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SANITARY
AND
PREVENTIVE MEASURES,
DISINFECTANTS, AND HOW TO USE THEM.

WHAT MAY BE DONE BY THE PUBLIC
TO GUARD AGAINST
CONTAGIOUS OR INFECTIOUS DISEASES.

Issued by the Board of Health of Halifax, N. S., for the use and information of the Citizens.

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SANITARY AND PREVENTIVE MEASURES, &c.

The following sanitary and preventive measures, especially important at this season of the year, are published for the guidance of citizens in the management of their dwellings and for personal application —

Thorough ventilation of dwellings is essential to the health of the occupants. Fresh air is a most important means of promoting and sustaining the healthy action of the body. Personal cleanliness and cleanliness about dwellings and premises should be most scrupulously observed. A source of danger to health is the decomposition of organic matter in and about our houses. Cellars, drains, cesspools, outhouses, should be examined to see that they contain nothing to poison the air. Damp cellars are injurious to health. The foul and humid air from them will permeate the house, in spite of every effort to prevent it. A remedy should at once be instituted.

For the prevention of disease, a good nutritious diet and regular habits of life are indispensable; temperance in all things is to be observed; and avoidance of all excesses is strictly insisted upon. Constant vigilance is necessary to guard against the many causes which, during the spring and summer months, have a tendency to disturb the stomach and bowels, thereby depressing the nervous system and diminishing the power to resist disease.

To secure, as far as possible, a good sanitary condition of the city, information of all nuisances, of whatever character, whether public or private, should be reported without delay to the City Medical Officer, or to the Health Inspectors, at the Board of Works' office.

CLEANLINESS

The essential preventive of disease is cleanliness. Keep your houses, cellars, yards, vaults and sinks clean, whenever it can be done. Whitewash the walls of your houses, cellars, fences, outhouses, shops, factories, store-houses and every other place about your premises where dampness exists, and where mould or mildew forms. It keeps the walls dry, sweet and clean, and prevents the accumulation of moisture, which promotes putrefaction, giving rise to fungi, which are thought by many to be a specific cause of disease. Avoid all collection of coal ashes mixed with kitchen garbage, slops, stagnant water, and other semi-solid or liquid filth, anywhere about your premises. Sewers, house-drains, waste-pipes, and water-closets should be frequently flushed with water—let on the largest practical volume. Water closets and house drains should be flushed in this manner every day.

VENTILATION.

Your premises, particularly sleeping apartments and cellars, should be thoroughly ventilated. Ventilation is no less a purifier than water. It cleanses by oxidizing and drying. Keep your houses open, and your windows hoisted during the day in good weather, that they may have the full benefit of sun-light and a free circulation of air. Avoid the possibility of exposure to sudden changes of weather at night. When the weather is cool or rainy, be sure to keep a fire in the house in order to prevent dampness.

DISINFECTANTS.

These are equally important. They absorb impure exhalations, prevent decomposition, and destroy noxious gases; but in no instance should they be considered or employed as substitutes for a pure atmosphere, obtained by free ventilation. These are simply aids in restoring and preserving healthful purity, and not substitutes for cleanliness and pure air. They may be employed in rooms, yards, privies, vaults, sinks, water-closets, sick beds, bed-pans, stables, and in other places about your premises, or wherever practicable, when there are offensive odors emitted.

DISINFECTANTS, AND HOW TO USE THEM.

Quick-lime—This may be employed as a purifier, to act as a dryer in damp apartments, to absorb carbonic acid, and to assist in the oxidation of organic matters. It may be strewn as dry lime on the earth, or placed upon plates, or, better still, in the shape of whitewash upon the walls. In the latter form, the addition of a small quantity of carbolic acid adds to its efficiency.

Charcoal is a powerful oxidizing agent. It may be used as a deodorant and disinfectant. It should be freely strewn on the floors of cellars, and all places which may be damp and mouldy. It should always be used in a crushed and fresh state.

Carbolic Acid serves an excellent purpose as a disinfectant. Being very strong it should be considerably diluted with water. A wineglassful (two ounces) of the pure liquid, well mixed with a quart of warm water, for use in night vessels, sinks, water closets, or for wetting a sheet to hang in the door way of the sick chamber. Half a wineglassful to one quart of water for washing furniture, walls, &c. One pint of strong carbolic acid to five gallons of warm water, should be occasionally poured into sinks and drains leading into sewers. One ounce of the crystals mixed with four pounds of slaked lime forms a good powder for covering over offensive heaps of filth or refuse that it is impossible or inexpedient to remove.

Carbolic Acid Soap—For the hands.

Sulphate of Iron, Sulphate of Zinc, Sulphate of Copper, Common Alum and Nitrate of Lead are useful disinfectants to destroy living organisms, and to neutralize offensive miasms. To use them, dissolve one or two pounds of the substance in a gallon of water, and throw the solution into the offensive mass. *Sulphate of Iron* is the cheapest of these substances. Eight or ten pounds of it dissolved in five or six gallons of warm water, with or without one pint of crude carbolic acid added, makes the *cheapest and best disinfecting fluid for common use* in privies, water-closets, drains and sewers.

Chloride of Lime.—This substance may be employed as the most convenient and available source of chlorine. Exposed in an open dish, or strewn upon the floor, it will

slowly emit chlorine, and may be made more copiously to yield it by the addition of a little vinegar. For the purpose of correcting offensive matters, and for utensils, sinks, water closets, drains, &c., it may be mixed with water in proportion of one pound to one gallon. It is estimated that one pound of good chloride of lime will, on the average, disinfect, for the time, about a thousand gallons of liquid sewage.

Permanganate of Potassium.—This substance does not exert much influence upon living substances, but is very powerful in disinfecting dead organic matter. It is, therefore, not so useful in the sick room as some other articles. The property of attacking dead and decaying organic matter makes it a valuable purifier of drinking water. Make a solution of the salt as strong as water will dissolve, then add to this strong solution from ten to five hundred parts of water, according to the requirements of the occasion. Linen should be thoroughly immersed in it, and then speedily rinsed out in cold water to avoid staining. It is among the neatest and most effectual of the disinfecting liquids, and can be used in smaller quantities than most others.

Fumigation with Sulphur is an excellent method of purification. Place the sulphur in an iron dish supported upon bricks, placed in a wash-tub containing a little water; set it on fire by hot coals, or with the aid of a spoonful of alcohol. All doors, windows, and other openings should be closed, and allowed to remain so about twenty-four hours. After this the room should be well aired for several days. About two pounds of sulphur will be required for a room ten feet square. The amount should be increased for larger rooms in the same proportion.

Heat.—Boiling water or steam may be employed as the most certain means of disinfecting contaminated clothing, &c. Hot air is a good disinfectant, but the temperature must be from 210° to 250° Fahr., and applied at least one hour to be effective, to disinfect wearing apparel, bedding, &c.

Before the emptying of privies or cesspools, the contents should be disinfecting. For effective disinfection, a solution of two pounds of sulphate of iron (copperas), in a gallon of water, or of one pint of a liquid chloride

of zinc in a gallon of water (to each of which two ounces of strong Carbolic Acid has been added), should be used, in the proportion of one pint to each cubic foot of contents. After thorough disinfection, a quantity of either of these solutions should be poured down daily, to keep the cess-pits in good condition. Chloride of Lime may also be used.

PERSONAL DUTIES.

Observe strict cleanliness in your person and clothing.

Bathe daily, during the summer, if you have the convenience; if not, wash freely with cold water every day

Change your undergarments as frequently as your circumstances will admit.

Be moral, regular in your habits of life, meals, exercise and sleep.

Be careful to dress comfortably for the season, avoid the night air as much as possible, and when thus exposed, put on an extra garment and do not go into the night air when in a state of perspiration.

Be careful to avoid the use of alcoholic drinks. Do not suppose that their use will prevent the occurrence of disease. On the other hand, those who indulge in the custom are always fair subjects of disease, and when attacked, the intemperate are particularly in a condition to offer feeble resistance.

Live temperately, live regularly, avoid all excesses in eating crude, raw and indigestible food. Take your meals at regular seasons, neither abstaining too long at a time, nor indulging too frequently. An overloaded stomach is as much to be dreaded as an empty one.

During the prevalence of cholera, dysentery, &c., do not neglect even the slightest diarrhoea, no matter how painless at first.

While the health of the community depends in great degree, upon a rigid observance by officials of all the laws of public hygiene, it is no less dependent upon the faithful application of the principles of hygiene upon the part of individuals, and it will be a satisfaction to citizens to

know, that whatever labour and expense may be incurred in improving the condition of their dwellings will not be lost should no epidemic reach us, for the very means that are most efficient in affording protection against the preventable causes of epidemic disease are most applicable and reliable against the propagation of disease in general.

The following suggestions are offered for the purpose of more widely extending the knowledge of a few well attested facts concerning the treatment of contagious sickness and to remind all persons that greater care should be exercised to prevent the spread of these much dreaded diseases.

CARE OF THE SICK.

When a case of contagious or infectious sickness occurs in any family, the sick person should be placed in a room, apart from the other inmates of the house, and should be nursed as far as possible by one person only. The sick chamber should be well warmed, exposed to sunlight and well aired. Its furniture should be such as will permit of cleansing without injury, and all extra articles, such as window and table drapery, woolen carpets, upholstered furniture, and all hangings should be removed from the room, during the sickness. The physician and nurse, as a rule, should be the only persons admitted to the room.

Visitors to the infected house should be warned of the presence of disease therein and children especially should not be admitted.

Children in the family should not attend school nor mingle with other children until the patient has wholly recovered, and all infected articles have been disinfected.

To disinfect the clothing or bedding defiled in any manner by the excrement of the sick, throw them into a solution made by dissolving together one pound of the Sulphate of Zinc, and one-half pound of salt in four gallons of water, to which add two ounces of pure Carbohc Acid. Suffer them to remain therein at least half an hour; then immediately place them in boiling water and continue

boiling. The above solution is useful for bed pans, chamber vessels, and for soiled floors and defiled places.

The evacuations should be received *at their very issue from the body* in a vessel containing about half a pint of either the above or one of the following solutions.

A solution of four ounces of strong Carbolic Acid in a gallon of warm water.

A solution of one quart of Chloride of Zinc in three quarts of water.

A solution of two pounds of sulphate of iron (green copperas) in a gallon of water.

When death occurs, the body should be immediately placed in the coffin, with disinfectants and the coffin *tightly* and *finally* closed.

The funeral should be as private as possible, and the corpse should not be exposed to view.

CONCERNING SPECIAL DISEASES

CHOLERA,

Diarrhoea and other disturbances of the stomach and bowels, frequently precede an attack of cholera, and place the person in the most dangerous condition for the reception of the cholera poison.

The exciting causes of this condition are overloading the stomach, taking large draughts of cold water, eating tainted and unwholesome meats, over-ripe or under-ripe fruits and vegetables, the intemperate use of spirituous liquors, excessive exertion in the heat of the day, much exposure in the night air, sitting in currents of air and sleeping without sufficient covering, especially between midnight and morning.

The early symptoms of the disease are sudden looseness of the bowels, the discharges becoming copious, watery and whitish, oppression, dizziness, nausea, vomiting and cramps in stomach and legs. Ordinary diarrhoea in times of Cholera epidemic, should not be neglected, and when

the above symptoms appear, medical aid should be summoned immediately, as it is in this early stage that medical treatment is of greatest use. While waiting for the physician, put the patient in bed and make hot applications to feet, legs and bowels.

There are strong reasons for believing that the cholera poison resides in the bowel discharges of the sufferer, and that the disease is communicated to others, not through the atmosphere, as is the case with small-pox, scarlet-fever and measles, but by this poison reaching the stomach and bowels through the drinking-water or food.

It is not, therefore, necessary or wise to flee from cholera sufferers, who, if properly cared for, need not communicate the disease to others.

SMALL-POX.

Vaccination is one of the best means of preventing the attack of small-pox. Every child should be vaccinated within three months after its birth, and any parents or persons having charge of infants, and not having them vaccinated are guilty of an offence which, in some countries, makes them liable to prosecution and fines.

All persons should be re-vaccinated after twelve years of age.

Nurses should always be selected from those who are themselves protected from small-pox, either by having had the disease, or by having been thoroughly vaccinated.

Where small-pox prevails in a family or neighborhood, every person should be immediately re-vaccinated under the direction of a legally qualified medical practitioner.

Small-pox is supposed to be most dangerous during convalescence, therefore, every small-pox patient, should be strictly secluded during the whole progress of the disease, as well as during convalescence from it and until all power of infecting others is past.

TYPHOID FEVER.

Typhoid fever, according to the most reliable authority may be contracted by infection or contagion. It is also supposed to be induced by the emanations from decayed

animal and vegetable substance, foul drains and other sources of filth. The discharges from the bowels of the typhoid patient are supposed to be the source of the greatest danger, and may infect the atmosphere of the sick chamber, the drain, cesspool, vault, or by filtration may infect the well, cistern or other source of drinking water, and produce the disease in other persons.

SCARLET-FEVER.

Scarlet-fever is like small-pox in its power to spread rapidly from person to person; it is highly contagious. The disease shows its first symptoms in about one week after exposure, as a general rule; and persons who escape the illness during a fortnight after exposure may feel themselves safe from an attack.

Scarlet-fever, Scarlatina, Canker-rash and Rash-fever are names of one and the same dangerous disease.

On recovery, the sick person should not mingle with others, until all roughness of the skin, due to the disease shall have disappeared; a month is considered an average period, during which isolation is needed.

Because children are especially liable to take and to spread scarlet-fever, and because schools afford a free opportunity for this, every child from a family in which a case of the disease occurs, should be kept from school for a period of four weeks, counting from the beginning of an attack.

DIPHTHERIA.

Diphtheria is contagious and infectious, and may be easily communicated, either directly or indirectly, from person to person.

It may be conveyed directly in the act of kissing, coughing, spitting, sneezing; or indirectly by infected articles used, as towels, napkins, handkerchiefs, &c.

The poison clings with great tenacity to rooms, houses articles of furniture and clothing, and may occasion the disease even after the lapse of months.

Diphtheria attacks all classes, at all ages and all seasons of the year. By preference it attacks children and

those who are debilitated from exposure to filth, dampness or foul air from whatever source.

It is better not to use handkerchiefs for cleansing the nostrils and mouth of the patient, but rather soft rags which should be immediately burned.

Children in the family should not attend school nor mingle with other children until the patient has wholly recovered and all infected articles have been disinfected.

MEASLES.

Measles, like scarlet-fever and small-pox, is liable to spread from person to person by contagion or by infection.

It may be contracted directly from the person who is ill with the disease, or it may be taken from the house in the clothing or anything that has been used by or about the sick person, and which has not been thoroughly disinfected.

It attacks persons of all ages and at all seasons of the year.

It manifests itself in about a week after exposure to the disease, and as a rule, occurs but once in the same person.

The precautionary measures mentioned above have been compiled from the best information obtainable, and are most earnestly recommended to the people, with the knowledge that their application will avert a vast amount of preventible disease, and aid materially in maintaining a sound condition of the public health.

By order of the Board of Health,

J. C. MACKINTOSH, Mayor,
Chairman Board of Health

JOHN McINNIS,
Chairman Sanitary Committee.

THOS. TRENAMAN, M.D.,
City Medical Officer.

