



Tularemia



What is Tularemia?

Tularemia is a bacterial disease caused by the bacterium *Francisella tularensis*. Two subsets of tularemia exist, one is a terrestrial disease (Type A) and the other is aquatic (Type B).

Where is Tularemia found?

Type A and B are found throughout North America including Wyoming and type B is found throughout Europe and Asia. Tularemia can affect a wide range of hosts. Common species seen in Wyoming with the disease can include rabbits and squirrels for type A and muskrats and beavers for type B. Due to a wide host range this disease can also affect domestic species, sheep and house cats are most common. This disease occasionally affects dogs. If you suspect your pet may be infected, please contact your local veterinarian for further information. Tularemia was unusually active in 2015 with over 10 human cases of the disease and one fatality in Bighorn County. Tularemia is relatively common across the entire state, but we normally see only two to three human cases of the disease each year.

How is it spread?

Bites from infected ticks and biting flies are the most common method of transmission for type A tularemia but can also be transmitted through predation, scavenging and direct contact. Type B tularemia is most commonly spread through direct contact from contaminated water but can also be spread through arthropod vectors and predation or scavenging. Human transmission is typically through bites from ticks and biting flies but other routes of transmission can include ingesting contaminated water, or undercooked meat, direct contact with an infected animal, or inhaling bacteria that may be present in contaminated dust or animal material.

What are some clinical signs of disease?

In some animals, very few clinical signs are displayed before death occurs due to fast progression of the infection. Other affected animals may act lethargic, run slowly, or not carry their head or forefeet well, can present with swollen lymph nodes, have respiratory distress or a fever.

How does this disease affect me?

Human cases of tularemia are uncommon (normally 2-3 cases/year in WY). Although symptoms may vary, the common symptoms are swollen and painful lymph glands, abrupt onset of fever, chills, headache, muscle aches, joint pain, dry cough, and progressive weakness. A skin ulcer commonly forms at the site of the insect bite and is frequently accompanied by swelling of regional lymph glands, usually in the armpit or groin. Tularemia is a disease that is easily treated with antibiotics once diagnosed, but left untreated; it can progress to a significant human disease.

Information for outdoor recreationists:

Please contact your local biologist if you find large die offs of rabbits, squirrels, beaver or muskrat as this can be a sign of a tularemia outbreak.

Prevention measures you can take to limit your risk of infection:

- Use an insect repellent that is effective against ticks, biting flies and mosquitoes (e.g. DEET), and wear light colored clothing so that ticks are easier to spot.

- Do not mow over animal carcasses, and use a dust mask when mowing or doing landscape work (mowing over dead rabbits is a great way to contract tularemia).
- Avoid handling sick wildlife. If an animal carcass must be moved, wear gloves and place it in a garbage bag using a long-handled shovel; place the bag in an outdoor garbage can. Carcasses can also be disposed of by deep burial (deep enough that dogs can't recover them) or incineration. Wear gloves and wash hands thoroughly if you must handle sick animals or carcasses.
- Wear gloves when field dressing any harvested animal.
- See a doctor if you become ill with high fever and/or swollen lymph nodes. Tularemia can be treated with antibiotics and early detection is best.
- Protect your pets and hunting dogs by preventing them from hunting or eating wild animals. Infected pets may in turn transmit the disease to you (especially house cats that may bite if they're not feeling well and you try to help them). Check your pet for ticks and see a veterinarian if you think your pet may be ill.
- Avoid drinking unpurified water from streams or lakes and keep your pets from doing the same.
- Cook meat thoroughly before consumption, especially rabbit or squirrel.

For additional information on tularemia or any other wildlife disease, please contact the WGFD Wildlife Health Laboratory at 307-745-5865.