

Lyme Disease

We know that many people in San Mateo County work and play in areas where the risk of tick exposure is high.

Lyme disease is caused by the bacterium *Borrelia burgdorferi*. In California, the infection is transmitted to humans by the bite of infected Western black legged ticks (*Ixodes pacificus*). 3-5% of nymphs and adult black-legged ticks in San Mateo County test positive for *Borrelia burgdorferi*.

Symptoms of Lyme Disease

Untreated, Lyme Disease symptoms become more severe over time. One to two weeks after infection, many to most people will exhibit **erythema migrans (EM)**, a red, expanding rash radiating from the attachment site.

Other signs of early Lyme Disease may be mild and non-specific, or present as flu-like symptoms of fever, malaise, fatigue, headache, muscle and joint aches.

Late manifestations of Lyme Disease can occur days, weeks, or months after the appearance of the first EM lesion. Late disease affects the:

- **musculoskeletal system**, manifesting as migratory joint and muscle pain with or without obvious swelling
- **nervous system**, manifesting as meningitis, cranial neuropathy, and encephalopathy
- **cardiovascular system**, seen as myocarditis or acute onset of atrioventricular blocks of varying degrees.



Western black legged tick, responsible for carrying Lyme Disease in the Western US.

Lab testing for Lyme Disease:

Blood tests are indicated only if history, signs and symptoms are equivocal. If there has been exposure to Western black legged ticks and typical symptoms are present, antibiotics are generally started empirically. If testing is needed, antibody testing using a two-step procedure should be performed:

1. Initial test with ELISA or IFA. If positive do confirmatory test.
2. Confirm with Western Blot test: IgG and IgM if less than 4 weeks from onset; IgG alone if more than 4 weeks. Consult with an infectious disease specialist for any questions.

Laboratories have been required to report positive tests for Lyme disease to the Health Department since 2005. Be sure to send in a CMR as well, so that we have specific information on your patient.

Phone, fax, or mail within 1 week

 **(650) 573-2919** fax

 **Disease Control and Prevention**

**San Mateo County Health Dept.
225 37th Avenue
San Mateo, CA 94403**

Prevention

Advise your patients to take tick precautions when walking outdoors from December to June: wear long-sleeved shirts tucked in to pants, pants tucked into boots or socks. Apply permethrin products to clothes and DEET to skin to repel ticks. Check clothes and skin frequently for several days after walking outdoors. Remove ticks with tweezers, grabbing the tick close to the skin and pulling straight out. **If ticks are removed within 24 hours of attachment, the chance of contracting Lyme disease is extremely low.**

Tick Testing Services

If your patient has removed a tick, it can be submitted to our Public Health Lab for identification. If the tick is determined to be of a species capable of transmitting Lyme Disease, it will be tested for *Borrelia burgdorferi*. Call (650) 573-2500 for instructions.