

## Lyme Disease Update 2020

**Attention:** Physicians, Emergency Departments, Infection Control Practitioners, Occupational Health Practitioners, Walk-In Clinics/Urgent Care Clinics, Nurse Practitioners, EMS, Designated Officers, Midwives, Family Health Teams, Pharmacies, Central LHIN, NSM LHIN, Beausoleil First Nation, Moose Deer Point First Nation, Rama First Nation, Wahta First Nation, Long-term Care Homes, Retirement Homes, Hospices

**Date:** July 16, 2020

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### Surveillance

In 2019, 14 cases (confirmed and probable) of Lyme disease were reported in the Simcoe Muskoka District Health Unit (SMDHU) catchment area. Three of the 14 Lyme disease cases were determined to be locally-acquired. In 2020, over 230 black-legged ticks were submitted for identification to SMDHU. Thirteen black-legged ticks were confirmed positive for *Borrelia spp.* with 9 of the 13 ticks coming from habitats within SMDHU. Public Health Ontario has updated its annual 2020 PHO [Lyme disease risk areas map4](#)<sup>i</sup> (Appendix A) which should be referenced when assessing for tick exposures. The map indicates areas where active surveillance has occurred and blacklegged ticks have been found. Areas on the map that are not designated as Lyme risk areas may still have blacklegged ticks, and a risk assessment of the patient's outdoor activities and clinical signs and symptoms should still be performed using the Health Quality Ontario clinical management algorithm titled [Management of Tick Bites and Investigation of Early Localized Lyme Disease](#)<sup>ii</sup>

Based on active environmental surveillance of blacklegged ticks in recent years, the following local locations are designated as Lyme risk areas:

- Northwest Simcoe County (impacting Town of Midland, Town of Penetanguishene, Township of Tiny, Township of Tay and Beausoleil First Nation);
- Township of Springwater (eastern part of the township);
- Southeast Bradford West Gwillimbury (including the adjoining areas of York Region);
- South Central Simcoe (impacting the southern portions of the Town of New Tecumseth and Township of Adjala-Tosorontio);
- The Township of Oro-Medonte;
- City of Orillia; and
- North City of Barrie

There are many places throughout Ontario and the United States that could pose a risk for Lyme disease. The Ontario risk areas are determined by standard provincial active tick surveillance methods. **The exact prevalence of *Borrelia burgdorferi* carriage in blacklegged ticks in the local risk areas indicated above is not known, but is estimated to be well below 20% at this time.** The rate will likely increase in the next few years.

Please note: blacklegged ticks have been found throughout Simcoe Muskoka, even in non-risk areas through passive surveillance where health professionals and residents have submitted ticks for identification and testing.



## Ticks Submitted by Health Care Providers

Health care providers may submit the tick to the Public Health Ontario Laboratory for identification and subsequent bacterial testing by the National Microbiology Laboratory. Public Health Ontario provides a [surveillance form](#)<sup>iii</sup> that is to be filled out and submitted along with the tick. **The laboratory identification and bacterial testing of ticks is generally deemed to not be helpful for the clinical management of Lyme disease given that results come later than when clinical decisions need to be made.**

## Tick Identification during COVID-19

**Due to COVID-19 physical distancing measures, the health unit is no longer accepting submission of ticks. The public is encouraged to use a free app to identify ticks. The app, [eTick.ca](#)<sup>iv</sup>, is a photo-based identification platform that can identify the species of tick quickly and accurately, often within 24 hours.** If a blacklegged (*Ixodes scapularis*) tick is identified, the patient is being advised to contact their health care provider.

## Prevention

Ticks that carry Lyme disease live in woodland areas, tall grasses and bushes. Key prevention measures for Lyme disease include the following: use insect repellent containing DEET or Icaridin on clothes and exposed skin, wear light-colored clothing (makes ticks easier to see) and long-sleeved shirts tucked into long pants and tuck pants into socks. When hiking and walking, stay on the center of trails, check clothes and body for ticks (especially groin, naval, armpits, scalp and behind knees and ears) and shower as soon as possible after being outdoors to more easily find and wash off ticks. Further information for the public is available at:

<http://www.simcoemuskokahealth.org/Topics/InfectiousDiseases/DiseaseInformation/FactSheetsIL/lymedisease.aspx>

## Clinical Supports

In 2018, Health Quality Ontario produced a very useful two page document including a clinical management algorithm titled [Management of Tick Bites and Investigation of Early Localized Lyme Disease](#)<sup>v</sup>

The following are also helpful resources regarding Lyme disease:

- [Public Health Ontario Lyme Disease Website](#)<sup>vi</sup>
- [Infectious Disease Society of America \(IDSA\) Lyme Disease Guidelines, 2006](#)<sup>vii</sup> **(under revision)**
- [National Institute for Health and Care Excellence \(NICE\) Lyme Disease Guideline, 2018](#)<sup>viii</sup>
- [Clinical Aspects of Lyme Disease in the Canada Communicable Disease Report \(CCDR\) May 28, 2014](#)<sup>ix</sup>

For further information on Lyme Disease, the Infectious Diseases Team is available at (705) 721-7520 extension 8809 during business hours (Monday to Friday 8:30 a.m. – 4:30 p.m.) or after hours at 1-888-225-7851.

<sup>i</sup> <https://www.publichealthontario.ca/-/media/documents/2020/lyme-disease-risk-area-map-2020.pdf?la=en>

<sup>ii</sup> <http://www.hqontario.ca/Portals/0/documents/evidence/qs-clinical-guidance-lyme-disease-en.pdf>

<sup>iii</sup> <https://www.publichealthontario.ca/-/media/documents/lab/surveillance-tick-identification.pdf?la=en>

<sup>iv</sup> <https://www.etic.ca/>

<sup>v</sup> <http://www.hqontario.ca/Portals/0/documents/evidence/qs-clinical-guidance-lyme-disease-en.pdf>

<sup>vi</sup> <https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/vector-borne-zoonotic-diseases/lyme-disease>

<sup>vii</sup> <https://academic.oup.com/cid/article/43/9/1089/422463>

<sup>viii</sup> <https://www.nice.org.uk/guidance/ng95>

<sup>ix</sup> [https://www.phac-aspc.gc.ca/publicat/ccdr-mtc/14vol40/dr-rm40-11/assets/pdf/14vol40\\_11-eng.pdf](https://www.phac-aspc.gc.ca/publicat/ccdr-mtc/14vol40/dr-rm40-11/assets/pdf/14vol40_11-eng.pdf)