

## What is Lyme Disease?

There's no need to panic. No need to keep your preschooler inside, cancel your outdoor activities, or ban the dog from the house. Lyme disease does not need to stop your family's outdoor activities. All it takes is a bit of knowledge with common sense.

### What is Lyme disease?

Lyme disease is caused by the bacteria, *Borrelia burgdorferi*, and is transmitted by a tick called *Ixodes scapularis* (commonly called the deer tick). Lyme disease may cause symptoms affecting the nervous system, heart, joints, and skin of an affected individual. The disease is called Lyme disease because the first cluster of cases with this infectious agent was discovered near the town of Lyme, Connecticut. Surveillance for Lyme disease began in Wisconsin in 1980, and since that time over 6,000 cases have been reported.

### How is Lyme disease spread?

The disease is acquired by a tick bite. The deer tick that transmits the Lyme disease becomes infected when the immature stage of the tick feeds on infected field mice. When subsequent stages of that tick feed again, the infection can

be transmitted to the tick's new host. The tick must actually be attached to a person's skin before it can transmit the bacterium. The bite of the tick may go unnoticed because it is usually painless.

### Who gets Lyme disease?

Lyme disease can affect anyone of any age. People who spend a good deal of time outdoors in tick-infested environments are most at risk. Cases have been reported during all months of the year but an increased rate is seen between May to August. In Wisconsin, the greatest incidence of the disease has been seen in the northwestern and west central portions of the state.

### What are the symptoms of Lyme disease?

The illness often starts as a roughly circular reddish rash around or near the site of the tick



The adult Deer Tick is very small, about the size of a small apple seed, and orange-brown in color with a black spot near the head.

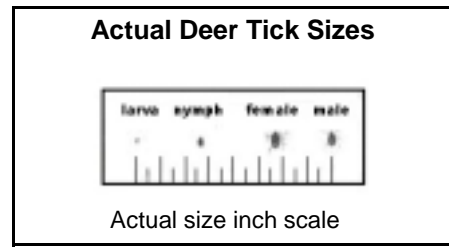
bite. The rash expands over a period of a few days or weeks. The rash has been said to have the appearance of a “bull’s eye” with a paler center and redder edges. Along with the rash, the affected individual may begin developing symptoms such as headache, fever, fatigue, stiff neck and muscle or joint pain. These symptoms can last weeks. If left untreated, complications such as meningitis, facial palsy, heart anomalies and arthritis may occur. Swelling and pain in the joints can plague one for months or years to come. **Not all persons will develop the initial skin rash.** That’s why proper prevention and detection of tick bites is crucial.

### How is Lyme disease treated?

Antibiotics are the usual treatment for Lyme disease and the treatment is usually successful. Current information indicates that you do not build up an immunity against Lyme disease and therefore, a person can get infected more than once. There is no vaccine available at this time.

### How do you prevent tick bites?

If you are in areas where ticks may be present, take these precautions. Wear a long sleeved shirt and long pants with pant cuffs tucked into high socks. Light colored clothing makes ticks easier to find. Walk in the middle of mowed trails to avoid brushing up against vegetation. Insect repellents containing 0.5% permethrin or 20-30% DEET are effective in repelling deer ticks. Make sure to read and follow manufacturers directions and ask your physician before using these repellents on children. Conduct thorough tick checks on your children and yourself after spending any time outdoors. Prompt removal of ticks even



after they are attached can drastically reduce the chance of Lyme disease transmission. (It takes 24 - 48 hours of tick feeding to transmit the disease.)

### How should a tick be removed?

To remove an attached tick, grasp it with narrow bladed tweezers or forceps as close as possible to the attachment (skin) site. Pull upward and out with firm and steady pressure. If tweezers are not available use fingers shielded with tissue or rubber gloves. Do not attempt to remove with bare hands. Be careful not to squeeze, crunch or puncture the body of the tick, which may contain infectious fluids. Do not use gasoline, kerosene, petroleum jelly, or hot matches to remove ticks. Once the tick is removed, thoroughly disinfect the bite site and wash hands. See a doctor if there is concern about incomplete tick removal.

#### Source:

Department Health & Human Services, Centers for Disease Control, Division of Vector-Bovine Infections Disease, Fort Collins, CO.

Department Health & Social Services, Division of Health, POH 9287A.

Wisconsin Division of Public Health, Disease Fact Sheet Series - Lyme Disease, 6/99.

Author: Laurel Hughes, Vilas County Public Health Nurse  
Editor: Joan E. LeFebvre, Professor, Department of Family Development, University of Wisconsin-Extension  
Reviewer: Phillip J. Pellitteri, Insect Diagnostician, Department of Entomology, UW-Madison  
Layout: Penny Otte, Program Assistant I, Family Living Area Office, Vilas County

For more information on Parenting and Child Development, contact: Joan E. LeFebvre, Area Family Living Agent, University of Wisconsin, Extension, 330 Court Street, Courthouse, Eagle River WI 54521-8362, 715-479-3653, FAX 715-479-3605, E-Mail joan.lefebvre@ces.uwex.edu  
May, 2002, revised