



Lyme Disease Prophylaxis After Tick Bite

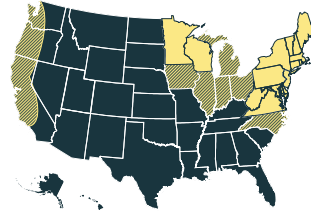
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1 Where the tick bite occurred, are ticks likely to be infected with *Borrelia burgdorferi*?

No

Yes

When a tick bite occurs in a state or county where Lyme disease is common, (cdc.gov/lyme/datasurveillance), PEP might be beneficial. If Lyme disease is not common in your area, ask your patient if they have recently traveled to an area where Lyme disease is common.



Areas with HIGH INCIDENCE of Lyme disease
Some local transmission of Lyme disease

2 Was the tick removed within the last 72 hours?

No

Yes

The Lyme disease incubation period is at least three days, so PEP is most effective within the 72-hour window after tick removal.

3 Was the tick's body flat, or was it engorged with blood?

Flat

Engorged

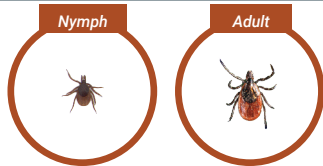


If the tick is engorged with blood, the risk of Lyme disease is higher, and PEP should be considered. A flat, or unfed tick, is unlikely to have transmitted the pathogen that causes Lyme disease.

4 Was the tick an *Ixodes* (blacklegged) tick?

Definitely NOT

Yes / Possibly / Tick Unavailable



In the United States, the only ticks that transmit the bacteria that cause Lyme disease are the small, teardrop-shaped *Ixodes* ticks. Tick identification can be challenging, and PEP can still be considered when the tick cannot be identified.

5 Is doxycycline safe for the patient?

No

Yes

A single dose of doxycycline has been shown to reduce the frequency of Lyme disease after a high-risk tick bite and is safe for people of all ages, including young children. Before recommending doxycycline prophylaxis, make sure that it is a safe medication for your patient. Considerations include allergy to doxycycline, pregnancy, and lactation.

Consider Prescribing PEP*

PEP Not Indicated

*Single dose of doxycycline (200 mg for adults or 4.4 mg/kg for children of any age weighing less than 45 kg)

REFERENCES:

Nadelman RB, et al. Prophylaxis with single-dose doxycycline for the prevention of Lyme disease after an *Ixodes scapularis* tick bite. *N Engl J Med.* 2001 Jul 12;345(2):79-84.
Harms MG, et al. A single dose of doxycycline after an *Ixodes ricinus* tick bite to prevent Lyme borreliosis: An open-label randomized controlled trial. *J Infect.* 2021 Jan;82(1):98-104.

