

What is Lyme Disease?

PATIENT/FAMILY INFORMATION SHEET

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Lyme disease is an infectious disease that is spread (transmitted) by a bite from a deer tick that harbors the bacteria. Not all deer ticks carry the bacteria and a bite does not always result in the development of Lyme disease, even if the tick is a carrier. In most cases, the tick must be attached to a human for 36 hours or more before the bacteria can be transmitted. Ticks can attach to any part of the body, but they are often found in hard-to-see, hairy areas such as armpits, the scalp, and groin. Early symptoms of Lyme disease may begin from 3 days to 1 month after the tick bite.

What are the symptoms of Lyme Disease?

The early symptoms include:

- Fatigue
- Headache
- A skin rash called “erythema migrans” which is a red circular patch that appears at the site of the tick bite usually within 3 days to 1 month after the bite of the infected tick. The patch may grow larger and have a “bull’s eye” appearance with the center lighter as it enlarges. It is possible to develop more than one rash at sites other than the place of the bite.
- Chills
- Muscle and joint pain
- Fever
- Swollen lymph nodes

It is important to note that not all rashes that occur at the site of a tick bite are due to Lyme disease. Some people have allergic reactions to tick saliva, which causes a rash and can be mistaken for the “bull’s eye” of Lyme disease. Additionally, some people infected with Lyme disease never develop a rash or the early symptoms of the disease, but do develop the later symptoms.

The late symptoms include:

- Arthritis, which may appear as brief bouts of pain and swelling in one or more joints (especially the knees).
- Nervous system abnormalities, such as numbness, pain, nerve paralysis (often of the muscles of the face), and meningitis (fever, stiff neck, severe headache).
- Heart rhythm irregularities

How is Lyme disease diagnosed?

Many of the symptoms of Lyme disease are similar to other illness, such as viral infections and other types of arthritis. In order to make a definitive diagnosis, your doctor will usually:

- Take a history of possible exposure to ticks in areas where Lyme disease is known to occur
- Evaluate your signs and symptoms
- Order blood tests to detect whether you have been exposed to the Lyme disease bacteria.

What is the treatment for Lyme disease?

Test results of the tick that caused the bite is not a good predictor of illness, even if the tick tests positive for the bacteria. Treatment is based on your clinical symptoms and your blood test results.

Lyme disease is curable. It can be treated effectively with antibiotics that are given by mouth, or by intravenous therapy for severe cases. Your doctor will choose the antibiotic that is best for you.

How can I reduce my chances of getting Lyme disease?

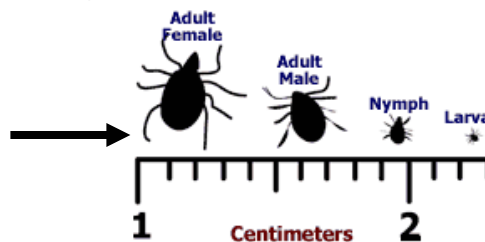
You can decrease your chances of being bitten by:

- Avoidance of tick-infested areas, such as tall grass, brush, and woods (especially in the spring and early summer months).
- Do a tick check to every family member daily. A good time is before bathing or showering.
- Brush off your clothing before going indoors. Wear light colored clothing so that you can spot ticks on you more easily.
- Check pets frequently for ticks. They can get Lyme disease too. If they live in your home and go outside they may carry the tick into the house. Ask your vet about a special tick collar and the vaccine for dogs.
- Tuck pant legs into socks or boots, and shirts into pants to keep ticks away from your body, especially when doing yard/garden work or hiking.
- Wear a long-sleeved shirt for added protection.
- Use repellents when going outside. Be sure to follow manufacturers' instructions.

How do I remove a tick?

If you do find a tick on you, the sooner you remove it, the less chance of infection. Use fine-point tweezers and grasp the mouth parts of the tick as close to the skin as possible. **Do not squeeze the tick's body.** This may cause the tick to inject the Lyme disease bacteria into you. Tug outwardly away from the skin, gently but firmly. Don't worry if the mouthparts of the tick remain in the skin, as they will not transmit the disease. Wash the area thoroughly with soap and water and observe for symptoms.

*Magnified size comparison
of deer tick female, male,
nymph, larva compared to a
centimeter*



Sources: CDC. (1999). *Lyme disease: A public information guide from the Centers for Disease Control and Prevention*.
Pfizer Research Central. *Lyme disease*. Groton, CT: Central Research Division.
Greenwich Hospital Infection Control Department

*For more Patient Fact Sheets, see the Greenwich Hospital web site at www.greenhosp.org and
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