



**Erie County Health Department  
Vector Surveillance & Control Field Laboratory  
Buffalo, New York**

**2005 - 2007 Lyme Disease Survey**

9/ 2008

Lyme disease is the most prevalent arthropod-borne disease in New York State, and has been endemic in the lower Hudson Valley and Long Island since at least the 1980's. Evidence suggests that Lyme disease is expanding into the Western Region of the State, including Erie County.

<b>Number of Human Lyme Disease Cases Confirmed by the NYSDOH in Erie County</b>						
2007	2006	2005	2004	2003	2002	2001
7*	4	11	1	1	1	4



**\*Note: Prior to 2007, travel history outside Erie County was not routinely obtained. In two of the 2007 cases there was no significant travel history outside Erie County.**

The Erie County Health Department Vector Field Laboratory has provided a regional tick identification service since 2001. The ability to identify ticks and determine the degree of engorgement in a timely manner can be a valuable tool in early diagnosis and treatment of Lyme disease.

<b>Ticks Identified in Erie County*</b>			
<b>Year</b>	<b>Total Ticks Identified</b>	<b><i>Ixodes scapularis</i></b>	<b>% <i>Ixodes scapularis</i></b>
2007	184	62	33.7%
2006	164	32	19.5%
2005	76	21	27.6%
2004	49	8	16.3%
2003	84	33	39.3%
2002	103	16	15.5%
2001	49	9	18.4%
<b>Total</b>	<b>709</b>	<b>181</b>	<b>27.6%</b>

\*Note: Ticks were identified by the Erie County Vector Field Laboratory, NYSDOH Western Regional Entomologist and the NYSDOH Hudson Valley Community College.





With respect to Lyme disease, dogs may be considered sentinel animals because they are at greater risk of tick infestation than humans. They are compliant and easily sampled, and have a pronounced antibody response to the spirochete infectious agent. Moreover, since dogs frequently develop asymptomatic disease that can lead to lameness, their owners are often motivated to have their animals tested.

<b>Erie County Canine Lyme Disease Survey Results</b>				
<b>Year</b>	<b>Vets Surveyed</b>	<b>Vets That Test for Lyme</b>	<b>Canines Positive*</b>	<b>No Travel History</b>
2007	47	34	74	19
2006	54	35	83	23
2005	66	47	54	22
<b>Total</b>	<b>167</b>	<b>116</b>	<b>211</b>	<b>64</b>

\*Note: Laboratory confirmation of Lyme disease relies on indirect methods such as antibody detection. Scientific studies have demonstrated variable levels of sensitivity (30-80%) and specificity (80-90%) associated with the performance of these assays and are dependant upon stage of the infection, presence of cross-reacting antibodies, etc. Therefore, it must be assumed that a laboratory result for the diagnosis is not absolute and performance characteristics of the assay must be considered. Additionally, the diagnosis of the disease cannot rely on the laboratory result alone, but must incorporate clinical recognition, history, and other pertinent information.

Discussion: In 2007, two confirmed human cases of Lyme disease reported no travel history outside Erie County. A large percentage of the ticks identified in Erie County are *Ixodes scapularis* (Blacklegged deer tick), the vector of Lyme disease. Substantial numbers of confirmed canine Lyme disease cases with no travel history have occurred over the last three years.

Conclusion: Evidence suggests Lyme disease can be acquired locally by humans. Lyme disease should be considered an important Public Health threat in Erie County.



For information contact:  
 John P. Eiss [john.eiss@erie.gov](mailto:john.eiss@erie.gov)  
 Associate Public Health Sanitarian  
 or  
 Peter Tripi [peter.tripi@erie.gov](mailto:peter.tripi@erie.gov)  
 Senior Public Health Sanitarian

Vector Surveillance and Control Program



Tick Identification Service:  
 Erie County Health Department  
 Vector Surveillance & Control Program  
 462 Grider Street Room BB-122  
 Buffalo, NY 14215  
 716-961-7524