



FACT SHEET **Plague**

Plague

What is Plague?

Plague is an infectious disease that affects animals and humans. It is caused by the bacterium *Yersinia pestis*. This bacterium is found in rodents and their fleas, and occurs in many areas of the world including the United States. Plague is an ancient disease that occurs in irregular cycles. Millions of people in Europe died from plague in the Middle Ages, when flea-infested rats inhabited human homes and places of work. In the U.S., the last urban plague outbreak occurred in Los Angeles in 1924-25.

How do people become infected with plague?

People can get plague several ways:

- By the bites of infected fleas.
- By direct contact with the tissues or body fluid of plague-infected animals.
- By inhaling infectious airborne droplets from persons or animals, especially cats, with plague pneumonia.
- By laboratory exposure to plague bacteria.
- Inhalation of an aerosol in a bioterrorist attack.

Are there several forms of plague?

- **Pneumonic plague** occurs when *Y. pestis* infects the lungs. This type of plague can spread from person to person through the air. Pneumonic plague can be transmitted by breathing in *Y. pestis* in respiratory droplets from a person or animal with pneumonic plague. Respiratory droplets are spread by coughing or sneezing. Becoming infected in this way usually requires direct and close (within six feet) contact with the ill person or animal.
- **Bubonic Plague** is the most common form of plague. This occurs when an infected flea bites a person or when materials contaminated with *Y. pestis* enter through a break in a person's skin. Bubonic plague does not spread from person to person.
- **Septicemic plague** occurs when plague bacteria multiply in the blood. It can be a complication of pneumonic or bubonic plague or it can occur by itself. Septicemic plague does not spread from person to person.

What are the symptoms of plague?

- **Pneumonic plague** or plague pneumonia, develops when the bacteria infect the lungs. People with plague pneumonia have high fever, chills, difficulty breathing, a cough, and bloody sputum. Plague pneumonia is considered a public health emergency because a cough can quickly spread the disease to others. **Untreated** pneumonic plague is usually fatal.
- **Bubonic plague** - When a person is bitten by an infected flea or is infected by handling an infected animal, the bacteria move through the blood stream to the lymph nodes. The lymph nodes swell, causing painful lumps. Other symptoms are fever, headache, chills, and extreme tiredness. Some people have gastrointestinal symptoms.
- **Septicemic plague** - If bubonic plague goes untreated, the bacteria can multiply in the blood stream and produce plague septicemia, a severe blood infection. Patients with septicemic plague experience fever, chills, tiredness, abdominal pain, shock, and bleeding into the skin and other organs. Untreated septicemic plague is usually fatal.

What should someone do if they suspect they have the plague?

Someone who suspects they have the plague should get immediate medical attention. To prevent illness, a person who has been exposed must receive antibiotic treatment without delay. If an exposed person becomes ill, antibiotics must be administered within 24 hours of their first symptoms to reduce the risk of death. Patients with suspected plague should be hospitalized, placed in isolation, and have specimens obtained for plague diagnosis.

Can a person exposed to the plague avoid becoming sick?

People who have had close contact with an infected person can greatly reduce the chance of becoming sick if they begin antibiotic treatment within seven days of their exposure. Treatment consists of taking antibiotics for at least seven days.

How can plague be prevented?

People who live, work, or play in areas with active plague infection in wild rodents should take these precautions:

- Eliminate food and shelter for rodents around homes, work places, and certain recreation areas, such as picnic sites or campgrounds where people congregate. Remove brush, rock piles, junk, and food sources, including pet food.
- Allow health authorities to use appropriate and licensed insecticides to kill fleas during plague outbreaks in wild animals.
- Treat pets (cats and dogs) for flea control regularly.
- Avoid sick or dead animals, and report such animals to the local health department. Hunters and trappers should wear rubber gloves when skinning animals.
- Use insect repellents when outdoors in areas where there is a risk of flea exposure.

Who should be notified of a suspected case of plague?

Immediately notify the Mid-Michigan District Health Department so they can begin to investigate and control the problem right away. Your doctor should contact the local health department if they suspect you have been exposed to the plague. The Mid-Michigan District Health Department will notify the Michigan Department of Community Health who will communicate with the Centers for Disease Control and Prevention. If terrorism is suspected, the local health department will notify the FBI and other appropriate authorities. If not a resident of Clinton, Gratiot or Montcalm counties, contact the local health department that provides services where you live. A listing of local health departments can be found at www.malph.org.

