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From the Office of Dr. Joyce Lock, Medical Officer of Health, Southwestern Public Health

Lyme Disease Update

Tick Season is Underway

The general public submits ticks to SWPH for identification. All deer ticks are sent to the National Microbiology Lab in Winnipeg for detection of various human pathogens such as *Borrelia burgdorferi*. The turnaround time for these results is up to 6 months. *Ticks are submitted only for surveillance purposes and not for diagnosis and management of Lyme disease.*

New:

- A public platform for image-based identification and population monitoring of ticks in Canada: www.etick.ca
- Port Burwell Provincial Park is identified as a Lyme disease risk area on the [2019 Ontario Lyme Disease Risk Map](#). Transmission of Lyme disease from infected ticks may occur here. The overall risk of acquiring Lyme disease following a deer tick bite in a high-risk area is approximately 2.2%.
- Be mindful of Lyme disease in patients presenting with signs and symptoms compatible with early localized disease and recent history of a tick bite or travel to a Lyme disease endemic area. For up-to-date, evidence-based best practices on management of ticks and early, localized Lyme disease, visit: <https://bit.ly/2QiwntF>

Reporting Cases

To report suspect or confirmed Lyme disease cases, please fax this [Lyme Disease Report Form](https://www.swpublichealth.ca/sites/default/files/swph_lyme_disease_notification-dc.pdf) (https://www.swpublichealth.ca/sites/default/files/swph_lyme_disease_notification-dc.pdf) to us at 519-631-1682.

Quick Clinical Pearls

- If prophylaxis is given, the overall risk of progression to Lyme disease is 0.2 % (data based on systematic review and meta-analysis of antibiotic prophylaxis) (ref: Warschafsky S et al. 2010)
- Transmission < 24 hours of tick attachment is highly unlikely. Based on animal models, there is almost invariably a delay of at least 36 hours between the time of tick attachment and transmission of *B. burgdorferi*.

- **NEW:** Due to reassuring safety data, doxycycline can be given for short term use (< 21 days) in children of any age (ref: Kimberlin DW et al. 2018).
- Treatment of early Lyme disease with appropriate antimicrobials is easy and effective (> 95%).
- In general, Lyme serology is not warranted in early disease. Lyme serology may be useful in atypical cases and disseminated or late Lyme disease cases.
- Lyme disease is not transmitted by dog (*Dermacentor variabilis*) or groundhog ticks (*Ixodes cookei*).
- **PREVENTION IS KEY:** Avoid ticks, wear appropriate protective clothing, use insect/tick repellent (DEET), check body daily for ticks, remove attached tick promptly (within 24 hours).

Additional Reading

- [Clinical Guidance Document: Management of Tick Bites and Investigation of Early Localized Lyme Disease](#), Health Quality Ontario
- [Lyme Disease in Canada: Focus on children](#), Canadian Paediatric Society
- [Lyme Disease - Symptoms, diagnosis and treatment](#), BMJ Best Practice
- [NICE Guideline: Lyme Disease](#)

References

1. Children's Hospital of Eastern Ontario: Prophylaxis of Lyme Disease in Pediatric Patients: www.cheo.on.ca/uploads/Infectious%20Diseases/CHEO%20Algorithm%20Lyme%20disease_July2018.pdf
2. Kimberlin DW, Brady MT, Long SS from American Academy of Pediatrics (AAP). Lyme Disease. In: Red Book 2018 Report of the Committee on Infectious Diseases. P. 515-522.
3. Public Health Ontario – Lyme Disease: www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/vector-borne-zoonotic-diseases/lyme-disease
4. Warschafsky S et al. Efficacy of antibiotic prophylaxis for the prevention of Lyme Disease: an updated systematic review and meta-analysis. J Antimicrob Chemother. 2010; 65: 1137-1144

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