

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Showering to Prevent Lyme Disease: Clinical Effectiveness and Guidelines

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Research Questions

1. What is the clinical effectiveness of showering after potential tick exposure to help prevent Lyme disease?
2. What are the evidence-based guidelines associated with showering after potential tick exposure to help prevent Lyme disease?

Key Findings

One non-randomized study was identified regarding showering to prevent Lyme disease.

Methods

A limited literature search was conducted on key resources including PubMed, the Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2009 and April 16, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Pediatric or adult patients who are potentially exposed to ticks
Intervention	Showering post-potential tick exposure
Comparator	Q1: Not showering post-potential tick exposure (no treatment); Showering with any chemical agent; Use of a Lyme brush Q2: No comparator
Outcomes	Q1: Clinical effectiveness (e.g., incidence of Lyme disease) Q2: Guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized trials, evidence-based guidelines

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One non-randomized study was identified regarding showering to prevent Lyme disease. No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One non-randomized study¹ was identified regarding showering to prevent Lyme disease. The study by Connally et al. was a 32-month-long prospective neighbourhood-matched and aged-matched case-control study.¹ It was conducted in the United States in 24 communities from 2005 to 2007. It included 364 patients with Lyme disease, of which 349 patients were matched with a suitable control.¹ The study reported that bathing within 2 hours was protective against Lyme disease after spending time in the yard, with the odds ratio reported to be 0.42 and the confidence interval between 0.23 and 0.78.¹ The authors concluded that bathing after spending time in the yard may reduce the risk of Lyme disease.¹

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

1. Connally NP, Durante AJ, Yousey-Hindes KM, Meek JI, Nelson RS, Heimer R. Peridomestic Lyme disease prevention: results of a population-based case-control study. *Am J Prev Med.* 2009 Sep;37(3):201-206.
[PubMed: PM19595558](#)

Guidelines and Recommendations

No literature identified.

Appendix — Further Information

Review Articles

2. Eisen RJ, Eisen L. The blacklegged tick, *Ixodes scapularis*: an increasing public health concern. *Trends Parasitol.* 2018;34(4):295-309. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5879012/>. Accessed 2019 Apr 26
[PubMed: PM29336985](#)
3. Rahlenbeck S, Fingerle V, Doggett S. Prevention of tick-borne diseases: an overview. *Br J Gen Pract.* 2016;66(650):492-494. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5198687/>. Accessed 2019 Apr 26
[PubMed: PM27563139](#)
4. Wright WF, Riedel DJ, Talwani R, Gilliam BL. Diagnosis and management of Lyme disease. *Am Fam Physician.* 2012 Jun 1;85(11):1086-1093.
[PubMed: PM22962880](#)

Additional References

5. Stop ticks to avoid Lyme and other tickborne diseases. Atlanta (GA): U.S. Centers for Disease Control and Prevention; 2018:
<https://www.cdc.gov/features/stopticks/index.html>. Accessed 2019 Apr
6. Surveillance for *Ixodes scapularis* and pathogens found in this tick species in the United States. Atlanta (GA): U.S. Centers for Disease Control and Prevention; 2018:
https://www.cdc.gov/ticks/resources/TickSurveillance_Iscapularis-P.pdf. Accessed 2019 Apr 26
7. Institute of Medicine (US) Committee on Lyme Disease and Other Tick-Borne Diseases. Critical needs and gaps in understanding prevention, amelioration, and resolution of Lyme and other tick-borne diseases: the short-term and long-term outcomes: workshop report. Washington (DC): National Academies Press (US); 2011:
<https://www.ncbi.nlm.nih.gov/books/NBK57027/> . Accessed 2019 Apr 26

Correction

The original report, published April 26, 2019, stated: “No relevant literature was found regarding showering to prevent Lyme disease; therefore, no summary can be provided.”

However, the study by Connally et al.¹ reported that bathing within 2 hours of spending time in the yard may reduce the risk of Lyme disease.

This has been corrected in the overall summary of findings in this version of the report.