



## **Feeling Sleepy, Dopey, Grumpy?**

By Dr. John P. Mamana

With a wide variety of symptoms, Lyme disease is considered the most common tick-borne disease in the northern hemisphere of the United States. We've only been aware of the disease since 1975 when a group of children living near each other in Lyme, Connecticut were diagnosed with rheumatoid arthritis. Ultimately, this unique finding was brought to researchers' attention who later identified the bacterial cause of the children's condition - dubbed as "Lyme disease" in 1982.

Today we know that Lyme is the most common arthropod-borne illness in the U.S. with more than 150,000 cases reported to the Centers for Disease Control and Prevention [CDC] since 1982. Found most often in the northeastern United States, Lyme is primarily contracted in the Northeast from the state of Maine to Maryland, in the Midwest in Minnesota and Wisconsin, and in the West in Oregon and Northern California. It has also been reported as far away as China, Europe, Japan, Australia, and parts of the former Soviet Union. The reason Lyme is so common in the northeast and upper mid-west is because the deer tick's preferred hosts, whitefooted mice and deer, are common in large numbers and close to humans. Technically known as *Borrelia burgdorferi*, Lyme disease is caused by a type of bacterium called a spirochete carried in the stomach of deer ticks who then transmit the spirochete to humans with a bite.

Symptoms vary tremendously which makes it tough to diagnose. However, some signs of the infection are relatively common. People generally see a circular expanding rash known as erythema migrans, or EM which occurs in 80 to 90 percent of all cases. Three to 30 days after a bite, the rash begins to form and may slowly expand over several days, often enlarging up to 12 inches across. The center of the rash may clear as it enlarges, resulting in a bull's-eye appearance. Some people find multiple EM lesions and may experience fatigue, chills, fever, headache, and muscle and joint aches, and swollen lymph nodes. These symptoms may be brief, and recur with more symptoms as the spirochete continues spreading through the body.

Left untreated for several months, about 60 percent of people will begin to have more severe issues. This can include intermittent bouts of arthritis, extreme joint pain and swelling. In the later stages, about 5 percent of untreated people develop chronic neurological complaints months to years



after infection. This could include shooting pains, numbness or tingling in the hands or feet, and problems with concentration and short term memory. Researchers don't know the cause of these symptoms but believe it may result from an autoimmune response.

Ticks will attach anywhere on the body, but prefer warm body creases such as the armpit, groin, back of the knee, and nape of the neck, so it's best to protect yourself by wearing long pants tucked into boots and long sleeve shirts. Check yourself, your children, and pets for both ticks and rashes. If you find a tick, remove it gently with tweezers and save in a jar for later identification.

The good news is that treating Lyme with antibiotics such as doxycycline, amoxicillin, or cefuroxime can lead to a full cure. Patients with certain neurological or cardiac forms of illness may require intravenous treatment with drugs such as ceftriaxone or penicillin.

If you think you may have been bitten by a tick carrying Lyme disease, make an appointment with your doctor at Executive MD as soon as possible. Even without an EM rash, diagnosis of Lyme Disease should be made on the basis of symptoms and evidence of a tick bite, not just blood tests, which can often give false results if performed in the first month after initial infection.

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