

# Plague

## What is Plague?

Plague is caused by the Gram-negative bacterium *Yersinia pestis*. It occurs primarily in wild rodents (e.g., rats, prairie dogs, ground squirrels) and is transmitted from rodent to human primarily by the bite of an infected flea vector.

During the 14<sup>th</sup>-century plague caused an epidemic in Europe known as the “Black Death” that killed more than one quarter of the population. Plague is currently a rare disease and infections are only documented in about 10 to 15 people each year, mostly in the southwestern United States.

## What are the symptoms?

There are three forms of plague: Bubonic; Pneumonic; and Septicemic. The Bubonic plague is the most common form.

Symptoms include an abrupt onset of fever with chills, swollen and painful lymph nodes (i.e., buboes), a rapid and thready pulse along with weakness.

Pneumonic plague is the most deadly and easily spread form of plague. It occurs when the bubonic or septicemic plague spread to the lungs. The disease can then be transmitted to others through aerosolized droplets created when the infected individual coughs or sneezes. Its symptoms are coughing, headache, an increased heart rate, difficulty breathing, high fever, and chills.

Septicemic plague is the rarest form of plague. Symptoms include abdominal pain, fever, chills, shock, and bleeding into the skin or other organs.

## How is plague transmitted?

People get **bubonic plague** from infected animals. The bacteria are spread by bites from infected fleas, bites or scratches from infected animals, or direct contact with infected animal carcasses. People get **pneumonic plague** by inhaling droplets that contain plague bacteria. The

droplets are released into the air when infected people—or animals—cough.

## How is it diagnosed?

First, a history of contact with animals—especially wild animals—is established. Then blood, lymph, and/or sputum samples are collected to test for the presence of the bacteria, *Yersinia pestis*. Radiographs should be taken to determine whether there are bacteria in the lungs.

## Can pets get Plague?

Cats (and sometimes dogs) can become infected through the bite of infected fleas or eating a rodent, rabbit, or other animal that is carrying fleas infected with plague. Symptoms in cats include fever, discharge from the eyes, vomiting, diarrhea, dehydration, poor hair coat, swollen tongue, mouth ulcers, enlarged tonsils, and an enlarged abdomen.

## How can it be treated?

Plague is treated using antibiotics and supportive therapy-- including fluids, ice bath, and respiratory support. Modern antibiotics are very effective but if left untreated, the disease is likely to cause severe illness or death.

## Can it be prevented?

- Yes, plague can be prevented by controlling rodent populations in endemic areas.
- Eliminate sources of food and nesting places for rodents around homes, workplaces, and recreation areas; remove plant material, rock piles, junk piles, and potential food supplies, such as pet food.
- Control your pet's fleas and do not let cats or dogs roam freely.
- Do not pick up or touch dead animals.
- Wear insect repellent to prevent flea bites and wear gloves when handling potentially infected animals.

This fact sheet provides general information. Please contact your physician or veterinarian for specific information related to you or your animals.

For more information go to:

• **Centers for Disease Control**

[www.cdc.gov](http://www.cdc.gov)

• **National Association of State Public Health Veterinarians** [www.nasphv.org](http://www.nasphv.org)