



Lyme disease

What is Lyme disease?

Lyme disease is an illness caused by bacteria that are spread to people and animals by tiny infected deer ticks. It is the most frequently reported tick-borne illness in the United States.

Where is Lyme disease found?

In Massachusetts, deer ticks are found everywhere, but especially in coastal areas, the islands and the Connecticut River Valley. In the Boston area, ticks can be found in grassy, brushy or wooded areas. The time the disease is most likely to spread is between spring and early autumn, when ticks are most active.

How is Lyme disease spread?

Deer ticks cling to plants near the ground in brushy, wooded, or grassy places. These ticks are quite small and climb onto animals and people who brush against the plants. Very young ticks, called larvae, which are no bigger than the period at the end of a sentence, pick up the bacteria that cause Lyme disease by biting infected animals. Slightly older ticks, called nymphs, which are the size of a poppy seed, are the stage most likely to bite humans. Adult deer ticks can also transmit the disease, but they are not as great a risk as nymphs are because the adults are less likely to bite humans because they are easier to see and remove. Deer ticks are small as seen in their size in comparison to a dime:

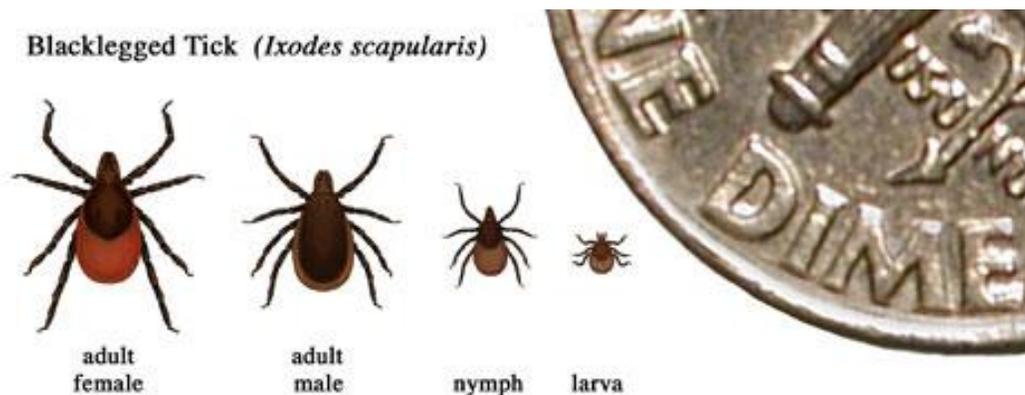


Figure 1: Deer Tick

Ticks live for 2 years and can infect animals as well as people. Not all ticks carry Lyme disease, and being bitten by a deer tick does not mean that you will always get the disease. The tick must usually be attached for at least 24 hours to pass on the bacteria, so removing the tick promptly will greatly decrease your chances of being infected.

What are the symptoms of Lyme disease?

Early stage (days to weeks):

An early symptom of Lyme disease is usually a rash where the tick was attached. The rash appears between 3 to 30 days after the bite. It often starts as a small red area then spreads, clearing up in the center so it looks like a donut. However, the rash may not always appear like this. Flu-like symptoms, such as fever, headache, stiff neck, sore and aching muscles and joints, fatigue and swollen glands are also common in the early stages of Lyme disease.

CONTINUED

Although these early symptoms often go away by themselves after a few weeks, the person may still be infected. The rash may come back in some people in other places on their bodies, and some will experience more serious problems. Early treatment with antibiotics can clear up the rash within days and is important to prevent more serious problems from occurring later on.

Later stages (months to years):

People with Lyme disease can develop late-stage symptoms even if they never noticed a donut-shaped rash. Up to 60% of people with untreated Lyme disease get arthritis (inflammation of the joints) that comes and goes, usually in their knees, elbows and wrists. Some people who don't get treatment develop nervous system problems. The most common problems include meningitis (an inflammation of the lining of the brain and spinal cord); facial weakness (Bell's palsy); and weakness, pain, or both in the hands, arms, feet and/or legs. These symptoms can last for months, often shifting between mild and severe. Rarely, the heart can be affected in Lyme disease, with changes in the heartbeat.

What should I do if I find a tick on myself, my child or my pet?

Remove any ticks promptly using fine point tweezers:

- The tick should not be squeezed or twisted, grasp it close to the skin and pull straight out with the steady pressure. Other methods of such as using a match, petroleum jelly, or kerosene are not recommended.
- Clean the skin around the bite with soap and water or a disinfectant.
- Mark the date and location of the bite for future reference.
- If you develop a rash, see your doctor.

How is Lyme disease treated?

Prompt treatment of early symptoms with certain antibiotics is an important step to prevent later, more serious problems. Talk with your doctor about the treatment of Lyme disease.

Is there a human vaccine for Lyme disease?

A human vaccine for Lyme disease is not currently available.

How can I prevent Lyme disease?

The best way to prevent Lyme disease is to avoid areas where deer ticks are likely to be found. In general you can keep tick numbers low by reducing cover and shade, by keeping grass mowed, removing leaf litter and trimming shrubs and trees. Other precautions to take:

- Wear long sleeved shirts and long pants and tuck your pant legs into your socks.
- Light colored clothes can help you spot the ticks on your clothes before they reach your skin.
- Stay to the middle of paths when in a heavily wooded area.
- Use insect repellents containing DEET on exposed skin. Read labels carefully. Use products with no more than 30% DEET. Do not use insect repellents on infants. Wash skin with soap and water after returning indoors.
- There are others insect repellent products approved by the EPA for ticks other than DEET. Visit <http://www2.epa.gov/insect-repellents/find-insect-repellent-right-you> to find the right repellent for you.
- Always check yourself and your children after being to a high risk area to find any ticks that may have attached.

