

## LYME DISEASE

Lyme disease, caused by the spirochete *Borrelia burgdorferi*, is transmitted by the bite of *Ixodes* ticks. The acute phase of the illness is characterized by erythema migrans (EM), a red circular patch that usually appears 3 days to 1 month after the bite of an infected tick, at the site of the bite, and is accompanied by mild systemic symptoms. EM occurs in 60%-80% of the patients. The chronic phase may occur within weeks to months after the initial infection and consists of arthritic, cardiac or neurologic manifestations. Chronic phase symptoms of Lyme diseases are similar to many other diseases, which can make a definitive diagnosis difficult.

### **Laboratory Criteria for Confirmation:**

- Isolation of *B. burgdorferi* from a clinical specimen, **OR**
- Demonstration of diagnostic IgM or IgG antibodies to *B. burgdorferi* in serum or CSF. A two-step testing approach using a sensitive enzyme immunoassay (EIA) or immunofluorescent assay (IFA) followed by Western Blot is required.

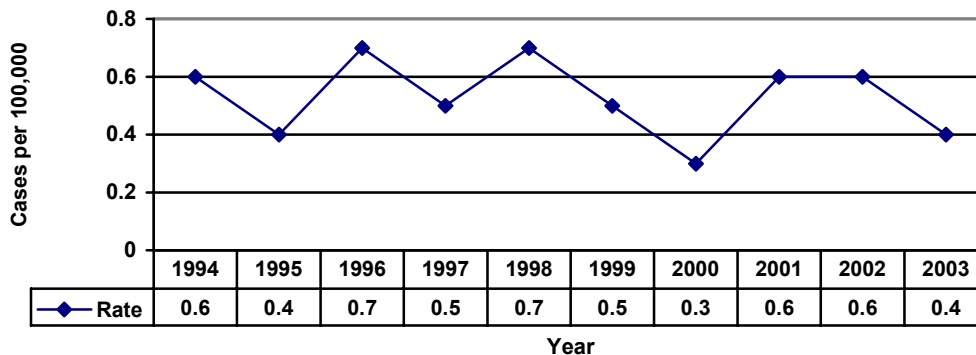
### **Case Classification**

*Confirmed:* a) A case with erythema migrans or  
b) a case with at least one late manifestation that is laboratory confirmed.

### **Comment**

See the complete surveillance case definition on the back of the CDC Lyme Disease Report Form in the Kentucky Reportable Disease Desk Reference.

**Lyme Disease Incidence, Kentucky  
1994-2003**

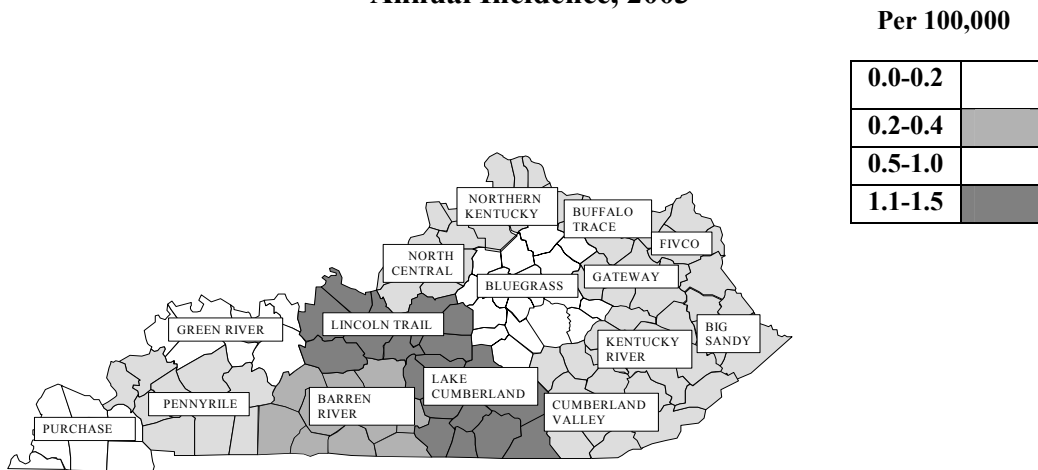


**Epidemiology**

<b>Kentucky 2003</b>	<b>Rate per 100,000</b>	<b>U. S. Rate (2002) per 100,000</b>
Cases      17	0.4	8.44

<b>Cases by Gender</b>	<b>Rate per 100,000</b>
Female      8	0.4
Male        9	0.4

**Lyme Disease by District, Kentucky  
Annual Incidence, 2003**



Nearly one-third of the cases (6) occurred in the Bluegrass District, for an incidence rate of 0.9 cases per 100,000 population. The vector tick, *Ixodes scapularis*, is rarely found in Kentucky, but was documented on several deer harvested from South Central Kentucky in late 2002.

District	Rate per 100,000
Purchase	0.5
Pennyrile	0.0
Green River	0.5
Barren River	0.4
Lincoln Trail	1.2
North Central	0.2
Northern Kentucky	0.0
Buffalo Trace	0.0
Gateway	0.0
Fivco	0.0
Big Sandy	0.0
Kentucky River	0.0
Cumberland Valley	0.0
Lake Cumberland	1.5
Bluegrass	0.9