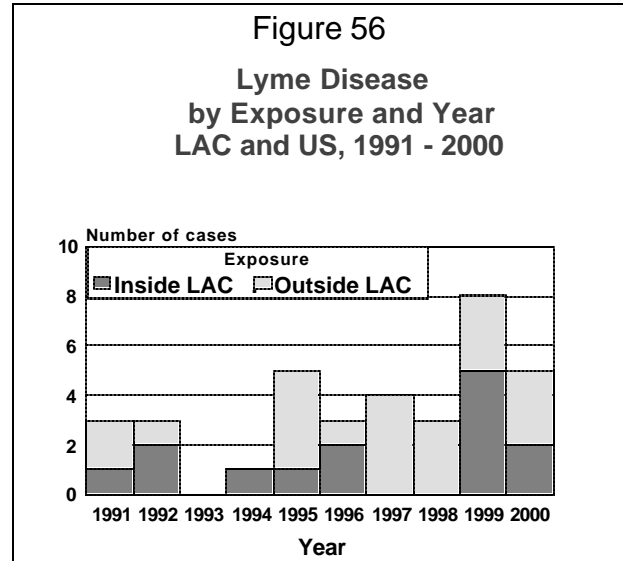


## LYME DISEASE

CRUDE DATA	
Number of Cases	5
Annual Incidence <sup>a</sup>	
LA County	0.06
California	0.29
United States	6.50
Age at Onset	
Mean	33 years
Median	18 years
Range	4-73 years
Case Fatality	
LA County	0.0%
United States	N/A

<sup>a</sup> Cases per 100,000 population.



### ETIOLOGY

Lyme disease is caused by a bacteria, *Borrelia burgdorferi*, is transmitted to humans by the bite of the Western black-legged tick (*Ixodes pacificus*), and is not common in LAC. The reservoir is in small rodents, with deer serving as a secondary reservoir. Ticks that feed from infected rodents or deer may then transmit the disease to humans, who are accidental hosts. The classic rash, called erythema migrans (an expanding bull's eye rash) is the first sign of illness in about 90% of patients. The incubation period is from 3-32 days; however, early symptoms, such as fever, body aches, headaches and fatigue may be not be recognized as Lyme disease, while some patients may present with later manifestation--including aseptic meningitis, cranial neuritis, cardiac arrhythmias, and arthritis of the large joints. Early disease is treated with a short course of oral antibiotics, while later manifestations may require longer treatment with oral or intravenous (IV) antibiotics. There is now a vaccine available, although it is not routinely recommended in California.

### DISEASE ABSTRACT

- Lyme disease is very uncommon in LAC.
- The diagnosis of Lyme disease may be difficult because early symptoms of fever, body aches, headaches, and fatigue can be caused by other diseases.
- Laboratory tests are available, but they are often not sensitive, specific or consistent.
- Lyme disease may be cured by early diagnosis and treatment with antibiotics.

## COMMENTS

In 2000, 5 reported cases of Lyme disease met CDC surveillance criteria. Three cases reported exposure outside LAC and 2 of 5 were male. When a case of Lyme disease is reported to LAC-DHS, an investigation is initiated by ACDC which includes collection of information from the physician and the patient. Vector Management staff determine the probable site of tick exposure and initiate field studies. The field studies include collection of ticks and samples from animals to test for Lyme disease.

Lyme disease is reported infrequently in LAC. Since Lyme disease became reportable in 1989, 43 reported cases have met the CDC surveillance criteria. Of these, only 15 (35%) were exposed to ticks inside LAC. Although transmission of Lyme disease does occur in LAC, it is believed to be rare because the Western black-legged tick is not the most common tick in LAC and only 1-2% of Western black-legged ticks in California are infected with the bacterium that causes Lyme disease. The tick must be attached for a minimum of 48 hours for transmission to occur. Although DHS has been testing ticks and reservoir animals for the past ten years, 1999 was the first year for which ticks were confirmed to carry *B. burgdorferi* by culture in LAC.

## PREVENTION

Although Lyme disease occurs rarely in LAC, personal protective measures can be taken to prevent tick bites. These measures include using insect repellents containing "DEET," wearing long pants and long-sleeved clothing, wearing light-colored clothing (so that ticks can be spotted more easily), and walking in the center of a trail to avoid overhanging grass or brush.

## ADDITIONAL RESOURCES

- CDC Lyme disease website:  
<http://www.cdc.gov/ncidod/dvbid/lyme/index.htm>
- Brochure from California Department of Health Services on Lyme disease:  
<http://www.dhs.ca.gov/ps/dcdc/pdf/Lymbro99.pdf>
- Acute communicable disease control website:  
<http://lapublichealth.org/acd/procs/b73/b73index.htm>