

The Importance of Personal Hygiene.

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Outline.

Introduction.

A bit of history.

Promoters of Health.

1. Good fresh air.

Composition - impurities.

Method to obtain fresh air.

Ventilation.

2. Cleanliness of public buildings.

Sweeping, dusting, and disinfecting.

3. Care in handling wool, hides, rags, old papers.

4. Care in factories as to poisonous gases and mineral dust.

5. Baking - kinds.

6. Disinfection in case of sickness.

7. Disposal of sewerage.

The need of more and better hygienic laws.

The moral application of hygiene.

The Importance of Personal Hygiene.

The question of personal hygiene has, in late years, become one of very great importance, especially among the more cultured people. We have passed the age when people can be "dragoned into cleanliness", or be "made virtuous by police regulations." The way to spread sanitary science is to educate the masses.

It was a part of the Jewish Code to care properly for the body. The Greeks also took good care of their bodies. Yet they knew little of the causes of disease, and the same is true of the Romans. Today, the great problem of health and disease is to know the causes of disease, so as to promote the former and prevent the latter.

In the Middle Ages, our forefathers lived in very unsanitary conditions. They very seldom changed their clothing; their diet was coarse; they used much ale; and their houses were very

filthy. As a result, there was much sickness. However, they thought it could not be helped — it was supernatural. The large number of deaths is shown by accounts of the Black Death and the Sweating Sickness about the 14th Century. In the 17th Century, people began to think more of the cleanliness of themselves and of their homes. It is said that the London fire wonderfully advanced the sanitary condition of that city, for it swept away all the dirt and filth, and in its place was built a clean city. The 18th Century saw still greater progress. The discovery of vaccination, by Dr. Jenner, made great advancement along this line. From the conditions of our forefathers, we see that the strictest rules of personal hygiene must be observed in order to prevent disease.

Good fresh air is one of the promoters of health. Air is composed of 20.19 parts of oxygen, 79 parts of nitrogen, .133 parts of carbon dioxide, and small parts of aqueous vapor and ammonia. The oxygen and

nitrogen are essential to the life of animals. Without oxygen, respiration would be impossible. It is also necessary to oxidize the food we take in. The nitrogen simply dilutes the oxygen; it alone could not support life, nor could oxygen alone. Ozone is present in the air in certain places. It promotes health indirectly by being deadly to micro-organisms. The carbon dioxide present in the air is very detrimental to man's health. By inhaling air in which there is .7 per 1,000 cu. ft., or more, headache and vertigo are produced. By inhaling even a small amount of carbon dioxide, it prevents sufficient exhaling of it, and in consequence insufficient oxygen is inhaled, and therefore oxidation is not carried on perfectly so as to eliminate sufficient waste matter.

Air is the vehicle of contagion; it contains poisonous vapors and bacteria. We now see the importance of preventing contamination by purifying the air. It also contains suspended organic matter and mineral impurities. It is this

organic matter, given off in the breath of human beings, that causes the foul odor in overcrowded rooms. The people living in such houses are generally in a low state of health. There are many different kinds of bacteria carried in the air. Carefully found, in houses that were called clean, 180 bacteria in 10 litres of air. In a dirty school room, with natural ventilation, he found nearly 2000 in the same volume of air.

Particles of every chemical constituent of the soil are carried by the winds into the air. It also contains debris from the vegetable world. The animal kingdom supplies germs of various kinds. The air also contains vapors from their decomposition. Air is also contaminated from marshes. From all these sources, proceed very harmful germs. The organic matter in the air is in the form of cell life, sometimes resembling the bacteria-form puncta. In sick rooms, it contains pus cells. Air containing such impurities hangs about the room like tobacco smoke. "It is now

admitted by all physiologists that the re-breathing of foetid matter thrown off by the skin and lungs produces a kind of putrescence in the blood in proportion to the amount inhaled, and to the period of exposure to its influence. Typhus fever comes from breathing bad air.

Ventilation is the means used to replace vitiated air of buildings by fresh air, yet indoor air can never be made as pure as outdoor air. The amount of fresh air supplied should be 3000 cu. ft. per head per hour. If the space is small, the removal of air should be much more frequent. Ventilating by opening the windows is not a good method - it produces too much of a draught. To prevent a draught the window may be so constructed that the top slants inward when opened. This produces an upward current of cold air, and then it descends from its own gravity. But a still better method of ventilation is by means of ventilating tubes. By this method the air can be exchanged without one noticing it, so far as draughts are

concerned. The air coming through these tubes should, if possible, be filtered to take out any particles of dust or organic matter it may contain. Such tubes collect dust, whether or not they contain a filter, and therefore should be cleaned often. In all houses, public or private, there should be such a means of ventilation.

In public buildings, such as theaters and churches, where one is under all sorts of conditions, near filthy people, consumptives, etc., and breath the air they exhale, taking into their system tuberculosis germs of some other dreadful disease, it is of the utmost importance to have a good system of ventilation. One can not take enough precaution when in large crowds; for it is by inhaling germs exhaled by diseased persons that some of the worst diseases are taken.

Cleanliness of all public buildings should be strongly enforced. When air is quiet, it falls to the ground, and the germs, contained in it, are entrapped by drapery or rough surfaces, draperies and carpets. They

may also attach themselves to the walls, and by careless dusting and sweeping, are thrown back into the air. The walls should be thoroughly dusted, once a week, with cloths that have been well cleaned and disinfected. Never use feather dusters; they only set the germs flying into the air. By so many people going into these buildings, dirt containing all sorts of disease germs is carried in; and by dry sweeping, and dusting with a feather duster, these germs are set to flying in the air. Damp sawdust should be sprinkled on the floor before sweeping.

Expectoration should be forbidden in all public places. The expectorations dry, form dust, and then rise in the air. In this way tuberculosis bacteria and bacteria causing other lung and throat troubles, are carried. All public cuspidors in public places should be thoroughly disinfected. We can now see the utmost importance of the sanitation of such places.

Great care should be taken by employees who handle wool, hides, rags, and old papers.

for many times they are not disinfected before taken from homes in which there has been disease. Those handling such infected articles should be very careful with their hands, as any cut or sore may afford an entrance for disease. Rubber gloves should be worn by workmen to ward off such danger.

The inhaling of poisonous gases or mineral dusts, by employees of certain factories, should be well guarded against. Chlorine and sulphurous acid occur in some bleaching occupations. Nitric acid, hydrochloric acid, and ammonia are some of the poisonous gases in connection with some manufacturing. They, at first, irritate the breathing surfaces and the eyes, then cause catarrhal troubles. Such dust that injures the lung tissue does not often carry germs of tuberculosis. Steel dust from steel works is often very cutting to the lung tissues. Mineral dust from dyes is very injurious. It tends to cause chronic catarrh of the lungs. Poisonous dust from arsenic and lead act upon the digestive

tract. The chief occupations liable to this danger are white lead manufactories and smelting factories. Severe colic and constipation are the first troubles; then paralysis of the extensive muscles. Workers in all these occupations should change their clothes before leaving the factory. If they carry their lunch, they should wash their hands and change their clothes before eating.

Bathing is one of the requisites in maintaining perfect health. Our clothing, in some degree, obstructs the healthy processes of the skin and prevents the casting off of scales. These impurities and scales can be removed only by bathing. The warm tub bath is the best. The cold bath can, in most cases, be used only by the strong and robust people. But those who can stand a cold bath should take one the first thing every morning. They should take a warm bath every evening before retiring. Cold baths should not be indulged in by people afflicted with heart trouble. Turkish baths are excellent for people

afflicted with kidney trouble. One can not lay too much stress on keeping the body in a clean healthy condition.

To arrest the spread of communicable diseases, disinfection is the principal method used. A disinfectant is something that kills the germs of the disease. When sickness prevails, even to a small extent, everything about the house should be disinfected, to prevent the spread of those diseases. This is accomplished in two ways — by heat and by chemicals. One method of applying heat is by fire, i.e. destroying by burning. In this way we get rid of old bedding, soiled bandages, infected books, and even the sputa of tuberculosis patients.

By dry heat, bundles of infected articles can be placed in the oven and the germs killed, by applying heat of about 100°C for $1\frac{1}{2}$ — $2\frac{1}{2}$ hours. But the most practicable method, and the one most used in the home is by steaming the articles that need disinfection. For this purpose, one can use a boiler containing boiling water with a

sort of steamer on top of it. Even mattresses, comforters, and pillows can be disinfected in this way, if taken apart.

All clothes that have been around a patient may be disinfected by dipping them into boiling water. If such clothes are taken to the laundry, they should be disinfected before taken. They should be carried from the sick room in wet bags, to prevent the dust, containing disease germs, from flying into the air.

Chemicals are also effective means of disinfecting. Sulphur burned in a sick room is a good means of disinfecting. Corrosive sublimate is excellent to use to disinfect bed clothing, to wash the walls of a sick room, or to wash the body before a surgical operation. A good disinfectant for rooms of an institution is a saturated solution of copperas water. In a room 40 by 20 ft., about three, 1 gallon pail of crockery containing such a solution is sufficient to keep the air pure. All public institutions should have a disinfecting chamber of some sort.

Before a case of infectious disease enters a room, all curtains, rugs, upholstered furniture, and such furnishings that will entrap disease germs, should be removed. The daily dusting and cleaning of a sick room should be done with cloths moistened in corrosive sublimate. A sheet wet with the same solution may be hung in front of the door to prevent any germs from escaping into other parts of the house. The drinking and eating utensils of the patient should be washed in boiling water, containing a little soda. When a case of scarlet fever or small pox has been in a room, it is best to scrape the walls, if papered, then wash them with sublimate, and repaper them.

Public health requires that there be a final disposal of sewerage in order to prevent contamination. Sewerage is the principal means of transferring bacteria of typhoid fever and Asiatic cholera. Until recently, sewerage was carried to a neighboring river. If that city is not

especially contaminated by it, other cities along its course are. Many times, the river is the only source of drinking water, and then we can see the terrible results of such thoughtlessness.

However, sewerage may be purified before turning into a stream. Precipitation is the most important method. By this means, the sewerage loses its organic matter, and bacteria. This coarse matter from filtration is used for manure. For many years, this has been done in Berlin, and it has shown that such irrigation has no odor, and does not cause disease. Sewerage is also purified by cremation. Large crematories are built for this purpose, the smoke being consumed so as to prevent offensive odors. This method has proven successful.

There is nothing quite so important to public health as the proper disposal of sewerage. As yet, we have not been able to have a perfect system of sewerage. But the time will come when the law

will demand this.

After discussion of all these points in personal hygiene, it fairly makes one quiver to think of the germs that might be in the air he is breathing. We are kept away from church because of the generally bad ventilation, and the fear of sitting near a consumptive or a person who does not bathe properly. Then we can surely say that it is of the utmost importance that personal hygiene be taught in every school in the land, and practised accordingly. It will not be many years before there will be masters of hygiene, and physicians who, instead of giving medicine, will give you strict hygienic rules to observe.

In order to keep the body in a healthy condition, strict hygienic rules should be observed. Without a healthy body, there can be no great mental powers, nor much morality. A person who is physically clean is more likely to be morally clean. Immorality is an abnormal con-

dition. Therefore when your body is in a normal condition, you have higher moral aims. There are three selves (if I may term it so) making up the person, that you should strive to make perfect. First, the bodily self. When the body is in a perfect condition, your mental faculties can easily be enlarged. With a healthy body and a good intellect, you can strive toward higher moral aims.