

# Tularemia

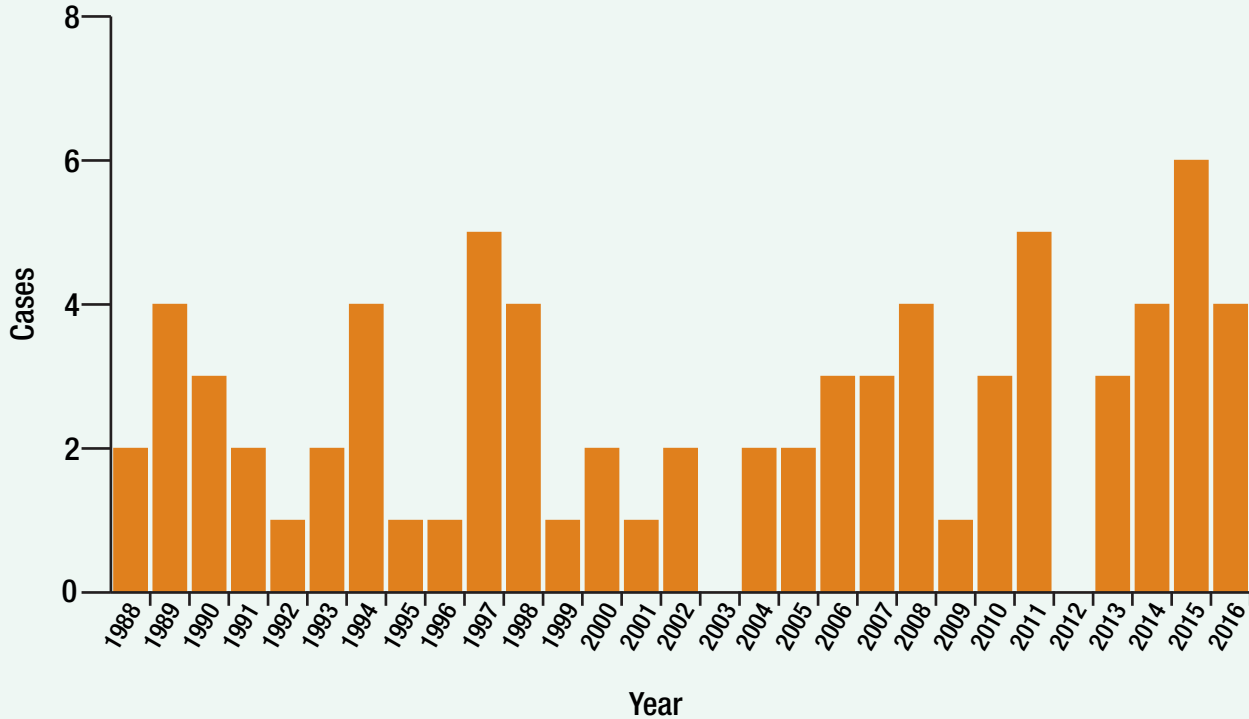
Tularemia, also known as rabbit or deer-fly fever, is considered a “category A” agent of potential bioterrorism. It is caused by *Francisella tularensis*, a hardy organism found in rodents, rabbits and squirrels; in ticks, deer flies and mosquitoes; and in contaminated soil, water and animal carcasses. The organism is remarkably infective; 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 be a risk for infection among laboratory workers. For potentially exposed workers, management options include a “fever watch” or antimicrobial prophylaxis.

Disease onset is usually sudden, and includes fever, malaise, myalgia, 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).

Four sporadic cases were reported in Oregon in 2016.

## Tularemia by year: Oregon, 1988–2016



## 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 (or *any* animals for that matter) 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:
  - › Procedures that manipulate cultures and might produce aerosols or droplets should be done under biosafety level 3 conditions.