

### What is tularemia?

Tularemia, a disease that can affect both animals and humans, is caused by a bacterium, *Francisella tularensis*. Although many wild animals are infected, (hares, rabbits, muskrats, beavers) some domestic animals like sheep and cats can be infected too. Rabbits are most often involved in disease outbreaks. The bacteria also can be found in ticks and deer flies.

### Who is at risk for tularemia?

Hunters, trappers or other people who spend a great deal of time outdoors are at a greater risk of exposure than those who spend more time indoors.

### What are the symptoms of tularemia?

Symptoms of tularemia may include sudden fever, chills, headaches, diarrhea, muscle aches, joint pain, dry cough and progressive weakness.

People can also contract pneumonia, develop chest pain and bloody sputum, can have trouble breathing, and may even stop breathing.

Other symptoms of tularemia depend on how a person was exposed to the tularemia bacteria. These symptoms may include ulcers on the skin or mouth, swollen and painful lymph glands, swollen and painful eyes, and a sore throat.

### How soon do symptoms appear?

Symptoms can appear between one and 21 days after exposure, but usually within three to five days.

### How is tularemia spread?

People can be infected in many different ways. The common ways include contamination of the skin or mucous membranes with blood or tissue while handling, dressing or skinning infected animals; being bitten by infected deer flies or ticks; or handling or eating insufficiently cooked rabbit or hare meat. Less common means of spread are drinking contaminated water; inhaling dust from contaminated soil; or handling contaminated pelts or paws of animals. Rabbit meat can remain infective even after being frozen for several years.

Tularemia cannot be spread from one person to another.

### When and for how long is a person able to spread the disease?

Tularemia cannot be spread from person to person.

## How is a person diagnosed?

There are laboratory blood tests that can be used to diagnose tularemia. Consult a health-care professional for more information.

## What is the treatment?

Tularemia may be treated and cured with certain antibiotics. Make sure to follow all directions when taking antibiotics.

## Does past infection make a person immune?

Typically, people will have long-term immunity after recovering from tularemia; however, re-infection has been reported.

## Should children or others be excluded from child care, school, work or other activities if they have tularemia?

No. This disease is not spread from person to person. However, infants, toddlers and school-aged children should be excluded if the staff determines the child is unwilling or unable to participate in activities. They also should be excluded if the staff determines that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.

All others can attend work and other functions as long as they are well enough to do so. As always, good hand hygiene and respiratory etiquette are recommended.

## What can be done to prevent the spread of Tularemia disease?

Rubber gloves should be worn when skinning or handling animals, especially rabbits. Wash hands after handling animals or meat. Wild rabbit and rodent meat should be cooked thoroughly before eating. Avoid bites of flies and ticks by using insect repellent containing DEET on your skin, or treat clothing with repellent containing permethrin. Avoid drinking, bathing, swimming or working in untreated water where infection may prevail among wild animals. Note any change in the behavior of your pets (especially rodents, rabbits and hares) or livestock, and consult a veterinarian if they develop unusual symptoms.

### Additional Information:

Additional information is available by calling the North Dakota Department of Health at 800.472.2180.

**This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.**

### Resources:

1. American Academy of Pediatrics. [Children in Out-Of-Home Care]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 132-151.
2. American Academy of Pediatrics. [Tularemia]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 839-841.
3. Control of Communicable Disease Manual, 20th Edition-2015, Heymann, David, MD ed.