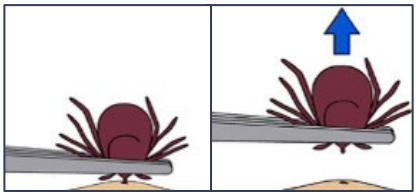
Lyme disease, a multi-systemic illness caused by the spirochete *Borrelia burgdorferi* and is the most common vector-borne illness in the US.

www.michigan.gov/lymeinfo

LYME DISEASE TIP SHEET
for Healthcare Providers

Tick Bites



An attached tick should be removed promptly. Grasp the tick's head with tweezers as close to the skin as possible and slowly pull it straight out without twisting.

Interested providers can submit ticks for identification. See www.michigan.gov/lyme for instructions.

A **single dose** of doxycycline may be administered within 72 hours of tick removal only if the attached tick can be reliably identified as an *Ixodes scapularis* tick that is estimated to have been attached for longer than 36 hours or is not flat. The prophylactic dose for adults is 200 mg and for children is 4.4 mg/kg, up to a maximum dose of 200 mg.

Ixodes scapularis

If the tick cannot be identified or prophylaxis is not indicated, the patient should monitor their health for 30 days for fever, rash, or other symptoms.

Erythema Migrans (EM)

Classic Bull's Eye Erythema Migrans Rash

The initial skin lesion occurs in 60-80% of patients and will present at the site of a tick bite after 3-30 days (average 7 days). A bull's eye appearance accounts for less than 20% of all EM cases; the most common appearance is a homogeneously colored oval lesion.

When a patient has EM, testing for Lyme disease is not generally necessary or fruitful; empiric treatment is indicated. Clinical diagnosis of Lyme disease should be reported to your local health department.

If there is no apparent rash, but the patient exhibits fever, fatigue, headache, arthralgias, and/or myalgias, **AND** had risk of exposure to ticks, then testing for Lyme disease should be considered.

Laboratory Testing

A two-step test should be ordered, consisting of a screening test followed by a confirmatory EIA or Western blot. When ordering testing, keep in mind:

- Antibodies can take several weeks to develop, so patients may test negative if infected only recently.
- Antibodies normally persist in the blood for months or even years after the infection is gone; therefore, the test cannot be used to determine cure.
- Some tests give results for two types of antibody, IgM and IgG. Positive IgM results should be disregarded if the patient has been ill for more than 30 days.

Treatment (Refer to IDSA guidelines)

For early disseminated Lyme disease in the absence of specific neurologic manifestations:

- Adults: **Doxycycline 100 mg po bid x 14 days** or Doxycycline 200 mg once per day x 14 days or Amoxicillin 500 mg po tid x 14 days or Cefuroxime 500 mg po bid x 14 days
- Children: **Doxycycline 4.4 mg/kg per day (max 100mg/dose) in 2 divided doses x 14 days** or Amoxicillin 50 mg/kg/day (max 500 mg/dose) in 3 divided doses x 14 days or Cefuroxime 30 mg/kg/day (max 500 mg/dose) in 2 divided doses x 14 days

Most patients treated with antibiotics recover completely. In patients with persistent or recurrent joint swelling, retreatment with a second 4-week course may be needed.