

Diseases Transmitted by Rodents

Rodents can transmit several diseases to human through their ectoparasites, contamination with their excreta and their bites. These diseases include bubonic plague, scrub typhus, urban typhus, tick-borne spotted fever, Q-fever, Hantaviral infection and leptospirosis. All these rodent borne diseases have been reported locally though Hong Kong did not have case on bubonic plague after 1920s'.

Bubonic Plague

Plague is a deadly disease transmitted by rodents. Bubonic plague is transmitted by bite of infected rat flea, an ectoparasite of rodents. Manifestations may progress to septicemic plague with bloodstream dissemination to diverse parts of the body. Secondary involvement of the lungs results in pneumonic plague. Pneumonic plague is of special importance since respiratory droplets may serve as the source of person-to-person transmission.

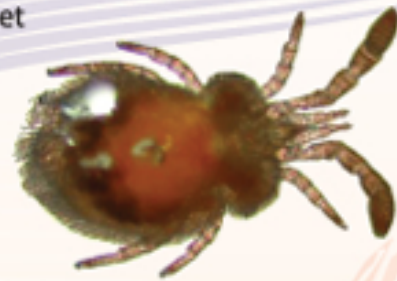


Rat flea



Scrub typhus

Rodents living in vegetated area may carry the larvae of trombiculid mites on their bodies. Scrub typhus is transmitted by the bites of infective larval trombiculid mite. Trombiculid mites are small, only 1-2 mm in length, and red in color. People touching the vegetation with the larval mites on them may get the mites. On man, the larvae congregate at areas where clothing is tight against the skin such as those around the waist or the ankles.



Adult Trombiculid mite

Urban typhus / Murine typhus

Urban typhus, also called Murine typhus, is transmitted by the bites of infective fleas, usually rat flea. The flea normally live on the body of rodent may leave the animal and jump to the body of human. Crushing of flea staying on our body could introduce the faeces of infective fleas into wounds and contraction of the disease.

Tick-borne spotted fever

Tick-borne spotted fever is transmitted by bite of infective hard or soft ticks. Crushing of infective ticks or its faeces into wounds or the eyes could also be a way to have contracted the disease. Most larval ticks cluster at tips of grasses or leaves and seek for their preferred animals. Rodents may carry ticks on their bodies.



Adult Hard Tick

Q-Fever

Besides domestic animals such as cats and dogs, wild mammals including rodents are natural reservoirs of Q-fever. The disease is commonly transmitted by airborne dissemination of dust contaminated with excreta of infected animals. Transmission also occurs through direct contact with infected animals and other contaminated materials.

Hantaviral Infection

Rodents may carry hantavirus in their body. Hantavirus infection is transmitted by inhalation of dried small particles of virus from excreta of infected rodents, especially in ill-ventilated premises.

Leptospirosis

Leptospirosis is transmitted by contact of wounds or mucous membranes with moist soil, vegetation and water contaminated by urine of infected animals. Wild mammals such as rodents could be a possible reservoir of the disease.

