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RESTRICTION AND PREVENTION OF SCARLET FEVER, DIPHTHERIA, SMALL POX, AND OTHER INFECTIOUS DISEASES.

MUSEUM OF HYGIENE NOV 20 1914

[FROM THE OFFICE OF THE R. I. STATE BOARD OF HEALTH.]

PUBLIC HEALTH TRACT NO. 2.

Good personal health, is the foundation of individual enterprise and success. Individual health, in the aggregate, is public health.

Good public health, is the essentially solid basis of national energy and prosperity.

A nation of invalids is already in its decline. A nation of universally able-bodied citizens, in the fullness of physical and mental health, may defy adversity.

How to prevent the occurrence of disease, and acquire, and preserve good health, is one of the most important studies of modern times. It is not only engaging the attention of the Medical Profession, but also that of advanced and thoughtful minds in every community.

Fortunately it is one, in which every intelligent individual can readily engage, and also one, which every person is under imperative moral obligations to pursue.

No person can rightfully allow himself, his family, or his neighbor to become sick, when such sickness can be prevented by reasonable precautions.

The design of this tract is to show in what way, many cases of contagious disease, may be prevented from spreading through a whole community, or lighting up the disease at some future time or in some distant place, by restricting the infection to the original cases.

The directions given will have particular reference to Scarlet Fever. This disease is also popularly known under the different other names, of Canker Rash, Scarlet Rash, Putrid Sore Throat, Scarlatina, etc., all and singular of which are produced by one and the same poison, and are capable of reproducing the same, and consequently infecting other persons with the same disease.

It is not a long time since prominent physicians had doubts of the contagiousness of Scarlet Fever. The proofs of communicability, have however so multiplied in a few years of close observation and investigation, that the question seems now to be definitely settled.

Scarlet Fever is caused by the introduction within the body through the lungs, stomach or skin, of specific poisonous particles of matter, or organic germs. Individuals vary greatly in their readiness to receptivity of the disease germs, and their susceptibility to the effects of the inceptive action. But whatever the degree of the disease, the same poisonous germs are reproduced, with equal power to produce the disease in other persons.

The excretions or waste material from the bowels, kidneys, skin, lungs, mouth and nostrils, contain and carry out of, and away from the body, these particles or germs of the disease, which are so exceedingly minute in size, that they have never yet been detected by microscopic observation, and so light, as to float in the air for long periods of time, and for long distances, without having their poisonous qualities or vitality destroyed, by the moisture or dryness, the heat or cold, or the ordinary gases of the atmosphere.

These germs, by their exceeding lightness, may separate from any of the emanations from the body, either after having been thrown out upon the surface of the ground, and rising therefrom to be wafted away in the currents of the air, to infect some other person or persons, weeks or months afterwards, and scores of miles away, or, separating immediately in the sick chamber from the breath, perspiration, scaling off, or other discharges from the body, may rise, and floating about in the room, infect some unwary caller, or find lodgment in some nook or crevice, or on some shelf, moulding, sash, ornament, curtain, drapery or other clothing, to be again dislodged from their resting places weeks, months or years afterwards, to affect some casual visitor or new occupant, or be carried away in articles of furniture, ornament, or wearing apparel, to spread infection and carry dismay to other persons, and in other localities.

Scarlet Fever is one of the most fatal of contagious diseases.

By the Census of the United States for 1870, the mortality from this disease for the previous twenty years, is stated to average about one to every twenty from all other causes.

But it is needless to go to statistics, to prove the necessity of all reasonable attempts to check the progress of the malady.

When, therefore, it is ascertained, that a member of the family is affected with the disease, let the following directions be observed and carried out, as far as circumstances will permit, under the supervision, and modification, when needed, of the physician in attendance.

A close observance of them will be attended with considerable labor and inconvenience, but it must not be forgotten, that no person has a right to injure his own family, his neighbor, or his fellow man anywhere, by willful or indolent neglect of known duties.

1. Entire separation of the sick from all other persons, except such as are absolutely required for attendance and nursing. Nothing can compensate for this precaution, for the restriction of the disease, and the welfare of the patient.

2. The patient should be taken to a dry, well ventilated, and properly prepared apartment. An upper room is dryer, and safer as well as more airy than one near the ground. The temperature should be kept between 68° and 72° F., as nearly as possible during the heated stage, and at about 76° thereafter.

All furniture not really needed, all ornaments, pictures, books and maps, all valuable carpets, drapery or other cloth material that might be damaged by fumigation or disinfection, and all furniture upholstered with cloth, should be entirely removed.

All large furniture not removable except with great difficulty, may, however, be covered with paper, and the paper covered with cloth, all which can be carefully removed and destroyed after the termination of the sickness.

Pieces of carpet and old rugs may be used to cover the naked floor and disposed of as above, or disinfected by fumigation or heat. Fresh air should have free access to the room, special care being taken to protect the patient from currents or drafts, or sudden introduction of large volumes of air of lower temperature than that of the room.

3. The bed provided should be elastic and cool. Soft feather beds, or any into which the body of the patient sinks, are entirely inadmissible. Rubber sheets or other covering of firm material, laid over the bedding, drawn tight, and securely fastened to the sides of the bedstead, to prevent sinking down of the body, should be used when mattresses cannot be obtained. Rubber sheeting, properly applied, is a very effectual protection of the under bedding.

4. Attention to cleanliness and disinfection is indispensable. The body and bed linen, and all larger clothes, should be frequently changed and immediately on removal, immersed in vesels containing a disinfecting solution, (Liquor Sodæ Chlorinatæ one quart, water four gallons,) which should be kept in or near the room for the purpose of retaining soiled clothes until opportunity occurs for thoroughly boiling for at least one hour.

Heat above the boiling point, whether by boiling or baking, is a powerful disinfectant, and effectually destructive of contagion germs. The clothing of nurses and attendants should also be disinfected before coming in contact with persons liable to infection, and the above precautions should be continued until the period of peeling or scaling of crumbled scurf skin has ceased. **These fine branny or mealy scales are especially dangerous as carriers of the contagium of Scarlet Fever.**

Cotton clothing is much better than woolen for use in the sick room, being less likely to entangle and hold the scales or germs of contagion, and also more easily disinfected.

The hands should be washed with Carbolic Acid Soap, or in diluted Chlorine Water, (One ounce to half pint of water,) or diluted Bromo Chloralum, (one ounce to half pint water,) The last is free from any odor. The body of the patient should be bathed at least once every twenty-four hours in the solution (Liquor Sodæ Chlorinatæ one-half ounce, water one pint,) until cessation of peeling.

5. All the larger discharges from the nose or mouth, and all the stools and passages of water, should fall into vessels containing at least a half pint of a solution of green copperas, (One pound copperas to one gallon of hot water,) and carried at once to some distance from the house, and if possible covered with a light coating of dry earth. Keep out of streams of water, and away from the vicinity of wells. If water closets or privies must be used, let them be frequently and thoroughly disinfected. (See Public Health Tract No. 1.)

Good napkins and handkerchiefs should not be used for the smaller discharges from the mouth and nose, but instead small pieces of old cotton cloths, which may be burned immediately after use.

While good ventilation is indispensable in the sick room, some benefit may doubtless be derived from the diffusion therein, of some disinfecting gas like chlorine or ozone. Saucers partly filled with Chloride of Lime may be set in different places in the room, upon each of which a teaspoonfull or two of good sharp vinegar may be turned every three or four hours. The Lime should be renewed when it ceases to give off the gas. Cloths may be wet with Liquor Sodæ Chlorinatæ (One part to three of water,) or if Chlorine gas is very offensive to the

patient or attendants, the cloths may be wet with Bromo Chloralum, which is without odor, (One part to four of water,) and hung up in different parts of the apartment.

6. After the complete termination of the disease, all the contents of the sick chamber, all the material of every kind whatever, used during the sickness and remaining in the room unprotected, and the floor, walls, windows and ceiling of the room should be thoroughly disinfected by washing, fumigation or heat. Whatever is of small value had better be burned. The rooms should be washed thoroughly in every part with the following solution :

(Sulphate Zinc, half a pound, crude Carbolic Acid one ounce, hot water, two gallons.)

When practicable, the walls and ceilings, should be lime washed or kalsomined.

To fumigate a room with Sulphurous Acid gas, the contents must be so arranged that the fumes may come in contact with the entire surfaces of all the articles to be disinfected, as well as sides of the apartment.

Across a tub partly filled with water, place a pair of tongs or other support, for an iron basin or skillet, or thick earthen pan. Put in the basin or pan, a layer of ashes one inch thick, then a few bright live coals, upon which scatter at least one pound of powdered or crushed sulphur. Close the apartment tight, and leave for twenty-four hours. Then ventilate freely.

To disinfect with heat alone, large ovens must be used, and the temperature carried up to a degree, at which bread would be rapidly baked, and continued for one hour.

In case of death, the body should be wrapped in large cloths, thoroughly saturated with a strong solution of Chloride of Lime or Soda and placed in a coffin as soon as possible.

Funerals of persons dying of contagious diseases, had better be held elsewhere, than at the residences of the deceased, and an open coffin should never be allowed.

Whenever a virulent contagious disease occurs in any community, it is the duty of all citizens to coöperate with the afflicted family, in repelling the attack of the invader, and confining the disease to the first cases.

To avoid attacks of infectious diseases, the directions suggested in Public Health Tract No. I should be strictly observed.. Breathing air containing sewer gas, or any gases of decay, or exhalations from any form of filth, in cesspools, water closets, sinks, foul cellars, or uncleansed animal bodies, or repeatedly re-breathing one's own breath, or the breath of others in closed rooms, **especially in closed bed-rooms through the night**, are unfailing sources of deterioration of general health, and whatever impairs general health, lessens the natural vigor of the individual, lessens the power of resisting the attacks of any disease, and especially predisposes to attacks of infectious maladies, like Scarlet Fever and Diphtheria, and also greatly increases the liability of death.

While the above suggestions have particular reference to Scarlet Fever, many of them will apply equally well to other forms of contagious diseases. Small Pox preeminently, requires the same management.

Paragraphs numbered one, two and three, are applicable to nearly all forms of dangerous maladies, while **the first section of paragraph 5 has especial applicability to typhoid fever, and nearly all will apply equally well to diphtheria.**

Doubtless some will question the necessity of such sweeping precautions, but it may be suggested that to the neglect of such precautions, may be due in a great measure, the continued existence of infectious diseases, whether in isolated or in epidemic visitations, and if preventable diseases are ever to be stamped out of existence, it can be accomplished only by such vigorous measures, as will effect the destruction of the disease producing germs, in their infancy.

Let this be preserved for future use in case of need.