

# Babesiosis

## What is babesiosis?

Babesiosis is one of many tickborne diseases in Minnesota. It is an uncommon illness but has been occurring more frequently in recent years. Most human cases of babesiosis in the United States are caused by the parasite, *Babesia microti*.

## How do people get babesiosis?

People can get babesiosis through the bite of a blacklegged tick (deer tick) that is infected with microscopic parasites. Not all blacklegged ticks carry these parasites and not all people bitten by a blacklegged tick will get sick. The tick must be attached to a person for approximately 24 hours before it can spread the parasite.

Blacklegged ticks live on the ground in areas that are wooded or have lots of brush. The ticks search for hosts at or near ground level and grab onto a person or animal as they walk by. Ticks do not jump, fly, or fall from trees.

In Minnesota, the months of April through July and September through October are the greatest risk for being bitten by a blacklegged tick. Risk peaks in June or July every year. Blacklegged ticks are small; adults are about the size of a sesame seed and nymphs (young ticks) are about the size of a poppy seed. Due to their small size, a person may not know they have been bitten by a tick.

In rare cases, babesiosis may be transmitted from a blood transfusion or from an infected mother to her baby (during pregnancy or delivery).

## What are the symptoms of babesiosis?

Many people infected with babesiosis have no symptoms or only mild symptoms. While people of any age can get babesiosis, symptoms tend to be most severe in older individuals, those with weakened immune systems, or those who do not have a spleen. Symptoms of babesiosis usually appear within several weeks of a tick bite. Signs and symptoms may include:

- **Fever**
- **Headache**
- **Muscle aches**
- **Tiredness and weakness**
- **Anemia** (low number of red blood cells)

Serious illness and complications may occur if the infection is not treated correctly. Death is possible but rare (approximately 5-20% of hospitalized or immunosuppressed patients).

## How is babesiosis diagnosed?

If a person suspects babesiosis, they should contact a doctor as soon as possible for diagnosis and treatment. The diagnosis of babesiosis is based on a history of exposure to tick habitat, a physical examination, and blood tests to confirm the diagnosis.

## How is babesiosis treated?

People who do not have any symptoms may not need to be treated. Ill patients or those who may be at risk of severe or recurring infection should be treated. Babesiosis is treated with a combination of antimicrobial medications. Supportive care may also be needed for individuals with severe illness.

## How can I reduce my risk?

There is currently no human vaccine available for babesiosis. Reducing exposure to ticks is the best defense against tickborne diseases.

### Protect yourself from tick bites:

- Know where ticks live and when they are active.
  - Blacklegged ticks live in wooded or brushy areas.
  - In Minnesota, blacklegged tick activity is greatest from April – July and September – October.
- Use a safe and effective tick repellent if you spend time in or near areas where ticks live. Follow the product label and reapply as directed.
  - Use **DEET**-based repellents (up to 30%) on skin or clothing. Do not use DEET on infants under two months of age.
  - Pre-treat clothing and gear with **permethrin**-based repellents to protect against tick bites for at least two weeks without reapplication. Do not apply permethrin to your skin.
- Wear light-colored clothing to help you spot ticks more easily. Wear long-sleeved shirts and pants to cover exposed skin.
- Tumble dry clothing and gear on high heat for at least 60 minutes after spending time in areas where ticks live.
- Talk with your veterinarian about safe and effective products you can use to protect your pet.

### Check for ticks at least once a day after spending time in areas where ticks live:

- Inspect your entire body closely with a mirror, especially hard-to-see areas such as the groin and armpits.
- Remove ticks as soon as you find one.

- Use tweezers or your fingers to grasp the tick close to its mouth. Pull the tick outward slowly and gently. Clean the area with soap and water.
- Examine your gear and pets for ticks.

### Manage areas where ticks live:

- Mow lawns and trails frequently.
- Remove leaves and brush.
- Create a barrier of wood chips or rocks between mowed lawns and woods.

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