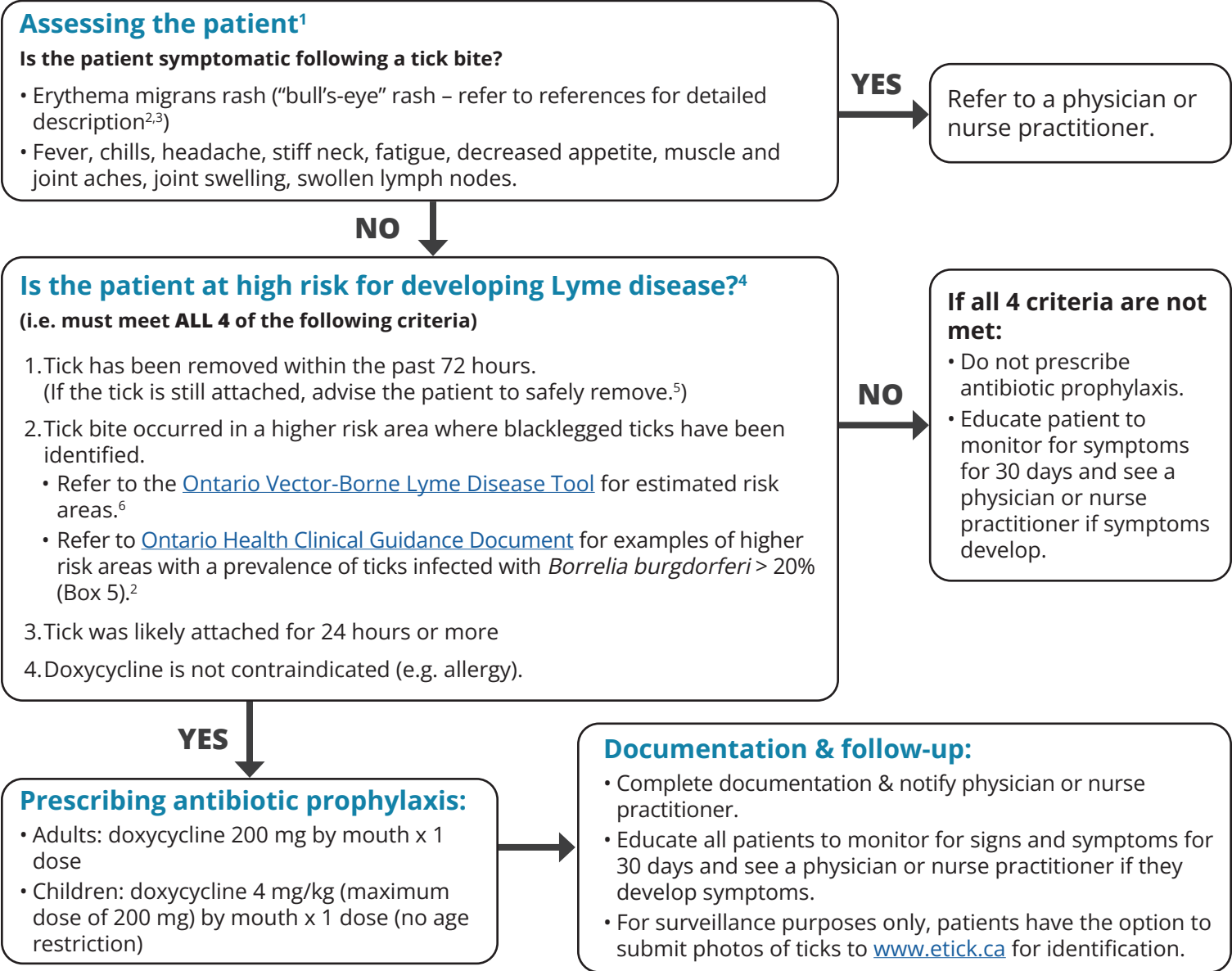


Assessment and Prescribing Algorithm for Pharmacists: Antibiotic Prophylaxis to Prevent Lyme Disease following a Tick Bite



Prescribing Considerations:

- Doxycycline should be used for post-exposure prophylaxis in adults and children of all ages. Previously, doxycycline was not recommended for children < 8 years of age however this guidance has changed as dental staining is uncommon with short courses.^{7,8}
- Previously, doxycycline was contraindicated in pregnant and lactating individuals however recent evidence has demonstrated that a single dose of doxycycline is safe for this population.⁹
- If doxycycline is contraindicated (e.g. allergy), there are no alternatives. Do not prescribe other antibiotics for post-exposure prophylaxis. Educate patient to monitor for symptoms for 30 days and see a physician or nurse practitioner if symptoms develop.

References:

1. Ontario College of Pharmacists. Community pharmacist practice assessment criteria [Internet]. Toronto, ON: Ontario College of Pharmacists; 2017 [cited 2023 Mar 3]. Available from: <https://www.ocpinfo.com/library/practice-related/download/PracticeAssessmentCriteria.pdf>
2. Ontario Health. Clinical guidance document: management of tick bites and investigation of early localized Lyme disease. Toronto, ON: King's Printer for Ontario; 2023. Available from: <https://www.ontariohealth.ca/content/dam/ontariohealth/documents/qs-lyme-disease-clinical-guidance-2024.pdf>
3. Health Canada. For health professionals: Lyme disease [Internet]. Ottawa, ON: Government of Canada; 2022 [modified 2022 Dec 22; cited 2023 Mar 3]. Available from: <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/health-professionals-lyme-disease.html>
4. Lantos PM, Rumbaugh J, Bockenstedt LK, et al. 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. Clin Infect Dis. 2021;72(1):1-8. Available from: <https://doi.org/10.1093/cid/ciaa1215>
5. Centers for Disease Control and Prevention (CDC), National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Division of Vector-Borne Diseases (DVBD). Tick removal [Internet]. Atlanta, GA: CDC; 2022 [reviewed 2022 Mar 13; cited 2023 Mar 3]. Available from: https://www.cdc.gov/ticks/removing_a_tick.html
6. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Ontario vector-borne disease tool [Internet]. Toronto, ON: King's Printer for Ontario; 2025 [cited 2026 Jul 3]. Available from: <https://www.publichealthontario.ca/en/Data-and-Analysis/Infectious-Disease/VBD-Tool>
7. Centers for Disease Control and Prevention (CDC), National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Division of Vector-Borne Diseases (DVBD). Lyme disease prophylaxis after tick bite [Internet]. Atlanta, GA: CDC; 2022 [reviewed 2022 Aug 5; cited 2023 Mar 3]. Available from: <https://www.cdc.gov/ticks/tickbornediseases/tick-bite-prophylaxis.html>
8. Viel-Thériault I, Le Saux N. Lyme disease. In: Therapeutics [Internet]. Ottawa, ON: Canadian Pharmacists Association; 2021 [cited 2023 Mar 3]. Available from: <http://www.myrxtx.ca>
9. Smith GN, Moore KM, Hatchette TF, et al. Committee opinion no. 399: management of tick bites and Lyme disease during pregnancy. J Obstet Gynaecol Can. 2020;42(5):644-53. Available from: <https://doi.org/10.1016/j.jogc.2020.01.001>