

## Doctors face challenges in diagnosing *Borrelia miyamotoi*

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<http://danielcameronmd.com/doctors-face-challenges-in-diagnosing-borrelia-miyamotoi/>

*Borrelia miyamotoi*, the bacteria which causes relapsing fever, is one of the latest threats. The disease was first reported in the United States in 2013 but has become increasingly more common. *B. miyamotoi* is carried by black-legged ticks, the same ticks that can transmit Lyme disease. One study found that 2% of nymphal ticks collected in 11 states endemic for Lyme disease were infected with *B. miyamotoi*.

A recent review by Shapiro and Wormser in the *Journal of the American Medical Association*, points out the concerns associated with this particular tick-borne disease and how its unique presentation can make it [challenging to diagnose](#).<sup>[2]</sup>

- “This bacterium can be transmitted within the first 24 hours of tick attachment.”
- “The probability of transmission increases with every day an infected tick is allowed to remain attached.”
- While some patients with Lyme disease may exhibit a rash, “patients infected with *B. miyamotoi* in the United States typically do not have a rash.” But they may present with “a fever in conjunction with headache (96%), myalgia (84%), arthralgia (76%), and malaise/fatigue (82%).”
- There [are no diagnostic tests for \*B. miyamotoi\* infection](#) that have been approved by the US Food and Drug Administration.
- The fever may be relapsing. [Editor’s note: Fevers often do not relapse.]
- “Laboratory abnormalities include leukopenia (51%) and thrombocytopenia (60%), which are rarely seen in Lyme disease.” [Editor’s note: These are seen in Ehrlichia and Anaplasmosis.]
- “Severely immunocompromised patients may develop chronic meningitis.”

Fortunately, doxycycline and amoxicillin have been shown to effectively treat *B. miyamotoi* infection in patients, including those who are immunocompromised. [Editor’s note: Long-term outcome studies are needed.)

### Related Articles:

[The best antibiotics to treat \*Borrelia miyamotoi\*?](#)

["Urban" ticks carry \*B. burgdorferi\* sl and \*B. miyamotoi\*](#)

[Don't count on a relapsing fever to diagnose \*B. miyamotoi\*](#)

### References:

1. CDC Vital Signs, Weekly / May 4, 2018 / 67(17);496–501.  
<https://www.cdc.gov/mmwr/volumes/67/wr/mm6717e1.htm>
2. Shapiro ED, Wormser GP. Lyme Disease in 2018: What Is New (and What Is Not). *Jama*. 2018;320(7):635-636.

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