



New Brunswick College of Pharmacists
Ordre des pharmaciens du Nouveau-Brunswick

GUIDANCE:

LYME DISEASE PROPHYLAXIS

Lyme Disease Prophylaxis

Developed from a document by [Nova Scotia Pharmacy Regulator](#). The New Brunswick College of Pharmacists thanks NSPR for sharing this resource.

Note: This guidance supports the assessment and prescribing for the purposes of reducing the risk of acquiring Lyme disease after a high-risk tick bite. Prescribing medication for the treatment of Lyme disease or as a means to prevent other tick-borne diseases is outside of the scope of practice for pharmacists in New Brunswick.

Introduction

Pharmacists may **only** prescribe antibiotic prophylaxis (a single dose of doxycycline 200 mg for adults or 4.4 mg/kg for children of any age weighing less than 45 kg) to reduce the risk of acquiring Lyme disease after a high-risk tick bite for asymptomatic adults and children in accordance with established clinical practice guidelines¹.

Authority to assess and prescribe for prophylaxis for black-legged tick (*Ixodus scapularis*) bites is given in [Section 21 of the Regulations of the New Brunswick College of Pharmacists](#) (the Regulations).

Process

To practice as a primary provider of Lyme disease prophylaxis, as with any patient care activity, pharmacists must self-assess to ensure they have the required knowledge, skills, and judgement before engaging in the activity.

Pharmacists who practice as a primary provider of Lyme disease prophylaxis must ensure they have adequate knowledge and skill to:

- Provide patients with information on tick bite prevention strategies,
- Recognize symptoms consistent with Lyme disease,
- Reliably identify the tick as Ixodes (adult female or nymphal blacklegged) tick,
- Estimate the duration of attachment based upon the extent of tick engorgement,
- Provide patients with information on tick removal,
- Provide patients with information related to the evidence-based diagnosis and treatment of Lyme disease at both early and late stages.

¹ *Clinical Practice Guidelines by the Infectious Diseases Society of America (IDSA), American Academy of Neurology (AAN), and American College of Rheumatology (ACR): 2020 Guidelines for the Prevention, Diagnosis and Treatment of Lyme Disease.*

- Provide patients with information and advice to monitor for symptoms suggestive of tickborne illness and to consult a health care provider if fever, rash, or other symptoms of concern develop, regardless of whether Lyme disease prophylaxis was provided.

Patient Assessment and Prescribing

Prophylaxis can only be prescribed if the pharmacist can confirm that **ALL** of the following criteria are met:

- ✓ The prophylaxis can be given within 72 hours of tick removal.
- ✓ The patient is asymptomatic.
- ✓ The patient lives in or has recently travelled to an area where blacklegged ticks have been identified. Refer to the New Brunswick Department of Health Lyme Disease website.
- ✓ The tick can be reliably identified as a Ixodes (nymphal or adult female blacklegged) tick.
- ✓ The tick was likely attached for more than 36 hours.
- ✓ Doxycycline is not contraindicated for the patient for the purposes of Lyme disease prophylaxis.

The pharmacist will refer to the [New Brunswick Department of Health Lyme Disease Estimated Risk Map](#) which identifies risk areas in the province (higher, moderate, and lower). If **ALL** other criteria listed above for Lyme disease prophylaxis are met, prophylaxis:

- **should** be given for an attached tick likely acquired in higher risk areas,
- **may be** considered for attached ticks likely acquired in moderate risk areas, but
- **should not** be given for attached ticks likely acquired in lower risk areas.

As part of assessment and prescribing, the pharmacist will discuss with the patient:

- The overall risk of Lyme disease after a bite from an infected tick is low².
- The reported efficacy of Lyme disease prophylaxis, including the option to “wait-and-watch” rather than providing a prescription.
- Signs and symptoms suggestive of early and late Lyme disease.
- The importance of monitoring for and immediately reporting any signs and symptoms suggestive of Lyme disease to a primary care provider.
- The importance of safely removing ticks and sharing information on how that is to be done, using tick bite prevention strategies to prevent Lyme disease and other tick-borne illnesses (e.g., avoiding tick habitat, wearing protective clothing, using insect repellents with DEET or Icaridin, checking for ticks daily and reducing tick habitat around home.)

Suggested Clinical Tools

² Guidance for Primary Care and Emergency Medicine Providers in the Management of Lyme Disease in Nova Scotia

- Clinical Practice Guidelines by the Infectious Diseases Society of America (IDSA), American Academy of Neurology (AAN), and American College of Rheumatology (ACR): 2020 Guidelines for the Prevention, Diagnosis and Treatment of Lyme Disease
<https://www.idsociety.org/practice-guideline/lyme-disease/>
 - INESSS Quebec. Guides and Standards. Post tick bite antibiotic prophylaxis to prevent Lyme disease. Report in support of knowledge transfer tools. Quebec's provincial medical protocol and the collective May 2019.
https://www.inesss.qc.ca/fileadmin/doc/INESSS/Rapports/Biologie_medicale/Lyme_PPE/inesss-report-post-tick-bite-antibiotic-prophylaxis.pdf
 - New Brunswick Department of Health - Public Health: Lyme Disease – Information for Health professionals
https://www2.gnb.ca/content/gnb/en/departments/ocmoh/cdc/content/vectorborne_andzoonotic/tick-borne-diseases/information.html
 - New Brunswick Department of Health - Public Health: Tick-Borne Diseases
[Tick-Borne Diseases \(gnb.ca\)](https://www2.gnb.ca/content/gnb/en/departments/ocmoh/cdc/content/vectorborne_andzoonotic/tick-borne-diseases/information.html)
 - Quebec Clinical Tool: Dialogue with your Patient: Options to be discussed with an asymptomatic individual with a tick bite that occurred in a PEP (post-exposure prophylaxis)-designated area
https://www.inesss.qc.ca/fileadmin/doc/INESSS/Rapports/Biologie_medicale/Lyme_PPE/Lyme_dialogue_EN.pdf
 - Quebec Tool: Follow Up Sheet: Individual bitten by a tick or diagnosed with Lyme disease:
https://www.inesss.qc.ca/fileadmin/doc/INESSS/Rapports/Biologie_medicale/Lyme_Diag-traitement/Lyme_Feuille-de-suivi_EN.pdf
 - Lyme disease rash images: Lyme disease: erythema migrans tool to support NICE's guideline on Lyme disease
<https://www.nice.org.uk/guidance/ng95/resources>
 - Infection, Prevention and Control Canada (IPAC) – Lyme Disease
<https://ipac-canada.org/lyme-disease>
 - Public Health Agency of Canada – Lyme Disease
<https://www.canada.ca/en/public-health/services/diseases/lyme-disease.html>
- Guidance for Primary Care and Emergency Medicine Providers in the Management of Lyme Disease in Nova Scotia
https://novascotia.ca/dhw/cdpc/documents/statement_for_managing_ld.pdf

- ETick: A public platform for image-based identification and population monitoring of ticks in Canada
www.etick.ca