

April 2007

## PLAGUE FACT SHEET

Plague is an infectious disease of animals and humans that is caused by the bacterial germ called *Yersinia pestis*. It is a severe, life-threatening disease in humans that is fortunately rare, even in New Mexico. Nonetheless, about half of the cases of human plague in the U.S. each year occur in New Mexico.

### How common is plague in New Mexico?

The number of cases varies by year, ranging from 0 to 27 cases per year. From 1983 through 2006 there were 135 human plague cases in New Mexico, for an average of about 6 cases per year. Since 1993 the number of cases has dropped to an average of less than 4 cases per year.

### How do people get plague in New Mexico?

People usually get plague by being bitten by a rodent flea that is infected with the plague bacteria. Fleas become infected by feeding on rodents that have plague bacteria in their blood. Fleas transmit the plague bacteria to humans and other mammals during the feeding process.

Another, less common way of getting plague is by handling sick or dead animals that are infected with plague. An example of this would be a hunter or trapper who catches a plague-infected rabbit, coyote, bobcat or other animal and then skins the animal without using gloves. Plague bacteria in the animal's blood and tissues can enter cuts or scratches on the person's hands and result in disease.

Plague may also be transmitted by exposure to infected respiratory droplets from a person or domestic cat with plague pneumonia. This is extremely rare and has not occurred in New Mexico.

### What are the symptoms of plague?

Symptoms of plague usually appear two to seven days after infection. The most common signs are:

- Sudden onset of high fever
- Muscle aches and headache
- Chills
- Extreme weakness

In about 75% of cases, a lymph gland in the groin area, under the arm, or in the neck becomes extremely painful, tender and swollen. This is called a "bubo" and this form of plague is referred to as bubonic plague.

Plague can also cause severe infection of the blood and pneumonia. Persons with untreated bubonic plague are at risk for having the infection spread to the blood or lungs.

### **Is plague curable?**

Yes. Plague is curable with antibiotics, but medication must be started right away to avoid serious complications. People can die of plague infection, particularly if appropriate treatment is delayed. Of a total of 250 human plague cases in New Mexico, 32 (13%) were fatal.

### **Can plague spread directly from one person to another person?**

Uncomplicated bubonic plague is not contagious and patients do not place their family, friends, or health care workers at risk.

Plague pneumonia can be spread to others by exposure to infected respiratory secretions. This could occur when a person or cat with plague pneumonia coughs in someone's face. This type of spread, however, is very rare and the Department of Health acts quickly to protect any contacts of plague patients with pneumonia. In New Mexico, there has been no person-to-person spread of plague, despite the fact that we have had many cases of plague pneumonia.

### **Which animals carry plague in New Mexico?**

Rodents are the main type of animal that carry plague in New Mexico. Rodents include squirrels, prairie dogs, woodrats, chipmunks and mice. Rabbits can also carry plague. Rock squirrels and their fleas are the primary source of human plague cases in New Mexico. Wild and domestic carnivores, including dogs, cats, coyotes, and bobcats can become infected with plague, probably by eating plague-infected rodents or rabbits. These animals vary in their response to plague infection, with some animals showing no symptoms at all. It is important to recognize that dogs and cats may transport plague-infected fleas from areas where rodents live into the home.

### **Is there a particular time of the year when plague cases occur?**

Yes, the majority of New Mexico plague cases occur during the warmer months of the year — May through September. Most of these cases result from exposure to plague infected fleas, because this is the time of year when fleas, rodents and people are most active and there are more chances that infected rodents and/or fleas can come in contact with people. However, cases have occurred during other months of the year. Wintertime cases usually result from direct contact or handling of plague-infected animals, as described above.

### **What is cat (feline) plague?**

Cats that hunt can get plague by eating plague-infected rodents, or sometimes by fleabites. Symptoms in cats are fever, tiredness, and loss of appetite. Sometimes a cat will develop a swollen lymph node, usually under the jaw. Cats can transmit plague to their owners or veterinarians through biting, scratching, or from an oozing infected lymph gland. Cats can also develop plague pneumonia and rarely spread plague to people by coughing.

### **What can I or my family do to avoid getting plague?**

- Avoid contact with wild rodents and their fleas, nests and burrows. Especially avoid sick or dead animals and teach children not to handle any wild animal, whether alive or dead.
- Prevent pets from roaming. Regularly treat outside pets (dogs and cats) with an effective flea control product.
- Remove items which attract rodents to the home, such as uncovered garbage kept outside, wrecked cars, and piles of refuse near the home.
- Wear rubber gloves when skinning game and handling the uncooked meat.
- Be aware of the symptoms of plague. If you think you have been exposed to plague and develop illness, contact your doctor right away.