

Babesia cases skyrocket in Wisconsin with a 26-fold increase

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<http://danielcameronmd.com/babesia-cases-skyrocket-wisconsin-26-fold-increase/>

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In Wisconsin, between 2001 and 2015, “there was a 26-fold increase in the incidence of confirmed *babesiosis*, in addition to geographic expansion,” [according to MMWR](#). [1] The report listed suburbanization, forest fragmentation patterns, and warming average temperatures as potential causes behind the surge.

The rising prevalence of co-infections in rodents may also be to blame for the rise in *Babesia* cases. When studying the Northeastern region, [Diuk-Wasser from Columbia University](#) in New York City found “the prevalence of co-infection tends to be greater in rodents, ranging from 6% to 41%, because they are exposed to multiple tick bites during their lifetime.” [2] Furthermore, she adds, “the prevalence of *B. burgdorferi* and *B. microti* co-infection ranges from 0% to 13% in nymphs and from 2% to 13% in adults.”

Babesia can be severe, causing life-threatening symptoms. According to the report, in Wisconsin between 2001 and 2015, “three deaths occurred, one in a woman aged 88 years, and two in men aged 64 and 72 years.” [1] Most cases, however, are treated without hospitalization. Thirty-five percent of the confirmed *Babesia* cases, and 76% of the probable cases were treated in the community.

Of the confirmed cases:

- 64% = male
- 68% = over age 60
- 96% = onset of illness occurred between April and October

Individuals contracting *Babesia* through blood transfusions has also been reported. “Three confirmed cases of transfusion-associated transmission were detected in 2008 and one in 2011, before implementation of routine screening for *babesiosis* by Wisconsin blood banks in 2016,” according to MMWR. [1]

The authors point out that perinatal transmission of *Babesia* has been reported, as well. Transplacental transmission is not described in the MMWR Wisconsin report, but was discussed in a 2017 review of tick-borne diseases in the [Cleveland Clinic of North America](#). [3]

Babesia cases spread throughout Wisconsin

During 2001 – 2005, 20 counties in Wisconsin (28% of the state) reported at least one confirmed case of *Babesia*. That number rose to 30 counties between 2006 and 2010. And during 2011 – 2015, the number of counties reporting at least one case had jumped to 40.

The actual number of *Babesia* cases in Wisconsin is unknown. To be considered a confirmed case, the MMWR required a blood smear or a 4-fold increase or greater in *B. microti* immunoglobulin G [IgG] antibody titers. [1] However, the blood smear has poor sensitivity, the authors point out. “Blood smear exam has a substantially lower sensitivity of detection of parasites (100–500 parasites/?L blood) than does PCR which can be positive at concentrations as low as one to three parasites per ?L of blood.”

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[Study raises concerns for Babesia patients and blood banks](#)

[Babesia becomes the number 2 tick-borne illness behind Lyme disease in the Hudson Valley](#)

[Sweats may be a sign of Babesia](#)

[Babesia and Lyme - it's worse than you think](#)

References:

1. Stein E, Elbadawi LI, Kazmierczak J, Davis JP. Babesiosis Surveillance - Wisconsin, 2001-2015. MMWR Morb Mortal Wkly Rep. 2017;66(26):687-691.
2. Diuk-Wasser MA, Vannier E, Krause PJ. Coinfection by Ixodes Tick-Borne Pathogens: Ecological, Epidemiological, and Clinical Consequences. Trends Parasitol. 2015.
3. Eickhoff C, Blaylock J. Tickborne diseases other than Lyme in the United States. Cleve Clin J Med. 2017;84(7):555-567.

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