



## Maine Health Alert Network (HAN) System

### PUBLIC HEALTH ADVISORY

**To:** All HAN Recipients  
**From:** Dr. Siiri Bennett, State Epidemiologist  
**Subject:** **2016 Lyme and Other Tickborne Disease Information**  
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**Abstract:**

Lyme disease is the most common vectorborne disease in Maine. Ticks are already out and we expect the number of Lyme disease cases to increase as the weather continues to get warmer. **May is Lyme Disease Awareness Month in Maine.**

The purpose of this advisory is to:

- Provide general information regarding ticks and Lyme disease
- Remind providers to report cases of Lyme disease, including those diagnosed by erythema migrans
- Provide resources on diagnosis and treatment of Lyme disease
- Remind providers that anaplasmosis, babesiosis and other tick borne diseases are also increasing in Maine

## 2016 Lyme and other Tickborne Disease Information

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The purpose of this advisory is to:

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### Background:

Lyme disease is a bacterial infection that is carried by *Ixodes scapularis* (the deer tick). Cases have increased over the last decade in Maine, and occur in all 16 counties. Over 1,200 cases of Lyme disease were reported statewide in 2015, a slight decrease from 2014. Lyme disease is most common among school age children and mature adults over the age of 65. Most infections occur during the summer months, and as the weather continues to warm up, more ticks will be out in the open, and we are likely to see more cases of Lyme disease. Cases have already been reported in 2016, and the number will rise as we enter the summer months.

### Symptoms:

The most common early symptom of Lyme disease is an expanding red rash (erythema migrans) that occurs 3-30 days after being bitten. Fever, joint and muscle pains may also occur. Untreated infections can lead to clinical findings in skeletal, cardiac, and nervous systems. Disseminated manifestations of disease include: arthritis characterized by recurrent, brief attacks of joint swelling; lymphocytic meningitis; cranial neuritis (such as Bell's palsy); encephalitis; and second or third degree atrioventricular block. Lyme disease is treatable, and the majority of patients recover after receiving appropriate therapy.

### What to do after a tick bite:

- Remove the tick properly, ideally using tweezers or a tick spoon.
- Identify the tick and the engorgement level, or length in time of attachment. Tick identification is available for free through the University of Maine Cooperative Extension and more information can be found at <http://extension.umaine.edu/ipm/tickid/>
- Clean the area around the bite, and instruct the patient to watch for signs and symptoms for 30 days.
- Testing of the tick is not routinely recommended because even if the tick tests positive for Lyme, that does not mean it was attached long enough to transmit the disease, and even if the tick tests negative that does not mean that was a patient's only exposure, and that does not eliminate the possibility of anaplasmosis or babesiosis.
- Prophylaxis after a tick bite is **not** routinely recommended, but can be considered under specific circumstances including:
  - Tick has been identified as an engorged deer tick that has been attached for over 24 hours
  - Exposure occurred in an area where there is a high rate of infected ticks. Areas south of Bangor have the highest rate of infected ticks in the state. There is limited data from the more northern counties on the rate of infection among ticks.

- Prophylaxis can be started with 72 hours. **Even if prophylaxis is used, monitoring for symptoms for 30 days is recommended.**
- There is no data showing if prophylaxis is effective in preventing anaplasmosis, and a single dose of doxycycline will not have an effect on babesiosis. As such, **even if prophylaxis is used, monitoring for symptoms for 30 days is recommended.**

#### **If Lyme disease is suspected:**

- Preferred laboratory testing is a two tier method, with an EIA or IFA test followed by Western Blot for both IgG and IgM
- IgM is only considered reliable in the first month after exposure
- IDSA guidelines for assessment, treatment, and prevention of Lyme disease are available at <http://cid.oxfordjournals.org/content/43/9/1089.full>

#### **What to report:**

Lyme disease is a reportable condition in the state of Maine. Report all diagnosed erythema migrans rashes and all positive lab diagnoses. Cases can be reported by fax at 1-800-293-7534 or by phone at 1-800-821-5821.

#### **Other tickborne diseases:**

Other diseases that are carried by ticks in Maine include anaplasmosis, babesiosis, and Powassan. Symptoms of anaplasmosis include: fever, headache, malaise and body aches. Symptoms of babesiosis include: extreme fatigue, aches, fever, chills, sweating, dark urine, and possibly anemia. Symptoms of Powassan include: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, and encephalitis and meningitis. Preferred testing for anaplasmosis, babesiosis, and Powassan is by PCR. Testing for all three diseases can be performed at Maine's Health and Environmental Testing Laboratory (HETL), and many reference and commercial laboratories offer testing for anaplasmosis and babesiosis.

In 2015, providers reported 186 cases of anaplasmosis, a slight decrease from 2014. Providers reported 55 cases of babesiosis, a slight increase from 2014. A single case of Powassan was identified in 2015. Ten anaplasmosis cases and two babesiosis cases have already been reported in 2015. Anaplasmosis, babesiosis, ehrlichiosis, Powassan, and Rocky Mountain spotted fever are all reportable in Maine; however ehrlichiosis and Rocky Mountain spotted fever are uncommon in the state.

A Physician's Reference Guide is available and describes the most common tick borne diseases in Maine. This guide can be found on our website at: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/index.shtml> under Resources. Paper copies can be requested through [disease.reporting@maine.gov](mailto:disease.reporting@maine.gov).

#### **Additional information:**

- Lyme disease data is available on Maine CDC's website at [www.maine.gov/idepi](http://www.maine.gov/idepi) and then navigating to Maine Tracking Network: Lyme disease on the left navigation pane.
- For more information on tick borne diseases including Lyme: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/index.shtml>
- For IDSA Lyme disease treatment guidelines: <http://cid.oxfordjournals.org/content/43/9/1089.full>
- To order Lyme educational materials: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/order-form-wn.shtml>
- Disease consultation and reporting available through Maine CDC at 1-800-821-5821
- HETL requisition [www.mainepublichealth.gov/lab](http://www.mainepublichealth.gov/lab)