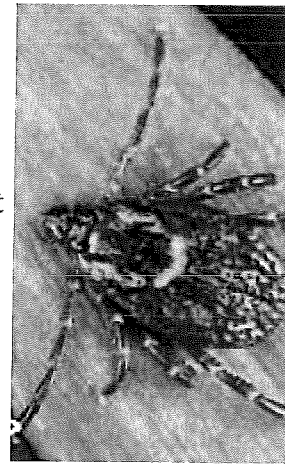


Northeast Tri County HEALTH DISTRICT

Ticks and Tick-borne Diseases

What is a tick?

Ticks are small blood-feeding parasites that can transmit diseases to people. Some types of ticks perch on the edge of low-lying vegetation and grab onto animals, and people, as they brush past. Other ticks are associated with rodents and their nests and may only come out at night to feed. Once aboard, ticks crawl until they find a good spot to feed, then burrow their mouthparts into the skin for a blood meal. Their bodies slowly enlarge to accommodate the amount of blood ingested. Ticks feed anywhere from several minutes to several days depending on their species, life stage, and type of host.



Avoiding tick bites

Outdoor activities

When working, camping, or walking in a tick habitat - wooded, brushy, or grassy places - a few simple precautions can reduce your chance of being bitten.

- Wear long pants and a long-sleeved shirt. Tuck your pant legs into socks or boots and shirt into pants. This can help keep ticks on the outside of your clothing where they can be more easily spotted and removed.
- Wear light colored, tightly woven clothing which will allow the dark tick to be seen more easily. The tight weave makes it harder for the tick to attach itself.
- Use tick repellent when necessary, and carefully follow instructions on the label. Products containing DEET or permethrin are very effective in repelling ticks. Take special care when using repellents on children.
- Check yourself, your children, and pets thoroughly for ticks. Carefully inspect areas around the head, neck, ears, under arms, between legs, and back of knees. Look for what may appear like a new freckle or speck of dirt.

Cabins and rodents

When staying in summer cabins or vacation homes, especially in eastern Washington, make sure rodents, and their ticks, aren't spending the night with you. Practice rodent control by not attracting rodents, sealing them out of your living areas, trapping rodents, and properly cleaning up rodent-contaminated areas.

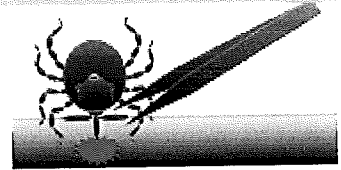
Around the home management

Focus your management of tick habitat to areas frequently used by your family, not necessarily your entire property.

- Use brick, paving, decking, gravel, container plantings, and low water requirement plants to encourage bright sunny areas immediately around your home - open sunny areas are less likely to harbor ticks.
- Keep grass mowed, shrubs trimmed, and restrict the use of groundcover in family or pet areas.
- Keep dogs and cats out of the woods to keep them from bringing home ticks.
- Widen woodland trails.
- Move swing sets, sand boxes, and other children play areas away from the edge of woods and place them on a wood chip or mulch foundation.
- Use plantings that don't attract deer or exclude deer through fencing.
- Practice rodent control to discourage rodent activity in and around your home.

Removing a tick

1. Promptly remove the tick using fine-tipped tweezers. Grasp the tick as close to the skin surface as possible and pull upward with steady, even pressure. Avoid removing the tick with bare hands. Don't twist or jerk the tick - this may cause the mouthparts to break off and remain in the skin. If this happens, remove the mouthparts with tweezers.
2. After removing the tick, disinfect the bite site and wash your hands.
3. Note the date that you found the tick attached to you, just in case you become ill. If a fever, rash, or flu-like illness occurs within a month, let your health care provider know that you were bitten by a tick. This information may assist your health care provider in diagnosing your illness.



Avoid folk remedies to remove a tick

Hot matches or coating the tick's body with petroleum jelly, soap, or nail polish do little to encourage a tick to detach from skin. In fact, they may make matters worse by irritating the tick and causing it to release additional saliva, increasing the chance of transmitting disease. These methods of tick removal should be avoided.

Diseases spread by ticks

Washington has relatively few tick-borne disease cases reported each year in comparison to some areas of the United States. If you think you have symptoms of a tick-borne disease, contact your health care provider. Diseases that you can get from a tick bite in Washington include:

Lyme Disease

The first sign of Lyme disease is usually an expanding circular rash which starts at the site of the tick bite. The rash may have a target-shape or "bull's-eye" appearance. Fever, headache, muscle aches, and joint pain may also occur. If left untreated, later symptoms can include recurring joint pain, heart disease, and nervous system disorders. Lyme disease is the most common tick-borne disease in the United States, but is rare in Washington. Only 0 to 3 Lyme disease cases per year are reported to be infected in Washington. Lyme disease is caused by the *Borrelia burgdorferi* bacteria, which can be transmitted through the bite of a western black-legged tick, *Ixodes pacificus*. Western black-legged ticks pick up the bacteria after feeding on infected rodents. These ticks live in forested or brushy areas of western Washington.

Tick-borne Relapsing Fever

Symptoms include relapsing (recurrent) periods of fever lasting for 2 to 7 days, disappearing for about 4 to 14 days, and then reoccurring. One to 12 cases of tick-borne relapsing fever are reported each year in Washington. Most people become infected while staying in rural, mountainous cabins of eastern Washington during the summer months. The soft tick, *Ornithodoros hermsi*, typically feeds on rodents, which is where they pick up the *Borrelia hermsii* bacteria. The infected tick can then transmit the bacteria by feeding on a person for short periods of time while they are sleeping. Since these ticks are associated with rodent burrows and nests, it's important to keep rodents out of cabins and other sleeping areas.

Rocky Mountain Spotted Fever

Initial symptoms of Rocky Mountain spotted fever may include fever, nausea, vomiting, muscle pain, lack of appetite, and severe headache. A rash generally, but not always, appears a few days later. Abdominal pain, joint pain, and diarrhea can also occur. Each year, 0 to 3 cases of Rocky Mountain spotted fever are identified in Washington. Some of the cases are infected in Washington, some are infected elsewhere. The bacteria that causes Rocky Mountain spotted fever is transmitted by the bite of an infected American dog tick, *Dermacentor variabilis*, or Rocky Mountain wood tick, *D. andersoni*. These ticks are found throughout the state and prefer woodland areas, medium height grasses and shrubs between wetlands and woods, and sunny or open areas around woods. They are especially common in eastern Washington.

Tick Paralysis

Tick paralysis is caused by a neurotoxin from an attached tick. This condition is characterized by a progressive paralysis that usually starts in the legs with muscle weakness, loss of coordination, numbness, and difficulty standing or walking. The symptoms progress upwards to the abdomen, back, and chest. If the tick is not removed, paralysis of the chest muscles can lead to respiratory failure and death within 24 to 48 hours after symptoms begin. Prompt removal of the tick usually leads to a complete recovery. Five cases of tick paralysis have been reported in Washington from 1990 through 2009. Ticks associated with tick paralysis include *Ixodes* and *Dermacentor* species that live in forested and brushy areas or along edges between open grassy areas and woods.

Tularemia

A tick bite is one way people can get tularemia. Symptoms of tularemia following a tick bite include sudden fever, headache, swollen lymph nodes, and a skin ulcer near the bite. One to 10 cases of tularemia are reported each year in Washington - only some of these are due to tick

bites and some cases are acquired in other states. Ticks that can transmit tularemia in Washington are the American dog tick, *Dermacentor variabilis*, and the Rocky Mountain wood tick, *D. andersoni*. These ticks are found throughout the state and prefer woodland areas, medium height grasses and shrubs between wetlands and woods, and sunny or open areas along the edge of woods.

Anaplasmosis

Symptoms of anaplasmosis include headache, fever, chills, and muscle aches. No human cases have been reported in Washington, however, anaplasmosis has been diagnosed in numerous dogs in our state. Western black-legged ticks, *Ixodes pacificus*, can carry the bacteria that cause anaplasmosis and are found in the western part of the state living in forested or brushy areas.

Babesiosis

Symptoms of babesiosis include fever, chills, fatigue, muscle pain, and anemia. Since 1990, only 2 cases have been reported as contracting the disease in Washington. The western black-legged tick, *Ixodes pacificus*, is considered the vector of this disease in Washington. This tick is found in forested or brushy areas of western Washington.