

IDRS Infectious Disease Reporting System

Disease Reporting 24 Hours a Day

Columbus Public Health and Franklin County Public Health

PLAGUE

Plague is a severe disease caused by an infection with bacteria called *Yersinia pestis*, which can affect humans and animals. Millions of people in Europe died from plague in the Middle Ages, when rats were common in areas where humans lived. Today, the disease is rare but can still be found in South America, Africa, Asia, and the southwestern United States.

Symptoms

Symptoms usually begin 1-6 days after exposure to the plague bacteria, and may take one of three forms:

- **Bubonic plague** is the most common form of plague.
 - Swollen, tender lymph glands (called buboes)
 - Fever, headache, chills, and weakness
- **Pneumonic plague** occurs when someone breathes in the bacteria. This type is life threatening.
 - Fever, chills, cough, difficulty breathing, chest pain, and bloody or watery phlegm may occur.
- **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.
 - Fever, chills, stomach pain
 - People may go into shock and collapse, and may bleed into skin and other organs.

Transmission

- The most common means of transmission is through the bite of infected fleas. Fleas become infected by biting rodents, such as chipmunks, prairie dogs, ground squirrels, mice, rats, and occasionally cats.
- In U.S., plague exists primarily in wild rodents in the southwest. People at risk include hunters, veterinarians, owners of infected cats, and campers or hikers entering areas with outbreaks of animal plague.
- People or animals with pneumonic plague may transmit the disease to other people when coughing. Becoming infected in this way usually requires direct and close contact with the ill person or animal. Bubonic or septicemic plague is not transmitted person to person.
- Theoretically, plague bacteria could be released into the air as a bioterrorism attack.
- Other sources include the handling of tissues from infected animals, or by laboratory exposure.

Treatment

- Laboratory tests can be performed on blood, sputum or fluid from a lymph node to diagnose plague.
- Persons with plague should be hospitalized and medically isolated. Antibiotic treatment for 7 days will protect people who have had direct, close contact with infected patients.
- **Early treatment of pneumonic plague is essential.** To reduce the chance of death, antibiotics must be given within 24 hours of first symptoms. About 14% of all plague cases in the U.S. are fatal.

Prevention

- When human or animal cases have been identified, efforts to control the rodent and flea populations by the use of rodenticides and insecticides should be used. The patient and his/her clothing and baggage should be treated to kill all fleas that may be attached.
- Patients with pneumonic plague should be isolated until they have completed three full days of antibiotic treatment.
- There is no plague vaccine available.

All information is general in nature and is not intended to be used as a substitute for appropriate professional advice.



c/o Franklin County Public Health, 280 East Broad Street, Columbus, Ohio 43215-4562

Call: (614) 525-8888 • After Hours: (614) 525-3965 • Fax: (614) 525-8890

Email: idsr@franklincountyohio.gov • Web: www.idrsinfo.org

