

What is ehrlichiosis?

Ehrlichiosis is an illness caused by infection with one of several species of *Ehrlichia* (air-LICK-ee-ah) bacteria. These bacteria can be transmitted to humans and animals when an infected tick attaches and takes a blood meal. The bacteria targets white blood cells and causes an infection that usually results in flu-like symptoms. Most illness in people is caused by *E. chaffeensis* and is spread by the bite of an infected lone star tick, *Amblyomma americanum*.

Where does ehrlichiosis occur?

In the United States, ehrlichiosis can occur wherever the lone star tick is present. This tick is most abundant in the southeastern and south-central regions of the country, although they may be found in some northern states as well. The lone star tick has not yet become established in Vermont.

What are the symptoms of ehrlichiosis?

Symptoms of ehrlichiosis usually appear one to two weeks after a bite from an infected tick. The most common symptoms are fever, headache, fatigue and muscle aches. A rash can occur in up to 25% of adults and 60% of children. Patients can also experience nausea, vomiting, diarrhea, joint pain and confusion. Infection usually produces a mild to moderately severe illness, and early treatment usually results in full recovery. Typically, symptoms of the disease last from one to two weeks. Occasionally complications occur, including respiratory problems, blood and kidney abnormalities, meningitis and other central nervous system problems. Ehrlichiosis can occasionally be a life-threatening disease with an estimated 1.8% of illnesses resulting in death.

How is ehrlichiosis spread?

Ehrlichiosis is spread to humans through the bite of an infected tick, and the risk of infection increases the longer the tick is attached. The lone star tick is the primary transmitter of the disease, but this species is not commonly found in Vermont. Ehrlichiosis cannot be spread from person-to-person or by direct contact with an infected animal.

Who is at risk for getting ehrlichiosis?

Anyone can get ehrlichiosis, but most illness occurs in people older than 50. People who spend a lot of time outdoors are more likely to have exposure to infected ticks and are more likely to become ill. Illness usually occurs between April and October with the number of cases peaking in mid-summer.

How is ehrlichiosis diagnosed?

Special laboratory tests can detect recent infection with the *Ehrlichia* bacteria. Other laboratory findings that may point to ehrlichiosis include low white blood cell count, low platelet count, and elevated liver enzymes. While testing is important to confirm ehrlichiosis, treatment should be based on clinical symptoms and a history of exposure to ticks.

What is the treatment for ehrlichiosis?

Ehrlichiosis is treated with antibiotics. Early treatment usually leads to a rapid recovery. Hospitalization may be necessary for people with more severe illnesses.

How do you prevent ehrlichiosis?

The best way to prevent ehrlichiosis is to prevent tick bites.

While outdoors:

- Wear long pants and long-sleeved shirts to minimize skin exposure to ticks.
- Tuck your pants into your socks to form a barrier to tick attachment.
- Wear light-colored clothing to help see ticks on your clothing.
- Check for ticks, looking particularly for what may look like nothing more than a new freckle or speck of dirt, and remove ticks promptly.
- Use an effective tick repellent on your skin or on your clothing. There are several repellents that are effective against ticks. For an up-to-date list of EPA registered products, see <http://cfpub.epa.gov/oppref/insect/>. Repellents should not be used on infants under 2 months of age. Read the label carefully and use according to the recommendations.
- Use permethrin on clothing you wear outside. Permethrin is an insect repellent that is very effective in preventing tick bites.

After you come inside:

- Check your or your child's body for ticks, and remove them promptly. Pay special attention to the head, armpits, and groin area.
- Examine clothing and gear for ticks. Placing your clothes in a hot dryer for 60 minutes will kill any ticks that may be clinging to the fabric.
- Check your pets for ticks as well. Consult your veterinarian for advice on choosing effective tick repellents for your pets.

How do you remove ticks?

Try to remove the tick as soon as you discover it because prompt removal can prevent transmission of tick-borne diseases.

To safely remove ticks:

1. Use fine-tipped tweezers and firmly grasp the tick close to the skin. Avoid touching the tick with your bare hands.
2. With a steady motion, pull straight up until all parts of the tick are removed. Do not twist or jerk the tick. Do not be alarmed if the tick's mouthparts remain in the skin. Once the mouthparts are removed from the rest of the tick, it can no longer transmit disease-causing bacteria.

DO NOT use petroleum jelly, a hot match, nail polish, or other products to remove a tick. These methods are ineffective.

Thoroughly wash your hands and the bite area

After removing the tick, wash your hands with soap and water or use an alcohol-based hand sanitizer if soap and water are not available. Clean the tick bite with soap and water or use an antiseptic such as iodine scrub or rubbing alcohol.