeating the essential things until every one shall know them. We must continue to talk fresh air and sunshine, cleanliness and right living. In short, the whole people must know and must do the things that make for health and freedom from disease. And, as this sort of knowledge is spread through the masses, so, in just the same proportion or ratio, will the spread of consumption and the other preventable diseases diminish.

Are you helping in this great work of spreading the right kind of knowledge?

INDUSTRIAL DEATH RATES.

The death rate from consumption among marble workers and stone cutters is nearly six times greater than that of bankers and brokers from the same disease. Of all the trades stone and marble workers furnish more victims of consumption than any others, cigar makers and tobacco workers coming next.

Out of 1,000 of the former 54 die each year from consumption, while the latter pay an annual death

toll to the white plague of 47 persons for every 1,000 engaged in the tobacco industry. Following them are the plasterers and whitewashers, printers and pressmen, servants, and the hat and cap makers, who contribute from 45 to 41 as victims for every thousand working at their respective trades.

Pretty heavy toll, isn't it? And the worst of all is that it is not necessary, for the reason that bad air and insanitary conditions in both the shops and homes of those engaged in these trades are the essential factors in causing so high a death rate.

LOOK TO THE PLUMBING.

A perfectly installed sanitary system in the house is as important as that the foundations be strong and secure. And this applies to an entire community in matters of water supply and sewage disposal. Epidemics and plagues are and have always been due to filth and lack of sanitation. So it pays from the health standpoint to look carefully after the plumbing of the house.

PREVENTIVE METHODS.

After a man is taken sick he is willing to spend all he has, be it much or little, for the purpose of regaining his lost health. Too often, however, the same man would be-grudge a few dollars for prevention. In like manner, too, will he fail and neglect to do the things he should do in order to preserve his physical health and well being. No doubt he has heard all about the value of fresh air, plain food, exercise, and right living, but he pays no heed until it is too late. Then, under the doctor's advice, he proceeds to do, with almost religious care, the very things he should have done all the time.

It is, after all, only a case of not understanding or properly appreciating the value of preventive methods.

THINGS THAT ARE NEEDED.

In the movement which has for its object the practical extermination of consumption there is at this time a recognized need for certain things. Among the more important of these are: The enactment of proper laws in all the states requiring notification and registration of all cases of

consumption; the establishment, under both private and public control, of sanatoria, hospitals, and day and night camps, including institutions of the same kind for the treatment and care of the tuberculosis poor; the better regulation of factories and workshops as to light, air, and sunshine and the compulsory installation of dust preventing devices; the establishment of courses in personal and school hygiene in all schools, together with the widest possible spread of knowledge among the masses as to consumption, its cause, and how it may be prevented.

MORE HOSPITALS NEEDED.

While there is good reason for taking an encouraging view of the progress being made in the war on tuberculosis, it is apparent to those who are at all in touch with the situation that the one great need just now is more hospitals or sanatoria for the care and treatment of consumptive patients. Especially does this need apply to the advanced cases, those that have passed the curable stage. Most sanitariums do not want this class of patients, but insist on confining their

efforts to those that stand a reasonable chance to get well. And yet the incurable or advanced cases are the most dangerous to the well. This phase of the consumption situation is one that demands the earnest attention of all civic and state health bodies. There is room, too, for some splendid work for individual philanthropy in helping to stamp out this universal scourge of human life.

HOW TO BUILD UP.

Intemperate eating and drinking, together with loss of rest and lack of good fresh air, tend to weaken the vital powers and make one an easy victim to many forms of disease.

If you are in bad physical condition now, cut out the smoking and drinking, cancel most of your social engagement, and try a 9 o'clock bed-time for a while. Also eat about one-third less than you have been in the habit of taking and get all the fresh outdoor air you can, both during the day and night. Persist in this regimen for a few months and it will do wonders in building up for you a strong and vigorous constitution.

BABY'S MILK.

How about your baby's milk? Do you know anything about its purity, its age before delivery at your door and the conditions under which it is produced in the country? If not, you would better take steps to find out at once. Are your health officials alert and active in their efforts to improve the milk supply? If they are taking things easy in this respect get after them without delay.

The milk for the baby should be as good as the money it takes to buy it; that is, it should be up to standard in every way. With good, pure milk the baby has nine chances out of ten to live. With dirty milk the chances are about ten to one it will die.

RAISING BOYS.

That was a wise mother who wrote to her congressman at Washington asking his aid in securing the establishment of a bureau in the department of the interior for looking after the welfare of children. She stated that her husband, who was engaged in the business of raising hogs, had no difficulty in getting all kinds of high

priced advice on diseases of the hog and how to prevent them, but that she was unable to get any help at all from the government in raising her boys.

The mother's point was well taken. There is little doubt either that the day is not far distant when the state will take upon itself the duty of supplying the people with both advice and information on matters pertaining to their health as it now does in matters pertaining to the health of their live stock.

OPEN AIR TREATMENT.

A noted New York physician says open air treatment has killed no one, has helped every one, and has determined many cures. He does not hesitate to put patients with pneumonia, scarlet fever, and even bronchitis with marked cough, out of doors in all sorts of weather.

His definition of open air is that it be understood to mean open, flowing air—that is, uninclosed atmospheric air. He has carried his theories into practice in a children's hospital with the most satisfactory results.

HOW IT WORKS.

A noted authority on vital statistics as affected by sanitary administration says that if only everybody could have pure air, pure water, and pure milk the effect in a short time would be to lengthen the average duration of human life by eight years.

The same authority also shows that whenever sanitary measures are enforced against any particular disease that is amenable to sanitation, that is, a preventable disease, the result will be a saving of lives in all of the diseases that are due to bad sanitary conditions. For example, the enforcement of sanitary measures in protectting a community's water supply as a bar against typhoid will also result in the saving of lives from the other intestinal ailments due to the use of impure water. Prevention pays.

HEALTH AND THE TARIFF.

There is much talk about the tariff and widely differing opinions on the subject. Without at all attempting even to belittle the tariff issue as a question of great national importance, it may safely be asserted that the health of the 90,000,000

of people in this country is of more importance, as a factor in our national power and prosperity, than is the tariff question.

Consumption alone kills 138,000 people in the United States each year. The estimated cost or loss is placed at $8,000 for each life, making the almost incalculable total of $1,104,000,000 a year. As consumption is one of the diseases responding to sanitary administration, congress might well hurry up and get through tinkering with the tariff and then study up on health matters a little.

THEN AND NOW.

The dark, poorly ventilated rooms of today are doing for those who are compelled to live in them practically what the dungeons of the middle ages did for the unfortunate victims sentenced to pass their days within their walls. There is, however, this difference. In the olden time men threw their enemies into dungeons, from which they emerged, if at all, broken in health and ready for the grave. Now unfortunate people pay for the privilege of living in quarters from which light and air are excluded and which are, to a

degree, as dangerous to life and health as were the dungeons of 300 years ago. Happily, we are waking up to the importance of proper housing as a most important factor in promoting community health.

BLAZING THE WAY.

Having passed a bill providing for the establishment of a state school of sanitary science and public health as a part of Cornell university, New York is blazing the way for its sister states. The purpose of the bill is "to aid in acquiring practical knowledge and in diffusing useful information on subjects relating to sanitary science and public health and to promote scientific investigation and research respecting the principles and application of sanitary science. Also to train and educate students in all matters pertaining to public health."

Here is an excellent suggestion to all state legislative bodies to follow the lead of New York and see to it that their respective state universities are equipped to maintain schools of the kind that is to be established at Cornell.

STAGNANT WATER.

Stagnant water anywhere is always a menace to health. Prompt measures should be taken to drain all pools of this kind and to clean out all cellars and basements that, for any cause, have been flooded.

It is well known that stagnant or still water is the natural breeding ground for the pestiferous and frequently dangerous mosquito. The easiest and, at the same time, most effective way to get rid of mosquitoes is to destroy their breeding places. It is well understood that they must have water to live in during their early life. When it is impossible to drain off the standing water, spraying the surface with kerosene destroys the larvae and prevents propagation.

MEDICAL SCHOOL INSPECTION.

School children suffering from defects of the teeth, nose, throat, or eyes are always below the normal in mentality and backward in their studies. Hence the importance of medical school inspection, supplemented by the work of the school nurses. In many cases it means restoration of bodily vigor and increased mental

strength. It also means giving the defective child a chance to develop into a healthy, active, useful man or woman.

Parents should pay more attention than they do to the so-called minor ailments of their children. The suggestions made by the medical school inspector or the school nurse should be followed under the advice and guidance of the family physician. This is important, since the children who are neglected in this way are the ones that wear out in childhood.

SCIENCE OF HEALTH.

The science of health—i. e., sanitary science—as it stands today is a product of slow, painful, and costly evolution. For many centuries its one dominating thought was the cure of disease. During all these years of needless sickness and suffering there were no attempts made for the protection of communities by preventive methods.

Now all this is changed. We have reached a point where it is recognized that it is the duty of the state to teach, preach, and enforce measures for the prevention of all the diseases known to be

amenable to sanitary administration. And with all this is coming the spread of sanitary knowledge among the people to the end that every citizen may aid in establishing and maintaining conditions that make for community health and happiness.

TOWN BUILDING.

For both health and economic reasons it is of the utmost importance that every growing town put in water works and proper methods of sewage disposal as early as possible. Better a good sized debt for the protection of the public health than to have an epidemic of typhoid.

It has been shown that as a town without proper sewage disposal and water supply increases in population the typhoid death rate also increases in proportionate ratio. But so soon as these improvements have been installed the mortality from typhoid drops. A town with a low death rate attracts population, while a town with a high death rate drives it away. It pays to spend money for means to prevent disease and to protect human lives.

HOW TO KILL 'EM.

It is important that the agency used to kill flies that get into your home be nonpoisonous or not dangerous to human beings. Especially is this true in homes where there are children. A 7 per cent solution of bichromate of potassium made up with water and sweetened with sugar, and placed in shallow dishes throughout the house, will kill the flies and will not harm the children should they get hold of it. This is cheap and may be obtained at any drug store. A 2 per cent solution of cobalt chloride may be used. It is nonpoisonous, but is more expensive and hard to obtain.

Spraying ponds of water with kerosene will destroy the larvae of mosquitoes, and used in the same way in garbage boxes will destroy the larvae of flies.

PRESENT DAY TENDENCIES.

Not long ago a noted medical authority made the statement that the social, commercial, and industrial phases of our present day civilization favor the increase of indoor and inactive modes

of life and that these are detrimental to a high type of physical development. The demands of labor, often compelling prolonged confinement in overcrowded quarters, together with the prevailing ignorance and indifference as to the importance of fresh air and outdoor exercise, all tend to vitiate the blood and impair the vitality of a large portion of the human race. This means increased susceptibility to disease, and especially does it increase the danger of tuberculous infection. The one simple and yet effective preventive that can be used is fresh air and plenty of it.

WOMEN CAN HELP.

Through their clubs the women of the country should be able to render material aid in the fight now being waged against consumption. Especially can they help in the distribution of literature and in securing its publication in their local papers. They can also do a great deal in cooperating with their own health officials and in furthering the educational side of the work. In fact, it is conceded this is now the one important feature of the fight. If only all the people can

become well informed on the nature of this dread disease, the ways in which it can be spread, and the methods of prevention, the day of victory will not be far away.

STREAM POLLUTION.

God made the waters of our rivers and lakes pure. It is man alone that defiles them. So extensive and general has the pollution of water supplies become that it is today almost, if not quite, a national menace. Great rivers are being transformed into little better than open sewers. In some cases, especially the smaller water courses, the pollution from sewage and industrial waste is so great and continuous in character as to absolutely prevent that self-purification which can and does take place in bodies of water that flow over sand and under sunlight.

In the aggregate this wholesale pollution is costing thousands of human lives each year that otherwise might be saved. Another example is this of where prevention would pay.

DANGER IN THE CUP.

It is everywhere conceded that the common drinking cup is a prolific means for the transmission of disease. This is true of offices, factories, public schools, and public drinking fountains, where many people drink from the same receptacle.

In places where many persons are employed each one should have his own cup. Some public fountains are provided with cups from which the water bubbles or overflows. These can be used without touching the lips to the rim of the cup and are therefore sanitary. The use of a common cup in schools is dangerous and some better means should be devised for supplying the pupils with drinking water.

The bubbling fountain cup is a safe and satisfactory solution of the problem. Add your influence to the movement for its adoption everywhere.

REPORTING CONTAGION

A case of contagious disease, unless all proper care and precautions are taken in its management, is a menace to the whole community. Thus a

case of diphtheria may mean only one case, or it may mean scores of cases, bringing death and sorrow to many homes.

It all depends on how the first case is handled. Contagion is spread by the mingling of the sick with the well. And a concealed case of scarlet fever or diphtheria is a terrible danger to a community. This is why the law requires that all cases of contagious sickness be reported by the attending physicians. It also goes further and places the same duty on the parent or legal guardian in cases where no physician is in attendance.

This is done to fully protect the community and to prevent these terrible scourges of child life, diphtheria and scarlet fever, from becoming epidemic in any given locality or throughout the entire city, as they would do unless proper protective and restrictive measures were enforced.

HELP THE CHILD.

The reports of medical school inspectors in all the larger cities where this excellent and valuable work is now being carried on show an enormous percentage of school children suffering from

minor physical ailments that tend seriously to impair their future health and usefulness.

Among the ailments noted, and it is singular how closely the reports from the different cities agree, were: Defective vision, impaired hearing, decaying teeth, poor nutrition, under development, enlarged glands, etc. The work that means prompt and remedial treatment for such defects cannot be overestimated in value.

It means healthier, happier, and more intelligent children now, and a stronger, better, and more useful generation of men and women in the years to come. And to a work of admittedly such primal importance parents, teachers, nurses, and physicians should lend their united and aggressive co-operation.

WHY NOT WALK?

A walk of a mile in the open air
  Will save you more than your nickel fare,—
For in God's out-doors the air is good;
  It will clear your brain and redden your blood
And bring you more vigor and health by far
  Than you can possibly get in any old car.

VENTILATION.

The matter of proper ventilation is of great importance; for without a plentiful supply of pure air there is no such thing as perfect bodily health and vigor.

The eminent Dr. Parkes tells us that "Air is the prime supporter of life; health, even life itself, is dependent upon its purity." He also says that of the causes of death which are usually in action, impurity of the air is the most important.

Another authority says: "Anything which has passed through the human body ought to be treated as excreta and rejected; just as sewage is thrown away into the drains, so air that has passed through the human lungs should be got rid of at the earliest possible moment without allowing it to go through the lungs of some one else."

This means that it is just as foolish and dangerous for us to breathe the same air over and over again as it would be for us to go to the sewer for our drinking water. And while none of us

would think of doing the latter, there are thousands of people who every day of their lives, either ignorantly or wilfully, poison themselves by using air that has already been robbed of its life-sustaining and health-giving properties.

It is said that ventilation is the most difficult of all sciences to practically deal with in such a manner as to satisfy every one. This is due to the varying temperaments and ideas of the human race. But it is pretty generally admitted that the system of ventilation which insures the required change of air in the simplest manner is the one most to be desired. Most systems of artificial or mechanical ventilation are faulty to the extent that they are of but little practical value.

It follows, then, that a system of natural ventilation is the one that can be best depended upon to do the important work required of it—which is to carry off the impure air and to furnish a constant and unfailing supply of fresh air to take its place. Dr. Parkes, whom we have already quoted in this talk, says: "Incessant movement of the air is a law of nature. We have only to allow the air in our cities and dwellings to take

share in this constant change, and ventilation will go on uninterruptedly without our care."

Here is your system of natural ventilation in a nutshell. Nothing complex or difficult about it at all. Now note what Houghton, another authority on this subject, says: "Science proves that there is not a moment of time but when there is a movement of the air and this movement, properly utilized is sufficient at all times to change the air in a building and secure ventilation."

Scientists also tell us that air that we call still is in reality moving at the rate of from one to one and a half miles per hour. So you see it is an easy matter to secure proper ventilation of the average building by a proper use of the doors and windows. Also we can see that in churches, schools, theaters and other buildings of a similar character it should be a comparatively easy matter to have them well ventilated.

But the main point is to have a plentiful supply of good air. And in our homes, stores and work places, including also the street cars and all public conveyances, this should not be, nor is it, a difficult matter. Do not be afraid of taking cold if a little cold air strikes you. Never sleep in a

room with all the windows closed. Open at least one, top and bottom, pile on the cover if you need it, and you'll sleep soundly and feel refreshed and vigorous when you get up in the morning.

CORRECT BREATHING.

Pure air and correct breathing are of the utmost importance in maintaining bodily health and vigor.

A noted physician has made the statement that only those who are too lazy to breathe have consumption. All doctors, too, are agreed that people who habitually breathe full and deep, that is, use their lungs to their full capacity, seldom have this disease; and further it is asserted that persons stricken with consumption and who begin at once to breathe as they should, frequently recover.

Improper breathing means that the lungs, not being supplied with the life-giving oxygen, lose their vitality and soon become ideal beds for the development of consumption germs. According to Dr. D. H. Kress, a prominent physician of Washington, D. C., the human body may be compared to a furnace. The food we eat is the fuel

needed to produce heat and energy; but oxygen is needed to keep active the vital spark. The more oxygen we admit, the brighter the fires will burn and the more pronounced is the energy experienced. When only a small amount of oxygen is admitted the fires in the body burn low and this means the retention of unoxidized products. These products clog the system and cause depression and lack of energy. When this occurs it is not more fuel or food that is needed, but more air.

In the lungs, says the same authority, the oxygen is absorbed by the blood and conveyed to all parts of the body. The gases formed as a result of the oxidation which takes place in the tissues are brought by the return flow of the blood to the lungs and are exhaled. In this way the vital fires are kept burning, the blood and the tissues of the body are kept clean, good bodily health is maintained and disease prevented.

Then, too, we should remember that breathing, like eating, is a matter that each individual may control. In other words, it is left entirely with each one of us just how much or how little of life-giving air shall be taken into the lungs

and how much of the life and health-destroying products shall be exhaled. For those who work indoors it is an excellent thing to take a few breathing exercises in the morning and then again at night the last thing before retiring. Be sure to throw open the windows in order that the air you take is good, fresh, outdoor air. If possible, the morning exercises should be taken out of doors.

In taking breathing exercises care should be observed to breathe slowly and deeply, taking in the air through the nostrils. Exhalations may be either through the nose or mouth. Breathing exercises in which the lungs are overtaxed, that is, forced to take in more air than is required, may be injurious rather than beneficial, and especially if the inhalations are vigorously and rapidly taken.

A brisk, cheerful walk in the open air, with an erect posture and the chest well forward, is stimulating and affords one of the best of breathing exercises. Climbing hills, swimming and rowing are excellent ways of increasing lung capacity but should not be overdone.

Finally, it is important to maintain an erect

posture, no matter whether sitting, standing or walking. In order to breathe properly it is necessary to keep erect and thus allow free expansion of the lungs. By following these simple directions the greatest amount of benefit may be obtained.

IT PAYS TO VENTILATE.

The one all-important matter to be looked after in work-places is that of the air supply. In the dust-producing occupations it is of no less importance that all proper means be provided for the protection of the employees from the dust.

Air that is filled with dust particles is dangerous. In machine shops, metal polishing rooms, type foundries, brass works, etc., there is much dust made that is very injurious to those exposed and who inhale it into the lungs and air passages. Investigations made in eastern industrial institutions disclose some interesting facts as showing the effects of a dust-laden atmosphere upon those compelled to work in poorly ventilated shops and where no protective devices are employed.

Out of twenty-four establishments visited it was found that in those places where the air was

filled with dust, the employees were pale and sickly in appearance and all complained of the irritating effects of the dust which they were compelled to breathe. In other places where the conditions were model as to light, ventilation and general sanitation, the employees were in good health and able to turn out more work per person than in the places where conditions were bad.

This means that with no increased cost as to wages paid, the employer who spends money to provide sanitary conditions for his help is increasing his output. In other words, without adding to his pay roll he is able to turn out more finished material than he would with the same number of employees working under bad conditions as to light, air and general cleanliness.

Now, we have said this much to bring out the fact that it pays in dollars and cents to provide clean, light and well-ventilated work-places.

Overcrowding is another crying evil in many work-places for the reason that it always means that the employees will be compelled to breathe bad air, and this means loss of efficiency in work performed, loss of time through illness and enforced absence. So it is clear that overcrowding

does not pay. In fact, nothing pays that tends to injure the health of the employees. And this is looking at the matter from purely the standpoint of economy.

No workman can do as much work nor as good in quality on foul air as he can when supplied with good air. If this is true, and it will not be questioned, what is the answer? The answer is this:

See to it that your employees are provided with clean, well-ventilated work-rooms. See to it, too, that the rooms are not over-crowded. Also, if your business is one of the dust-producing trades, don't begrudge the money to adopt devices that will protect your employees and give them a better, cleaner atmosphere to work in.

Health is wealth and time is money; and good sanitary surroundings for work people mean more health for them and more money for both employers and employees.

BASEMENT CLASS ROOMS.

Few basements are fit for human occupancy. They are always lacking in natural light, and this

alone renders them more unhealthful than are places on or above the street level. When lighted by either gas or oil lamps they become more dangerous on account of the constant vitiation of the air, owing to the increased difficulty in providing a fresh and unfailing supply of pure air from the outside.

In a former talk on basement dwellings, it was urged that people should abandon their use for living purposes. But there is another class of basements that, while they are not in constant use, are none the less dangerous because used as places of assembly, and in that way have an important bearing on the public health. We refer to basement school rooms in public, private and parochial schools; including also basements in the churches throughout the city that are used as Sunday School class rooms, generally for the primary grades.

Many of these basements are damp, all of them are deficient in natural light, and all of them, it may be safely asserted, are lacking in ventilation, many of them woefully so. Especially are they likely to be bad as to the proper air supply during the winter months. The worst feature of the

use of basements in churches for class rooms is that they are seldom aired out after each occupancy. As a rule it will be found that they are allowed to remain closed from one Sunday to another, and the dead, foul air with all its impurities settles down on the seats and furnishings, thus increasing the danger of using them at all. There can be no doubt but that many a case of scarlet fever, diphtheria, whooping cough or measles has been contracted in Sunday School class rooms which had not been properly cleaned and aired immediately after occupancy.

All audience rooms and class rooms in churches should be thoroughly aired and cleaned as soon as possible after use. This is done in a few churches whose pastors, having some little knowledge of sanitation, insist on their janitors performing this important duty. But such churches are the exception, not the rule. And because this is true, there are churches everywhere so badly neglected as to the matter of proper cleaning and airing after each assemblage as to make of them a standing source of danger to the health of the communities in which they are located.

The conditions that prevail in many of our school rooms are far from ideal as to these important features of proper methods of cleaning and ventilation. In some instances that have been reported to the department the rooms were being dry swept, which is inexcusably bad. Sometimes, too, the janitors begin the work of sweeping before the pupils are out of the rooms, a practice which should be sufficient cause for their immediate dismissal from the service.

It is little short of criminal to compel children to stay in rooms that are not maintained to the highest efficiency in the all important requisites of natural light, fresh air, proper heating and cleanliness. In cases where basement rooms are used, while the task of reaching and maintaining this efficiency is all the more difficult, it is none the less imperative that it be done. And in this responsible task the school officials, the teacher and the parents should certainly be equally concerned.

SHOP SANITATION.

This is going to be a little talk on shop sanitation, using the word "shop" in its broadest sense

and as meaning any place where people are employed or pass their working hours.

It has been frequently stated that consumption is a house disease; that is, it is not contracted in the open air. As a rule, persons engaged in outdoor occupations do not contract consumption. If they do, an infected house has been the cause or the source of the infection. This is why we have had so much to say on the general subject of house sanitation, using the word "house" in its broadest sense as meaning any place where people live or work.

Here are some sanitary suggestions for the shop, store and factory that are worth posting up where they can be seen all the time:

Consumption is a house disease. It is caused by germs that grow in the tissues of the body and which are cast off in the sputum or spittle. Now, this being true there is just one thing to do and that is, to not spit on the floors. No spit, no consumption. This means that all work places should be provided with cuspidors and that they should be carefully cleansed and disinfected every day.

Dust is dangerous. For this reason floors

should be sprinkled before being swept. It will be all the better, too, if sawdust that has been well dampened with a good disinfectant solution is used.

Dirty air is death. Consumption, pneumonia, influenza and many other diseases are due directly to bad or dirty air. So, look carefully after the matter of ventilation. See to it that the windows are at all times lowered a little from the top and raised from the bottom. This will, in most buildings, afford a free circulation of air; the fresh air being admitted at the bottom while the bad air is permitted to escape at the top.

Dirt and disease go together. Water closets, urinals and wash sinks should be kept CLEAN. This means they must have attention every day. In many work places these important details are shamefully neglected. A toilet room, including lavatories and all its equipment, should be built as far as possible of non-absorbent material and should be scrubbed and scoured daily.

Then, live out of doors as much as possible. Get all the fresh air and sunshine you can. Keep the body clean by frequent bathing. Keep regular hours, and observe temperate habits and you

will be healthy and happy. Incidentally you will also have more money.

INDOOR HUMIDITY.

Outdoor air is pure and life-giving. This is not true of indoor air, as a rule.

To secure ideal conditions as to the air we breathe in our homes and work places, it is important that it approach as nearly as possible that of out of doors. This applies as to both purity and moisture, and both these requisites are of the utmost importance as affecting our health.

Normal out-door air at a temperature of 70 degrees, contains about 70 per cent of watery vapor. In the summer time, there is, as a rule, sufficient moisture in the air to render it most beneficial. It sometimes happens that there is an excess of moisture and when this happens, even with a temperature of not over 70 degrees, the weather will be most uncomfortable. This means that we feel the heat more than we would with the thermometer touching 90 and the air normally dry.

But in the winter when most people keep their

homes closed and with a heated temperature of 70 to 74 degrees, the moisture is soon absorbed and the air becomes very dry and unhealthful. Especially is this true in buildings and flats that are heated by steam.

In homes heated by hot air furnaces the air in the rooms is kept sufficiently moistened by hot water pans set in the furnaces. It is also possible to attach a receptacle containing water to radiators and in this way moisten the air in steam-heated apartments.

While it is comparatively an easy matter to provide means of moistening our indoor air, it has not been so easy to determine the degree of humidity. That is, to tell whether the air is too dry or too moist. This is determined by an instrument called a hygrometer. An instrument of this kind, that is fairly accurate, can be made by using the following formula:

Cobalt Chloride	5 drams
Sodium Chloride	150 grains
Calcium Chloride	40 grains
Gum Arabic	80 grains
Water	2 ounces

Dissolve carefully and then soak thin white

muslin in the solution and wring dry; when dry cut into strips for use and hang up in rooms where indications are desired. The muslin strips when dry are blue; when moist they are pink or red. If the air in your room contains 70 per cent humidity, the muslin indicator, prepared as directed, would show pink. If there be only 50 per cent or less, the color will be blue. So, too, if the strip assumes a grayish color inclining to pink, it would indicate, at a temperature ranging from 68 to 72 degrees, a normal and therefore healthful degree of humidity in the air.

There is, too, an economic as well as a health side to the matter of having the proper degree of moisture in our indoor air. It is a well-known fact that a room is more comfortable at a temperature of 68 degrees and a relative humidity of 65 per cent, than it is at a temperature of 74 degrees and a relative humidity of only 30 per cent. In fact, it has been determined that as a rule indoor air contains far too little moisture, probably 40 per cent less than that found out of doors. This means that the air in most of our homes is dryer than the dryest climate to be found anywhere on earth.

The point to all we have been saying is this: When the air in our homes or work-places is lacking in moisture it tends to produce pneumonia, catarrh, bronchitis, and other diseases of the respiratory tract. The dry atmosphere absorbs the moisture from the lungs and membranous linings of the air passages, thus causing irritation and disease. With a hygrometer such as we have described, it will be easy to tell approximately, at least, when the air is too dry, and with just a little care and attention much more healthful conditions may be maintained.

TRY THE TROLLEY.

When the outdoor season is here, the parks are looking their best. Out in the country the fields are green, the air is balmy, flowers are blooming and all nature says: "Come and have a good time."

Sounds a little sentimental, doesn't it? Well, suppose it does. Nothing wrong about it, is there?

It certainly can do you no harm to get out of the city for a day, or a part of a day. Especially when it costs so little. Many of the trolley lines

will take you far beyond the city limits for only ten cents. If you can go on a weekday afternoon, the cars are not likely to be crowded and the ride alone is a treat. In the event you can not take the trolley ride you should be able to go to the nearest city park where the air is pure, the grass green and soft and the flowers and birds everywhere.

What we are driving at is this: Get out of the house whenever you can. If you have a little time at your command, spend it out of doors. If you are compelled to stay in, open doors and windows and make your surroundings as nearly outside surroundings as is possible. Your house has been pretty well closed all winter. Now is the time to open it up and let the sun and air have a chance at every room in it.

The parks are great places for the babies and children and they should be permitted to visit them every day if possible. Nothing like fresh air, bright sunshine and outdoor exercise to promote bodily vigor and mental content. The children can also study nature in the parks. They can find out the names of birds and their value in protecting trees from the worms and insects. It

has been noticed that in communities where the boys are permitted to stone the birds and either kill or frighten them away, the trees soon die. Especially is this true of orchards and all fruit-bearing trees.

Trees and birds go together. The beauty and attractiveness of all our city parks are maintained and increased by the birds and the noble trees in the branches of which they sing. Tell the children about all these things and they will grow up to be better men and women. And in this way all outings should be used; not only to make us well and strong in our bodies but also to teach us more about the world we live in and how to get a larger degree of health and happiness out of it.

By the way, have you started that little garden yet? And what about those flowers for the front yard? Lots of good, healthy exercise to be had in tending a few garden beds and growing flowers.

But in any event, get out of doors all you can and don't overlook the importance of letting the sun and air have the freest possible access to every corner of the home.

OVERCROWDING.

The death rate of a community is largely affected by its housing conditions. This is aside from the structural defects that may contribute to the discomfort and unhealthfulness of a people. For example, a house may be sanitary in every way, so long as it is not overcrowded. With an occupancy not in excess of the normal capacity the conditions as to healthfulness may be all that could be desired, as man's primary object in building habitations is, of course, to secure protection from the influences of heat, cold, rain and storm. This means, of course, the preservation of health and, indirectly, the securing of community comfort and an elevation of the morals of the human race. But when human beings are crowded into a habitation of any character beyond its reasonable capacity, discomfort and disease are sure to follow.

As early as 1827 studies were made in France as to housing conditions, and it was found that in communities where there were 22 per cent of badly constructed houses one out of sixty-five died, while in an adjoining community contain-

ing 38 per cent of badly constructed dwellings one out of every fifteen died.

It has been shown by studies made in Scotland that where the average number of persons to each room was 1.51 the mortality was 21.7 per thousand, and where the number of occupants exceeded two for each room the mortality reached 28.6 per thousand.

In Berlin some years ago among 73,000 one-room tenants the death rate was 163.5 per thousand against a death rate of 5.4 per thousand among 398,000 residents occupying four-room apartments.

Insanitary dwellings are found everywhere. Of course, they are more numerous in towns and cities but it is not an uncommon thing to find them even in the rural districts.

One of the important municipal problems is to correct existing evils in tenement districts. This is done by the enactment and enforcement of laws regulating structural conditions and providing sufficient light and ventilation, but when all this is done, it requires separate and distinct legislation to correct the evil of overcrowding.

It is well understood that rooms that are illy lighted and poorly ventilated are unfit for human habitation, either as dwellings, workshops, or places of business. Quarters of this kind are extremely unhealthful and people who live in them are subject to such diseases as rickets, scrofula, and especially tuberculosis. Children who are reared in places of this kind are puny, pale, sickly —much like a plant that has been reared in similar surroundings.

Among certain peoples there is a tendency to flock together, to economize on rents by overcrowding. This is poor economy. The expenses of sickness and death are largely increased, and amount to a great deal more than the saving in rent. It is far better to pay more rent and fewer doctor bills.

It is urged that this doctrine of plenty of "elbow room" should be more generally promulgated. The newspapers of the country should have more to say about it and urge upon people the importance of securing clean, sanitary places in which to live and to see to it that they are never overcrowded.

HOT WEATHER HINTS.

Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick-room. His body is covered with disease germs.

Do not allow decaying material of any sort to accumulate on or near your premises.

All refuse which tends in any way to fermentation, such as bedding straw, paper waste and vegetable matter should be disposed of or covered with lime or kerosene oil.

Screen all food.

Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with oil or lime.

Keep all stable manure in vault or pit, screened or sprinkled with lime, oil or other cheap preparation.

See that your sewage system is in good order; that it does not leak, is up-to-date and not exposed to flies.

Pour kerosene into the drains.

Cover food after a meal; burn or bury all table refuse.

Screen all food exposed for sale.

Screen all windows and doors, especially the kitchen and dining room.

Burn pyrethrum powder in the house to kill the flies.

Don't forget, if you see flies, their breeding place is in nearby fifth. It may be behind the door, under the table or in the cuspidor.

If there is no dirt and filth there will be no flies.

It is not only possible but easy to make, at a trifling expense, an ice box that will take but little ice and which will keep the baby's milk cool and sweet for 40 hours with 5 cents' worth of ice.

In construction, it is very simple and of trifling expense. A person can make one at a cost of from twenty-five to fifty cents. An ordinary wooden box, 13 by 18 inches, with depth of 11½ inches, can be obtained from your grocer. In the bottom of the box place a substantial layer of sawdust. On this set a tin pail or can, 8 inches in diameter and tall enough to hold a quart bottle of milk. Care should be taken that the pail rests on sawdust—not on the wood bottom of the box. Around the pail place a cylinder of tin a little larger than the pail, then pack sawdust about the cylinder—not between pail and cylinder—up to

top of the cylinder. On the cover of the box nail about 50 layers of newspaper. Place the milk bottle in the pail and pack broken ice about the bottle. A refrigerator of this description will hold two quart bottles of milk, or four eight-ounce feeding bottles. It can be operated for about two cents per day. To prevent rusting, a little soda may be placed in the can each day. The little expense involved is nothing as compared with the cost of sickness and death.

CASH VALUE OF VENTILATION.

It is possible for a man to live three weeks without food; three days without water and three minutes without air.

This simple statment of a well known fact should make it very clear that air, fresh, pure air, is the most important element in the world for the sustaining of life. It is also equally important that in order to perform the best labor, to do the best work in any occupation, human beings must be plentifully supplied with pure air.

It is strange that employers of labor, owners of mills, factories and shops, do not recognize the economy side of providing clean, well-ventilated

rooms, for their employees. Perhaps it may be that this side of the problem has never been presented to them. As a rule, when you can show a man how to save money, he will "sit up and take notice." Show the owner or superintendent of a factory how he can increase the efficiency of his force, that is, get more work out of them without increasing their pay, and he will adopt the suggestion without hesitation.

There is no question but that a force of employees working under good sanitary conditions as to light, air and general comfort will do much more work and much better work than a like number of employees engaged in the same occupation will perform in a room where the sanitary conditions are bad. A striking instance of this has been furnished by Professor Winslow, of the Boston School of Technology. The toll room of the New England Telephone & Telegraph Co. at Cambridge, is long and narrow, with windows only at each end. In winter, the employees refused to work with these windows open, and as a result the air became very foul. The telephone company paid little or no attention to these conditions until it was noticed that practically

one-half of their working force of sixty-odd girls was absent from duty nearly all the time.

At an expense of not to exceed $100 an air-duct was built along the ceiling, opening to the street at the front and discharging fresh air into the room through inch-and-a-quarter holes. Fans were placed at the rear of the room to draw out the foul or vitiated air. A marked improvement in the working conditions was apparent at once. The percentage of absences was reduced to 1.9 per cent of the entire working force. The girls improved in health and vitality and their work was in every way much more satisfactory.

Take notice, however, that the company did not put in the improvements because of its interest in the health of its employees but simply on the grounds of economy. Incidentally, from the company's standpoint, the health conditions were improved. The main consideration was better service and more work.

There are shops and factories in every large city where the conditions as to ventilation and light are bad. It would be economy on the part of the owners to spend money liberally to improve these conditions. The returns on the investment

would come in more work and better work from the employees. No employer of labor can afford to overlook these important considerations.

PUBLIC HEALTH DAYS.

From the pen of Burton Rogers, formerly a veterinary inspector for the United States Government, come a few pertinent thoughts and suggestions that are worth while. In substance he says:

"It is all right to honor our ancestors and to observe certain days that are set apart to commemorate their deeds. But in these days of concentration of time and effort, why not let our ancestors rest in peace, and set aside a few days for the noble purpose of bettering the conditions that will surround our descendants?"

According to Mr. Rodgers, we need more days in which to concentrate our efforts towards preventing conditions that make it unfortunate for those born today, as compared with the conditions that are certain to prevail fifty years hence. Not a bad idea, is it?

If tuberculosis is preventable, why not prevent? If education prevents, why not educate?

To this end and to stimulate the idea of the widest possible publicity along the lines of public education on this subject, Mr. Rogers suggests that the President of the United States, the governors of all the states and the mayors of all the cities unite in proclamations setting aside certain days to be known as "Public Health Days." That programs be prepared embracing talks by competent local physicians and officials, covering all phases of popular instruction on health matters.

All organizations, such as women's clubs, churches, aid societies, medical and scientific associations, commercial clubs, legislative bodies, charitable and fraternal organizations, farmers' institutes and granges, etc., could jointly or severally hold meetings on these days. The halls where moving picture shows are held might be leased for the day, and by the use of the stereopticon, the pertinent facts of all the essential phases of health work could be clearly and popularly presented to the general public. School teachers should tell the story of invisible germ life with test tubes and culture media.

A Public Health Day should have as much in-

terest attached to it as any day set aside for any purpose could possibly have. Nobody wants to be sick; all of us want to be well and to keep well all the time. Arbor Day is a great day, or should be. It is the day on which we are asked to plant trees; and all who can should contribute their share toward the proper observance of a custom which means so much for future generations.

So, in the same spirit, might we observe with fitting and instructive lessons days set apart for the wider dissemination of knowledge as to the prevention of a scourge which claims over 100,000 victims each year in the United States alone. The idea of having Public Health Days is well worth thinking about; as is also the idea of making all our days count, in that we do something to add to our store, and to the world's store, of knowledge on matters that will enable us to live longer and with less suffering and discomfort.

HYDROPHOBIA.

All dogs are dangerous, for the reason that any dog, however well cared for, may develop rabies; but the homeless or ownerless dog is a far more serious menace to the public.

It may safely be asserted that more than ninety per cent of the cases of hydrophobia in human beings are caused by dogs that nobody owns. And when it is remembered that there are now not less than 10,000 of these canine vagabonds roaming the streets and skulking through the alleys of towns and our cities, it becomes very plain that they are responsible for the steadily increasing number of cases of hydrophobia. It also becomes equally plain that this vast horde of homeless and ownerless dogs constitutes a positive and terrible danger to the community. And, finally, is it not very evident that the vagabond dog must go?

This means a war of extermination, waged along humane lines, against uncared-for dogs. It means that the existing laws forbidding unmuzzled dogs from running at large must be strictly enforced. Also that all dogs found on the streets in violation of these laws must be taken up and destroyed.

The Pasteur treatment for persons who have been bitten by dogs is expensive and beyond the reach of poor people. It is hoped that in the near future there will be a way provided so that those

who are unable to pay may have the benefit of free treatment for hydrophobia, the same as we now have for that dread disease, diphtheria. But meanwhile let's get rid of the pests and thus reduce the danger to the minimum.

If you have a dog and it begins to act unnaturally in any way, call up the dog pound man and have it removed. If it be a valuable dog and you have money to spend on it, send for the dog doctor or a skilled veterinarian. It should also be borne in mind that rabies or hydrophobia in dogs is infectious; that is, one rabid dog in a community means that other dogs may also be infected with the same disease.

In cases where persons have been bitten, the dog should not be killed, for the reason that it is often difficult to tell after the animal has been killed whether or not it had hydrophobia. If possible, the dog should be caught and confined where it can do no harm. If it is determined that the dog did not have rabies, then no particular harm has ben done and there is no need of the person that was bitten continuing treatment.

It is a mistake that many people make in supposing that dogs are dangerous only during the

hot weather months. The records show that January furnishes almost as many cases of hydrophobia as July or August. The danger of persons being bitten warrants the rigid enforcement of the law prohibiting unmuzzled dogs running at large. It also calls for the active co-operation of the public in aiding officers of the law in ridding every community of the class of dogs which has been shown to be so terrible a menace to human life.

METAL POLISHERS.

Metal grinding or polishing metal by the dry grinding or buffing process has long been known as one of the very dangerous occupations. Before the introduction of protective appliances in the shape of hoods, suction fans and pipes for conducting the dust away from the operators, the mortality among this class of workers was frightful.

Metal and mineral dust is produced in large quantities where dry grinding or buffing is being done. Much of this gets into the lungs and air passages of the operatives as it is produced. Much of it settles on the floors from which it rises

again in clouds when disturbed. It is a well-settled law of hygiene that people should not work in a dust-laden atmosphere. It is also equally well understood that the metal and mineral dusts are far more injurious to the lungs than are the vegetable dusts. For example, the dust in a flouring mill, while injurious, is not so to the same extent as is that generated from the machinery in a room where the dry grinding and buffing of metal is carried on.

In England the figures show a death rate from consumption among metal polishers of 342 out of every 1,000 deaths and 295 in addition from other respiratory diseases. These two constitute 64 per cent of the total deaths in these trades. Is not this a fearful tribute to pay? The sad feature of it all is that most of these victims die young and while they should be in the very prime of life. Here are the figures.

Out of every 1,000 deaths among metal grinders, that is, dry grinders and polishers, 458 die between the age of 35 and 55 as against only 261 in the entire male population counting deaths from all causes.

This fearful death rate among the metal pol-

ishers of England is due largely to the unsanitary and unfavorable conditions under which the men are compelled to work.

No room in which dry grinding, polishing or buffing is done should be located below the street level. A room given over to this industry should be plentifully provided with windows for the admission of air and sunlight. The floors should be constructed of concrete and slope to either end with suitable drains connecting with flush tanks. The floors should be washed each night with a hose so that all dust that is not carried away by the suction fans and pipes may be removed and not left on the floors to be stirred up and inhaled by operatives.

This, together with an adequate system of hoods, fans and pipes will insure good working conditions and tend to promote the health of the workmen. There is one important fact, though, in this connection, and that is that all workmen should be required to use the hoods once they are installed. It sometimes happens that, until they become accustomed to the hoods, workmen on piece-work find they cannot turn out as much work and so discard them. This is unfair to the

employer who has gone to the expense of putting in the device for the protection of the men and it works a great injury to the men themselves. The workman who refuses to use a safety appliance should be compelled to comply with the law just the same as should an employer who refuses to install the devices required.

Dry grinding and polishing should never be carried on in the same room with other processes of manufacture. To do this only exposes more people to the dangers of the dust and at the same time makes it more difficult to maintain proper protective and sanitary conditions.

DANGEROUS OCCUPATIONS.

It is well known that the germs of certain diseases, such as smallpox, scarlet fever, consumption, diphtheria, measles and cholera are conveyed in the body, clothing and bed clothing, and that in this way infection is spread. This is why workers in rag-sorting warehouses and paper mills are exposed to the danger of contracting any of the diseases named. This danger can only be guarded against by a thorough disinfection of

the rags before being handled by the pickers in the warehouses.

Out of the nearly 5,000 German workers in rags, it was found that fifty per cent are annually taken sick. Also that nearly thirty-four per cent of those working in dry rags suffered from diseases of the respiratory passages, while only twenty-one per cent of those otherwise employed in the same establishments were similarly afflicted. These figures tell the whole story so far as showing the danger from dust in rags.

A great many tons of rags, known as paper stock, are imported into this country yearly. The Federal authorities exercise supervision over these and prohibit all such material from countries where cholera, anthrax, bubonic plague and typhus fever are prevalent, requiring that material of this kind, including wool and hides, from all foreign ports be disinfected.

Rags, used for paper stock, usually come to the paper mills in bales, where, after unbaling, they are "chopped" or beaten by machinery and made ready for the pulp vats. It is this beating or chopping process that produces the dust which is harmful and which calls for the adoption of ex-

haust fans and dust pipes. In mills where proper devices of this kind are installed the danger is, of course, reduced to the minimum. Proper ventilation, too, is always an important factor in protecting the health of employees in places of this kind, as it is in workshops of all kinds.

It is gratifying to know that the movement to improve the conditions surrounding those who work in shop, mill and factory is growing. And that it is taking shape in the enactment of laws requiring the adoption of proper safeguards and appliances for protecting the health of the workers and providing for their bodily safety. It is also equally gratifying and encouraging to see that the employees themselves are beginning to wake up to a knowledge of their responsibilities in matters affecting their health and comfort. That they are becoming interested in personal and house sanitation and seeking more information along these lines.

There are those employed in workshops today who know all about the danger of indiscriminate spitting on the floors; of the value of having clean, well-ventilated work places; and these are helping to spread this knowledge among their

fellow workers, for the reason that no one who has learned the value of pure air and sunshine is able to keep still about it.

This is a mighty good policy to follow. If you know something that will be of value to your fellow beings let them have it. If you go to work in a dark, poorly ventilated work shop, start an agitation right away for more light and air. These God-given agencies of health and happiness are free. See that you get your share.

DESTRUCTION OF VERMIN.

Among the many kinds of pests to which humanity is subjected, vermin are perhaps the most common and all-pervading of them all. Wherever human beings live or congregate there as a rule will be found vermin of some sort or other. Even the homes of the rich are not free from rats and mice that have their runways in the basements and from which they have every access to the rooms above. Cockroaches and water bugs are as much at home in the kitchen of the dwellers on the boulevards, as they are in the poor homes of the tenement dwellers, or among the paste pots of the down-town printing offices.

Then there is the unspeakable bed bug, the terror of all good housewives, and whose unwelcome presence is often discovered when least expected. These dreaded foes of household peace and comfort are almost a scourge to housewives for the reason that it is only by constant care and vigilance that they are able to keep their homes free from them. The bed bug is both secretive and elusive in its habits. As an inhabitant of office, store or factory it has no objections at all of being carried home under someone's coat collar. In fact, if the housewives only knew it the male members of the family who work down town are frequently the ones to blame for the presence of the bed bug in the home. Many of the shops where light manufacturing is carried on, including printing offices generally, are alive with vermin for the reason that they are never properly and thoroughly renovated.

General cleanliness is the best preventive of vermin. Exterminating agencies are many. Some of them are good, more are of doubtful value. Turpentine will kill bed bugs and destroy their eggs. Sulphur fumigation kills the bugs

but not the eggs, for this reason, where sulphur is used, the process has to be repeated until the eggs are destroyed, which takes two or three weeks. Gasoline will also destroy both the eggs and the bugs, but gasoline is dangerous and should never be used at night when gas or oil lamps are used for lighting. A small bottle of gasoline will evaporate explosive gas enough to blow up a house. Corrosive sublimate or bichloride of mercury may be used. But it is dangerous to have around where children can get hold of it, as it is poison. Black flag or pyrethrum powder is an effective insecticide for bugs, flies, mosquitos, roaches and water bugs. It can be obtained at every drug store. Turpentine is sure death to bed bugs but it leaves a disagreeable odor which remains for days. It is claimed that caustic potash or concentrated lye in powdered form scattered in the runways frequented by rats and mice will drive them away. Rats and mice are both pests of the worst sort and are dangerous to health, as it is known they are carriers of disease.

It is important that our homes, shops, stores and factories be kept clean as the first long step towards ridding them of vermin of all kinds. So, too, proper construction has much to do with keeping rats and mice out of a building. Concrete floors in basements, besides being more sanitary are also practically rat-proof.

PROPER CARE OF MANURE.

In another talk about house flies as agents by which certain diseases are scattered, we showed that the manure pile is their birth place.

It being conceded that manure is the breeding ground for flies, it follows that if we would get rid of these dangerous pests, we must abolish manure piles. A pretty big undertaking, this, in any city, and yet it can be done. A single stable containing but one horse can furnish ample breeding ground for flies for a whole community, provided the manure is allowed to accumulate for weeks before removal, as is gen-

All stables should be provided with tightly covered receptacles into which each day's accum-erally the case.

ulation should be placed. A small quantity of chloride of lime sprinkled over the manure each day will destroy any eggs that may have been deposited.

Manure that is exposed to air and sunlight furnishes the most favorable conditions for hatching the eggs and for the rapid development of the larvæ into full-grown flies. So, in a neighborhood where there are no stables and no manure piles there will be few flies.

It is of the greatest importance that the flies be kept out of the house and in this way prevent them from having access to articles of food and drink. There is but one effective method of doing this, and that is to have all doors and windows securely screened. The screens should be sixteen mesh to the inch, which will exclude mosquitoes as well. Care should be taken to keep milk and all articles of food covered so that flies cannot in any way come in contact with them.

Keep your premises clean. Never allow garbage pails to stand uncovered. Keepers of groceries and meat markets should keep the rear of their places free from refuse that always attracts

flies, and from which they find easy access to the shop and home.

It has been shown that the house fly can be the medium for the transmission of such diseases as tuberculosis, cholera, typhoid, anthrax, inflammatory affections of the eyes and wound infections. Dr. F. T. Lord in a series of experiments proved conclusively that flies disseminate tuberculosis. By feeding flies on tuberculous sputum he found that the bacilli increased in wonderful proportion and were deposited by the flies. Guinea pigs that were inoculated with excreta from the flies, in a short time developed tuberculosis. The doctor in his studies also discovered that flies will readily feed on tuberculous sputum even when other food is accessible. If afterwards they alight on food, they are certain to deposit the tubercle bacilli in great numbers, thus infecting it with the germs of consumption.

The following is an approved method of taking care of manure in stables pending its removal from the premises:

Build a box 6x8 feet, in a corner of the stable nearest the alley. The opening of the box connected with the stable should be provided with a

tightly fitting door, as should the opening on the alley side. An open window, carefully screened, should be placed in the outside wall. Each morning when the stalls are cleaned the manure should be deposited in the box and lightly sprinkled with chloride of lime. This will kill odors and also prevent the eggs from hatching should any have been deposited.

In view of the things we know about flies, it is important that there should be an organized and persistent fight made for their extermination. And it is for the purpose of helping along these lines that we have offered another talk on this subject. It is certainly a good work, so let us all help it along.

FEEDING THE BABY.

The hot summer months are particularly trying to babies that have reached the "second summer," the teething period.

Nothing is of more importance than the proper care in feeding of infants. Thousands of babies die each year as the result of indiscretions committed by the parent, either through ignorance or neglect.

Heat kills off babies, because it spoils their milk and other food quickly. Even breast milk, when the mother is overheated, may give the baby a colic or summer complaint. If a mother is very hot she should draw a teaspoonful or so from the breast before nursing the baby. If the breast has not been given for two hours or more it should be drawn off in the same way, or if the mother has been angry or excited it would be best not to give the breast at all. It should be drawn and the milk thrown away.

Now, a word about feeding. Many infants are killed every year by bringing them to the table and giving them a little of this and a little of that and the other, meat, vegetables, pie, pickles, or whatever may be on the table. These are all articles of diet to which the little stomach is not accustomed, nor is it capable of taking care of them. The result is that the baby sickens, often dies, and the death certificates usually show as the cause, diarrhœa, dysentery, cholera infantum, summer complaint, convulsions, brain fever, etc., but all these are only names that are used for the result of poisoning with improper food.

Here is a good rule to be observed. Wait till

baby gets its teeth before you put food into its mouth that needs to be chewed. Don't overfeed the baby. Once in two or three hours is often enough to suckle or feed a baby until it is four or five weeks old. After that don't feed so often. When a baby is six months old it will generally thrive best if fed only once during the night and four or five times at regular periods during the day. It is bad for a baby's stomach and bowels to feed it too often or too much at a time—especially in the hot weather.

A new born baby's stomach will hold from two to three tablespoonfuls, and not more than this amount should be given at a time during the first week or so of a bottle-fed baby's life. As the baby grows the quantity should be gradually increased, so that at the end of the first month it may be taking about four tablespoonfuls at a meal. Some children will require more and others will not stand so much, but there is more danger of giving too much than there is of giving too little.

Keep the baby clean, and it will stand the heat better. It should have at least one full bath every day and oftener when the days are very

hot. Never bathe a baby, however, within one hour after feeding. If possible, bathe it first, feed afterwards. Dress the baby as lightly as possible. It will be better stark naked, except for a napkin and binder, during the hot weather when indoors. When the weather is fine and warm, it is better to keep a baby in the open air as much as you can between sunrise and sunset. Fresh air is the breath of life in a baby's nostrils. Therefore you will see the importance of keeping babies in the open air as much as possible.

Don't let the baby sleep in the same bed with any other person. If there is no crib, the mother should put a couple of chairs at her bedside with any sort of covering on them, except feather pillows and hot woolens, and let the baby sleep there. It will be much more comfortable and much more healthful.

Finally, don't drug the baby. Don't buy patent medicines. If the baby is ailing, call your family physician.

In closing, let us repeat once more these instructions:

Don't overfeed the babies:

Don't give them rich food, meats, gravies, pastries, cake, etc., nor a great variety.

The simpler the food the better.

Keep up the daily bath until it becomes a fixed habit, and, give them all the fresh air and sunshine possible.

DRESSING THE BABY.

Dress the baby lightly. In hot weather the fewer clothes the better. A long, stiffly-starched dress, petticoats, etc., will make baby cross from heat and discomfort; besides, the little one needs room to kick and to exercise the muscles it will need later in walking.

Long clothes are often damp and disagreeable; this makes the baby cross. The short, unstarched dresses, plain and smooth at the neck will often save the busy mother and fretful child many weary moments.

Do not put tight bands around baby's tender body. The long, tightly-wound binders in use a generation or two ago are a mistake. The soft little bones cannot keep their proper shape, the delicate little organs inside cannot be normal, if bound and constricted by yards of "bands." A

binder five or six inches wide, unhemmed, placed snugly but not drawn tight around the body once or twice, is sufficient; and this only in the earliest weeks of baby's life.

Stockings are better off than on in hot weather; so are shoes; so is everything else but binder and napkin.

A warm bath and a cool drink of boiled water will often prove more effective than many weary steps; and if baby is fat a light dusting of pure powder will help; but this is better left alone than applied so thickly as to cake and prove a torment to the easily irritated skin.

Do not pick the baby up every time it cries. A little crying is good, for this is the only way a "new" baby gets the exercise it needs.

If the baby develops diarrhœa, stop all feeding, give a dose of castor oil, and keep on a diet of barley water.

AIR AND EXERCISE DO MUCH FOR THE BABY.

The baby must have clean pure milk if it is to live and grow up strong and vigorous. But along

with good milk, babies must have plenty of air and exercise.

Babies do not develop and get strong when they are kept in cribs and baby carriages all the time. Many mothers are so afraid that their babies will get hurt when they are trying to learn to walk that they will not let them tumble around or use their little legs at all. This is wrong. Exercise is as important a factor in aiding the baby's growth and digestion as is the food it eats. A baby that is cuddled and coddled all the time either in its crib or carriage or in the nurse's lap will generally not be able to digest its food, although it may be of the proper kind and best in quality. But give the same baby plenty of out-door air and exercise, it will have good digestion and will grow and thrive as a baby should.

As a matter of fact air and exercise are fully half the battle in keeping the baby well. On this subject a noted physician says that parents should not be content with simply keeping the baby alive. We want not only live babies, but we want them healthy and well-developed physically.

When a baby is able to walk and is in the sec-

ond year, exercise is a most important aid to good digestion, and this of course, means proper development of the body. "At eighteen months of age, exercise," says the same physician, "is especially valuable." And if an infant of this age is allowed to play on the grass in the open air, in the shade if the weather is hot, it will eat and digest food that would kill it if kept heavily clothed, strapped in a go-cart and wheeled about the streets.

A plot of grass with a quilt spread down is a fine place for the baby to roll and kick about on; of course, being careful to protect it from the direct rays of the sun.

And this all means that right food, right feeding, with good air and exercise, will keep the baby well.

VACANT LOT GARDENING.

So popular has the vacant lot gardening plan become in Philadelphia that last year the poor people in a certain section of the city took possession of a tract of 18 acres of ground and began cultivating it on their own account, without any help from the association.

The proceeding was, of course, irregular and without authority. Happily, however, the owners of the land took it good naturedly and told them to go ahead. Some 60 families took part and at the end of the season had produced over $3,000 worth of garden truck, on land which, before they took hold of it, had been a dumping ground covered with rubbish, unsightly and useless.

Another instance worthy of note: Sixteen families that had been helped by the association the previous year with free gardens banded together and went into the truck-farming industry on their own account. They rented 9 acres in one tract, selected a manager and allotted the land among themselves. As soon as their stuff was ready, they opened a market in a shed on one corner of the land and had a thriving trade from the start. In addition they started their children out soliciting orders and delivering fresh vegetables direct to families in the better resident districts. This also proved a paying venture and many of the boys and girls thus employed earned three to five dollars a week on a commission basis of 20 per cent of their sales.

They rarely worked over five hours a day and enjoyed it as play.

In 1906 two women who had just come out of a hospital and who had no experience in gardening took a lot containing nearly one half of an acre. They started in June and here is what they produced, in addition to regaining their health and strength:

Radishes $1, sweet peas $3, parsnips $2, Swiss chard $4, beets $3, onions $3, melons $3, tomatoes $11.75, cucumbers $3.70, squashes $4.50, pumpkins $3, cabbages $16, lettuce $2.10, Brussels sprouts $2.40, parsley $2.25, celery $5.15, cauliflower $1.10, leeks 75c, turnips $1.35, kohl rabi 65c, peppers 50c, corn $5.35, scarlet runners $6.20, carrots $1.75, green string beans $2.50, yellow beans $2.75, potatoes $6.

The above may smack of statistics, but they are mighty interesting figures. Suppose, just to impress them on your mind, you go over the items and total them up, just to see what these two women were able to do. Keep in mind also the fact that the women had been sick and that when they came out of the hospital both were out of work. So the Vacant Lot Gardening As-

sociation found a piece of idle land for the two idle women, and—but the rest of the story has already been told. Pretty good thing, isn't it, this bringing idle people and idle ground together? In fact, it is a wonderful combination, productive of good habits, good things to eat and good health; all of which are mighty good things to have.

One more instance showing the health side of this vacant lot gardening plan and we'll quit for this time.

In Philadelphia, after the papers had published the proposed plan for furnishing not only the idle or unemployed but also the poor people with vacant lot gardens, the very first applicant was a man of family living in one miserable room in the slum district. He had been ill and was so weak and emaciated that Doctor Martin, one of the directors of the association, feared he would not get out of his office without assistance. However, he assigned him a garden containing about one-fifth of an acre. The man noticed, on starting to work his ground, that a much larger piece, almost an acre, which adjoined his piece was unused, because of its being literally covered with

stones, bricks and all kinds of rubbish. He offered to exchange and clear the ground for the use of it that year. His offer was accepted and in a few days, with the help of his three girls and a boy, the land had been cleaned, the low places filled and cultivation started. He rented a small house nearby in place of the one alley room in the slums. In a short time his health returned, his children grew strong and sturdy, and when autumn came the family were living comfortably and happily.

There is plenty of idle ground in every large city that could be secured for gardening purposes. There are also many idle people who will be glad to avail themselves of a chance to use it. A little intelligent direction is all that is needed to make the plan a success. It has been tried and tested thoroughly and found to be a practical and economical way of helping deserving people to help themselves.

SKIMMED MILK AS FOOD.

If you want and are determined to have clean milk, you stand a much better chance of getting it by using only bottled milk. You should be

careful, too, to get only milk that has been bottled in the country.

Milk that has been brought to the city in cans is much more likely to have come in contact with dirt than is milk that has been bottled at clean, well-conducted bottling plants in the country where the farmers have control of their cans and have them returned to them as soon as they have been emptied, thoroughly cleansed by sterilization.

This is why the can must go. This is why the large shippers of milk to the city markets some years ago began the bottling of milk in the country and close to the places where it is produced. Of course, it costs more to bottle and ship milk in this way than it does to ship it in bulk in cans, unless it is done on a very large scale. But concerns having plenty of capital are able to do it and still sell clean milk at the same price that is paid for milk that has been shipped in cans and that has been subjected to all kinds of chances for having become contaminated with dirt and filth from the time it left the farm until it reached the consumer.

The time is coming soon when there will be no

milk shipped in bulk for family consumption. Neither will people buy milk that has been bottled in the city unless the dealer can show that his plant is clean and the milk has been bottled under conditions approved by the health authorities.

Dirty milk is far more harmful than is even so-called poor milk, that is, more harmful than skimmed milk, which is both nutritious and healthful. As a matter of fact, it is known that the butter fat in milk is of small value compared with the other solids it contains. Many people think that when the cream has been skimmed off, the milk that is left has little or no food value. This is not true. On the contrary, milk that has been skimmed is only a trifle less valuable as food than is whole milk.

An authority on this subject has this to say as to the food value of skimmed milk: "A quart of skimmed milk that can be bought on the market for three cents has the food value of a pound of steak that costs from twelve to thirty cents, according to the cut. The part that is left in milk after it has been skimmed is the same that forms the body of cheese—the casein. The only dif-

ference is that the casein of the milk is in a better form for digestion than it is in the cheese."

The same writer also adds that a man can perform the heaviest kind of labor on a ration of skimmed milk and five ounces of bread three times a day; and that he can keep it up for months.

So it will be seen that, from these facts, skimmed milk is not worthless as food by any means. And, as the writer we have already quoted says, "It would be hard on the pigs, perhaps, but good for the children if people were to learn more of its value."

CONCERNING FRESH AIR.

This is a little talk on air. It will tell you some things that are worth remembering. Nothing is more common than fresh air. Nature has provided it in abundance for all who will take it. A noted doctor says: "There is no one thing so potent to prevent disease, so effective in maintaining a healthy action of the whole body, so powerful to heal sickness, as fresh air. We all need it, we all have to have it whether sick or well; and the more sick we are, the more fresh air

we need. Nothing stimulates the heart better than a current of fresh air upon the face. It reddens the blood, improves the secretions, aids digestion and meets most of the things needed in the treatment of consumption and pneumonia. Bad air causes diseases. Consumption, pneumonia, bronchitis and catarrh are bad-air diseases. In warm, pleasant weather, when people are out of doors most of the time and have their homes and work places open for the admission of plenty of fresh air, there is little of pneumonia.

But when cold weather comes on and the windows and doors are kept closed, then the death rate from pneumonia is frightful. Bad air is the cause of colds. People who get plenty of fresh air seldom have colds.

Sewage flowing into pure water pollutes it. So the air we exhale from our lungs pollutes the air in the room. Put only ten drops of ink into a glass of clear, pure water, and it will color it so that you would not care to drink it. But put in fifty drops, and shake it up and you would not drink it at all. This will give you an idea of how the impure air from the lungs of any number of people in a room mixes with the pure air, and

makes it dangerous and unfit for breathing. There must be a supply of fresh air constantly coming in to take the place of the foul air which in all cases should be permitted to escape near the top of the room.

It is a law of nature that air is always in motion, and because this is true, we have only to lower our windows a little from the top and to raise them a little from the bottom, and the processes of ventilation will go on without our thought or care.

It is impossible to estimate the amount of misery, suffering, disease and death caused by impure air. If you would escape pneumonia and consumption see to it that you get at all times a plentiful supply of fresh air. It is free. It is your right to have it. It is the best thing you can get to keep well.

PREVENTION COUNTS.

Nothing is truer than the old saying "An ounce of prevention is worth a pound of cure." And when applied to disease, it becomes a golden text of Health Gospel; a text that cannot be too often quoted or too often preached from.

It is only in recent years, however, that the real value of prevention, as applied to many diseases are caused by germs has made it possible, of the fact that the dangerous contagious diseases are caused by germs, has made it possible, The discovery of the fact that the dangerous contagious diseases are caused by germs, has made it possible for us to find the means for their prevention. We have learned that fresh air and sunshine are the deadly foes of germ life. We know that dirt, filth and darkness are the conditions most favorable to its growth and development. We know that contagion is spread by the mingling together of the sick and the well. And knowing these few simple, yet basic, facts helps us wonderfully in our efforts to keep well.

About ten years ago it was discovered that a certain species of mosquito transmitted yellow fever. Preventive methods were at once vigorously applied, and with the result that this dreaded scourge to human life has practically been wiped out of existence in the United States.

One hundred years ago there was scarcely a woman in London whose face was not scarred with smallpox, and every year this terrible dis-

ease numbered its victims by thousands. Today, thanks to vaccination, it is unknown in epidemic form and the few cases we have are only those of persons too ignorant or careless to have themselves protected by being vaccinated. Before vaccination was discovered and practiced as it is today smallpox killed more soldiers in the army of Europe than were killed by bullets. Today in the armies of the old world this disease is unknown.

So, you see, prevention pays and pays big. Money spent along these lines pays better returns than any other form of investment. If there is any knowledge that we should be eager and glad to get, it is the knowledge of how to prevent disease and how to keep well.

WHAT DO YOU EAT FOR LUNCHEON?

What do you eat for your noonday lunch? Do you select it for the good it will do you, or because it appeals to your taste? And, do you take time to chew it properly?

Thousands are compelled to depend upon the lunch room for their mid-day meal. The restaurant may be good, bad or indifferent, but

no matter how bad the food may be, there is always some room for selection. If people would only choose with discretion the food which makes the needed energy for their daily work, how many outraged stomachs would gratefully respond and do their duty well instead of making life a burden to the foolish ones who eat whatever they think "tastes good."

Wholesome, nourishing food is what is needed. Milk, eggs, rare beef, soups, vegetables and fruits,—all take their place in favor of the worker, as against the soggy pastry, poor coffee, worse tea and the countless other "bakery" lunches offered to the public.

And if we are tired, have had a hurried, busy morning, it is well to rest a few moments before giving an already tired system more work to do in the labor of digesting a meal. Far better at such a time would it be to do without, instead of eating hurriedly.

Those mothers whose children cannot return from school for a simple home-cooked meal should investigate conditions around the schoolhouse, and insist that the children be given nothing that is not nourishing and good. The

safer way is to give them a little luncheon to carry from home, than to allow them to ruin health and future strength and vitality by poorly cooked, indigestible food, or quantities of pastry and candy,—stuffs that are now so easily procured at the stores and lunch rooms near the school-house.

KEEP THEM OUT.

When the cool autumn days come on flies are, if anything, more of a nuisance and more dangerous than they are during very warm weather.

As the weather grows cool you will notice them hanging in swarms about the doors and eager to get in out of the cold. But as they are also stupid and sluggish, they are more easily killed.

A good plan is to brush them down with a broom or swat them with a folded newspaper. But be very careful to keep them out of the house. All summer long they have lived out of doors on all kinds of filth. Now they would get in and feast from your good things and at the same time leave the germs of disease on everything they touch.

GOOD AIR IN THE LODGE HALL.

It is doubtless true that nearly every male reader of this publication is a member of some one or more of the fraternal organizations. To these we have a suggestion to offer as to badly ventilated lodge halls.

It is very important that all places of public assembly be well ventilated. Even a few persons in a room will soon poison the air and render it unfit to breathe unless there is proper ventilation. Some lodge rooms are very poorly ventilated. Janitors in charge of places of this kind should see to it that they are thoroughly aired out after each meeting.

And you as members should insist on having windows lowered a little from the top and raised a little from the bottom while your lodges are in session. This will insure you a supply of fresh air and also provide means for the escape of dirty, dangerous air.

SAVE YOUR EYES.

To lose your eyesight would be a terrible misfortune. For one to be compelled to go through

life in darkness is an affliction almost unbearable. And yet the average person is both careless and ignorant in the important matter of care of the eyes.

A few generations ago, schools, especially in the small towns and the country, were in session only three to four months of the year. Now, the children of the land are in school six to ten months each year.

This means a largely increased strain on their eyes. Last year, 1909, the Department of Health of Chicago examined 123,897 school children for the many minor defects that children are afflicted with. The Department inspectors found that 21,824 school children had defective eyesight or impaired vision.

Now, many of these cases had been caused by improper use of the eyes. In most of the schools the children are taught how to hold their books while reading. Also how the light should fall on the book or on the work which the pupil is doing, so as to save the eyes from needless strain.

If possible, the light should be behind you, and fall over the left shoulder. One should never read in a dim or fading light. A few minutes'

use of the eyes in a light that overtaxes or strains them may cause serious and permanent injury.

The child who is attending school and is troubled with headaches needs medical attention. The headaches may be and often are due to bad air; but just as often are due to eye-strain caused by bad light or defective vision. If the latter, the oculist should be consulted at once.

THREE IMPORTANT FACTS.

Here are three important facts:

FACT NUMBER ONE: Consumption is caused by a very small germ, visible only under the miscroscope. These germs are found in the spittle of persons who have the disease, and are raised from the lungs whenever the patient coughs.

FACT NUMBER TWO: Consumption is spread by people who have the disease when they are careless about spitting; when they cough or sneeze in the presence of others without holding a handkerchief to the face; when they handle articles that may be used by others, such as drinking cups or eating utensils. It is also carried by

flies that have had access to the sputa of careless spitters.

FACT NUMBER THREE: People who are well and strong and who live out of doors as much as possible and who sleep in bedrooms with the windows open are not at all likely to get consumption. Fresh air and PLENTY of it all the time, together with sunshine, nourishing food and rest, are the agencies that cure consumption if taken in time. This might be called "Fact Number Four;" but let it go in as part of Fact Number Three.

Now read these over carefully and see if you can repeat the substance of them. If you can, try to remember them, so that you may be able to tell others. It is in this way that good information may be easily spread throughout a whole community, and so on through a number of communities, until thousands of people are put in possession of knowledge that is of great value to them.

Let us all help to spread that kind of knowledge.

MORE HOT WEATHER HINTS.

It pays to keep clean all the time; but it is of especial importance during the hot weather months.

How about the back yard? Is it clean and tidy and free from material that breeds flies and disease?

If you have not yet put in your screens, do it at once. Flies are dangerous. Keep them out of the house at any cost.

Hot weather is hard on the babies for the reason that unless great care is taken, the food becomes bad and bad food kills the babies. So, indirectly, hot weather kills the babies. And it is only by being very careful in caring for the food that the lives of the babies can be saved.

Don't overfeed the baby. It is not always hunger that makes the baby cry. Often it is thirst or tight, uncomfortable clothing. Dress the baby in light, loose clothing. In hot weather, binder and napkin are sufficient both for comfort and health. Give the baby a drink of water (which should be first boiled and cooled) but not with ice in it. Babies should have water same as big folks.

Don't over-eat during the hot weather. Cut out meats, gravies and the heat-producing foods, and live on fruits, vegetables, milk, eggs and the cereal foods. Stay out doors all you can. Drink lots of water. Beer and alcoholic drinks are highly dangerous as hot-weather drinks. Buttermilk is better, as it is both refreshing and nourishing.

PUBLIC DRINKING CUPS.

Public drinking cups are dangerous. They are recognized by all sanitarians as excellent mediums of transmitting the germs of disease.

Especially is this true in public and parochial schools where a large number of children are compelled to use the same cups. Statistics tell us that about one person out of sixty has tuberculosis; and among school children there are always those who have some of the communicable diseases in light form, and these are communicated, without doubt, by the use of the common cup.

So fully is this now understood that several states of the Union have passed laws abolishing the public drinking cup, and compelling rail-

roads and public carriers to supply individual cups. The use of individual cups has also been advocated in public and parochial schools. It is doubtful, however, whether this would prove practicable. The better and safer plan, no doubt, would be the installation of what is known as "bubbling" cups with the water flowing over the rims all the time. Such cups would be safe and sanitary and it is doubtful that it would involve very much more waste of water than the present dangerous common cup.

A cup which had been used in a high school for several months without having been washed, was lined inside with a thick, brownish deposit. How often have you seen drinking cups in similar condition? Under the microscope, this proved to be composed of particles of mud, thousands of bits of dead skin, and millions of bacteria. Some of this sediment was injected under the skin of a healthy guinea pig and 40 hours later the pig died. An examination afterward showed that pneumonia germs had killed the pig. A second guinea pig was inoculated with some of the sediment from the same cup and developed tuberculosis. Careful inquiry showed that several

pupils in this school from which the cup was taken were then suffering from consumption.

The people should start an agitation, asking their school board to install the "bubbling" cups in all public schools. If this were done, it would be a long step toward the prevention of disease.

WASH YOUR HANDS.

Wash your hands!

Wash them often!

When we remember that every bit of food we eat is handled by human hands, we can better understand how important it is that hands should be clean.

Some dirty hands are clean and some clean hands are dirty and dangerously dirty. This means that some kinds of dirt are harmless and others are not. Most often it is the invisible dirt that is dangerous to both life and health.

The farmer's hands may be grimy and dirty from the soil of the farm; the plasterer's hands may be covered with lime and mortar; but in neither case would the dirt be very dangerous.

The germs of disease are everywhere. It is believed by sanitarians that unclean hands

spread more typhoid than is carried by flies. Thousands of cases of this terrible disease have been traced directly to cooks, cooks' helpers, bakers, dairy people and those who have handled or prepared food with unclean hands,—hands that were polluted with the germs of typhoid.

Scientists tell us that if a dozen men and women only dip their hands into a basin of water upon examination it will be found to be swarming with colon bacilli. And these average hands are those that handle our bread, our meat, our fruit, our pastry, and in fact everything we eat and drink.

Many persons continue to be carriers of typhoid for years after they have themselves recovered from the disease. A noted physician tells us of a case where a mother had successively infected thirteen members of her own family with typhoid after her own recovery, and that for 31 years she was still a carrier of the disease. And then he adds, "Plain, common sense can do nothing but trace it through her dirty hands to the food she cooked and served."

It has been demonstrated that 78 germs of typhoid placed in fresh milk became 60,000 in 24

hours, 10,300,000 in 48 hours and 480,000,000 in seven days. This shows us how easy it is to infect milk or food of almost any kind with dirty hands. So, too, we can and do poison our own food when we fail to thoroughly wash our hands before each meal, and because this is true, we should wash our hands OFTEN and wash them CLEAN.

KEEPING CLEAN.

Dirt and filth mean disease and death. Cleanliness means health. We know this is true. We know also that in order to keep clean and to have clean, healthful surroundings, we have to fight dirt all the time.

The trouble is that dirt is always gathering and piling up, it seems of its own accord. Cleanliness does not.

We may clean up the back yard and have the place neat and tidy as a new pin; but almost before we know it the rubbish has gathered again and another clean-up is needed.

Filth attracts flies and furnishes them breeding places. Flies, as we know, carry the germs of disease on their feet. Because this is true, we

should never cease keeping clean. Every day should be cleaning day. If this is done, it makes the work of keeping clean easy.

Don't let dirt of any kind accumulate. Set a good example to your neighbors by keeping your own premises neat and attractive.

If you have a neighbor that won't keep his place clean, tell your Health officers about it.

HOT WEATHER CARE OF INFANTS AND YOUNG CHILDREN

(By Dr. FRANK W. REILLY)

Note—The following reprint of a circular issued by the Chicago Department of Health, "Hot Weather Care of Infants and Young Children," was first prepared by the late Doctor Frank W. Reilly, then Assistant Commissioner of Health, in 1895. It has been printed in French, Italian, Swedish, German, Bohemian, Polish, Lithuanian, Yiddish, and English every year since and is now in the fourteenth edition. It is safe to say that at least one million copies of this excellent little folder have been printed and circulated in Chicago alone; while in both form and substance it has been adopted by health officials throughout the United States. It is also an eloquent and forceful testimonial to the worth and ability of its author, who in his life-time was known as "Chicago's Most Useful Citizen."

This circular was first issued in June, 1895. During the previous twelve years there had been 106,524 deaths of infants and children under 5 years of age in Chicago. During the following twelve years there were only 101,802 such deaths.

Had the death rate of the earlier period been maintained during the later twelve years, there would have been 205,920 deaths among children under five years of age, whereas only 101,802 actually occurred.

Taken in connection with the increased population—nearly doubled in the twelve years—this reduced death rate means, therefore, a saving of 104,118 lives at this period.

CARE OF INFANTS

ABOUT ONE-QUARTER of the total yearly deaths of infants and young children in big cities occur in the two hottest months of the year—July and August.

Heat kills off babies and young children largely because it spoils their milk and other food quickly. Even breast milk, when the mother is overheated, may give the baby colic or "summer complaint." If a mother is very hot she should draw a teaspoonful or so from the breast before nursing her baby. If the breast has not been given for two hours or more it should be drawn off in the same way. And if the mother has been badly frightened or very angry or excited, it is not safe so give the breast at all; it should be drawn and the milk thrown away.

THE PROPER FOOD FOR BABIES IS MOTHER'S MILK.—No sensible mother needs advice on this point. If she is fairly healthy her breast will give all the nourishment the child should have until it begins to cut its teeth—the sixth or eighth month. Up to this time it is a sin to give an infant one morsel of solid food of any kind, or anything but breast milk (if the mother is healthy) except water in moderate quantity occasionally, but never soon after nursing.

Many infants are killed every year by bringing them to the table with the family and giving them a little bit

of this, that and the other—meat, vegetables, pie, pickles, etc., which the little stomach is not fitted for. They are killed just as surely, though not so quickly, as if they had been fed poison out of a drug store.

When the baby that is fed this way sickens and dies it is said that the baby died of "diarrhoea," or "dysentery," or "cholera infantum," or "summer complaint," or "teething," or "convulsions," or "brain fever."

But these are only names for the result of poisoning with unfit food.

Wait till the baby gets its teeth before you put food into its mouth that needs to be chewed.

IF THE BREAST MILK GIVES OUT, or becomes thin and watery, or if the mother has consumption or any other long-standing sickness, the baby must be put on the bottle and fed with cow's milk.

As soon as the milk is received take what is to be used for the baby and "scald" it. Don't let it boil.

A good way is to set a pan of cold water on the stove and put the vessel containing baby's milk into this pan; just as soon as the water comes to a boil take it of. This amounts to what is called "sterilizing" or "pasteurizing" the milk.

If the milk was sweet and hadn't begun to "turn" when it was received it will keep sweet for twenty-four hours or more after being treated this way, even in hot weather. But, of course, it should be kept in a close covered vessel or fruit jar or stoppered bottle.

Whatever it is kept in should be thoroughly scalded—cover, stopper and all—just before the milk is put in.

If you have an ice-box or refrigerator to put the milk in, or can in any other way keep it from "turning," it is better to let it stand for about six hours and then pour off the upper half for the baby's milk. This should then be "scalded." If you can't do this, a little cream should be added to the baby's milk—say one tablespoonful of cream to two or three of the milk.

To make this nearly like breast milk add two cups of water that has been boiled to each cup of milk and enough white sugar to make it as sweet as breast milk.

(Milk sugar, if perfectly pure, is better than white or cane sugar.)

If this mixture is too rich the baby will throw it up in curds or lumps, or it will pass through the bowels in white flakes and shreds. If this happens add more boiled water to the mixture until you find just what strength the baby's stomach will stand—what it can digest.

WHEN THE BABY IS ABOUT A MONTH OLD, barley water should be used instead of plain water. Put two tablespoonfuls of pearl barley in four cups of cold water; boil an hour or more—down to two cups; strain through a close cloth; add a pinch of salt and sweeten to breast milk taste. Add this to a cup of "scalded" cow's milk treated as before described and begin feeding this strength.

Gradually use more milk and less barley water, un-

til at about six months of age the child is getting two-thirds milk and one-third barley water.

Next to healthy breast milk this will make as good food as the infant can get during teething and weaning. Then comes the pure milk—always "scalded"—bread and milk, baked potato and milk, oatmeal porridge—which can't be boiled too long, never less than two hours—and always eaten with milk, and the milk always "scalded," not boiled.

DON'T OVERFEED THE BABY.—Once in two or three hours is often enough to suckle or feed a baby until it is four or five weeks old; after that do not feed so often.

When a baby is about six months old it will generally thrive best if fed only once during the night and four or five times regularly during the day. It is bad for a baby's stomach and bowels to feed it too often or too much at a time—especially in hot weather.

A new-born baby's stomach will hold from two to three tablespoonfuls, and not more than this amount—rather less—should be given at a time during the first week or so of a bottle-fed baby's life.

As the baby grows the quantity should be gradually increased, so that at the end of the first month it may be taking about four tablespoonfuls at a meal. Some children will require more and others will not stand so much—but there is more danger of giving too much at a time than too little.

DON'T STICK THE NIPPLE IN THE BABY'S MOUTH EVERY TIME IT CRIES.—If the baby is properly fed at regular times it won't get hungry enough to make it cry, and it is foolish to feed it whenever it cries instead of trying to find out the trouble. It may be only thirsty and a swallow or two of cold water—not a big drink—will stop it; or its clothes may be uncomfortable, or its napkin need changing.

Try to find out what makes it cry, and then use "mother wit." And don't be afraid of giving the baby a drink of water. It needs water as much as milk. It needs more water in proportion to its size and weight, and oftener, than its mother does. Thirst causes more needless suffering to babies than anything else. Give the baby a drink!—but be sure the water is pure, by having been either boiled or filtered.

DON'T FEED THE BABY WITH A SPOON.—Sucking is the natural way that a baby takes its food. It needs the sucking action of the lips and mouth and tongue to mix its food with the fluids of the mouth and to keep it from getting into the stomach too fast.

Spoon feeding doesn't do this.

USE A PLAIN COMMON BOTTLE FOR FEEDING, with a rubber nipple and no tube.

Fancy nursing bottles, with long rubber tubes and patent contrivances, besides costing money, can't be cleaned easily, and babies don't do well with them in other ways. The more simple the bottle and the nip-

ple, the better for the baby. The rubber-tube bottle is a device of the Evil One for lazy mothers. It's bad enough when a mother can't suckle her own infant at her own breast; let her at least take it in her arms and hold the bottle and "mother" it while it feeds.

Take the nipple off after each feeding and at once boil both bottle and nipple for at least ten minutes. Before using again rinse the bottle and nipple in water that has been boiled—about a quart of water with half a teaspoonful of soda in it; or keep them in a pan of soda and water when not in use.

More babies get "sore mouth" and "wind colic" and "summer complaint," for want of care of the nursing bottle than from any other one cause. A little stale milk around the neck of the bottle or in the nipple will set up a ferment which is poison to the delicate lining of a baby's mouth and throat and stomach.

Keep flies away from baby's food—flies are frequently conveyors of disease germs.

Of course the baby's bottle food should be warm—about the same as breast milk, or "blood heat;" that is, as warm as the inside of the mouth.

KEEP THE BABY CLEAN AND IT WILL STAND THE HEAT BETTER.—When the thermometer is at eighty or ninety in the shade it isn't easy to keep the baby cool. But it can always be kept clean and will then be more comfortable and have a better chance of living through the hot weather. It should have at least one full bath every day and oftener

during extreme heat. Never bathe within one hour after feeding it. Bathe first; feed afterwards.

Dress as lightly as possible. It will be better stark naked—except for a napkin and binder—some hours a day during the hot weather when indoors. But keep it in the open air, out of the hot sun, as much as you can between sunrise and sunset. The outdoor air, even of a dirty street, is fresher and better than the air in the house.

Fresh air is the breath of life in a baby's nostrils. Take it or send it to the parks, or open squares, or the lake shore as often as you can.

In the changeable summer climate of Chicago, care must be taken against sudden chilling. A thin soft flannel binder, wound two or three times around the body will do more to guard against this chilling than the ordinary full dress of frock, vest, skirts, drawers, socks, etc.

This binder should be only wide enough to cover the belly, an inch or so above the navel and a couple of inches below. It should be wound smooth and free from creases or folds, and fitted with a few stitches of soft darning cotton—not pins.

This binder and a napkin are all the dress a baby needs during the heat of the day in the house in summer.

DO NOT LET THE BABY SLEEP IN THE SAME BED WITH ANY OTHER PERSON.—If there is no crib, the mother should put a couple of

chairs at her bedside, with any sort of soft covering on them—not feather pillows or hot woolen stuffs—and let the baby sleep there. It will be more comfortable on a summer night than lying against the hot body of its mother, and will not be so apt to disturb or be disturbed.

The backs of the chairs will keep the baby from falling, and the mother can readily reach over to care for it when necessary.

Screen the baby's bed so that flies cannot annoy and possibly infect it while asleep.

DO NOT DRUG THE BABY.—If after all your care the baby should fall sick, do not "pour drugs of which you know nothing into a body of which you know less."

There is no mother in the city of Chicago that cannot get the best of medical treatment for her sick baby without money and without price, if she is unable to pay. Call a doctor instead of spending money for patent medicines, "soothing syrups" or "cure-alls," which will probably do your baby more harm than good.

Although this advice is more directly for babies during the first year of life, the sense of it applies quite as well to older children.

Don't overfeed them, and don't let them overfeed themselves.

Don't give them rich food—meats, gravies, pastries, cakes, etc.—nor a great variety. The simpler and

plainer the better—plenty of milk, whole wheat bread, oatmetn, baked potatoes, baked apples and fresh fruit of all kinds, in season, but be sure the fruit is ripe and fresh. Roasts and stews and made dishes and—pie will come soon enough and so will dyspepsia.

Keep up the daily full bath until it becomes a fixed habit.

Keep them out in the open air as much as possible the whole year round, and send them into the country whenever you can do so, but only to places where the water is pure.

If a baby or child is worth having it's worth saving, and more than half of the babies and young children that die in Chicago every year could be saved, by following the advice here given.