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PUBLIC HEALTH ADVISORY

To: Health Care Providers
From: Dr. Isaac Benowitz, State Epidemiologist
Subject: **2024 Record Number of Tickborne Illnesses Reported**
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Tickborne Illnesses in Maine Continue to Rise; Maine CDC Encourages Clinicians to Consider Testing

The tick season in Maine this year remains active with numbers of some human tickborne illnesses so far in 2024 surpassing incidence rates of earlier years. The purpose of this health advisory is to remind clinicians to consider tickborne infection testing in patients presenting with febrile illnesses at **any time of the year**, including this fall when deer ticks are active.

The deer tick (*Ixodes scapularis*) is the most common tick in Maine. It can be active at any temperature above freezing. Deer ticks carry the pathogens that cause anaplasmosis, babesiosis, Hard Tick Relapsing Fever (HTRF), Lyme disease, and Powassan; and co-infections can occur. Most people infected with these pathogens have mild or no symptoms, but infections can be serious and even fatal.

As of October 14, 2024, Maine reported 2,544 cases of Lyme disease, 888 cases of anaplasmosis, 265 cases of babesiosis, 19 cases of HTRF, and 4 cases of Powassan. Rates of anaplasmosis, babesiosis, and HTRF in Maine are already higher this year than they were in October of last year. This year Maine also reported 6 cases of Alpha-Gal Syndrome (AGS), 3 cases of ehrlichiosis, 2 cases of Spotted Fever Rickettsiosis (SFR), and 1 case of tularemia.

Case counts for anaplasmosis, babesiosis, and Lyme disease are available on the [Maine Tracking Network Near Real-Time Dashboard](#).

Tickborne illnesses like Alpha-Gal Syndrome, Bourbon Virus, Ehrlichiosis, Heartland Virus, SFR, and STARI are not currently considered endemic to Maine, but people can acquire these illnesses while traveling to another state.

Alpha-Gal Syndrome is a serious and potentially life-threatening allergic reaction to the bite of a lone star tick (*Amblyomma americanum*). While lone star ticks are not considered endemic to Maine, they are endemic in parts of Massachusetts. Some people who become sensitized have an allergic reaction after exposure to red meat, dairy products, or other products containing alpha-gal. Symptoms occur 2-10 hours after exposure. 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 possibly anemia.
- HTRF: fever, chills, headache, body and joint pain, and fatigue.
- Lyme disease: Fever, headache, joint pain, muscle pain, erythema migrans.
- Powassan virus disease: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, and encephalitis and meningitis.
- AGS: hives, anaphylaxis, gastrointestinal symptoms, and hypotension.

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 24 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. A single dose of doxycycline will not have an effect on babesiosis or Powassan virus disease. Therefore, **even if prophylaxis is used, the Maine CDC recommends monitoring for symptoms of these diseases for 30 days.**

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 may also be diagnosed by blood smear.

Preferred testing for Powassan is by serological IgM and PRNT, but PCR is also available. Powassan testing can be performed at Maine’s Health and Environmental Testing Laboratory (HETL). If providers suspect Powassan infection 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.

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

Reporting

Anaplasmosis, babesiosis, ehrlichiosis, HTRF (*Borrelia miyamotoi* disease), Lyme disease, Powassan, SFR (including Rocky Mountain spotted fever), and tularemia are all reportable in Maine ([State of Maine Control of Notifiable Diseases and Conditions Rule](#)). AGS is not a reportable condition in Maine, but clinicians may report AGS cases to Maine CDC for situational awareness.

Additional information

- Maine CDC tickborne diseases website: www.maine.gov/dhhs/vectorborne
- Maine Tracking Network data dashboard: <https://data.mainepublichealth.gov/tracking/tickborne>
- HETL forms: www.maine.gov/dhhs/microforms
- Tickborne reference manual for healthcare providers: www.cdc.gov/ticks/hcp/data-research/tickborne-disease-reference-guide
- IDSA treatment guidelines: www.idsociety.org/practice-guideline/alphabetical-guidelines
- University of Maine Tick Lab: www.ticks.umaine.edu
- Maine CDC disease reporting & consultation line: 1-800-821-5821 (**available 24/7**)
 - Fax: 1-800-293-7534
 - Email: disease.reporting@maine.gov