



TULAREMIA

Tularemia is a disease of animals and humans caused by the bacterium *Francisella tularensis*. Rabbits, hares and rodents are especially susceptible and often die in large numbers during outbreaks. Humans can become infected through several routes, including:

- Tick bites, including the American dog tick, *Dermacentor variabilis*, and the lone star tick, *Amblyomma americanum*
- Deer fly bites
- Skin contact with infected animals, especially hunting and skinning infected rabbits
- Ingestion of contaminated water
- Inhalation of contaminated dusts or aerosols
- Contact as a result of bioterrorism

Tularemia Symptoms and Treatment

Symptoms vary depending upon the route of infection. Although tularemia can be life-threatening, most infections can be treated successfully with antibiotics. Reduce the risk of getting tularemia by following these steps:

- Use an insect repellent
- Wear gloves when handling sick or dead animals
- Avoid mowing over dead animals

LYME DISEASE

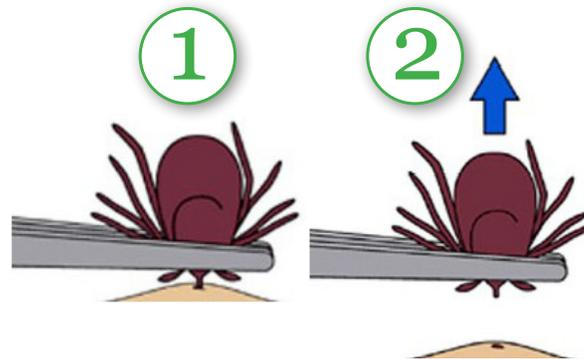
Currently, ticks in Arkansas do not carry Lyme disease. However, individuals who have travelled to other parts of the country, especially the Northeast and Midwest, might have become infected while traveling.

TICK REMOVAL

A tick attached to skin should be removed as soon as possible. This is important because disease will not transmit until the tick has been attached for several hours. To remove a tick, follow these steps:

- Use clean, fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
- Pull upward with steady, even pressure. Do not twist or jerk the tick; this can cause the mouth-parts to break off and remain in the skin. If this happens, remove the mouth-parts with tweezers. If the mouth cannot be easily removed with clean tweezers, leave it alone and let the skin heal.
- After removing the tick, thoroughly clean the bite area and wash your hands with rubbing alcohol, an iodine scrub, or soap and water.

Do not use home remedies such as "painting" the tick with nail polish or petroleum jelly, or using heat to make the tick come off. The goal is to remove the tick as quickly as possible. Do not wait for the tick to let go!



For more information, contact your local health department or call 1-800-462-0599.

Tick-Borne Diseases in Arkansas





PREVENTION OF TICK-BORNE DISEASE

Ticks do not jump, fly or fall out of trees. They wait on low growing plants for a host (person or animal) to pass by. When a host brushes against the plant, the tick will cling to fur or clothing. Once on the host, the tick will crawl upward, looking for a place to attach and begin feeding. In Arkansas, ticks can be active all 12 months. Reduce the risk of getting disease from ticks by following these steps:

Humans

- Avoid tick-infested areas such as tall grass and dense vegetation.
- Tuck your pants into sock tops or boots.
- Wear light-colored clothing to make it easier to find crawling ticks.
- Use repellents and follow label instructions carefully.
- Check yourself, your children and pets often for ticks.
- Bathe or shower within two hours after being where ticks live to find and wash off ticks that may be crawling on you.

Pets

- Pets are also at risk for tick-borne diseases and can carry infected ticks into the home. However, infected pets cannot spread illness to humans.
- Keep yards and outdoor play areas well mowed to keep away ticks.
- Ask your veterinarian how to control ticks on dogs and cats and always follow any label instructions.
- Inspect pets for ticks often.



ROCKY MOUNTAIN SPOTTED FEVER

Rocky Mountain spotted fever (RMSF) is the most common tick-borne disease in Arkansas. RMSF is caused by the bacterium *Rickettsia rickettsii*. This bacterium is carried mostly by the American dog tick, *Dermacentor variabilis*, but also by the brown dog tick, *Rhipicephalus sanguineus*. Not all ticks are infected. It takes an infected tick four to six hours to spread disease after attaching to the host. Adult ticks look for large hosts such as dogs, but they also feed on humans. Ticks are often found in overgrown lots and along weedy roadsides, paths and hiking trails. Most RMSF cases occur between June and August when tick populations and outdoor activities are highest. Half of all people with RMSF do not remember being bitten by a tick.

Rocky Mountain Spotted Fever Symptoms and Treatment

Symptoms of RMSF generally appear suddenly, about one week after an infected tick bite. However, there may be symptoms any time between 2 and 14 days after a bite. Symptoms include:

- High fever
- Headache
- Muscle pain
- Non-itchy, pink rash usually starting on the wrists, forearms and ankles

It is important to get medical care as soon as possible if you think you have RMSF. Blood tests are required to diagnose RMSF, but treatment should begin as soon as symptoms and/or recent tick exposure suggest RMSF.



EHRlichiosis AND ANAPLASMOSIS

Ehrlichiosis is the name used to describe several bacterial diseases that affect animals and humans. Human ehrlichiosis (formerly called human monocytic ehrlichiosis or HME) is caused by *Ehrlichia chaffeensis* (first recognized in 1986 from a patient infected at Fort Chaffee, AR) and *Ehrlichia ewingii*. These bacteria are spread to humans by the bite of the lone star tick, *Amblyomma americanum*.

Anaplasmosis is a tick-borne disease caused by the bacterium *Anaplasma phagocytophilum*. It was previously known as human granulocytic ehrlichiosis (HGE). Anaplasmosis is spread to humans by tick bites primarily from the black-legged tick, *Ixodes scapularis*. In Arkansas, these ticks are commonly found in shady areas along roads, meadows and woods. The risk of picking up these ticks is greater in wooded or brushy areas and in the edge area between lawns and woods.

Ehrlichiosis and Anaplasmosis Symptoms and Treatment

Symptoms of these diseases are similar and may appear up to 10 days after a tick bite. Symptoms can include:

- Mild to severe fever
- Headache
- Muscle pain
- Vomiting and general discomfort

Blood tests are used to aid in diagnosis of these diseases. Both Ehrlichiosis and Anaplasmosis respond to antibiotics, and treatment should be based on symptoms and/or history of tick exposure.