

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

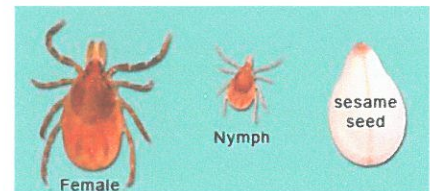
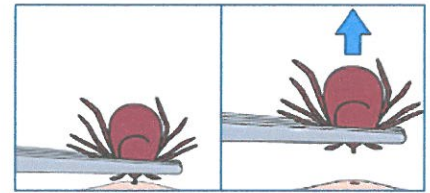
Tick Bites

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/lymeinfo for instructions.

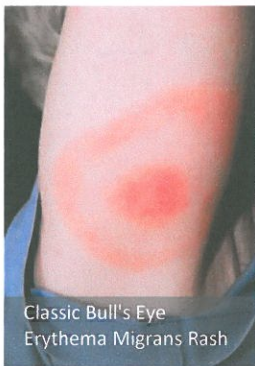
A **single dose** of doxycycline may be administered within 72 hours of tick removal only if the attached tick can be reliably identified as an *Ixodes scapularis* tick that is estimated to have been attached for longer than 36 hours or is not flat. The prophylactic dose for adults is 200 mg and for children 8 years and older is 4 mg/kg, up to a maximum dose of 200 mg.

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.



Ixodes scapularis

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. More photos are available at www.michigan.gov/lymeinfo under the symptoms tab.

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, including an Enzyme Immunoassay (EIA) or Immunofluorescence Assay (IFA) and an IgG and IgM Western Blot.

- If the EIA (or IFA) is negative, consider an alternative diagnosis or obtain convalescent serum if patient has had symptoms consistent with Lyme disease for less than 30 days.
- If EIA (or IFA) is positive and the patient has had symptoms for **less than 30 days** then IgM and IgG Western Blot should be utilized.
- If EIA (or IFA) is positive and the patient has had symptoms for **more than 30 days** then only IgG Western Blot should be utilized.

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 Amoxicillin 500 mg po tid x 14 days or Cefuroxime 500 mg po bid x 14 days
- Children (≥ 8 y.o.): **Doxycycline 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
- Children (< 8 y.o.): **Amoxicillin 50 mg/kg per day (max 500mg/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.