

LYME DISEASE

From the Maine Lyme Disease Workgroup, and Maine Bureau of Health

Lyme disease is a bacterial, tick-borne infection of humans, dogs, horses and other animals. It may begin as a characteristic skin rash and, if untreated, can result in long-term complications involving the joints, heart, and nervous system.

Lyme disease is found in many parts of the world. It occurs over wide areas in the United States, but particularly along the east coast. More than 100 cases of Lyme disease have been confirmed among Maine residents since 1986. The tick which spreads Lyme disease has become established in costal areas, particularly in York and Cumberland Counties, but is appearing in increasing numbers in inland areas as well.

Deer ticks carry the bacteria which cause Lyme disease. The ticks cling to vegetation in brushy, wooded, or grassy areas and transmit Lyme disease by biting. Both immature ticks (nymphs) and adult ticks can transmit Lyme disease. It is believed that the tick needs to remain attached for at least 24 hours for infection to occur. The immature tick is very small and may not be immediately noticeable on the skin.

Lyme disease is most commonly acquired in the summer months, but may also be acquired in early spring or late fall, the ticks may be active any time the temperature is above 40° F. Not all ticks carry Lyme disease, in fact the

common dog tick has not been shown to do so. Even a bite by a deer tick does not mean that Lyme disease will occur.

The first symptom of Lyme disease is usually a red, circular skin rash which occurs at the site of the bite but may spread to other areas. It begins about 7 to 10 days after the bite and gradually enlarges, often with partial clearing in the center so that it resembles a donut. Hives, swelling of the face, redness of the eyes, and flu like symptoms (fever, headache, stiff neck, muscle and joint aches, and fatigue) may also occur.

These symptoms disappear on their own over a period of weeks. However, the rash may recur and more serious problems may occur later in people who have not been treated. Treatment with the appropriate antibiotic clears up the rash within a few days and prevents future complications. The joints, nervous system, and heart may be affected weeks to months after the initial tick bite if treatment has not been taken. Arthritis in the large joints, especially the knee, elbow and wrist, may occur. The most common neurological symptoms are severe headache, and stiff neck, facial paralysis weakness, and pain in the arms, legs or chest. Heart symptoms, mostly electrical conduction problems, occur in 6 to 10 percent of infected people who have not received treatment. Occasionally, people with Lyme disease may develop symptoms during the later stages without having had the early rash. Even these serious symptoms respond to intravenous antibiotics. The diagnosis of Lyme disease is usually made by the characteristic red, circular rash which occurs in a person who has visited a wooded or brushy area in a county where

Lyme disease is known to occur. Some people who get Lyme disease do not recall a tick bite. Unusual cases, or cases with later stage complications, may be diagnosed by a blood test for antibodies to the Lyme bacterium. The blood test is unreliable in the early stages of disease, because antibodies may not yet be present. Even a positive blood test doesn't necessarily mean that Lyme disease is present.

Oral antibiotic treatment cures Lyme disease in the early stages. Tetracycline and amoxicillin are commonly used to treat Lyme disease, although other antibiotics may be substituted. Prompt treatment of the early symptoms may prevent later, more serious problems.

The only known way to get Lyme disease is from the bite of an infected tick. Avoiding areas where ticks are found and promptly removing attached ticks are the most important preventive measures. People living in or visiting areas where Lyme disease is known to occur should take the following preventive measures:

Don't walk bare legged in tall grass, woods or dunes where ticks may be found.

If you do walk in such areas, wear a long-sleeved shirt, long pants, high socks (with pants tucked into the socks), and sneakers. Light colors will help you spot ticks on clothing.

Apply a commercial tick repellent on clothing, shoes and socks, after reading the label instructions carefully. Avoid applying high concentrations to the skin, particularly of children.

Conduct daily “tick checks” on yourself, your companions and on pets when you get in from the field. Shower, if possible. The ticks are most often found on the thigh, flank, arms, underarms and legs, and may be very small. Prompt removal of the tick may help to prevent infection.

To remove an embedded tick, use tweezers to grip its body as close to the skin as possible and pull gently but firmly until the tick lets go. If tweezers are unavailable, grasp the tick with a piece of tissue. Do not handle the tick with your bare hands.

Know the symptoms of Lyme disease. If you have spent time outdoors in an area where ticks are found and you develop a circular rash or “flu” symptoms, see a health care provider for evaluation and treatment.

If you find ticks you would like identified, submit them to:

Insect and Disease Laboratory
Maine Forest Service Institute
25 John Roberts Road, Suite 5
South Portland, ME 04106-3295

OR

Maine Lyme Disease Project
Maine Medical Center Research
50 Hospital Street
Augusta, ME 04330

Place the whole tick in rubbing alcohol in a tightly sealed container, pack carefully to prevent breakage, and mail in a

crush-proof container. Please enclose your name, address, and telephone number, note the geographic location and the date on which the tick was found, and information as to whether the tick was found on a human or an animal.

Distributed by the Maine Department of Human Services,
Bureau of Health, April 1996

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