

# Plague

## Your questions answered

### **What is plague?**

Plague is a disease caused by fleas that become infected with bacteria *Yersinia pestis*.

### **How do people get plague?**

People get plague from the bite of fleas infected with the plague bacteria.

### **What is the basic transmission cycle?**

Fleas become infected by feeding on rodents, such as chipmunks, prairie dogs, ground squirrels, mice and other mammals that are infected with the bacteria *Yersinia pestis*. Fleas transmit the plague bacteria to humans and other mammals during the feeding process. The plague bacteria are maintained in the blood systems of rodents.

### **Can you get plague from another person?**

Yes. When the other person has plague pneumonia and coughs droplets containing the plague bacteria into air that is breathed by a non-infected person.

### **What are the signs and symptoms of plague?**

The typical sign of the most common form of human plague is a swollen and very tender lymph gland, accompanied by pain. The swollen gland is called a "bubo" (hence the term "bubonic plague"). Bubonic plague should be suspected when a person develops a swollen gland, fever, chills, headache, extreme exhaustion and has a history of possible exposure to infected rodents, rabbits or fleas.

### **What is the incubation period for plague?**

A person usually becomes ill with bubonic plague two to six days after being infected. When bubonic plague is left untreated, plague bacteria invade the bloodstream. When plague bacteria multiply in the bloodstream, they spread rapidly throughout the body and cause a severe and often fatal condition. Infection of the lungs with the plague bacterium causes the pneumonic form of plague, a severe respiratory illness. The infected person may experience high fever, chills, cough and breathing difficulty and expel bloody sputum. If plague patients are not given specific antibiotic therapy, the disease can progress rapidly to death.

### **What is the mortality rate for plague?**

About 14 percent (one in seven) of all plague cases in the United States are fatal.

# What Can **YOU** Do?

## How many cases of plague occur in the U.S.?

Human plague in the United States has occurred as mostly scattered cases in rural areas (an average of 10 to 20 persons each year). Globally, the World Health Organization reports 1,000 to 3,000 cases of plague every year.

## How is plague treated?

According to treatment experts, a patient diagnosed with suspected plague should be hospitalized and medically isolated. Laboratory tests should be done, including blood cultures for plague bacteria and microscopic examination of lymph gland, blood and sputum samples. Antibiotic treatment should begin as soon as possible after laboratory specimens are taken.

Streptomycin is the antibiotic of choice. Gentamicin is used when streptomycin is not available. Tetracyclines and chloramphenicol are also effective. Persons who have been in close contact with a plague patient, particularly a patient with plague pneumonia, should be identified and evaluated. The U.S. Public Health Service requires that all cases of suspected plague be reported immediately to local and state health departments and that the diagnosis be confirmed by CDC. As required by the International Health Regulations, CDC reports all U.S. plague cases to the World Health Organization.

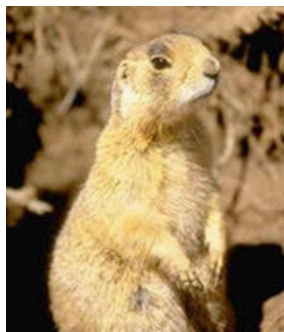
## Who is at risk for getting plague?

Outbreaks in people occur in areas where housing and sanitation conditions are poor. These outbreaks can occur in rural communities or in cities. They are usually associated with infected rats and rat fleas that live in the home.

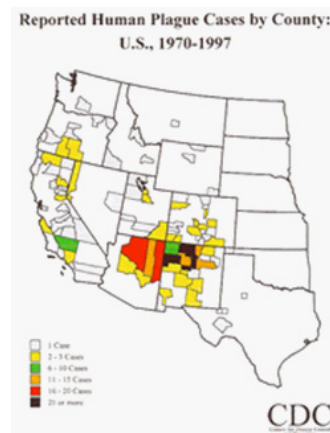
## Where is plague most common?

Plague can be acquired at anytime during the year. The map below that shows reported cases of human plague between 1970-1997 by patient's county of residence. Generally, plague is most common in the southwestern states, particularly New Mexico and Arizona.

This fact sheet is for information only and is not intended for self-diagnosis or as a substitute for consultation. If you have any questions about the disease described above or think that you may have an infection, consult with your health-care provider. This fact sheet is based on the Centers for Disease Control and Prevention's Health and Safety topic fact sheets.



Prairie dogs can harbor fleas infected with plague bacteria.  
CDC



For more information on plague, call the Lawrence-Douglas County Health Department at (785) 843-0721 or visit us on the web at: [www.ldchealth.org](http://www.ldchealth.org)