



TULAREMIA

Other names: *Francisella tularensis*, Rabbit Fever

CAUSE

Tularemia is a disease of both humans and wildlife caused by infection with the bacterium *Francisella tularensis*.

SIGNIFICANCE

Rabbits, hares, and rodents are especially susceptible to tularemia and their populations are prone to mass mortality events during outbreaks.

TRANSMISSION

Tularemia has multiple pathways for infection including the ingestion of contaminated water or food sources, skin contact with an infected individual, transmission through tick and fly bites, and inhalation of contaminated aerosols or dust. Tularemia is also capable of surviving in soil, water, and vegetation for periods of weeks to months.

RISK TO HUMAN AND DOMESTIC ANIMAL HEALTH

Tularemia is a highly infectious and potentially lethal zoonotic pathogen that represents a serious risk to public health as well as domesticated animals (pets and livestock). Human infections typically result from hunters/trappers skinning/cleaning infected animals, and from activities resulting in bacteria being aerosolized and inhaled (e.g. running over dead infected animals with lawn mowers). The disease has multiple pathways of infection and symptoms differ based on the route of infection. Despite the potential health risks of tularemia, most infections can be effectively treated with antibiotics.

CLINICAL SIGNS

Symptoms of tularemia in animals typically include fever, swollen lymph nodes, and can result in death. Additional symptoms may include reduced feeding/starvation, vomiting, diarrhea, fatigue, dehydration, draining abscesses, pustules, fur may appear rough, animals may huddle together, exhibit unusual behaviour, discharge from the eyes and/or nose, ulcers of the mouth and tongue, pneumonia, enlarged liver and/or spleen, and jaundice. Symptoms may differ depending upon the species that is infected and the route of infection.

PREVENTING INFECTIONS IN HUMANS AND PETS

Tularemia is a naturally occurring disease inherent within our environment, however, there are steps that can be taken to reduce the risk of you and your pets becoming infected:



- The CDC recommends the use of insect repellents containing 20-30% DEET, picaridin, or IR3535 to avoid transmission through insect and tick bites.
- Wear light coloured, full length pants and shirts, and long socks in order to prevent tick bites and aid in locating any ticks you may acquire. Remove any attached ticks as quickly as possible using fine-tipped tweezers.
- Do not drink untreated surface water.
- Avoid mowing over dead animals and preferably remove any carcasses prior to mowing.
- Wear a face mask while mowing the lawn or performing other landscaping activities that may stir up dust or otherwise result in aerosolization of bacteria.
- If hunting or trapping wear gloves and mask while handling/cleaning animals, especially rabbits and rodents (e.g. prairie dogs, muskrats, etc.).
- Thoroughly cook wild game prior to consuming.
- Protect your pets by taking measures to prevent insect bites, do not feed them raw meat, prevent pets from drinking surface water, and prevent interactions with wildlife.
- If you suspect you may have been exposed to tularemia, contact your physician.
- If you suspect a pet or livestock have been exposed to tularemia, contact your veterinarian.
- Report any sick or dead animals to the Canadian Wildlife Health Cooperative. Find your closest regional centre at: <http://www.cwhc-rcsf.ca/>

SUGGESTED READING

- [The Centers for Disease Control and Prevention: Tularemia](#)
- [Iowa State University: The Center for Food Security & Public Health Tularemia Fact Sheet](#)
- [Feldman KA \(2003\): Tularemia. Journal of the American Veterinary Medical Association 251\(3\): 244-351.](#)
- [CWHC Blog Article: Tularemia diagnoses in urban parks in Saskatoon, Saskatchewan, Canada](#)



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