

# Tick-Borne Diseases

There are 3 major diseases spread by ticks in Minnesota: Lyme disease, babesiosis, and human anaplasmosis. All three have been on the rise - in fact, in 2007 the state set new records for all three. Washington County is an especially high-risk area for all tick-borne diseases, which are carried and spread by the blacklegged (or deer) tick.

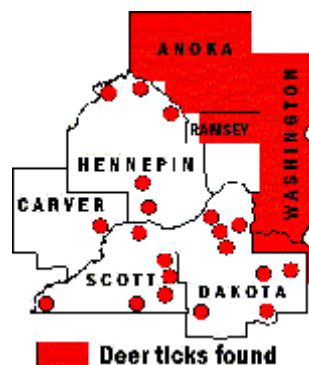
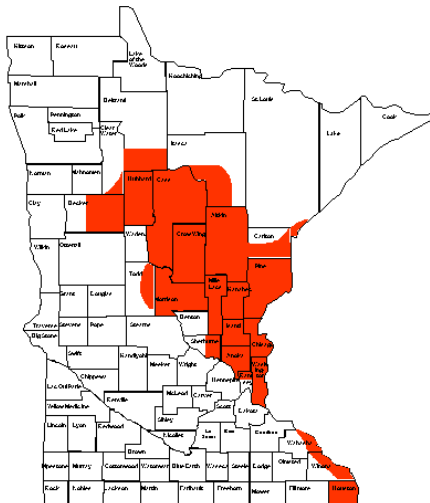
## What is a blacklegged tick?

- These two pictures show blacklegged ticks. The first compares them to the larger and more common wood tick, which does not carry disease in Minnesota. The second shows a blacklegged nymph – an immature tick. Both adults and nymphs can spread disease.



## Where are they found?

- Blacklegged ticks thrive in areas like hardwood forests with dense leaf layers and underbrush. They dry out easily, so they don't last long in the sun or other warm, dry areas.
- The areas in red on these maps are at highest risk, first in Minnesota and next in just the Twin Cities Metro:



## How does a tick transmit disease?

Tick-borne diseases do not actually infect the tick itself. Instead, it carries the disease from an infected animal to a human. Here's how it works:

Step 1: A tick bites an infected animal, like a mouse or a deer. It feeds on the animal's blood. After it detaches, it carries not just the blood, but the disease as well. If the animal that the tick bit was not infected with any disease, there is nothing for the tick to transmit. Therefore, **not all blacklegged ticks carry disease.**

Step 2: The tick sleeps over the winter, usually burrowed into the leaf layer on a forest floor. In the spring, the tick wakes up and looks for its next meal. Ticks remain low to the ground, usually climbing no more than a couple of feet. They wave their front legs looking for a host to latch onto.

Step 3: An infected tick bites a healthy human. In order to transmit disease, the tick must remain attached for **12-48 hours.**

This is the only way for these diseases to be transmitted. **They cannot be passed from person to person.**

## What are symptoms of tick-borne diseases?

### Lyme Disease

**3 to 30 days after the bite:**

- Fever
- Chills
- Muscle and joint pain
- Headache
- Fatigue
- 60 to 80 percent of people develop a "bulls-eye" rash similar to this:



**Other symptoms may appear at the same time or weeks later. These include:**

- Stiff neck
- Weakness or numbness in arms or legs
- Overall weakness
- Multiple rashes
- Irregular heartbeat

**Long term symptoms can include:**

- Arthritis, usually in the knees
- Chronic weakness and fatigue
- Nervous system problems

**Human Anaplasmosis**

- Fever
- Headache
- Muscle aches
- Chills

**Less frequent symptoms include:**

- Nausea, vomiting and/or diarrhea
- Loss of appetite
- Weight loss
- Joint pain
- Confusion
- Renal failure

**Babesiosis**

- High fever
- Chills
- Muscle aches
- Fatigue
- Headache
- Loss of appetite

If you develop “flu-like” or other symptoms listed above, it is tick season, and especially if you know you have been exposed to a blacklegged tick bite, you may have acquired a tick-borne disease. In this case, seek medical treatment immediately and share your suspicions with your doctor. Although anyone can get sick, the elderly and immunocompromised are the most at risk of developing severe illness.

**Can tick-borne diseases be treated?**

All are treatable with antibiotics. They are usually taken orally, but can also be given through an IV.

**Where can healthcare providers receive more information about diagnosis and treatment of these diseases?**

The Minnesota Department of Health offers information and guidelines at:

<http://www.health.state.mn.us/divs/idepc/dtopics/tickborne/hcp.html>

## What can be done to prevent tick-borne diseases?

At this time, there is no vaccine for Lyme disease, human anaplasmosis, or babesiosis. The Lyme disease vaccine that was formerly available has been removed from the market. **The best prevention is to control exposure to ticks.**

### At home:

- Although ticks have been found in yards throughout the area, it is most likely when the yard is bordered by a forest or other brushy area.
  - Place a barrier of wood chips or other material between these areas and the yard.



- Keep your grass mowed short.
- Clear brush and dead leaves around your house and yard.
- Pesticides have shown success when used properly on a lawn.
- Put well-used areas, like play sets and patio furniture, in sunny, dry areas.
- Avoid attracting animals to your yard that can carry these diseases, including deer and rodents.
  - Don't feed them purposefully or leave food where they can get to it.
- The Metropolitan Mosquito Control District offers consultation to homeowners on controlling ticks in the yard. Their information is located at the bottom of this page.

### If you spend time in wooded or brushy areas:

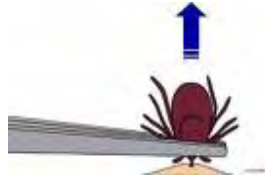
- Wear long sleeves and pants. If they are light-colored it will be easier to spot ticks.
- Tuck your pants into your socks. This is to prevent ticks from crawling under your pants and up your leg.



- Check for ticks immediately after leaving the area.
- Despite your best efforts, you may not see every tiny blacklegged tick (especially nymphs) that you pick up. Therefore, it is strongly suggested that you use a repellent if you know you will be in a high risk area.
- Use a DEET containing repellent.
  - The product should contain no more than 30 percent DEET.
  - Do not use DEET on children under 2 months of age.
  - Follow all manufacturer's directions.
- A repellent containing permethrin can be used on clothing.
  - Do not use this repellent on skin.
  - Follow all manufacturer's directions.

**If you find a tick has attached itself to a person or animal:**

- Using a tweezers, grasp the head of the tick near the skin.
- Without squeezing, slowly pull the tick away from the skin.
- Use an antiseptic on the area after removal.



**For pets:**

- Check pets for ticks before they enter the home.
- Topical treatments are available to repel ticks.
- A Lyme disease vaccine is available for dogs, but it will not prevent them from bringing ticks into the home.

**For more information:**

**Washington County Department of Public Health and Environment**

Phone: 651-430-6655

**Minnesota Department of Health**

<http://www.health.state.mn.us/divs/idepc/dtopics/tickborne/index.html>

**Metropolitan Mosquito Control District**

MMCD monitors deer ticks in the metro area, advises homeowners on landscaping and small scale tick control techniques, helps educate the public about Lyme disease, and offers free tick identification.

<http://www.mmcd.org/tick.html>

**Iowa State University's Deer Tick Homepage**

<http://www.ent.iastate.edu/imagegallery/ticks/deertick.html>

**Vermont Department of Health**

Landscaping to Prevent Ticks

<http://healthvermont.gov/prevent/lyme/landscape.aspx>