

# Lyme Disease



In the past 20 years, Lyme disease has quickly become an important public health problem in some areas of the United States. Since its discovery in Lyme, Connecticut, in 1975, thousands of cases of the disease have been reported across the United States and around the world. By knowing more about the disease and how to prevent it, you can help keep your family safe from the effects of Lyme disease.

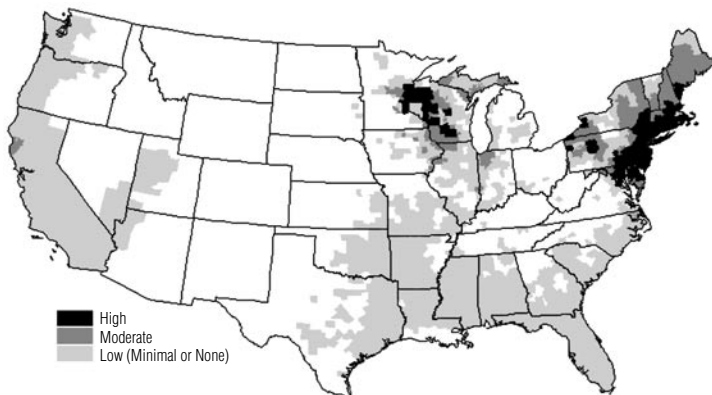
## What is Lyme disease?

Lyme disease is an infection caused by a bacteria called a *spirochete*. The disease is spread to humans by the bites of deer ticks infected with this bacteria. Deer ticks are tiny black-brown creatures no bigger than a poppy seed. They live in forests or grassy, wooded, marshy areas near rivers, lakes, or oceans. Many people who have been infected with Lyme disease were bitten by deer ticks while hiking or camping, or during other outdoor activities in the summer or fall months.

## Where is Lyme disease most common?

The deer ticks that are infected with Lyme disease are commonly found in areas that have very low and high seasonal temperatures and high humidity. In the United States, Lyme disease is more common in the following regions:

## Lyme Disease Risk



- **Northeast** (Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Pennsylvania, and Maryland)
- **North central states** (Wisconsin, Minnesota, Illinois, Indiana, and Michigan)
- **West Coast** (California)

## How will I know if my child has Lyme disease?

The first and most obvious symptom of Lyme disease is a rash surrounded by a light ring or halo, resembling a target. This is where your child was bitten and it may appear from 3 to 30 days *after* the bite occurred. Some people may have many rashes, and others may not notice a rash at all. Most people who develop the rash will not feel anything, but for others the rash may hurt, itch, burn, or feel warm to the touch. The rash most commonly appears on the groin, thighs, trunk, and armpits.

Other symptoms that often accompany the rash include

- Headache
- Chills
- Fever
- Fatigue
- Swollen glands
- Aches and pains in the muscles or joints

If your child develops the rash along with any of the symptoms listed above, call your pediatrician.

## How serious is Lyme disease?

For most people, Lyme disease can be easily recognized and treated. If left untreated, Lyme disease can progress and become worse. In very rare cases, it can cause problems with vision, facial muscles, and can cause permanent damage to joints or the nervous system.

## How is Lyme disease treated?

Lyme disease is most often treated with antibiotics (usually penicillin or tetracycline) prescribed by your pediatrician. The antibiotics are usually taken by mouth (pills), but also can be given intravenously (directly into the bloodstream through a vein) in more severe cases. Both early and late stages of the disease can be treated with antibiotics; however, late stages of the disease may be more difficult to treat.

## Ticks and how to remove them

Ticks do not fly, jump, or drop from trees. They hide in long grass and small trees, bushes, or shrubs waiting for an animal or person to brush by. Then, they attach themselves to the animal or person's skin. When a tick is found on a person (or a household pet), it should be removed as completely as possible using the following steps:

1. **Grasp the tick as close to the skin as possible** with a tweezers. Be careful not to squeeze the tick's body.
2. **Slowly pull the tick away from the skin.**
3. **Call your pediatrician** if any part of the tick remains under the skin.
4. **After the tick is out, clean the bitten area** with rubbing alcohol or other first aid ointment.

## How can I prevent Lyme disease?

If you live or work in a region where Lyme disease is a problem, or if you visit such an area, you will need to know how to protect your child from the ticks that carry the infection. Use the following suggestions when your child is in or around a grassy, wooded area while camping, hiking, or participating in any other outdoor activity, especially in the months between April and October.

- **Cover arms and legs.** Have your child wear a long-sleeved shirt, and tuck his pants into his socks.
- **Wear a hat** to help keep ticks away from the scalp. Keep long hair pulled back.
- **Wear light-colored clothing** to make it easier to spot ticks.
- **Wear enclosed shoes or boots.** Avoid wearing sandals in an area where ticks may live.
- **Use insect repellent.** Products with DEET are effective against ticks and can be used on the skin. However, large amounts of DEET can be harmful to your child if it is absorbed through the skin. Look for products that contain no more than 10% DEET. Wash the DEET off with soap and water when your child returns indoors. Products with *permethrin* can be used on clothing, but cannot be applied to the skin.
- **Stay on cleared trails whenever possible.** Avoid wandering from a trail or brushing against overhanging branches or shrubs.
- **After coming indoors, check for ticks.** This will only take a couple minutes. Ticks often hide behind the ears or along the hairline. It may take up to 48 hours for a person to become infected, so removing any ticks soon after they have attached themselves can help reduce the chances of becoming infected.

Keep in mind, ticks can be found right in your own backyard, depending on where you live. Removing leaves and keeping your yard clear of brush and tall grass may reduce the number of ticks. Talk to a licensed professional pest control expert about other steps you can take to reduce ticks in your yard.

## Is there a vaccine for Lyme disease?

In 1998, the Food and Drug Administration (FDA) approved the first vaccine for Lyme disease. The vaccine should be considered by people between the ages of 15 and 70 who live or work in an area that may be a high risk for Lyme disease. *The vaccine is not available for children under 15 years of age, and it is not recommended for pregnant women.*

The vaccine consists of three injections over a 12-month period. The vaccine cannot be used to treat Lyme disease, and it is not effective against any other diseases carried by ticks. Some people may have a temporary reaction to the vaccine that includes the following:

- Redness or swelling at the injection site
- Headache
- Fever
- Chills
- Fatigue
- Joint or muscle pain

Lyme disease is a health concern in some areas of the United States and not much of a problem in others. Be aware of whether there is a risk of Lyme disease wherever you and your family spend time outdoors. If you live in an area where Lyme disease has become a problem, take the steps listed in this brochure to protect your family members. Consider the vaccine for members of your family between the ages of 15 and 70. If you have any questions about the disease or the vaccine, talk to your child's pediatrician or your doctor.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

From your doctor

