

Ticks, Lyme Disease and Tick-borne Diseases Fact Sheet

Ticks can transmit a variety of diseases, the most common being Lyme disease. Lyme disease is a bacterial infection that is spread through the bite of infected blacklegged (deer) ticks. Most infections are due to bites of immature ticks, which can be less than 2 mm in length, as they are harder to see and feel. Between 10 and 20% of patients with Lyme disease have lingering symptoms (muscle/joint pain, fatigue, sleep disturbances, and cognitive difficulties) that can last months to years (even after appropriate treatment with antibiotics). Prompt removal of ticks is critical as Lyme disease can transmit in as little as 24 hours. Other tick-borne infections can transmit within 3-6 hours..

SYMPTOMS

Early Localized Stage (1-30 days post bite)

- Red expanding rash shaped like a bull's eye (erythema migrans), rash likely is warm to the touch and not itchy or painful (not present in 20-30% of cases)
- Fatigue
- Fever
- Headache
- Muscle and joint pain
- Swollen lymph nodes

Untreated short term (days to weeks post bite)

- Additional rashes occur
- Facial palsy
- Severe headaches
- Neck stiffness
- Pain/swelling in large joints
- Shooting pain
- Heart palpitations

Untreated long term (months to years post bite)

- Arthritis
- Numbness/tingling in hands or feet
- Short-term memory loss

PREVENTION

- Avoid areas where ticks are likely to be, such as tall grass, wooded areas, and leaf litter. Review CDS [heat maps](#) of high tick areas and months:
 - [Ehrlichiosis](#)
 - [Rocky Mountain Spotted Fever](#)



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- Wear a hat, long pants, tucked long sleeve shirt, and tuck pant legs into socks. Light colored clothing is recommended so that ticks are more visible.
- Use DEET containing repellants on exposed skin and clothing.
- Use permethrin containing repellants on clothing and gear. Never use permethrin on exposed skin.
- Perform tick checks during and after field work.
- When working in an area with endemic lyme disease, start preventative medication within 72 hours of being bitten by a tick. For higher risk field work, consider carrying a dose just in case.

FIRST AID TREATMENT.

- Remove ticks immediately using tweezers or a tick removal tool. Grasp the tick as close to the skin surface as possible and pull upward in a steady motion.
- Place the tick in a baggie or other sealed container with a slightly damp cotton ball/cloth (the tick can be dead or alive). Do not squish or place the tick in alcohol. Note the date, time, and location (e.g., park name) where you got the bite. Contact the OHC/Vaden for tick testing.
- Clean the area thoroughly with soap and water.
- Monitor bite area for rash.
- Document the event in case you may need the information for a future Worker's Compensation claim.
- If you develop any symptoms within several weeks of being bitten, seek medical attention. Make sure you tell the physician that you were bitten by a tick, and approximately how long ago the bite occurred. Treatment will likely consist of oral antibiotics for the early stages. More severe cases may require intravenous medication.

REFERENCES AND ADDITIONAL RESOURCES

CDC [Lyme Disease](#)

Bay Area Lyme Foundation [Prompt & Proper Tick Removal](#)

Illness, injury and close call events shall be reported by submitting an [SU-17](#).

If you have questions or need support, contact EH&S's Field Safety Program at ehs_field_safety_support@lists.stanford.edu.

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SI 22-056 Oct 4, 2022