

Tularemia

Tularemia, also known as rabbit or deer-fly fever, is considered a “category A” agent of potential bioterrorism. Tularemia is caused by *Francisella tularensis*, a hardy organism found in rodents, rabbits and squirrels; in ticks, deer flies and mosquitoes; and in contaminated soil, water and animal carcasses. Biovar type A, the most common type in North America, is highly virulent; as few as 10–50 organisms can cause disease.

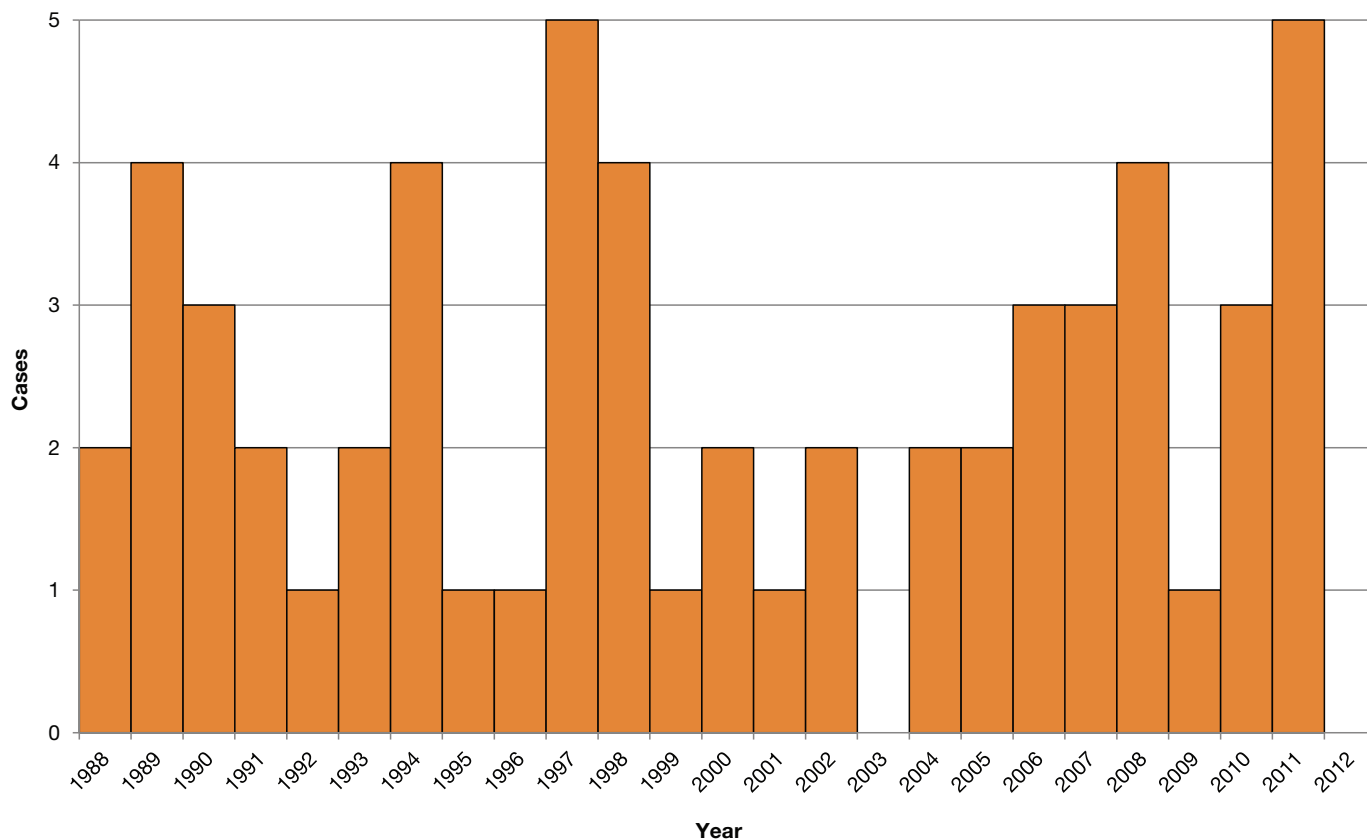
Tularemia occurs throughout the United States. Persons become infected primarily through handling contaminated animals; the bite of infective deer flies, mosquitoes or ticks; direct contact with or ingestion of contaminated food, water or soil; or inhalation of infective aerosols. *Francisella tularensis* is highly infectious when grown in culture and can generate concern for laboratory workers. For potentially exposed workers,

management options include a “fever watch” or antimicrobial prophylaxis.

Disease onset is usually sudden, and symptoms are influenza-like. General symptoms of tularemia include fever, malaise, myalgias, headache, chills, rigors and sore throat. Tularemia has six clinical forms, depending on the bacterium’s portal of entry. Ulceroglandular tularemia is the most common form of the disease, accounting for 75%–85% of naturally occurring cases. Other clinical forms include pneumonic (pulmonary symptoms); typhoidal (gastrointestinal symptoms and sepsis); glandular (regional adenopathy without skin lesion); oculoglandular (painful, purulent conjunctivitis with adenopathy); and oropharyngeal (pharyngitis with adenopathy).

From 2000 through 2011, 28 cases of tularemia were reported in Oregon. No cases were reported here in 2012.

Tularemia by year: Oregon, 1988–2012



Prevention

Use precautions when hiking, hunting, camping or working outdoors:

- Use insect repellents containing 20%–30% DEET, picaridin or IR3535. Wear long pants, long sleeves and long socks to keep ticks and deer flies off your skin.
- Remove attached ticks promptly with fine-tipped tweezers.
- Don't drink untreated surface water.
- Don't run over sick or dead animals with a lawn mower.
- If you hunt, trap or skin animals:
 - Use gloves when handling animals, especially rabbits, muskrats, prairie dogs, and other rodents.
 - Cook game meat thoroughly before eating

Laboratory workers should use precautions when working with suspect cultures:

- All work should be done in biosafety level 2 conditions.
- Procedures that manipulate cultures and might produce aerosols or droplets should be done under biosafety level 3 conditions.