



2525 Arapahoe #E4-527. Boulder, CO 80302. (720) 938-0788. [prairiedogcoalition.org](http://prairiedogcoalition.org)

## **PRAIRIE DOGS, PEOPLE AND PLAGUE**

**The Prairie Dog Coalition prepared this report with the cooperation of the Colorado Department of Public Health and the Environment.**

The following is a fact sheet compiled by the Prairie Dog Coalition is intended to offer the facts relating to prairie dogs and plague.

Prairie dogs are only one of many rodent species that are susceptible to plague. Seventy-six species of mammals have been shown to carry fleas infected with plague. Plague is a disease caused by bacterium that is transmitted by infected fleas and maintained in the environment in a flea-rodent cycle. Plague is found in rodents and their associated fleas throughout the Western U.S.. Prairie dogs are not silent, long-term reservoirs of plague; instead over 95% of prairie dogs will die within 78 hours of infection with plague. Because of this, prairie dogs can be an indicator species for the presence of plague circulating in other rodent species in an area. The loss of a prairie dog colony over the course of a few weeks, in absence of human control, strongly indicates the presence of plague. If you see an active prairie dog colony, plague probably is not present in that colony.

Plague is transmitted to people through fleabites or direct contact with bodily fluids of infected animals, but it is primarily a disease of wild rodents. Numerous species of rodents have been involved in Colorado's human cases particularly rock squirrels and wood rats because they often live in or near people's homes.

The Centers for Disease Control and Prevention states that, "The number of human plague infections is low when compared to diseases caused by other agents, yet plague invokes an intense, irrational fear, disproportionate to its transmission potential in the post-antibiotic/vaccination era." Fears of humans contracting plague from prairie dogs are often exaggerated and sometimes even used as an excuse for extermination. According to the Colorado Department of Public Health and Environment statistics, of the 51 plague cases in Colorado since 1957, only 7 cases, one a fatality, were directly linked to prairie dogs. In four other cases prairie dogs and other rodents species were found infected in the area. Of those 7 cases two were related to people skinning prairie dogs, two were the result of family pets bringing home fleas after being allowed to roam freely in prairie dog colonies and three were people infected from working, playing or hiking in infected colonies.

The Colorado Department of Health states, "If precautions are taken, the probability of an individual contracting plague, even in an active plague area, is quite low." Eric Stone, wildlife biologist for The US Fish & Wildlife Service at Rocky Mountain Arsenal National Wildlife Refuge confirms, "Contracting the Plague is very unlikely even if a person is walking through or living near a prairie dog colony. The fleas that carry plague stay in, and around the burrows, so as long as a person or their pets are not coming in contact with the fleas, it is unlikely that they will contract plague."

The most common means of human infection is from being exposed to rodent fleas in areas where rodents are dying from plague. Pet cats and dogs have also been implicated in human cases by bringing home infected fleas or in the case of cats contracting plague by catching and eating infected animals or by being bitten by infected fleas. Even though the risk of human infection is low, people working in or near prairie dog colonies should be familiar with the symptoms of plague. Please visit <http://www.cdc.gov/ncidod/dvbid/plague/index.htm> to learn more. Plague is easily treatable with antibiotics and readily curable in humans if diagnosed and treated early.

Plague was accidentally introduced to North America from Asia around 1900, and has devastated western wildlife populations. All four species of prairie dogs in the U.S. are extremely susceptible to plague.

Because the prairie dog ecosystem has been destabilized by massive plague die-offs, other wildlife that rely on prairie dogs for food and shelter, like the black-footed ferret, burrowing owl, ferruginous hawk, and mountain plover, are also in trouble now. Researchers are working to develop a vaccine against this nonnative disease.

## RECOMMENDED CONTROL AND PREVENTION

- **Large-scale rodent extermination, such as poisoning entire prairie dog colonies, is not recommended by the Colorado Department of Public Health and the Environment as an effective means of plague control.**
- Dusting rodent burrows with insecticide powder to kill fleas is effective in controlling plague in relatively small areas that have high human use such as a colony bordering a park, open space or subdivision. In these cases, a 100-foot buffer zone of burrows can be treated with insecticide dust and the areas posted to advise people and pets to stay out of the colony.
- Avoid contact with all sick and dead rodents and rabbits. Report any die offs involving multiple rodents (as opposed to a single dead animal) or the sudden disappearance of a prairie dog colony to local or state health departments.
- Keep cats and dogs out of prairie dog colonies; this will continue to decrease the low number of human cases of the plague linked to prairie dogs. Pets that live or visit rural areas should be treated for fleas according to your veterinarian's recommendations.
- Do not feed or entice any rodent or rabbit species into your yard, back porch, or patio.
- Eliminate rodent habitat, such as piles of lumber, broken cement, trash and weeds around your home or cabin.
- While hiking, treat pants, socks, shoe tops, arms and legs with insect repellants.
- Remember the incubation period of 2-6 days and consult a physician if sudden unexplained illness occurs within that period after activities in the outdoors.

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For more information or a list of sources, contact The Prairie Dog Coalition at (720) 938-0788 or visit [www.cdc.gov/ncidod/dvbid/plague](http://www.cdc.gov/ncidod/dvbid/plague), or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (Espanol), or (866) 874-2646 (TTY), The Colorado Department of Public Health and the Environment can be reached at (303) 692-2700 or the CO HELP (health education line for the public) toll free hotline, (877) 462-2911, for plague information inquires or visit <http://www.cdphe.state.co.us/dc/Zoonosis/plague/plaguehom.html>



**Photo by Sandy Nervig**