

OUR PRIZE COMPETITION.

NAME TWO COMMUNICABLE DISEASES, AND STATE THE MANNER IN WHICH INFECTION IS CARRIED.

We have pleasure in awarding the prize this week to Miss A. B. Owen, The Nurses' Home, St. Bartholomew's Hospital, E.C.

PRIZE PAPER.

1. TYPHOID FEVER is a communicable disease caused by the bacillus typhosus.

All insanitary conditions in respect of drainage of houses and localities furnish the most ready means for the spread of the contagion of typhoid fever.

The most certain means of preventing its appearance or checking its spread are those which provide a thoroughly secure drainage, a safe method of disposal of sewage, and a pure and abundant water supply.

Occasionally it breaks out in epidemic form, and this generally happens when people are crowded together and obliged to live under unhealthy conditions. This is particularly the case with armies in time of war, and the ravages of enteric fever among our own troops in the South African War are fresh in the memory of all.

Typhoid fever is not directly infectious; it can be nursed in a general ward with ordinary care. In almost all cases, the spread of typhoid fever depends upon food or drink contaminated by a bacillus which is derived more or less directly from the discharge of previous typhoid cases.

It is infective through the excreta—*i.e.*, through the faeces and urine—and this may lead to infection in the following ways:—

(a) Drying on linen, sheets, &c., when it may be converted into dust.

(b) The soiling of nurses' and doctors' hands.

(c) The pollutions of the typhoid patient infecting subsoil water.

(d) The infection of milk through the soiled hands of an unrecognised typhoid case, or through milkcans being washed with water which has been contaminated by typhoid excretions.

(e) Typhoid carriers—*i.e.*, patients who have recovered from typhoid fever, but who may nevertheless convey infection through the excreta.

During an epidemic it can be understood that flies may form a means of contamination between uncovered stools and uncovered food. The bacillus resides in the stools and urine of typhoid patients, and when these decompose, it seems to multiply and to acquire increased virulence.

It must be remembered that any possible danger from either milk or water may be removed by boiling, and, if they are not quite above suspicion, this should always be done, for the germs are quickly killed by exposure to a high temperature.

Predisposing Causes.—(1) It is more common amongst the young, occurring between the ages of fifteen and twenty-five. It attacks the well-to-do as frequently as the poor. (2) It is most prevalent in autumn. Other predisposing causes are fatigue, overwork, and night nursing.

2. SMALLPOX is a communicable disease caused by a micro-organism of the class called proto-zoon. Few diseases have been so destructive to human life as smallpox. It is regarded with horror, not only from its fatality, its loathsome accompaniments and disfiguring effects, but also from the fact that no age or condition of life are exempt from liability to its occurrence.

Smallpox is more intensely infectious than any other disease known in this country and, in the absence of vaccination, is one of the most fatal.

It may be communicated either during life or after death, and can be conveyed by bedding and clothes or anything that has been in contact with a smallpox patient.

The atmosphere around a smallpox patient is charged with the products of the disease, which likewise cling tenaciously to clothing, furniture, &c.

A person simply entering the room in which a smallpox patient is ill is liable to contract the disease.

The germ enters the body by the respiratory tract.

This disease is probably communicable from its earliest manifestations and onwards to its close, the most infectious period extending from the appearance of the eruption until the drying up of the pustules. It is conveyed for a considerable distance through the air, and it has been shown that people living in the immediate neighbourhood of smallpox hospitals are exposed to considerable risks.

Overcrowding and all insanitary surroundings favour the spread of smallpox where it has broken out.

The most influential condition of all is the amount of protection afforded to a community by a previous attack, and especially in the present day by vaccination. This protection, although effectual for a certain period, tends to become exhausted, unless renewed. This explains the fact that during epidemics the most severe cases occur at the commencement,

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