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PUBLIC HEALTH ADVISORY

To: Health Care Providers
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2025 Lyme and Other Tickborne Disease Information

Ticks are already active this year in Maine following a record year in 2024. As the weather warms, the Maine CDC expects an increase in the number of Lyme and other tickborne disease case reports. The purpose of this advisory is to remind health care providers to consider testing patients presenting with possible tickborne disease. **May** is **Lyme Disease Awareness Month** in Maine and the Maine CDC encourages all Mainers to prioritize tick bite prevention with the message **"Don't Let a Tick Make You Sick."**

The burden of human tickborne illnesses in Maine continues to increase every year. While Lyme disease is still the most common tickborne disease reported in Maine, the rates of many other tickborne illnesses also continue to increase. According to preliminary data, 3,218 cases of Lyme disease, 1,284 cases of anaplasmosis, and 309 cases of babesiosis were reported by providers in 2024, including 23 Hard Tick Relapsing Fever (HTRF) cases, 7 Powassan cases, 4 spotted fever rickettsiosis (SFR, including Rocky Mountain spotted fever) cases, 2 ehrlichiosis cases, and 1 tularemia case. The Maine CDC has already received several hundred reports of tickborne illnesses in 2025. Case numbers for Lyme disease, anaplasmosis, and babesiosis are available in near-real time on the Maine Tracking Network.

The deer tick (*Ixodes scapularis*) is the primary vector of most tickborne diseases reported in Maine. Deer ticks can carry the pathogens that cause anaplasmosis, babesiosis, HTRF, Lyme disease, and Powassan. The Maine CDC considers these pathogens endemic in Maine. Individuals bitten by a deer tick can acquire more than one infection simultaneously. Health care providers should **consider testing for tickborne diseases year-round**. Most infections occur during peak deer tick activity in the spring and summer months, but ticks can be active any time the temperature is above freezing throughout the year.

People traveling outside of Maine may encounter tickborne illnesses not common in the state, including Alpha-Gal Syndrome (AGS), Bourbon Virus, Ehrlichiosis, Heartland Virus, SFR, and STARI. AGS is a serious and potentially life-threatening allergic reaction. People can become sensitized to the carbohydrate alpha-gal through

lone star tick (*Amblyomma americanum*) bites. Some people with alpha-gal sensitivity have allergic reactions after exposure to red meat, dairy products, or products containing alpha-gal. Symptoms occur 2-10 hours after exposure. While lone star ticks are not considered endemic to Maine, they are endemic in parts of Massachusetts. The UMaine Tick Lab reports a small number of lone star tick submissions in Maine yearly.

Symptoms

The most common early symptoms of tickborne diseases occur within 30 days after a tick bite. Some of these non-specific symptoms are similar to the symptoms of COVID-19, influenza, and other infections. Untreated infections can lead to serious rheumatologic, cardiac, and neurologic manifestations like Lyme carditis and meningoencephalitis. Most tickborne diseases in Maine are treatable, and most patients recover after receiving appropriate therapy.

Symptoms of tickborne diseases of concern in Maine include:

- Anaplasmosis: fever, headache, malaise, and body aches.
- Babesiosis: extreme fatigue, aches, fever, chills, sweating, dark urine, and anemia.
- HTRF: fever, chills, headache, body and joint pain, and fatigue.
- Lyme disease: fever, headache, joint pain, muscle pain, and *erythema migrans* rash.
- Powassan: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, encephalitis, and meningitis.
- AGS: hives, anaphylaxis, gastrointestinal symptoms, and hypotension.
- Ehrlichiosis: fever, headache, gastrointestinal symptoms, muscle aches, confusion, and rash.
- SFR: eschar, fever, headache, rash, and muscle aches.

What to do after a tick bite

- Remove the tick properly using tweezers or a tick spoon.
- Clean the area around the bite.
- Instruct the patient to watch for signs and symptoms for 30 days.
- Identify the tick and the engorgement level (the amount of time the tick was attached).

Prophylaxis

- Prophylaxis after a tick bite for Lyme disease is **not routinely recommended**, but can be considered under specific circumstances including:
    - Tick is identified as an engorged deer tick that was attached for at least 36 hours.
    - Exposure occurred in an area where there is a high rate of infected ticks.
- Prophylaxis can be started within 72 hours of tick removal. There are no data showing if prophylaxis is effective in preventing other tickborne bacterial illnesses like anaplasmosis or HTRF. Prophylaxis with doxycycline will not prevent babesiosis or Powassan virus disease. Therefore, **even if prophylaxis is used, the Maine CDC recommends monitoring for symptoms of these diseases for 30 days.**

Tick identification and tick testing

- The University of Maine Tick Lab offers:
    - Tick identification for free.
    - Tick testing for $20 to Maine residents with a three-day turnaround time.
- The lab tests deer ticks for *Anaplasma phagocytophilum, Borrelia burgdorferi, Borrelia miyamotoi, Babesia microti*, and Powassan virus.
- The lab tests non-Ixodes ticks for *Ehrlichia spp., Francisella tularensis, Rickettsia rickettsii*, and Heartland virus.
- Clinical decisions **should not** be made based on the results of this testing service.
- While testing ticks for clinical purposes is not recommended, data from tick testing is very helpful for surveillance purposes and determining tick infection rates in the state.

Testing
Preferred testing for Lyme disease is a two-tier test (TTT). The standard TTT is an EIA or IFA followed by a Western Blot for both IgG and IgM. The modified TTT is an EIA or IFA followed by another EIA. IgM is only considered reliable in the first month after exposure.

Preferred testing for anaplasmosis, babesiosis, ehrlichiosis, HTRF, and SFR is by PCR. Many reference and commercial laboratories offer testing for these diseases. Babesiosis can also be confirmed by blood smear. Clinicians using serological testing should collect acute and convalescent phase samples.

Diagnostics for AGS include testing for alpha-gal sIgE antibodies are available at several large commercial laboratories and some academic institutions.

Preferred testing for Bourbon, Heartland, and Powassan viruses is by serological IgM and PRNT, but PCR is also available at some commercial laboratories. Bourbon, Heartland, and Powassan testing can be performed at Maine's Health and Environmental Testing Laboratory (HETL). If providers suspect infection with Bourbon, Heartland, or Powassan based on clinical evidence, they should submit whole blood and CSF for arboviral testing at HETL and serum for testing at U.S. CDC. A HETL Requisition Form and Arboviral Submission Form are required for arboviral testing.

Reporting
Anaplasmosis, babesiosis, ehrlichiosis, HTRF, Lyme disease, Powassan, SFR, and tularemia are all reportable in Maine (State of Maine Control of Notifiable Diseases and Conditions Rule).

Additional information
- Maine CDC tickborne diseases
- Maine Tracking Network data dashboard
- HETL forms
- Tickborne reference manual for healthcare providers
- IDSA treatment guidelines
- University of Maine Tick Lab
- The Maine CDC disease reporting & consultation line: 1-800-821-5821 (**available 24/7**)
    - Fax: 1-800-293-7534
    - Email: disease.reporting@maine.gov