



## **FREQUENTLY ASKED QUESTIONS ABOUT PLAGUE and PLAGUE in IDAHO**

### **What causes plague and how is it transmitted?**

Plague is a disease caused by the bacterium *Yersinia pestis*. The bacterium lives in several rodent species, including ground squirrels. When fleas feed on infected animals, the fleas become infected. Infected fleas spread the bacterium when they bite other animals and humans. If infected animals die, fleas seek live animals, including humans, to feed upon. When many infected ground squirrels die in an area, fleas from these animals may jump from the dead ground squirrels or from around abandoned burrows and bite pets or people that get too close. These bites can spread plague from the fleas to people and pets. Avoiding dead ground squirrels, their abandoned burrows, and their fleas help to avoid plague exposure. Less commonly, plague can also be transmitted when someone is exposed to tissue or body fluids of an infected animal, or by droplets when an animal or person with plague pneumonia coughs.

### **What are the symptoms of plague in people?**

Plague is a life-threatening illness.

In people plague can cause three main types of illness.

1. **Bubonic plague:** This form of plague disease usually results from the bite of an infected flea. Persons ill with bubonic plague have sudden onset of fever, headache, chills, and weakness and one or more swollen, tender and painful lymph nodes (called buboes).
2. **Septicemic plague:** This form of the disease may result from handling an infected animal, the bite of an infected flea, or may result from untreated bubonic plague. Infected persons have fever, chills, extreme weakness, abdominal pain, shock, and possibly bleeding into the skin and other organs. Skin and other tissues may turn black and die, especially on fingers, toes, and the nose.
3. **Pneumonic plague:** This form occurs as a result of septicemic plague or directly from inhaling infectious droplets from an animal or another person experiencing pneumonic plague. Ill persons have fever, headache, weakness, and a rapidly developing pneumonia with shortness of breath, chest pain, cough, and sometimes bloody or watery mucus.

### **What are the signs of plague in cats and dogs?**

Plague can be life-threatening in pets. Cats generally get much sicker than dogs and are likely to die if they do not get veterinary care soon after they become ill. Cats can develop bubonic, septicemic, and pneumonic forms of plague, just like people. Cats can spread plague directly to people if they have the pneumonic form through coughing.

Dogs usually have a mild illness, but they, too, can get seriously ill and potentially spread the disease to people.

If your dog or cat has been to an area with dead ground squirrels and is not as active as usual, not eating, or has a fever, seek veterinary care for them immediately and tell the veterinarian that your pet was potentially exposed to plague.

### **What if I feel ill after being around dead ground squirrels or their fleas in an area where there are die-offs?**

If you have recently been in a plague area and become ill with fever or other signs or symptoms of plague within 8 days of exposure, seek medical attention immediately.

### **What is a ground squirrel? What kinds of ground squirrel are typically affected?**

A ground squirrel is a squirrel that lives in burrows underground. A tree squirrel lives in and builds nests in trees. Tree squirrels have not been associated with plague in Idaho. Some people call ground squirrels “whistle pigs,” but the term “whistle pig” is also used for other rodents such as marmots. The scientific name of the most affected species in Southwest Idaho in recent years is *Urocitellus mollis* also known as the Piute ground squirrel (<https://idfg.idaho.gov/species/taxa/16824>).

### **What areas of Idaho are considered risky for plague?**

Any area where ground squirrel populations exist should be considered at risk for plague. Most recently (June 2018), a plague-positive cat was detected in Elmore County. In recent years (2015 and 2016), plague was detected in Ada and Elmore county ground squirrels. In 2015 a dog had a positive test for plague in Ada County and in 2016 six cats had positive tests for plague from Ada (1), Elmore (4), and Clark (1) counties.

### **How do we know if plague is present in ground squirrel colonies?**

Ground squirrel populations with plague can experience high mortality, sometimes evidenced by large numbers of carcasses in an area, and little to no noticeable activity around the colonies.

### **How would someone report dead animals?**

Online, go to <https://fishandgame.idaho.gov/content/plague> and click on the “Report Dead Rodents” button to report animal die-offs or contact your Idaho Department of Fish and Game office <http://fishandgame.idaho.gov/public/about/offices/> This will help determine the extent of any problems in the wildlife and help human health professionals target outreach and awareness efforts in appropriate areas where plague is detected.

### **How can I protect myself from plague?**

- Do NOT handle dead animals if you don't have to, and never without gloves.
- Leave alive and dead ground squirrels (“whistle pigs”) in public places alone.
- If you have ground squirrels (“whistle pigs”) on your property, see disposal instructions below.
- You and your pets should keep away from dead ground squirrels and their burrows as plague-carrying fleas might be present. Take precautions to avoid fleas:

- Wear long-sleeved shirts and long pants.
- Use DEET on clothing in accordance with label instructions or wear clothing pre-treated with permethrin.
- Use DEET on exposed skin, in accordance with label instructions.
- Have your pets on flea prevention medication; it protects the pet and reduces the chance that pets would bring fleas into the home.

### **What should I do if there are dead ground squirrels near my home?**

Contact the Idaho Department of Fish and Game (IDFG) if there are numerous dead ground squirrels (greater than 5) ([insert link to their website](#)). This will help IDFG track the distribution of animal deaths. IDFG will let you know if they wish to collect the dead animals for testing or if you should dispose of them.

### **How do I safely dispose of dead ground squirrels or other rodents or rabbits?**

*Dispose of dead animals before pets or children have a chance to come into contact with them.*

- Use repellent to deter fleas, following label instructions carefully.
  - Wear long-sleeved shirts and long pants and apply DEET to your clothing or wear clothing pre-treated with permethrin.
  - Apply DEET to your exposed skin.
- Put on disposable gloves (latex or rubber, for example)
- Spray the dead animal with a home insecticide that is labelled as effective in killing fleas. **DO NOT** spray live animals.
- Use a shovel to put the dead animal in a plastic garbage bag OR use a plastic bag with your gloved hand to pick up the dead animal, inverting the bag over the animal (like picking up dog poop).
- Close the bag and knot it tightly.
- Put the bag with the dead animal into a second bag, close it, knot it tightly, and put it in the trash.
- Put your gloves in the trash.

### **What should I do about ground squirrel burrows near my home?**

Plague easily kills ground squirrels. If ground squirrels near your home are alive, do not bother, shoot, or poison them. When the ground squirrel dies, fleas leave the carcass and look for a new host including pets or people. If you notice several dead ground squirrels near your home, you can consider treating the burrows with insecticidal dust, such as Deltamethrin® or other permethrin-type insecticides. Contact a licensed pesticide applicator for assistance (find one at <https://idfg.idaho.gov/species/taxa/16824>).

Contact your Public Health District if you have additional questions or concerns:

To find the public health district near you, visit the following webpage

<http://www.healthandwelfare.idaho.gov/Health/HealthDistricts/tabid/97/Default.aspx>

To learn more about plague in Idaho wildlife, visit the Idaho Department of Fish and Game website at <https://idfg.idaho.gov/plague>

For more general information about plague, see <https://www.cdc.gov/plague/index.html>.