

Date: June 9, 2006

To: Marin County Parents

From: Larry Meredith, Ph.D., Director, Marin County Department of Health & Human Services,
and Anju Goel, MD, MPH, Deputy Public Health Officer

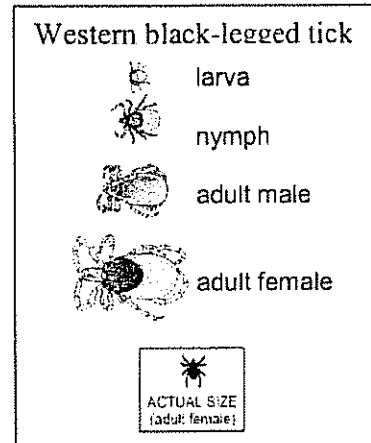
Lyme Disease Q & A

What is Lyme disease?

Lyme disease is an infection that people and animals get through the bite of an infected tick. It was first identified in Lyme, CT, in 1975. The bacterium that causes the infection is called *Borrelia burgdorferi*. The tick that spreads the infection in California is called the western black-legged tick, *Ixodes pacificus*.

How do people get Lyme disease?

People get Lyme disease from the bite of an infected tick. Ticks feed on the host's blood by inserting their mouth parts into the host's skin. Infected ticks usually do not transmit the Lyme organism during the first 24 hours, and the risk of infection increases the longer the tick remains attached. Ticks in the poppy-seed-sized nymph stage cause most human cases of Lyme disease. Because their bite is painless, most people don't realize they have been bitten. Lyme disease is more common during the spring and summer months when ticks are most active.



People can NOT get Lyme disease from air, food, and water; sexual contact; other insects such as mosquitoes, flies, or fleas; or directly from wild or domestic animals.

Where do people get Lyme disease?

Ticks prefer to live in wooded areas. They live in leaf litter and on the tips of grasses and shrubs. They attach to people as they brush against them. Campers, hikers, and outdoor workers may be at higher risk for infection. Ticks can also be introduced to households by attaching to domestic animals.

Ixodes pacificus ticks have been found in 56 of 58 California counties. Ticks infected with *Borrelia burgdorferi* have been found in 42 counties. A total of 15 cases of Lyme disease were reported in Marin County between 2001 and 2005.

How will I know if I have Lyme disease?

Early Lyme disease: The early stage of Lyme disease is usually marked by ONE OR MORE of the following symptoms:

1. a characteristic rash called erythema migrans
2. fatigue
3. chills and fever
4. headache
5. muscle and joint pain
6. swollen lymph nodes

Erythema migrans is a red circular patch that appears at the site of the tick bite, usually within 3 days to 1 month after the bite. Common sites are the thighs, groin, trunk, and armpits. The center of the rash may clear as it enlarges, resulting in a “bull’s eye” appearance. It is usually not painful.

Late Lyme disease: Some signs and symptoms of Lyme disease may not appear until week, months, or years after a tick bite. They include:

1. arthritis, with brief bouts of pain and swelling usually in one or more large joints (e.g. knees)
2. nervous system symptoms, such as numbness, pain, nerve paralysis, and meningitis
3. problems with memory or cognition, fatigue, headaches, or sleep disturbances sometimes persist after treatment.

Is there any treatment available?

Several antibiotics are effective for treating Lyme disease. Most are given by mouth, though people with severe infections may receive intravenous antibiotics. Most people treated with antibiotics recover rapidly and completely. A few patients may have persistent or recurrent symptoms and may need a second course of antibiotics. Some patients who are not diagnosed early may have permanent damage to joints or to the nervous system. Lyme disease is rarely fatal. The vaccine for Lyme disease is no longer available.

What can I do to prevent my children from getting Lyme Disease?

- Teach children to avoid tick infested areas
 - Teach children to walk in the center of trails to avoid contact with overgrown brush at the edge of trails
- Use insect repellent
 - Use products with 20-30% DEET for adults and 10% DEET for children. Avoid use on the hands of young children and around the eyes and mouth. Wash treated skin with soap and water after returning indoors.
- Dress children in protective clothing
 - Long pants and sleeves and light colored clothing are best
- Perform tick checks on children after they have been outdoors, especially on the scalp, hairline and skin folds
 - Remove attached ticks with tweezers. Do NOT use petroleum jelly, a hot match, nail polish, or other products. Grasp the tick firmly and as close to the skin as possible. Then cleanse the area with an antiseptic.

Where can I get more information?

Marin County Department of Health & Human Services, (415) 473-7805

California Department of Health Services <http://www.cdc.gov/ncidod/dvbid/lyme/index.htm>

Centers for Disease Control and Prevention (CDC)
<http://www.cdc.gov/ncidod/dvbid/lyme/index.htm>

This Q&A was modified from Lyme Disease: A Public Information Guide, developed by the Centers for Disease Control and Prevention.