

<p><b>IN THIS ISSUE:</b></p> <ul style="list-style-type: none"> <li>▪ <b>REMINDER:</b> Lyme Disease Risk in Peel</li> <li>▪ <b>UPDATE:</b> Lyme Disease Clinical Guidance</li> <li>▪ <b>UPDATE:</b> Change to Testing Methods for Lyme Disease</li> <li>▪ <b>REMINDERS:</b> Tick Species Identification and Reporting Lyme Disease</li> <li>▪ <b>UPDATE:</b> Pharmacists Offering Antibiotic Prophylaxis Following Tick Bites</li> </ul>	<p><b>FROM:</b> Nicholas Brandon, MD, MA, MSc, CCFP, FRCPC Acting Medical Officer of Health</p>
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<p><b>Key Messages:</b></p> <ul style="list-style-type: none"> <li>▪ Most of Peel Region is an estimated risk area for Lyme disease.</li> <li>▪ Clinicians may refer to <a href="https://www.hqontario.ca/Portals/0/documents/evidence/gs-lyme-disease-clinical-guidance-2023-en.pdf">https://www.hqontario.ca/Portals/0/documents/evidence/gs-lyme-disease-clinical-guidance-2023-en.pdf</a> to assist with diagnosis and treatment decisions.</li> <li>▪ Public Health Ontario testing protocols have changed for <i>Borrelia burgdorferi</i> IgM/IgG antibodies.</li> <li>▪ Health care providers and the public are encouraged to use <a href="https://www.etick.ca/">https://www.etick.ca/</a> for free image-based tick species identification.</li> <li>▪ Lyme disease is a reportable disease.</li> <li>▪ Participating pharmacists are now offering antibiotic post exposure prophylaxis in asymptomatic patients to prevent the development of Lyme disease following a tick bite.</li> </ul>
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- The risk of acquiring Lyme disease in Peel remains low; however, locally acquired cases are trending upwards with six confirmed cases in 2021 and thirteen confirmed cases in 2022.
  - The majority of Peel’s cases have acquired Lyme disease while travelling to other areas of Canada and the United States.
- NOTE: Confirmed cases were often not aware of being bitten by a tick in the thirty days prior to their symptom onset.**

- UPDATE: Lyme Disease Clinical Guidance**
- Health Quality Ontario’s Clinical Guidance Document can assist clinicians with diagnosis and treatment decisions: <https://hqontario.ca/Portals/0/documents/evidence/gs-lyme-disease-clinical-guidance-2023-en.pdf>.
    - For asymptomatic patients who have had a recent tick bite, the document provides guidance on when antibiotic prophylaxis would be warranted.
    - For symptomatic patients, the document provides a decision tree to assist with determining whether testing, treatment, or a combination would be warranted.

**NOTE: The Region of Peel has retired the previously issued Lyme Disease Diagnostic Algorithm for clinicians:** <https://www.peelregion.ca/health/professionals/pdfs/ld-algorithm.pdf>. Please discard any copies as it is no longer up to date.

- REMINDER: Lyme Disease Risk in Peel**
- Peel Region (all of Mississauga and Brampton and most of Caledon) is a risk area for Lyme disease.
  - Blacklegged ticks are transported by migratory birds, making it possible to encounter an infected tick anywhere in Peel or Ontario.
  - Public Health Ontario’s 2023 Lyme Disease Risk Area Map can be found at: <https://www.publichealthontario.ca/-/media/Documents/L/2023/ontario-lyme-disease-risk-area-map-2023.pdf>.

## **UPDATE: Change to Testing Methods for Lyme Disease**

- On April 1, 2023, the Public Health Ontario Lab (PHOL) changed their testing method for *Borrelia burgdorferi* (bacteria that causes Lyme disease).
- The Modified Two-Tier Testing (MTTT) approach is now used. Initial screening will continue to be performed by IgG/IgM ELISA. Samples that are reactive or indeterminate in the initial screening will be further tested using a second ELISA.
- This method provides 15-25% higher sensitivity during early localized disease, and comparable sensitivity during early disseminated and late-disseminated disease compared to the previously used testing methodology.
- PHOL's updated test information sheet reflects changes:  
<https://www.publichealthontario.ca/en/laboratory-services/test-information-index/lyme-disease-serology>.
- Early localized Lyme disease may be diagnosed based on symptoms (e.g. typical or atypical erythema migrans rash > 5cm) and risk of exposure to ticks; serological testing is not always indicated and may not yield positive results during early localized Lyme disease.
  - NOTE: Potential European exposure must be specified on lab requisitions.

## **REMINDERS: Tick Species Identification and Reporting Lyme Disease**

### **Tick Species Identification:**

- Peel Public Health no longer accepts tick submissions for identification and testing.
- Many types of ticks are found in Peel, however, only the black legged tick (*Ixodes scapularis*) can spread Lyme disease.
- Residents and health care providers can use <https://www.etick.ca/>, an online image-based tick identification platform, that provides fast, free and reliable results in approximately 48 hours.

- PHOL continues to accept tick submissions from health care providers for species identification; turnaround time is approximately three weeks.

**NOTE: Ticks are NOT tested for pathogens.**

### **Lyme Disease Reporting:**

- Lyme disease is a reportable disease. Report all suspect or confirmed cases by faxing Peel Public Health at (289) 801-0257. This includes cases that have been diagnosed based on symptoms (e.g. typical or atypical erythema migrans rash > 5cm) and risk of exposure to ticks, but have not received additional serological testing.

## **UPDATE: Pharmacists Offering Antibiotic Prophylaxis Following Tick Bites**

- Since January 1, 2023, participating pharmacists have been able to offer a prescription for antibiotic prophylaxis to prevent the development of Lyme disease following a tick bite.
- A prescription for antibiotic prophylaxis will be provided to asymptomatic individuals who meet the following criteria:
  - Tick bite occurred in a risk area where blacklegged ticks have been identified.
  - Tick was likely attached for 24 hours or more.
  - Tick has been removed within the past 72 hours.
  - Doxycycline is not contraindicated (e.g., allergy, pregnancy).
- Symptomatic individuals will be referred to a physician or a nurse practitioner for further assessment. Asymptomatic individuals will be informed to monitor for symptoms for 30 days and seek care from a physician or nurse practitioner if symptoms develop.

Additional information may be found at:

<https://www.publichealthontario.ca/-/media/Documents/L/2023/lyme-disease-assessment-prescribing-algorithm-antibiotic-prophylaxis.pdf>