



Tularemia

What is Tularemia?

Tularemia, also known as “rabbit fever,” is a disease caused by the bacteria *Francisella tularensis*. Tularemia is often considered a rural disease typically found in wild animals, especially rodents, rabbits, muskrats and beavers.

Where has this disease been found?

Tularemia has been found throughout North America and in many parts of Europe, Russia, China and Japan. In Canada, 289 cases were reported over a forty-one year span from 1940 to 1981. Tularemia is very rarely reported in Ontario with two cases being reported in 2010, one case in 2011 and one case in 2012.

How is this bacterium transmitted?

Although uncommon, Tularemia can be spread to humans when bitten or licked by an infected animal. More typically, people become infected through:

- the bite of infected insects including ticks and deerflies,
- by handling infected sick or dead animals and/or their equipment (e.g. cages, feeding equipment),
- by eating or drinking contaminated food or water, or
- by inhaling airborne bacteria.

Dog ticks are capable of carrying and transmitting the bacteria that causes Tularemia.



What are the symptoms of Tularemia?

The signs and symptoms people develop depend on how they are exposed to Tularemia. Possible symptoms include:

- Skin ulcers
- Swollen and painful lymph glands
- Inflamed eyes
- Sore throat
- Mouth sores
- Diarrhea
- Pneumonia

If the bacteria are inhaled, symptoms can include abrupt onset of:

- Fever
- Chills
- Headache
- Muscle aches
- Joint pain
- dry cough
- progressive weakness

People with pneumonia can develop chest pain, difficulty breathing, bloody sputum, and respiratory failure.

When do symptoms appear?

Symptoms can take as long as 14 days to appear but usually emerge three to five days after exposure to the bacteria.

How is Tularemia diagnosed?

When a person presents symptoms that appear related to tularemia, the health care provider should collect blood and/or sputum specimens for testing. Depending on the circumstances, a person may be given treatment based on symptoms before the laboratory results are returned.

What is the treatment?

Several types of antibiotics have been effective in treating tularemia infections. Health care providers should test the bacteria in the early stages of the response to determine which antibiotics will be most effective. Early antibiotic treatment is recommended whenever it is likely a person was exposed to tularemia or has been diagnosed as being infected with tularemia. Treatment with antibiotics for a period of 10 to 14 days or more after exposure may be prescribed.

How can I prevent being exposed to Tularemia?

Here are some precautions to take in order to avoid exposure to tularemia:

- Don't drink untreated surface water
- Don't mow over sick or dead animals.
- Consider using dust masks to reduce your risk of inhaling the bacteria
- Use gloves when handling animals, especially rabbits, muskrats, and other rodents.
- Dress game wearing impermeable gloves and cook meat thoroughly before eating

Tick Avoidance Tips:

For yourself:

- Don't walk barelegged in tall grass, wooded areas or marshlands.
- Try to stay in the centre of a cleared trail to avoid contact with overgrown grass, brush, and leaf litter.
- Wear long sleeves, slacks and fully-closed boots or shoes when walking in grassy or wooded areas.
- Tuck your pant legs into your socks.
- Conduct a "tick check" on yourself, your family and your pets after exposure to tick habitat.
- Wear light-coloured clothing to make the ticks easier to find.
- Insect repellents containing DEET (N,N-diethyl-meta-toluamide) are useful and can be sprayed onto clothing, especially pants and socks. Please read the label when using any repellents, in particular when using them on young children. For safety tips on using personal insect repellents containing DEET, visit the following website: www.hc-sc.gc.ca and search "insect repellents."

For your pets:

- Check your pets for ticks daily, especially after they spend time outdoors..
- If you find a tick on your pet, remove it right away.
- Ask your veterinarian to conduct a tick check at each exam.
- Talk to your veterinarian about tickborne diseases in your area.
- Reduce tick habitat in your yard.
- Talk with your veterinarian about using tick preventive products on your pet.

For your yard:

- Remove ideal tick habitat from your property, such as brush and leaf litter.
- Keep your lawn short (<16cm).

- Place a 3-ft wide barrier of wood chips or gravel between lawns and wooded areas and around patios and play equipment. This will restrict tick migration into recreational areas.
- Keep tables, swing sets, play equipment, etc. away from woods, shrubs and tall grass. Place in a sunny location, if possible.
- Remove possible rodent habitats around your property (e.g. stack wood neatly in dry areas away from house).

Tick Removal

- Prompt removal of ticks from your skin will help prevent infection, since transmission of the disease agent
- Using fine-tipped tweezers, carefully grasp the tick as close to your skin as possible. Pull it straight out, gently but firmly.
- Don't squeeze it. Squeezing the tick can cause the disease agent to be accidentally introduced into your body.
- Don't put anything on the tick, or try to burn the tick off.
- Thoroughly cleanse the bite site with rubbing alcohol and/or soap and water.

Tick Identification

- After the tick has been removed, place it in screw-top bottle (e.g. pill vial), and take it to your doctor. They can send it to the Ontario Public Health Laboratory for identification.
- Establishing the type of tick may help to assess your risk.
- It is important to remember where you most likely acquired the tick.

Note: Tick identification only is available. Ticks submitted will not be tested for Tularemia.

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