



Patient Information

Making Lyme Disease Take a Hike

Early summer brings sunshine, warm weather and, unfortunately, deer ticks. Deer ticks can carry the bacteria that cause Lyme disease, a condition that can lead to arthritis, heart problems or neurologic impairments.

History of Lyme Disease

Lyme disease was first recognized in 1975, after unusually large numbers of children developed juvenile rheumatoid arthritis in Lyme, Conn., and two neighboring towns. Most of the children lived near wooded areas that harbored ticks.

Researchers found that the children's symptoms typically started in summer, which is the height of tick season. Several patients reported having a skin rash just before developing the arthritis, and many also remembered having a tick bite at the rash site.

Further investigation discovered that tiny deer ticks infected with a spiral-shaped bacterium or spirochete (later identified as *Borrelia burgdorferi*) were responsible for the outbreak.

In the United States, these ticks look like common dog and cattle ticks, but are much smaller. In their larval and nymph stages, they are no bigger than a pinhead and grow only slightly larger as adults. *Ixodes scapularis* is the tick most often found in the Northeast and Midwest, and it also lives in the South and Southeast. *Ixodes pacificus* is the tick found on the West Coast.

The recent resurgence of the deer population in the Northeast and the influx of suburban developments into rural areas where deer ticks are common probably accounts for Lyme disease's rising prevalence.

The disease has been reported in nearly every state, although it has been concentrated mostly in the Northeast, Wisconsin, Minnesota and northern California.

Who's at Risk

If you live or work in areas surrounded by woods or overgrown brush infested with deer ticks, you are at risk of getting Lyme disease. If you participate in recreational activities in tick habitats, or you work outdoors in endemic areas, you also might be at risk.

Symptoms

In most people, the first symptom of Lyme disease is a red rash that starts as a small red spot at the site of the tick bite. Sometimes the rash resembles a bull's-eye, with a red ring surrounding a clear area with a red center.

After several months of infection, some people not treated with antibiotics develop arthritis that can shift from one joint to another, with the knee most commonly affected.

Lyme disease can affect the nervous system, causing a stiff neck and severe headache, temporary paralysis of facial muscles, numbness, pain or weakness in the limbs, or poor motor coordination. Nervous system abnormalities develop several weeks, months or even years after an untreated infection.

Treatment

Patients are treated with antibiotics. In general, the sooner this therapy is started, the quicker and more complete the recovery.

Prevention

To protect yourself from tick bites, try these tips:

- Keep ticks from living close to your home. Remove leaves, brush and tall grass from around your house and gardens.
- Avoid tick-infested areas such as wooded, bushy and grassy areas, especially in May, June and July. When hiking or camping, walk in the center of trails to avoid overhanging grass and brush.
- Wear proper clothing when outdoors. Try light-colored clothing so ticks are easily spotted. Tuck your pants legs into your socks or boots and your shirt into your pants. Wear a hat and a long-sleeved shirt.
- Spray DEET-containing insect repellent on clothes and on bare skin, except your face, or spray your clothes with an insecticide containing pyrethrins.
- If you find a tick on your body, remove it with tweezers. Grasp the tick as close to the skin as possible and pull straight back with a slow steady force. Don't crush the tick.

If you have any questions, ask your nurse practitioner.

Additional Notes:

Your nurse practitioner has given you this patient education handout to further explain or remind you about principles related to your medical condition. This handout is a general guide only. If you have specific questions, be sure to discuss them with your nurse practitioner.

