



Hamilton

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Public Health Services, Healthy and Safe Communities  
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## MEDICAL ADVISORY

### Lyme Disease: Updates to Clinical Guidance Document

TO: Family Physicians  
Emergency Departments  
Infectious Disease Physicians  
Medical Laboratories  
Infection Control Professionals (**please inform Labs**)

FOR YOUR INFORMATION:

Central West Medical Officers of Health  
Academy of Medicine  
Dr. Michael Stacey, VP Medical, Hamilton Health Sciences  
Mr. Bruce Squires, President, McMaster Children's Hospital  
Dr. Sarah Jarman, Chief of Staff, St. Joseph's Healthcare  
Dr. Greg Rutledge, Deputy Chief of Staff, St. Joseph's Healthcare  
LHIN, Dr. Jennifer Everson, Primary Care Lead and Dr. Bill Krizmanich, Emergency Department Lead.

FROM: Dr. Bart Harvey, Associate Medical Officer of Health

DATE: March 31, 2023

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#### Background

Hamilton Public Health Services is notifying health care providers of changes to the recommendations for treatment of patients with early localized Lyme disease and updates to Lyme serology.

Lyme disease is a tick-borne zoonotic disease caused by the bacterium, *Borrelia burgdorferi*. It's the most common tick-borne infection in Canada, spread to humans through bites from infected blacklegged ticks. Hamilton has been identified as a risk area since 2018, with a tick infectivity rate between 4 to 9%, based on a five-year period.

#### Clinical Manifestation and Post Exposure Prophylaxis

An infected tick must be attached for at least 24-36 hours to transmit *Borrelia burgdorferi*. If untreated, the bacteria can disseminate through the bloodstream and affect other parts of the body and symptoms can persist for years. To support best outcome, it is vital to identify, diagnose and treat Lyme disease early.

#### Treatment Recommendations

The recommendations for treatment of patients with early localized Lyme disease have been updated to include:

- Doxycycline as the preferred antibiotic treatment option for both children and adults; based on its ability to treat potential extracutaneous manifestations of infection (particularly neurological involvement) and potential coinfection or infection with *Anaplasma phagocytophilum* (anaplasmosis) or *Ehrlichia muris*-like agent.

This resource is available at <https://www.hqontario.ca/Evidence-to-Improve-Care/Evidence-and-Health-Quality-Ontario/Guidance-Documents>

### **Laboratory Testing**

As of April 1, 2023, the Public Health Ontario Lab (PHOL) will be using a modified two-tiered testing (MTTT) algorithm to maximize sensitivity and specificity.

Although sensitivity during early-localized diseases is improved with MTTT, early localized Lyme serological testing may not yield positive results. Management of clients should be based on clinical context. Laboratory testing is generally not indicated for asymptomatic patients or to monitor treatment outcomes.

If European Lyme disease is suspected, please submit a request for European Lyme disease along with appropriate travel history. For further details see the PHOL link under the resource section below.

### **Physician Action**

See attached Ontario Health et al. Clinical Guidance Document for detailed information regarding management of Lyme Disease.

### **Reporting Requirements**

Lyme disease is reportable to the Medical Officer of Health under the Health Protection and Promotion Act, R.S.O. 1990, c. H.7.

### **Reporting to Hamilton Public Health Services:**

To report suspect Lyme cases, call PHS Monday to Friday, 8:30 a.m. to 4:30 p.m. at 905-546-2063 or fax 905-546-4078.

### **Resources:**

Public Health Ontario Laboratory. Test Information Index. Lyme Disease – Serology (March 28, 2023). Available at: <https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Lyme-Disease-Serology>

Public Health Ontario Lyme Disease Map Estimated Risk Areas. Available at: <https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/vector-borne-zoonotic-diseases/lyme-disease> (Note: Map updated annually in late spring)

Hamilton Public Health Services, Lyme Disease & Ticks webpage. Available at: <https://www.hamilton.ca/people-programs/public-health/environmental-health-hazards/animal-insect-related-diseases/lyme>

Resources for identifying, diagnosing and managing early Lyme disease can be found at <https://cep.health/clinical-products/early-lyme-disease/> and [www.canada.ca/lymedisease](http://www.canada.ca/lymedisease)