New Hampshire
Department of
Health and Human Services
Division of Public Health Services

Fact Sheet

Lyme Disease

What is Lyme disease?
Lyme disease is caused by a bacterium, *Borrelia burgdorferi*. It was first identified in the U.S. in a cluster of children in Lyme, Connecticut in 1977, hence the name. The bacteria are transmitted to humans by the bite of infected deer ticks and cause more than 20,000 infections in the United States each year.

Who gets Lyme disease?
Lyme disease can affect people of any age. Persons who spend time in wooded or grassy areas are at greater risk of disease because of the increased exposure to ticks. This includes people who work or play in their yard, participate in recreational activities away from home, such as hiking, camping, fishing, and hunting, or who engage in outdoor occupations, such as landscaping, brush clearing, forestry, and wildlife and parks management.

When are ticks most active?
Deer ticks in the nymphal, or juvenile, stage, which are less than a tenth of an inch long (<2 mm), are active from May until August. This is the stage most likely to bite and infect people. Adult ticks, which are about an eighth of an inch in size (2-3 mm), are most active in middle to late fall. Our recent lab studies show that about 60% of the deer ticks in many parts of New Hampshire are infected with Lyme disease.

How is Lyme disease transmitted?
Lyme disease is spread in New England by the bite of the black-legged tick (*Ixodes scapularis*). Other species transmit the bacteria in other parts of the country. Ticks feed by inserting their mouths into the skin of a host and drawing blood. If a tick feeds on an animal infected with Lyme disease and then on a person, it can transmit the bacteria to the person. There is no evidence that Lyme disease is transmitted from person to person. For example, a person cannot get infected from touching, kissing, or having sex with a person who has Lyme disease.

What are the symptoms of Lyme disease?
The illness usually occurs during the summer months. Often, but not always, people develop a large circular rash around or near the site of the tick bite. Multiple rash sites may also appear. Other symptoms such as chills, fever, headache, fatigue, stiff neck, swollen glands, and muscle and/or joint pain may be present. These may last for several weeks. If Lyme disease is left untreated, complications such as meningitis, facial palsy, arthritis, and heart abnormalities may occur and other body systems may be affected. Swelling and pain in the large joints may recur over many years. These later symptoms may appear in people who did not have early symptoms or did not recognize them.

How long does it take the symptoms to appear?
Symptoms usually begin within a month of exposure, but onset can range from 3 to 32 days.

Does past infection with Lyme disease make a person immune?
Unfortunately, it is possible for someone to get Lyme disease more than once.

What is the treatment for Lyme disease?
Antibiotics are very effective for treating Lyme disease. Early diagnosis improves the outcome of treatment so it is important to contact your healthcare provider if you are feeling sick or develop a rash.

Is there a vaccine?
A vaccine was available for Lyme disease, but in February 2002, the manufacturer announced that LYMERIX would no longer be commercially available.

Is there Lyme disease in New Hampshire?
Lyme disease is most prevalent in the northeastern part of the United States. For the past few years, approximately 1,200 New Hampshire residents have been diagnosed with Lyme disease each year.

What can I do to prevent getting Lyme disease?
When in tick-infested areas:

- Wear light-colored clothing to make ticks easy to see
- Tuck pants into socks and shirts into pants
- Consider using an insect repellent. Products containing ≥20% DEET have been shown to be effective in repelling ticks. Clothes may be treated with Permethrin. Always follow manufacturer's instructions when applying repellents
- Check after every two or three hours of outdoor activity for ticks on clothing and skin
- A thorough check of body surfaces for attached ticks should be done at the end of the day
- Reduce the number of ticks around your home by keeping grass short, removing leaf litter, and creating a wood chips or gravel barrier where your lawn meets the woods.
- If a tick is not attached to your skin for at least 24-36 hours, your chance of getting Lyme disease is extremely small. But just to be safe, monitor your health closely after a tick bite and contact your provider if you notice any signs and symptoms of illness.

How should a tick be removed?
Grasp the mouthparts with a tweezer as close as possible to the attachment (skin) site. If tweezers are not available, use fingers shielded with tissue or rubber gloves. Do not handle a tick with bare hands. Be careful not to squeeze, crush, or puncture the body of the tick, which may contain infectious fluids. It is important that a tick be removed as soon as it is discovered. After removing the tick, thoroughly disinfect the tick site with rubbing alcohol or an antibacterial wash and then wash hands with hot water and soap. See or call a doctor if there are concerns about incomplete tick removal. Do not attempt to remove ticks by using petroleum jelly, lit cigarettes, or other home remedies because they may actually increase the chance of contracting a tick-borne disease.

For specific concerns or questions about Lyme disease, call the NH Department of Health and Human Services, Bureau of Infectious Disease Control at 603-271-4496 or 800-852-3345 x4496. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov/lyme or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.