

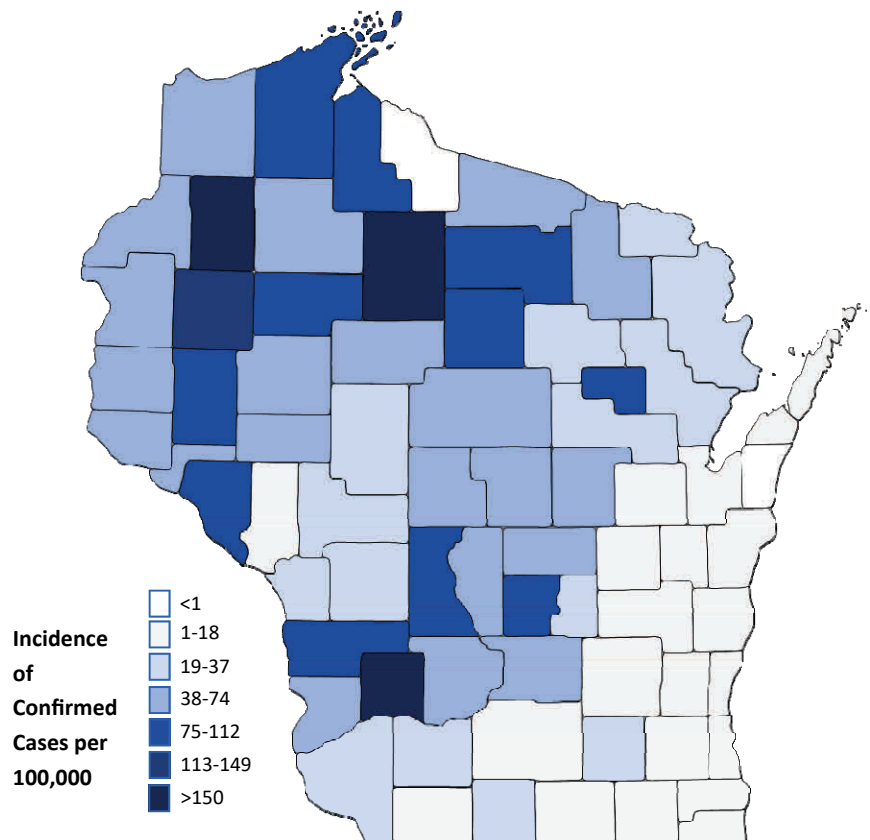
LYME DISEASE

In Wisconsin, the statewide average incidence of Lyme disease has increased more than fivefold in the past 19 years, from an average of 8.0 confirmed cases per 100,000 people (1991-1995) to 41.8 confirmed cases per 100,000 people (in 2011). Wisconsin's rate for both confirmed and probable cases of Lyme disease in 2011 was 61.8 cases per 100,000 people.

The Facts

- Lyme disease is caused by the bacteria *Borrelia burgdorferi*.
- Transmission of Lyme disease occurs when a female or nymphal tick attach to a host to take a blood meal.
- A blacklegged (deer) tick must be attached for at least 24 hours but averages 36-48 hours before the bacteria can be transmitted.

FIGURE 1. Wisconsin Lyme Disease Annual Incidence, 2015



Revised 4/12/2016

Statewide incidence = 22.6/100,000

This map is based on the county of residence of confirmed cases. Some infections may have been acquired during travel to other areas.

Data source: Wisconsin Division of Public Health



Clinical Signs

- **Stage 1:** Appears 3-30 days after tick bite. Symptoms may include:
 - Red, expanding erythema migrans (EM) rash at the site of the tick bite. An EM rash slowly expands outwards.
 - EM rash is being seen more commonly than a “bull’s eye” rash. Experts in the field are referring to EM rash rather than “bull’s-eye” rash.
 - Fever, chills, muscle and joint aches, tiredness, headache, and swollen lymph nodes.
- **Stage 2:** Early, disseminated stage that occurs days to weeks post-tick bite. Symptoms may include:
 - Additional bull’s-eye or EM rashes in other areas of the body
 - Loss of muscle tone on one or both sides of the face
 - Severe headaches, stiffness of the neck due to inflammation of the spinal cord (meningitis)
 - Pain and swelling of large joints
 - Dizziness or heart palpitations
- **Stage 3:** Can occur months to years after the tick bite, and can become a severe problem if not treated. Symptoms may include:
 - Chronic fatigue
 - Joint and muscle pain
 - Neurological and cognitive defects
 - Irregular heartbeat

Treatment

- Once acquired, Lyme disease can be treated effectively with antibiotics if treated early in the infection.
- Approximately 10%-20% of patients experience symptoms that last months to years after antibiotic treatment. This is called post-treatment Lyme disease syndrome (PTLDS) or commonly referred to as chronic Lyme disease, and its direct cause is unknown and further studies are being conducted to better understand this syndrome. Most patients have reduced symptoms over time.



Wisconsin Department of Health Services

Division of Public Health

Climate and Health Program

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