

## Diseases Transmitted by Insects and their Prevention

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### DESCRIPTION

There are several insects that are the main or extreme hosts or carriers of social diseases. Pathogens that are capable of being spread by insects include protozoa, bacteria, viruses, and such helminths as tapeworms, flukes, and roundworms. There are two approaches of transmission of a pathogen by insects. There are Mechanical transmission and biological transmission. The most common diseases caused by the insects are Malaria, is transmitted by mosquitoes that belonging to the genus Anopheles involving a Plasmodium protozoan. Arboviruses is transmitted by mosquitoes bite that belonging to the genus Aedes. Plague is transmitted by fleas, bacterium Yersinia pestis. Enteric diseases transmitted by some form of fecal contamination of food or water, either directly or indirectly mainly caused by Escherichia coli, Lyme disease, Sleeping Sickness, and American Trypanosomiasis.

The mode of transmission can include direct method and indirect method, direct method includes transmission through contact and droplets'. The disposed host has many ways of entry such as the mouth or a syringe that was used by the infected person. The transmission of insect causing diseases was divided into 5 ways there are direct contact, fomites, aerosol (airborne), oral (ingestion), and vector borne. Direct contact like using the things of the infected person, fomites is the materials which are likely to carry infection, such as clothes, utensils, and furniture. Aerosol leads to the transmission of infective viral particles. There are four main types of disease infectious diseases, deficiency diseases, hereditary diseases include both genetic and non-genetic hereditary diseases, physiological diseases. The

insects ingests the disease causing microorganism while sucking the blood of the infected person after the process of ingestion the pathogen gets replicated and later transmit it into a new host. Stings and Bites are more responsible for transmission of diseases they often cause the redness and swelling in the affected area. Sometimes a sting or bite can cause a dangerous allergic reaction. A sting or bite injects venom consist of proteins and other elements that may cause an allergic reaction in the affected person.

### PREVENTION

There are many other types of insects that bit for a blood meal can also transmit the diseases like Lice bites can transmit epidemic relapsing fever, which was caused by the bacteria spirochetes. Bacteria-caused diseases tularemia can be transmitted by deer fly bites. The bubonic plague can be transmitted by the fleas and the disease epidemic typhus rickettsia is transmitted by the lice. Other arachnids (bugs) such as bedbugs, chiggers, and mites usually affect the skin localized areas and leads to itchiness and intermittent swelling. Symptoms of a severe reaction include rashes, wheeziness, shortness of breath, unconsciousness, sometimes it leads to death within 30 minutes.

Treatment depends on the type of reaction to the bite. If it causes redness and swelling it can be treat by applying ice on the affected area. Clean the area with cleanser and water to eradicate the disease causing particles left by some insects as they can contaminate the wound if it was not cleaned. Zinc oxide ointment is used as soothing to irritated skin.

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