

Anaplasmosis

What is anaplasmosis?

Anaplasmosis is one of many tickborne diseases in Minnesota and is the second most common tickborne disease in Minnesota after Lyme disease. It was first recognized in the mid-1990s and was previously known as human granulocytic ehrlichiosis.

How do people get anaplasmosis?

People can get anaplasmosis through the bite of a blacklegged tick (deer tick) that is infected with *Anaplasma phagocytophilum* bacteria. Not all blacklegged ticks carry these bacteria and not all people bitten by a blacklegged tick will get sick. The tick must be attached to a person for at least 12-24 hours before it can spread the bacteria.

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.

What are the symptoms of anaplasmosis?

Many people infected with anaplasmosis have no symptoms or only mild symptoms. While people of any age can get anaplasmosis, symptoms tend to be most severe in older individuals and those with weakened immune systems. Symptoms of anaplasmosis usually appear within 1-2 weeks of a tick bite. Symptoms may include:

- **Fever**
- **Headache**
- **Muscle aches**
- **Nausea or abdominal pain**

Serious illness and complications may occur if the infection is not treated correctly. Death is possible but rare (less than 1% of cases).

How is anaplasmosis diagnosed?

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

How is anaplasmosis treated?

Anaplasmosis is treated with antibiotics. Treatment should not be delayed if anaplasmosis is suspected. Clinical signs often start to improve within 24 hours of starting antibiotics. It is possible to get anaplasmosis more than once so continue to protect yourself from tick bites and contact your doctor if you suspect you may have symptoms of anaplasmosis.

How can I reduce my risk?

There is currently no human vaccine available for anaplasmosis. 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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