

# Lyme Disease: Prevention and Control



## Outdoor Hazards and Preventive Measures

Lyme disease is the leading cause of tick-borne infectious illness in the U.S. with about 16,000 cases reported annually. In the United States, Lyme disease is mostly localized to states in the northeastern, mid-Atlantic, and upper north-central regions and to several counties in northwestern California. In 1999, 16,273 cases of Lyme disease were reported to the Centers for Disease Control and Prevention (CDC). Ninety-two percent of these were from the states of Connecticut, Rhode Island, New York, Pennsylvania, Delaware, New Jersey, Maryland, Massachusetts, and Wisconsin.

## Signs and Symptoms

- Within days to weeks following an infected tick's bite, 80 percent of patients will have a red, slowly expanding "bull's-eye" rash (called erythema migrans), accompanied by general tiredness, fever, headache, stiff neck, muscle aches, and joint pain.
- If untreated, some patients may develop arthritis, including intermittent episodes of swelling and pain in the large joints; neurologic abnormalities, such as aseptic meningitis, facial palsy, motor and sensory nerve inflammation, and inflammation of the brain; and rarely, cardiac problems.

## Tick Prevention Tips

A hike brings the chance of exposure to deer ticks which carry Lyme disease. Deer ticks hide in shady, moist ground litter and also cling to tall grass, brush, shrubs, and low tree branches. People and animals acquire ticks only by direct contact. When hiking, follow these precautions to prevent exposure:

- Wear light-colored clothing so you can more easily see ticks.
- Wear long sleeves buttoned at the wrist and long pants tucked into socks. Take a hat to protect your head.
- Walk in the center of trails to avoid brushing up against dense vegetation where ticks hide. Avoid sitting directly on the ground, use a blanket or towel.
- Do a tick check every few hours or more often if in heavily infested areas. Visually check clothing and exposed skin. At the end of the day, do a final, full-body tick check.
- Use an insect repellent containing DEET. Lightly spray clothing, especially children's, and avoid direct contact with skin.
- Remove ticks as soon as you detect them. Do not touch them directly, use a tweezers or tissue and do not crush the insect until it is separated from the skin and placed in a disposable container.

## The American Lyme Disease Foundation recommends:

- scanning clothes and any exposed skin frequently for ticks while outdoors;
- staying on cleared, well-traveled trails;
- avoiding sitting directly on ground or on stone walls (havens for ticks and their hosts); and
- doing a final, full-body tick check at the end of the day.

## Steps for Tick Removal

The American Lyme Disease Foundation reports that infected ticks begin transmitting Lyme disease an average of thirty-six- to forty-eight hours after attachment. Chances of contracting Lyme disease are greatly reduced if the tick is removed within the first twenty-four hours. The majority of early Lyme disease cases are easily treated and cured.

## To remove a tick, follow these steps:

1. Using a pair of pointed precision\* tweezers, grasp the tick by the head or mouthparts right where they enter the skin. Do not grasp the tick by the body.
2. Without jerking, pull firmly and steadily directly outward. Do not twist the tick out or apply petroleum jelly, a hot match, alcohol, or any other irritant to the tick in an attempt to get it to back out. These methods can backfire and even increase the chances of the tick transmitting the disease.
3. Place the tick in a vial or jar of alcohol to kill it.
4. Clean the bite wound with disinfectant.

*\*Keep in mind that certain types of fine-pointed tweezers, especially those that are etched, or rasped, at the tips, may not be effective in removing nymphal deer ticks. Choose unrasped fine-pointed tweezers whose tips align tightly when pressed firmly together.*

*Information adapted from the Centers for Disease Control and Prevention, [www.cdc.gov](http://www.cdc.gov), and the American Lyme Disease Foundation, [www.aldf.com](http://www.aldf.com).*