

LYME DISEASE

Reportable to local or state health department

**This fact sheet is for provider information only.
If you have questions, please call the health department.**

Lyme disease is an illness of concern in Minnesota because the deer tick (also called the black legged tick), which spreads the disease, is found in woody or brushy areas of east central, north central, and southeast Minnesota.

CAUSE

Borrelia burgdorferi bacteria.

SYMPTOMS

Early: About three-fourths of Lyme disease cases experience an expanding rash (usually 2 or more inches across) which looks like a bull's-eye, with a red outer rim and central clearing, called erythema migrans. Occasionally the rash does not look like a bull's-eye. A rash from Lyme disease will not be itchy, painful, or swollen. This rash first occurs at the site of the tick bite and may occur elsewhere on the body. It may not be noticed because of the location of the tick bite. Sometimes the rash is not present. A person with early Lyme disease may also have fever, malaise, fatigue, headache, stiff neck, joint pains, or muscle aches.

Late: Weeks or months later, the joints, nervous system, and heart may be affected. Late symptoms can include arthritis, facial palsy, and meningitis.

SPREAD

Lyme disease bacteria are spread through the bite of an infected deer tick. The tick must be attached and feeding for at least one or two days before transmission can occur. Not all deer ticks carry the bacteria.

The adult female deer tick is brown and red (or brown and orange) and about the size of a sesame seed. They are $\frac{1}{2}$ to $\frac{2}{3}$ the size of a wood tick. The nymph stage of the deer tick is dark-brown overall and approximately the size of a poppy seed. Nymphs are responsible for most Lyme disease transmission and are actively feeding from mid-May through August. Because they are so small, they often feed undetected long enough to transmit the disease. (The common dog tick or wood tick is brown with white marks near the head and does not transmit Lyme disease.)

INCUBATION

It takes 3 to 30 days, usually 7 to 14 days, from the time a person is exposed until early symptoms develop. Late symptoms may appear weeks to months, or even years, later.

CONTAGIOUS PERIOD

None. It is not spread from person-to-person.

EXCLUSION

Childcare and School: None.

DIAGNOSIS

Recommend parents/guardians call their healthcare provider if symptoms of Lyme disease are present. It is often difficult to diagnose, since the rash is not always noticed or present. Blood tests are available, but are not always specific for diagnosing Lyme disease. The Centers for Disease Control and Prevention recommends that confirmation testing be done in addition to the screening test to ensure more accurate results.

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TREATMENT Lyme disease can be treated with antibiotics. Treatment works best if it is started early. Discuss treatment options with the healthcare provider.

PREVENTION/CONTROL

- Avoid tick-infested areas, especially from mid-May through mid-July (risk is present but lower earlier in the spring and in September to October). Deer ticks prefer wooded or brushy habitats and are not typically found in grassy fields or lawns. They are sometimes found in thick brush directly adjacent to wooded areas. Stay on paved or well-mowed paths and avoid contact with tall vegetation and shrubbery.
- Wear proper clothing when in endemic areas (areas where ticks carrying the Lyme bacteria are commonly found) that are wooded or brushy. Wear long pants, tuck pants into socks, wear a long sleeved shirt tucked into pants, and wear light-colored clothing so ticks are easier to see.
- Use a repellent. The most effective repellents for deer ticks contain DEET or permethrin. Repellents containing DEET (up to 30% concentration for both adults and children; do not use DEET on infants less than 2 months of age) may be used on clothing or skin, but permethrin should be used only on clothing. **ALWAYS FOLLOW THE LABEL DIRECTIONS.** If used properly, most repellents are very safe.
- Check for ticks on clothing and entire body while outdoors and when returning indoors. Check pets for ticks before letting them indoors.
- Remove ticks promptly. Ticks attached for fewer than 24 hours are not likely to transmit the bacteria. Grasp the tick at the mouth parts with a tweezers and pull gently but steadily straight back. **DO NOT** use petroleum jelly, nail polish, or burning matches to remove ticks.

For more information, call Hennepin County HSPHD-Epidemiology at (612) 543-5230, call your local health department, or the Minnesota Department of Health at (651) 201-5414.