



Plague Fact Sheet

What is plague?

Plague is a severe disease caused by the bacteria *Yersinia pestis* (Y. pestis). Plague is usually carried by rodents but can be spread to man by fleas. The disease is rare in the United States, but occasional cases do occur in the western region of the country. Plague is rare in Oklahoma. The last case occurred in 1991.

Is pneumonic plague different from bubonic plague?

Yes. Both are caused by *Yersinia pestis*, but they are transmitted differently and their symptoms differ. Pneumonic plague can be transmitted from person to person; bubonic plague cannot. Pneumonic plague affects the lungs and is transmitted when a person breathes in Y. pestis particles in the air. Bubonic plague is transmitted through the bite of an infected flea or exposure to infected material through a break in the skin. If bubonic plague is not treated, however, the bacteria can spread through the bloodstream and infect the lungs, causing a secondary case of pneumonic plague.

How do people become infected with pneumonic plague?

Pneumonic plague occurs when *Yersinia pestis* infects the lungs. Transmission can take place if someone breathes in Y. pestis particles, which could happen in an aerosol release during a bioterrorism attack. Pneumonic plague is also transmitted by breathing in Y. pestis suspended in respiratory droplets from a person (or animal) with pneumonic plague. Respiratory droplets are spread most readily by coughing or sneezing. Becoming infected in this way usually requires direct and close (within 6 feet) contact with the ill person or animal.

*For further information, contact the Oklahoma City-County Health Department
(405) 425-4437*

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What are the signs and symptoms of pneumonic plague?

Patients usually have fever, weakness, and rapidly developing pneumonia with shortness of breath, chest pain, cough, and sometimes bloody or watery sputum. Nausea, vomiting, and abdominal pain may also occur. Without early treatment, pneumonic plague usually leads to respiratory failure, shock, and rapid death.

What are the symptoms of bubonic plague?

Typical symptoms include swollen painful lymph nodes (called a "bubo", hence the term bubonic plague), fever and chills, severe headache, muscle aches, nausea and vomiting.

How soon do symptoms occur?

Symptoms usually begin within one to six days after a bite from an infected flea, or exposure to an infected person or animal with pneumonic plague.

What is the treatment for plague?

Treatment with antibiotics is very useful, especially if started in the early stages of the disease (first 24 hours). Antibiotics commonly used are streptomycin, a tetracycline (such as doxycycline), a fluoroquinolone (such as ciprofloxacin), and chloramphenicol.

What can be done to prevent the spread of plague?

In areas where animal plague is found, dogs and cats should be treated periodically with appropriate insecticides. People should use insect repellents and be warned not to camp near rodent burrows. Dead or sick animals should not be handled and should be reported to health authorities.

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Could plague be used for bioterrorism?

Yes. Plague is considered to be one of the agents that could be used for bioterrorism because the disease can be spread from person-to-person and would cause increased illness and death in the population if used as a weapon. If plague was used for bioterrorism, it probably would be aerosolized (made airborne). This would lead to pneumonic plague.

The United States has the capability to ship antibiotics for the plague to anywhere in the nation within 12 hours.

Is there a vaccine for plague?

The vaccine for plague was discontinued in the United States in 1999 and is no longer available. Research is ongoing to create a vaccine suitable for a national stockpile in case of bioterrorist events.

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