

# Plague

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## What is plague?

Plague is a disease caused by the bacteria (germ) *Yersinia pestis*. There are two major types of plague illness that people can get: bubonic plague (swollen lymph nodes called buboes) and pneumonic plague (infection of the lungs). Plague has not been reported to occur in Massachusetts in over 100 years.

## How do people get plague?

When it occurs in the United States, plague is found mainly in squirrels, prairie dogs and other small rodents. Bubonic and pneumonic plague are spread to people and animals by a bite from an infected flea (a flea that is carrying the germ). You may also get bubonic and pneumonic plague from a bite or scratch from infected wild rodents (mice and rats) and cats. People, such as wildlife workers, who might handle tissue from infected animals or have other exposures to infected animals are at increased risk.

Pneumonic plague can spread from person to person by sneezing or coughing. People must have face-to-face contact with the ill person. Pneumonic plague can also be spread to people by cats with pneumonic plague. Bubonic plague does not usually spread from person to person.

## What are the symptoms of plague?

Initial symptoms can include fever, chills, muscle aches, headache, sore throat, nausea, vomiting, diarrhea, abdominal pain and extreme exhaustion. Swollen and tender lymph nodes (glands located in the armpits, neck, groin and other places) are typical of bubonic plague. The symptoms of pneumonic plague include coughing and difficulty breathing, which may develop into a severe pneumonia. Both types may also develop into blood infections with severe complications such as meningitis (inflammation of the tissue, called meninges, that surrounds the brain and spinal cord) and shock.

## How soon do symptoms of plague appear?

Symptoms begin to appear 1 to 7 days after exposure to the germ.

## How is plague diagnosed?

It is diagnosed through laboratory tests that look for the germ in various specimens such as blood and spinal fluid.

## How is plague treated?

Bubonic and pneumonic plague can be treated with antibiotics, if caught early. Both forms of the plague are almost always fatal if left untreated or if treatment is delayed for too long.

## Is there a vaccine (shot) for plague?

No vaccine against plague is currently available.



## Where does plague occur?

The germs are found in rodents and their fleas in many parts of the world. Wild rodent plague exists in large areas of South America, Africa, Eastern Europe and Asia. Plague is rare in the U.S. and is found mostly in the southwestern states, particularly Arizona and New Mexico.

## How can plague be prevented?

When traveling to areas where plague is common, it is important to avoid exposures to animals that may carry fleas infected with plague bacteria.

To avoid becoming infected with plague, follow these tips:

- Avoid unnecessary contact with wild animals such as mice, rats, prairie dogs and squirrels and use protective gloves if handling is necessary.
- Pay attention to any plague advisories while visiting the southwestern United States.
- Prevent rodent access to food and shelter by ensuring appropriate storage and disposal of food, garbage, and refuse.
- Use an appropriate insect (flea) repellent while camping in rural areas where plague is common and report dead or sick animals to park rangers or public health authorities.
- Prevent flea infestation of your dogs and cats.
- For more information regarding national/international travel and plague, contact the Centers for Disease Control and Prevention (CDC) at (800) 232- 4636 or through the internet at [www.cdc.gov/travel/](http://www.cdc.gov/travel/).

## Can plague be used for bioterrorism?

Yes. Bioterrorism is the use of any biological organism to intentionally hurt people or create fear. The CDC lists plague as a possible bioterrorism agent.

## Where can I get more information?

- Your doctor, nurse or clinic, or your local board of health (listed in the phone book under local government)
- The Massachusetts Department of Public Health, Divisions of Epidemiology and Immunization at (617) 983-6800 or on the MDPH website at [www.mass.gov/dph](http://www.mass.gov/dph)
- The Centers for Disease Control and Prevention (CDC) website at [www.bt.cdc.gov/](http://www.bt.cdc.gov/)

