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Maine Health Alert Network (HAN) System

PUBLIC HEALTH ADVISORY

To: Healthcare Providers
From: Dr. Siiri Bennett, State Epidemiologist
Subject: **Lone Star Ticks and Maine**
Date / Time: Monday, July 9, 2018 at 1:45pm
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Abstract:

Background: Maine CDC and its public health partners are receiving multiple questions and consultations about Lone Star ticks, as well as ehrlichiosis and alpha-gal allergies. Lone Star ticks are **NOT** endemic in Maine, and so illnesses associated with this tick are usually acquired while traveling. Maine CDC collaborates with both the Maine Medical Center Research Institute's Vectorborne Disease Laboratory and the University of Maine Cooperative Extension's tick identification lab to monitor the presence of tick species in the state.

Lone Star Ticks and Maine

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Tick information:

Lone Star tick



American dog tick



Courtesy Maine Medical Center Research Institute

Although the Lone Star tick (left) and the American dog tick (right) are large, brownish ticks, the white on the back of the dog tick is more pronounced. To date, there are no established populations of Lone Star ticks in Maine. American dog ticks are widespread in Maine.

Many ticks submitted to the University of Maine Cooperative Extension's tick identification lab that are suspected to be Lone Star ticks are actually identified as American dog ticks. Both ticks have white on their back and may be difficult to distinguish for those unfamiliar with both species.

Both MMCRI and UMaine Cooperative Extension perform tick surveillance through tick dragging and to date have not identified any Lone Star tick populations. UMaine Cooperative Extension runs the tick identification lab and of the ticks submitted in 2018 they identified (as of July 2, 2018):

- 80 deer ticks
- 103 dog ticks
- 1 Lone Star Tick (with documented travel history)

Ehrlichiosis: Maine CDC receives positive lab reports for ehrlichiosis every year. Many of these tests are serology tests which are known to cross react with the more common *Anaplasma phagocytophilia*. The majority of Ehrlichiosis cases reported in Maine are classified as probable because they are single

titer positives. Confirmed cases normally have travel history to an area of the country where Lone Star ticks are endemic.

Alpha Gal allergy: Recently the bite of a Lone Star tick is associated with the development of a red meat allergy. This occurs in individuals without previous sensitivity to red meat. There are no definitive tests available for this potentially tick-associated allergy. Alpha Gal allergy is not reportable, so there is very little information about the numbers of individuals affected. As the Lone Star tick is not endemic in Maine, any cases identified here likely have travel history to other areas of the country.

Information for providers:

- When evaluating individuals for tickborne diseases, be sure to take a complete travel history
- If ehrlichiosis is in the differential, consider PCR testing to distinguish between ehrlichiosis and anaplasmosis
- If your patient has the tick available, encourage them to send the tick to the University of Maine Cooperative Extension's tick identification lab.
- Consider voluntary reporting of suspected Alpha Gal allergies using the attached reporting form

Maine CDC and its partners are very interested in monitoring the emergence of the Lone Star tick in Maine. The reports of suspected Alpha Gal allergies will be used to determine if there are areas of the state where more intensive tick monitoring is warranted. If Lone Star Ticks become endemic, Maine CDC will clearly convey that information to healthcare providers and the general public.

For more information:

- Maine CDC's vectorborne diseases webpage <https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/index.shtml>
- University of Maine Cooperative Extension Tick Identification Laboratory <https://extension.umaine.edu/ipm/tickid/>
- Maine Medical Center Research Institute's Vectorborne Disease Laboratory http://mmcri.org/ns/?page_id=1090
- Federal CDC Tickborne diseases page <https://www.cdc.gov/ticks/tickbornediseases/tickID.html>