



Tick-Borne Diseases (TBDs)

- Tick-borne diseases and conditions are transmitted through the bite of an infected tick. **Ticks can be infected with bacteria, viruses, or parasites.**
- Some of the most common TBDs in the U.S. include; Lyme disease, babesiosis, ehrlichiosis, Rocky Mountain Spotted Fever, anaplasmosis, Tick-Borne Relapsing Fever, and tularemia.
- Different tick species transmit different disease-causing pathogens.

QUICK LINKS

- [Tick-Borne Diseases | NE DHHS](#)
- [Nebraska DHHS Tick Surveillance Maps](#)
- [Tick Exposure & Tick-Borne Disease Syndromic Surveillance Comprehensive Report \(2022\)](#)
- [Tularemia](#)
- [The NICE Book | Ticks](#)
- [How Ticks spread disease](#)
- [About Tick Tag Go](#)
- [Tularemia Fact Sheet](#)

Ticks in Nebraska

- Ticks can be active year-round and in Nebraska between April and October.
- The most common tick species found in Eastern Nebraska are the; American Dog Tick, *Dermacentor variabilis*, and the Lone Star Tick, *Amblyomma americanum*.
- May/June are considered high tick season in NE. The increase in outdoor activities like trail running, hiking, camping, and more mushroom hunting take place in prime tick habitat.



Tick	Distribution	Associated Illness and Infectious Agent	Symptoms of Illness
American dog tick <i>Dermacentor variabilis</i>	Found statewide throughout Nebraska	Rocky Mountain spotted fever (RMSF) Bacteria: <i>Rickettsia rickettsii</i>	Fever and/or red spotty rash beginning at wrist and ankles then spreading to trunk. Can begin 2-5 days after onset of fever. Some never develop rash. Treat with antibiotics in first few days of symptoms.
		Tularemia Bacteria: <i>Francisella tularensis</i>	High fever and/or skin ulcer at site of bite. Ulcer accompanied by swelling of regional lymph glands in armpit or groin. Treat with antibiotics in first few days of symptoms.
Lone star tick <i>Amblyomma americanum</i>	Found in eastern, southern, and central Nebraska	Human ehrlichiosis Bacteria: <i>Ehrlichia chaffeensis</i>	Fever, headache, fatigue, muscle aches 1-2 weeks following tick bite. Treat with antibiotics in first few days of symptoms.
		Southern tick-associated rash illness (STARI) Agent unknown	Rash nearly identical to Lyme with the expanding "bulls eye" lesion around the tick bite within 7 days. Treat with antibiotics in first few days of symptoms.
		Tularemia Bacteria: <i>Francisella tularensis</i>	High fever and/or skin ulcer at site of bite. Ulcer accompanied by swelling of regional lymph glands in armpit or groin. Treat with antibiotics in first few days of symptoms.
		Heartland virus Virus: Phlebovirus	Fever, fatigue, drop in white blood cells and platelets. Rare virus with no test or treatment.
Alpha-gal allergy or red meat allergy			Can present as hives, skin rash, stomach cramps, sneezing, headaches, asthma and/or anaphylaxis reaction after eating red meat. Must avoid meat trigger.
Black-legged tick <i>Ixodes scapularis</i>	Found (established) in Douglas, Sarpy, Saunders and Thurston counties.	Lyme disease Bacteria: <i>Borrelia burgdorferi</i>	Fever, headache, fatigue, rash nearly identical to STARI with expanding "bulls eye" lesion around tick bite. Can begin 3-30 days after bite. Treated with antibiotics in first few days of symptoms. If left untreated, infection can spread to joints, heart and nervous system.

KIDS HEALTH

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Tularemia in Kids

- Tularemia is transmitted to humans by the dog tick (*Dermacentor variabilis*), the wood tick (*Dermacentor andersoni*), and the lone star tick (*Amblyomma Americanum*).
- Tularemia is caused by *Francisella tularensis* bacteria. Also known as “rabbit fever”
- It spreads to humans through the bites of infected insects such as, ticks, mosquitoes, and deerflies. Direct contact with infected animals, like rabbits, cats, hares, and muskrats can spread Tularemia.
- Children can become infected by consuming contaminated food or water, eating inadequately cooked meat or breathing in the bacteria. It cannot be transmitted from person to person.

According to [NE DHHS 2023 Nebraska tickborne disease report](#), “there were 11 tularemia cases in NE and 6 of them were in the 0-13 age range.”

Tick Bite Prevention

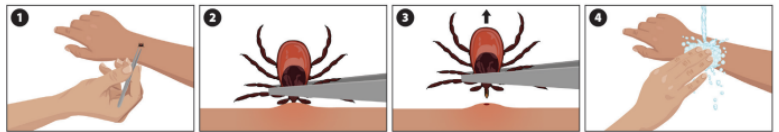
- After outdoor activities , urge children to perform regular, full body tick checks on themselves
- Encourage parents to practice safety, including using [EPA-approved skin repellents](#) such as DEET and picaridin
- Don't drink untreated surface water
- Wear long pants, long sleeves, and long socks.

Symptoms, Diagnosis, & Treatment

- Symptoms vary based on the route of infection, and severity ranges from mild to life threatening. All forms are accompanied by fever, which can reach 104°F.
- Diagnosis is by blood tests and cultures to confirm a tularemia infection.
- Antibiotics such as streptomycin or gentamicin are used to treat tularemia
- Treatment usually lasts 10 to 21 days depending on the stage of illness and the medication used.

Remove the tick as soon as possible

1. Use fine-tipped tweezers to grasp the tick as close to the skin as you can.
2. Pull upward with steady, even pressure. Don't twist or jerk the tick.
3. After removing the tick, clean the bite area and your hands with rubbing alcohol or soap and water.
4. Dispose of the tick by flushing it down the toilet. If you would like to bring the tick to your healthcare provider for identification, put it in rubbing alcohol or place it in a sealed bag/container.



Nebraska Vector-Borne Tick Surveillance



American Dog Tick

Dermacentor variabilis

Blacklegged Tick

Ixodes scapularis

Gulf Coast Tick

Amblyomma maculatum

Lone Star Tick

Amblyomma americanum