

## How long does it take for a tick to transmit Babesia?

Thursday, March 23, 2023

<https://danielcameronmd.com/how-long-tick-transmit-babesia/>

The study is of particular interest given the news that Babesia cases are on the rise. According to a recent Morbidity and Mortality Weekly Report (MMWR) from the Centers for Disease Control and Prevention (CDC), there has been an alarming increase in the numbers of Babesia cases in the Northeastern U.S. [1] Eight states in this region reported the greatest rise in cases. These states included: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

It takes 24 to 48 hours for a tick bite to transmit Lyme disease per the CDC, wrote Scott et al. [2] Other studies have demonstrated the transmission time to be even less. According to Cook et al., the time it takes for a tick to transmit Lyme disease was less than 16 hours, particularly if the salivary glands are infected. [3]

Meanwhile, since Babesia can reside in tick salivary glands, it can be transmitted immediately when the tick starts to take a blood meal, wrote Scott.

**“There is no grace period between tick attachment and transmission [of Babesia],” wrote Scott.**

Anaplasma phagocytophilum (the causative agent of human anaplasmosis) can often be transmitted in less than 24 hours, wrote Mehlhorn. [4]

Finally, “Powassan virus can be transmitted in less than 15 min.,” according to Ebel et al. [5]

The absence of a grace period between tick attachment and transmission makes reports of an increase in Babesia cases in the Northeastern U.S. more concerning. Furthermore, the actual number of cases in other states is not clear.

“Babesiosis is not reportable in all states; for example, although transmission of *B. microti* has been documented in Pennsylvania, babesiosis is not a reportable condition in that state,” wrote the CDC.

The CDC’s MMWR did not discuss whether Babesia might explain reports of individuals becoming sick in less than 24 hours after a tick bite.

The CDC's MMWR briefly discussed treatment. The prescribed treatment with doxycycline for a tick bite will not work for Babesia. Instead, Babesia is typically treated with atovaquone (marketed as Malarone and Mepron in the US) and azithromycin (marketed as Zithromax in the U.S.)

### Related Articles:

[After a tick bite, how long for disease transmission?](#)

[Birds vs. rodents in transmitting tick-borne pathogens](#)

[Babesia infections and tick-borne agents transmitted through the blood supply](#)

**References:**

1. Swanson M, Pickrel A, Williamson J, Montgomery S. Trends in Reported Babesiosis Cases - United States, 2011-2019. *MMWR Morb Mortal Wkly Rep.* Mar 17 2023;72(11):273-277. doi:10.15585/mmwr.mm7211a1
2. Scott JD, Clark KL, Foley JE, Bierman BC, Durden LA. Far-Reaching Dispersal of *Borrelia burgdorferi* Sensu Lato-Infected Blacklegged Ticks by Migratory Songbirds in Canada. *Healthcare (Basel).* Jul 25 2018;6(3)doi:10.3390/healthcare6030089
3. Cook MJ. Lyme borreliosis: a review of data on transmission time after tick attachment. *Int J Gen Med.* 2015;8:1-8. doi:10.2147/IJGM.S73791
4. Mehlhorn H, Shein E. The piroplasms: life cycle and sexual stages. *Adv Parasitol.* 1984;23:37-103. doi:10.1016/s0065-308x(08)60285-7
5. Ebel GD, Kramer LD. Short report: duration of tick attachment required for transmission of powassan virus by deer ticks. *Am J Trop Med Hyg.* Sep 2004;71(3):268-71.

---

How long does it take for a tick to transmit Babesia? - <https://danielcameronmd.com/how-long-tick-transmit-babesia/>