

Plague



What is plague?

Plague is a communicable disease that affects rodents, some animals and humans. It is caused by the bacteria *Yersinia pestis*. There are three main forms of plague infection: bubonic, pneumonic and septicaemic. Plague in human is a serious disease with a case-fatality ratio of 30% – 60% for the bubonic type, and is always fatal for the pneumonic type when left untreated.

Clinical features

Patients with bubonic plague typically experience a sudden onset of illness characterised by headache, chills, fever, malaise and painful swelling of the affected regional lymph nodes. The swollen lymph node is called a 'bubo'. This is the most common form of plague.

The infection can progress to septicaemic plague when the bacteria invade the blood stream. The infection can be spread to other organs and cause serious complications.

Patients with pneumonic plague typically present with chills, fever, headache, body pains, weakness and chest discomfort, cough with blood-stained sputum, difficulty in breathing and may die rapidly if not treated immediately. The patient is highly infectious in this most serious form of plague.

Plague endemic areas

As an animal disease, plague is found in all continents, except Oceania. Plague epidemics have occurred in Africa, Asia and South America. Since the 1990s, most human cases have occurred in Africa. The three most endemic countries are the Democratic Republic of Congo, Madagascar and Peru.

Mode of transmission

Plague is transmitted from an infected animal (mainly rodent) to humans through the bite of infected animal's fleas. People can also contract plague when cuts or other breaks in their skin come into contact with the body fluid or tissue of infected animals, or through inhalation of infected respiratory droplets. Bubonic plague is not usually transmitted directly from person to person unless there is contact with pus from suppurating buboes. Pneumonic plague is highly contagious. It can spread between humans by inhalation of respiratory droplets from an infected person.

Incubation period

The incubation period of bubonic plague is usually 1 – 7 days while the incubation period for primary pneumonic plague is usually 1 – 4 days.



Management

Plague patients should be isolated and treated with appropriate antibiotics.



Prevention

- ▶ Eliminate sources of food and nesting places for rodents in our living environment.
 - Store food properly in covered containers and do not leave pet food unattended overnight to avoid it becoming food for rodents. Store all refuse and food remnants in dustbins with well-fitted cover. Dustbins must be emptied at least once a day.

- Keep premises, especially refuse rooms and stairways clean. Avoid accumulation of articles.
- Inspect all flowerbeds and pavements for rodent infestation regularly. (For further information on pest prevention and control, please contact the Pest Control Advisory Section, the Food and Environmental Hygiene Department at: 3188 2064)

- ▶ Prevent flea bites by wearing long-sleeved shirts and trousers, and applying DEET-containing insect repellent to exposed skin and surface of clothes. Pregnant women and children of 6 months or older can use DEET-containing insect repellent. For details about the use of insect repellents and the key points to be observed, please refer to 'Tips for using insect repellents'. Besides, permethrin (an insecticide) can be applied on clothes, but it should NOT be applied to skin.



- ▶ If travelling to plague endemic areas, avoid visiting rat-infested places and never contact live or dead rodents. It is also important to take protective measures to prevent flea bites. For more information, please visit the website of Travel Health Service of the Department of Health (<http://www.travelhealth.gov.hk>).

