

## Lyme Disease

Lyme disease is spread by the bite of the tiny tick, usually no bigger than a pinhead. The tick is mainly found in Northeastern US, but can be in any state. It is active throughout the entire year, but bites are more prevalent in late spring. Because it is so tiny and its bite is generally painless, the tick is hard to detect. Feeding ticks must usually be attached for 24 to 48 hours before transmitting the disease. Unfortunately, if not promptly diagnosed and treated, Lyme disease can cause serious problems involving the heart, joints and nervous system.

Most people who get Lyme disease will show a rounded red rash at the place the tick bit them within a month. Some never develop a rash, while others develop multiple spots. The rash is called erythema migrans (formerly erythema chronicum migrans). The rash may be solid red, form a ring or multiple rings-called a "bull's-eye" appearance. The rash is commonly about four inches across when seen, but often covers large areas of the body. Usually, bites that leave a ring less than 2 inches don't turn out to be Lyme.

Erythema migrans can last for a few days or for more than a month and may be painless or can feel painful, itchy or hot to the touch. Other early symptoms of Lyme disease include flu-like symptoms, malaise, low-grade fever, fatigue, headaches and muscle or joint aches and pains. Later stages of the disease don't develop until weeks or many months later.

Many complications can follow an untreated case of Lyme disease. These include meningitis (stiff neck, headaches, vomiting, fever), Bell's palsy (paralysis of part of the face), heart block and irregular heartbeats, painful joints, muscles and bones. Chronic fatigue and fibromyalgia follow some cases of Lyme disease.

Some patients who develop fatigue and flu symptoms are also infected with human granulocytic ehrlichiosis. Ticks can spread a number of diseases including Lyme disease, Rocky Mountain spotted fever, tularemia, Colorado tick fever, babesiosis, and others. Lyme disease is caused when an Ixodes tick passes on the germ known as "Borrelia burgdorferi," while sucking blood from its victim.

The only proven method of non-tick transmission in humans is from pregnant women to their unborn children. In some instances, Lyme disease has resulted in miscarriages, birth defects, and other problems. Mosquito bite and other insects do not seem to spread Lyme.

The tiny ticks that cause Lyme disease may be spreading as a result of increasing deer populations. Ticks do not have wings and cannot jump or fly, rather, they cling to humans or animals and crawl upward to find a place to attach and feed.

The Ixodes deer tick is the main tick that transmits Lyme disease, and a majority of the ticks in our area are infected. The Lone Star tick can also transmit the disease, but only 3% are infected. American dog and wood ticks can sometimes carry the Lyme spirochete but are not effective transmitters of Lyme disease. They can, however, transmit the Rocky Mountain spotted fever. The Los Angeles county health department offers tick identification and analysis for Lyme disease bacteria. Bring the tick in a pill bottle with a bit of moistened cotton to them for analysis.

Lyme disease can usually be confirmed through a blood test. This detects the presence of antibodies-the product of our immune system designed to fight the disease. However, it takes six to eight weeks for the antibodies to show up, so a blood test done soon after contracting the disease may be negative (falsely indicating that you don't have Lyme disease). Even after the disease has progressed and antibodies are present, the tests may sometimes still be negative when the patient does have the disease (a result called a "false negative"). If a patient has the early symptoms, especially the telltale rash, immediate treatment is usually advised. Your blood test will continue to be positive for life.

Early treatment typically consists of orally administered antibiotics. Tetracycline family drugs, are given to adults as these also work on many of the other infections carried by ticks. Penicillin is given to children. Other antibiotics, including intravenous, are also used. Even with treatment, symptoms may persist for some time and a full recovery is not always possible.

The Lyme Disease vaccine is now available. There is no certain cure for Lyme disease; it can be effectively treated with antibiotics. The earlier the disease is treated the better the prognosis for complete recovery. However, successful treatment of the disease will not prevent one from getting Lyme disease again.