

Date: 20 June 2016

To: South Zone Physicians

From: Office of the Medical Officers of Health - South Zone

RE: Lyme Disease and the Alberta Tick Surveillance Plan 2016

Lyme disease (LD) is a tick borne zoonotic disease occurring in North America, Europe and Asia. There are many species of ticks native to Alberta; of those species found here, only *Ixodes* ticks are capable of carrying and transmitting *Borrelia burgdorferi*, the bacteria that causes Lyme disease.

Alberta is not considered to have an established population of *Ixodes* species ticks. Thus the risk of AB acquired Lyme disease remains very low at this time. *Ixodes* tick - endemic areas in Canada include southeastern Manitoba, southern and eastern Ontario, southwestern Quebec, New Brunswick and Nova Scotia, and in British Columbia - Vancouver Island, the lower mainland, and Fraser Valley

An enhanced **Tick surveillance program** (active and passive surveillance) was implemented in the Spring of 2013 to assess the risk of Lyme disease in Alberta. As part of the passive surveillance strategy, Albertans have the ability to submit ticks for analysis, including ticks from the environment, companion animals and ticks from patients.

Alberta data on reported **Lyme disease**:

- Between 1991 and 2014, 63 cases of Lyme disease were reported to Alberta Health. All were reported as having been acquired while travelling outside of the province in areas where the bacteria causing Lyme disease is known to circulate.

Enhanced tick surveillance 2015 data:

- 75/1864 (4%) of all submitted ticks were *Ixodes* species and were likely obtained in Alberta
- 0.8% of *Ixodes* ticks found in Alberta were positive for *B. burgdorferi*.

Conclusion to data:

- Alberta Health has concluded that at this point there is not yet an established *Ixodes* tick population in Alberta.

ACTIONS:

1. **Prevention**
 - Wear long protective clothing when in wooded or grassy areas;
 - Use DEET containing bug spray;
 - Check your pet for ticks after pet has been outdoors.

2. **Passive Surveillance**

Ticks found in the environment, removed from animals, or self-removed from Alberta residents can be submitted to local Alberta Health Services Environmental Public Health offices. These ticks will be analyzed by Alberta Agriculture and Rural Development, with results provided back to the individual who submitted the tick(s).

3. **Diagnostic Testing of Ticks**

A ***tick found on a patient***, and either brought to a physician office, or a tick removed at a clinic can be sent to the ProvLab. Submitted ticks will be speciated and, if the submitted tick is of a probable species type (*Ixodes* and *Dermacentor*), it will be further tested to see if it does indeed carry *Borrelia burgdorferi*.

If you do submit a tick to ProvLab for analysis, please follow the below instructions:

- Submit the tick in a sealed, non-glass container (such as medication bottles, pill vials, serum tubes) in packaging that can withstand shipping (such as box or bubble envelope).
- Multiple ticks may be included in one container, IF the ticks were found on one person.
- Add a small piece of tissue, lightly moistened with water, to prevent the tick(s) from drying out. Do not put holes in the container.

Test results, from submissions in your office, will be returned to you.

4. **Clinical and Laboratory Criteria**

An excellent resource on clinical diagnosis and laboratory testing can be found at:

<http://www.health.alberta.ca/documents/Lyme-Disease-Notes-for-Clinicians-2015.pdf>

Most patients with LD will present with a round skin lesion (erythema migrans) which may be followed by fatigue, chills, fever, headache, muscle and joint pain and swollen lymph nodes. To diagnose LD, exposure, clinical and laboratory criteria must be met. When you see a suspect case of LD who has spent time in wooded, grassy or bushy areas where LD is endemic, please consider consulting with an infectious disease specialist for further guidance.

RESOURCES:

- Laboratory Testing
<http://www.health.alberta.ca/documents/Lyme-Disease-Laboratory-Testing-2012.pdf>
- Clinic Notes for Physicians
<http://www.health.alberta.ca/documents/Lyme-Disease-Notes-for-Clinicians-2012.pdf>