

7 tick-borne pathogens reported in my home state of Minnesota

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The authors of a recent study published in *Ticks and Tick-borne Diseases* examined the pathogens in 1,240 host-seeking *Ixodes scapularis* (black-legged) nymphal ticks from Minnesota. They identified seven infectious agents including *Borrelia burgdorferi sensu stricto* (bacteria causing Lyme disease), *Borrelia mayonii*, *Borrelia miyamotoi*, *Anaplasma phagocytophilum*, *Ehrlichia muris eauclairensis*, *Babesia microti* (protozoan) and Powassan (virus).

B. burgdorferi s.s., *A. phagocytophilum*, and *B. microti* were the most common pathogens. “*Borrelia burgdorferi s.s.* was the most prevalent and geographically widespread, found in 25.24% of all nymphs tested,” writes Johnson and colleagues. [1] The other two were widespread but had a lower incidence rate with *A. phagocytophilum* and *B. microti* at 6.29% and 4.68%, respectively.

This study did not address the impact on residents but according to a case report by Sharma from the Mayo Clinic, “Minnesota had 1,176 confirmed Lyme [disease] cases in 2015 (20.7 cases/100,000).” [2]

“Over the last 20 years, the median incidence has risen from 464 cases (1996–2005) to 1121 (2006–2015),” Sharma states.

Meanwhile, the Centers for Disease Control and Prevention (CDC) is advising doctors to consider Lyme disease in [states where the condition is emerging, such as Minnesota](#), according to the authors of a recently published article in *Morbidity and Mortality Weekly Report (MMWR)*.

References:

1. Johnson TL, Graham CB, Maes SE, et al. Prevalence and distribution of seven human pathogens in host-seeking *Ixodes scapularis* (Acari: Ixodidae) nymphs in Minnesota, USA. *Ticks Tick Borne Dis.* 2018.
2. Sharma U. Disseminated Lyme disease presenting as multiple non-target cellulitic-appearing skin lesions and oral pseudomembrane. *BMJ Case Rep.* 2018;2018.

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