



## Hawaii State Department of Health

### Disease Investigation Branch

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## Plague

(bubonic plague, pneumonic plague)

### What is plague?

Plague is a serious illness caused by bacteria called *Yersinia pestis*. The disease is carried by rodents (rats and mice) and their fleas, which can then spread the disease to humans as well as to other animals. Plague is very rare in the United States, but cases are sometimes reported in the southwestern states. The most common form of plague is bubonic plague which affects the body's lymph glands. When the infection involves the lungs, the disease is called pneumonic plague. Plague could be used as a bioterrorist weapon.

### How do you get it?

Bubonic plague is spread to humans from the bite of infected fleas, or by being scratched or bitten by infected animals. Bubonic plague is not directly spread from person to person. Pneumonic plague can be spread through the air (through coughing or sneezing) and through direct and close contact with an infected person or animal.

### What are the symptoms of plague?

The first symptoms of bubonic plague include the sudden onset of fever with painful swelling of the lymph glands, called buboes, in the areas closest to the flea bite (typically, in the groin, armpit, or neck). Chills, muscle aches, weakness, fatigue, nausea, and headache may also occur. If the infection spreads to the lungs, it causes pneumonia that is highly contagious and often fatal.

Pneumonic plague is caused by fever, swelling of the lymph glands, cough, and chest pain. Persons with this form of plague may cough up blood.

### When do symptoms start?

The symptoms of bubonic plague begin 1 to 7 days following the bite of an infected flea. For pneumonic plague, symptoms begin 1 to 4 days after contact with an infected person or animal.

### What is the treatment for plague?

Antibiotics can be prescribed by a doctor to treat plague. It is very important to detect and treat the disease early in its course. If not treated, about half of those with bubonic plague will die. Prompt treatment can greatly reduce the chance of dying from plague. Persons who are infected with pneumonic plague should be isolated from well people for 3 full days after the start of antibiotic treatment.

### How do you keep from getting it?

Avoid rat-infested areas if possible. If you go to areas where plague occurs, take care to protect yourself against rodents and their fleas.

Avoid contact with sick or dead animals found on the roadside or in the woods. The risk of being bitten by infected fleas is high when plague infection kills large numbers of rodents. The infected and starving fleas aggressively look for new hosts.

Carefully watch over all children and household pets when outdoors in forest/picnic areas where rodents make their nests.

International travelers to areas where plague is common are generally at low risk for infection with *Y. pestis*. If you are traveling to such an area call your doctor or the Health Department for advice.

Report all suspected plague cases as soon as possible to your doctor or to the Department of Health.

For more information, see the CDC's website at <http://www.cdc.gov/ncidod/dvbid/plague/qa.htm>