



# UNIVERSITY OF MARYLAND UNIVERSITY HEALTH CENTER

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## Lyme Disease

Lyme disease is a multi-system infection transmitted by deer ticks and caused by the spirochete *Borrelia burgdorferi*. It is the most common insect-borne illness in the U.S. occurring mainly in the Northeast, Upper Midwest and California. Cases have been reported in 48 states and Canada.

The very small (pinhead size) nymphal form of the deer tick is believed to be the most important for transmitting the spirochete (bacteria) which causes Lyme disease. It is active in the spring and early summer. Thus, most early Lyme disease cases are reported with illness in May and June. But because the adult tick can also transmit Lyme disease, illness can occur at nearly any time of the year. In addition, there can be a long incubation between the tick bite and some of the later recognized symptoms.

The hallmark of Lyme disease is the characteristic expanding red rash which may have a clear center; it may appear in different parts of the body 3-31 days after the tick bite. About 60% of the patients with Lyme disease develop this rash. Often flu-like symptoms may be associated with it. Treatment at this stage is most effective and generally consists of oral antibiotics. Oral doxycycline is the drug of choice for the rash and other early symptoms. Children and pregnant (and lactating) women should receive penicillin instead of doxycycline.

Unfortunately later manifestations of Lyme disease may occur with or without the rash having been present. These may include neurologic disorders (inflammation of the brain and cranial nerves), cardiac symptoms (palpitations, rapid heart rate, and EKG changes) and arthritis which in some cases can become chronic. Treatment is beneficial for these later manifestations and may require intravenous antibiotics. There is evidence that the spirochete (bacteria) can be transmitted from a pregnant woman to her fetus, and pregnant women who are suspected to have Lyme disease should be evaluated promptly.

Laboratory tests may be useful to confirm the diagnosis of Lyme disease but specific antibodies are usually not detectable until 4-6 weeks after initial infection. Tests may remain negative and the diagnosis must be made by clinical evaluation.

You must avoid getting tick bites, because ticks carry other diseases like Rocky Mountain Spotted Fever. To best protect yourself when outdoors, be sure to wear insect repellent, dress in long pants and sleeves, check for ticks after outdoor exposure and remove any ticks noted.

(A major portion of this handout has been taken from Communicable Diseases Bulletin from the Maryland Department of Health and Mental Hygiene.)

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**Published for the University of Maryland community.**

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