

Lyme Disease in Vermont

The incidence of Lyme disease is increasing in Vermont. In 2007, Vermont had 138 confirmed reports of Lyme disease, which, according to the Centers for Disease Control (CDC), was the eleventh highest rate among states. (http://www.cdc.gov/ncidod/dvbid/lyme/ld_rptdLymeCasesbyState.htm)

In 2008, there were 330 confirmed cases and 74 probable cases reported to the state. Seventy-two percent of these cases were most likely infected in Vermont. The increase in cases can probably be attributed to both better surveillance and an increase in infected deer ticks.

Signs and symptoms of Lyme disease include fatigue, headache, fever, lymphadenopathy, myalgia, arthralgia, and an erythema migrans (EM) rash. EM usually develops 7 to 10 days (range, 3 to 30 days) after a tick bite. An EM rash that is 5 cm or more in diameter is diagnostic for Lyme disease. Tick bite hypersensitivity reactions, which appear as erythematous lesions within 48 hours of a tick bite, are usually smaller than 5 cm in diameter and typically begin to disappear within 24 to 48 hours. A history of a tick bite is helpful, but many people who have Lyme disease do not recall being bitten by a tick.

Laboratory testing should provide support for a clinical diagnosis of Lyme disease and should never be used as the sole basis for a Lyme disease diagnosis. Screening tests must be followed by the more specific Western immunoblot test. The presence of an EM rash of at least 5 cm is sufficient for the diagnosis of Lyme disease and lab testing is not required. Testing of ticks is not helpful and is not recommended.

People who have been bitten by a tick should be monitored for signs and symptoms of Lyme disease for 30 days. In some cases it may be appropriate to offer a patient antibiotic prophylaxis after a tick bite. Criteria for prophylaxis are published in the article, “The Clinical Assessment, Treatment and Prevention of Lyme Disease, Human Granulocytic Anaplasmosis, and Babesiosis: Clinical Practice Guidelines” by the Infectious Diseases Society of America (<http://www.journals.uchicago.edu/doi/full/10.1086/508667>).

Criteria include:

- a) the attached tick can be identified as a deer tick that has been attached for ≥ 36 hours.
- b) prophylaxis can be started within 72 hours of the time that the tick was removed;
- c) ecologic information indicates that the local rate of infection of these ticks with *B. burgdorferi* is $\geq 20\%$; and
- d) doxycycline treatment is not contraindicated.

Ecologic information on tick infection rates in Vermont is lacking. However, thirteen of Vermont’s fourteen counties meet the CDC’s 1996 definition of endemic for Lyme disease. The Lyme disease status of Essex County is largely unknown. In the thirteen counties where Lyme is endemic, healthcare providers should assume that at least 20% of deer ticks are infected. With this assumption, and if the other three criteria have been met, it would be reasonable to provide Lyme prophylaxis; this decision is left to the healthcare provider’s discretion.

Lyme disease is reportable to the Vermont Department of Health by calling 1-800-640-4374.

For more information on Lyme disease, go to:

http://www.healthvermont.gov/prevent/lyme/lyme_disease.aspx or
<http://www.cdc.gov/ncidod/dvbid/lyme/index.htm>

The *Infectious Disease Bulletin* can be viewed at:

<http://healthvermont.gov/pubs/IDB/index.aspx>

For questions & comments, please contact Patsy Kelso at (802) 863-7240

Contents:

Lyme Disease in Vermont

Chart: 2009 Selected Reportable Diseases To Date

