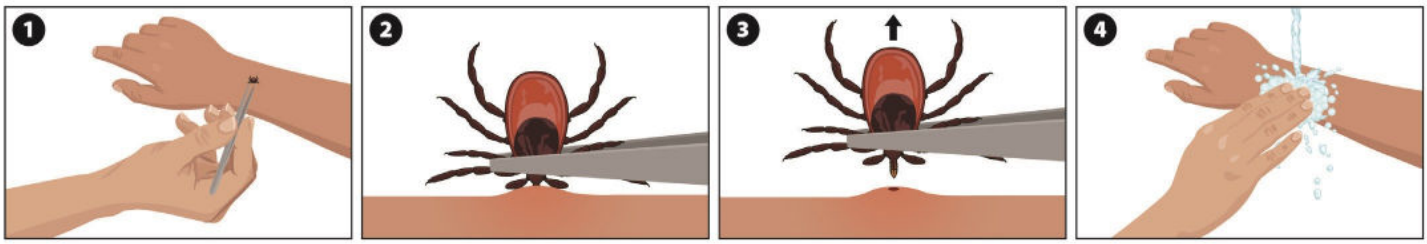
Image adapted from: upstatephysicianssc.com

Between 2009 and 2022, provincial public health units reported 17,080 human cases of Lyme disease across Canada. The annual number of reported cases in humans increased from 144 in 2009 to 2,168 in 2022. Lyme disease can be a serious, but preventable illness. It is a vector-borne disease caused by the bacterium *Borrelia burgdorferi* through the bite of infected blacklegged ticks, commonly known as **deer ticks**. These ticks are found in wooded areas, or areas with tall grass or shrubs, and prefer to get their blood meals (Dracula says yum!) from deer or small rodents. Ticks do not fall from trees or above but wait on tall grass blades to attach to a suitable passing host. Humans (and pets) are incidental hosts for the blacklegged ticks and are not required to complete their life cycle.

Ticks are usually more active in spring, summer, and fall. However, due to climate change and the resulting warmer weather, the tick populations are growing across Canada. Ticks carry several diseases but Lyme disease is the most common. Not all ticks carry the *Borrelia* bacteria so getting bitten by one of these ticks does not necessarily mean you will get the disease. Also, an infected blacklegged tick needs to attach/feed for at least 24 hrs to transmit Lyme disease to a person. The best way to prevent Lyme disease is to avoid tick bites by wearing protective clothing, using insect repellant, and performing a full-body tick check, especially on the lower back and on the backs of the legs, right after leaving a wooded area. If bitten, locate the attached tick (1-5 mm) and use a pair of tweezers to pull it out vertically or perpendicular to the skin.

Ticks removed within 24 hrs of the bite require no further treatment. For tick bites that are more than 24 hrs but less than 72 hrs old, a single prophylactic dose of antibiotic (usually 200 mg of doxycycline for adults or 4.4mg/kg for children of any age weighing less than 45 kg) may be used to reduce the risk of acquiring Lyme disease. The incubation period for Lyme disease is usually **3-30 days** after a tick bite and early localized symptoms include a typical circular red rash with a clear area in the middle forming a bull's-eye pattern called erythema migrans (EM). Other symptoms include fever, chills, malaise, fatigue, and joint and muscle aches. Lyme disease should be diagnosed clinically as serologic tests may be negative during the first few weeks of infection before antibodies have developed. If Lyme disease is left untreated, more severe, longstanding symptoms and complications may occur.

Sources: www.simcoemuskokahealth.org | www.cdc.gov | www.canada.ca | www.cbc.ca | www.publichealthontario.ca



HOW TO REMOVE A TICK - source: www.cdc.gov

Image adapted from: blog.eoscu.com

Construction, renovation, maintenance, and design (CRMD) of health care facilities bring specific risks associated with potentially fatal infection and illness. If dust particles contaminated with viruses, bacteria, and fungal spores are dispersed during construction, there may be serious health risks for patients, residents, staff, and visitors. Preventing and controlling infections while these activities take place requires the implementation of preventive measures intended to reduce these risks. Health care facilities need to consider how and when to incorporate infection prevention and control (IPAC) measures to reduce potential health care-associated infections within the setting. As part of the multi-disciplinary team (MDT), the infection control professional (ICP) should be involved in all phases of a CRMD project to ensure that IPAC risks are identified and mitigated.

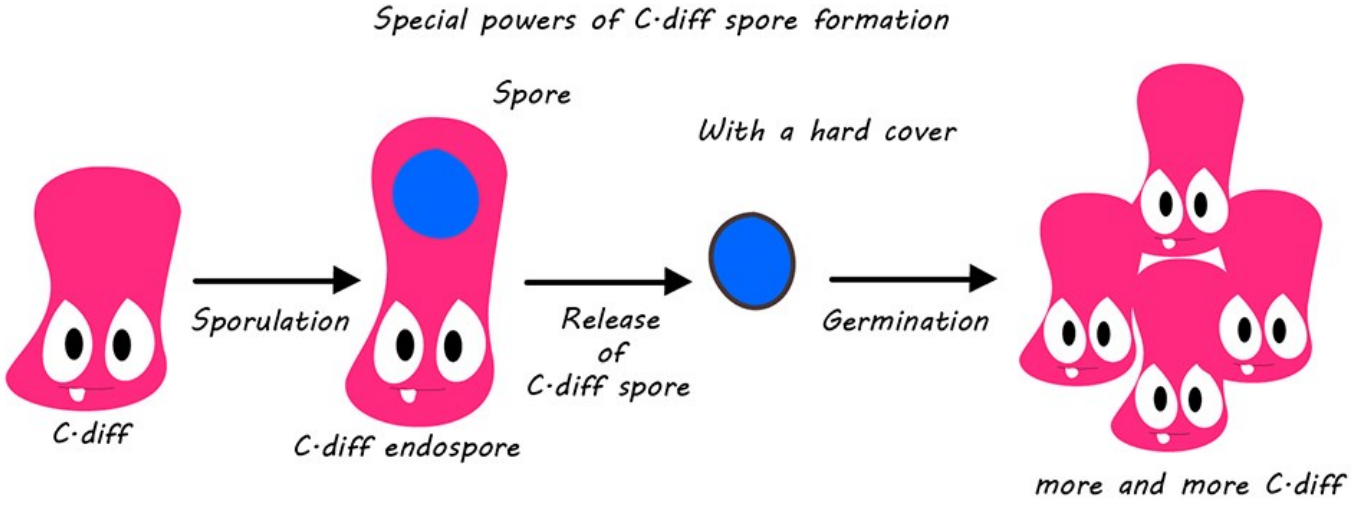
The ***CSA-Z317.13:22*** standard, published by the Canadian Standards Association, establishes the recommendations and requirements for infection control in health care facilities in Canada. The standard includes guidelines on some crucial components such as sealing off a construction/renovation area from patient care area using barriers, creating negative air pressure within the construction area to prevent dust and debris from entering patient care area, and effective usage of infection control risk assessment (ICRA) at the beginning of a project to mitigate the risk of Aspergillus, Legionella and other infections.

Amongst other guidelines, the standard lays out the type of preventive measures (I to IV) that should be used based on the type of construction activity (type A to D) and the population risk group (1 to 4) who could be potentially exposed to infectious pathogens. The preventive measures would be considered before, during, and after construction project is complete. It is crucial for infection prevention and control to be involved in construction process from concept to completion to identify and mitigate the risk of preventable nosocomial infections to vulnerable resident population, and continue to keep staff, visitors, and residents safe.

Sources: www.csagroup.org | www.publichealthontario.ca | publications.gc.ca

WHY IS IT SO "DIFFICILE" TO KILL BACTERIAL SPORES?

Bacterial spores are one of the most resistant life forms known to date and are extremely tolerant against various stresses such as heat, chemicals, exposure to drying, and harsh physical conditions. Bacteria start out as vegetative cells (active form). But when they get exposed to hostile conditions, some species have the ability to convert into an endospore (dormant), *Clostridioides difficile* being one of them. The endospore is first formed within the vegetative cell and is then released. When the environment becomes more favourable, the endospore can germinate and produce more active vegetative cells. The resilience of an



endospore is, in part, due to its unique cellular structure. Like an onion, bacterial endospores have multiple, protective layers that make it very difficult for chemical disinfectants to penetrate and damage the cell. Common antibacterial agents, including hand sanitizers, that work by destroying vegetative cell walls do not affect endospores. Endospores can also survive without nutrients or moisture for extended periods, including on surfaces. When dealing with bacterial endospores, a Health Canada-approved surface disinfectant with specific **sporicidal claim** should always be used, preferably with a short contact time.

Sources: www.cdc.gov | www.cell.com | www.ncbi.nlm.nih.gov | askabiologist.asu.edu (image)

simcoe muskoka DISTRICT HEALTH UNIT

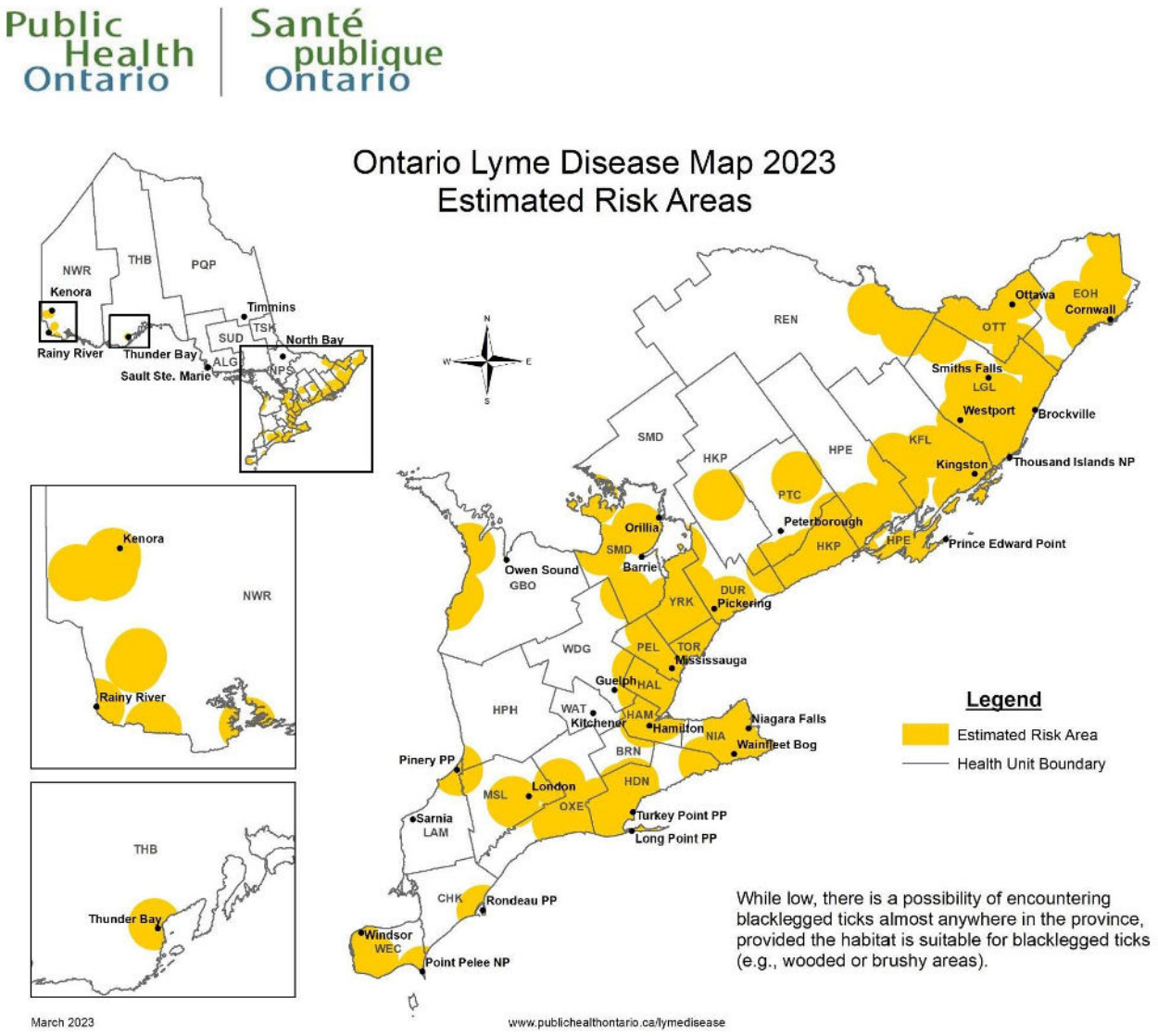
COVID-19 Community Risk

CLICK HERE

For the date of:

20 May, 2023

Overall Risk Level	Trend	For the week ending May 20, 2023:
Very High		The overall COVID-19 Risk Level is **Lower (Caution)**
High		
Moderate		
Lower (Caution)	Similar	Compared to the previous week COVID-19 activity is ***similar***.



Source: [Ontario Lyme Disease Map 2023 - Estimated Risk Areas - Public Health Ontario]

MANAGEMENT OF TICK BITES - CLINICAL GUIDANCE DOCUMENT

Health Care Ontario (part of Ontario Health), in collaboration with Public Health Ontario, clinical experts, and caregivers from across the province, has developed a clinical guidance document addressing the diagnosis and treatment of early localized Lyme disease. The document was updated in March 2023 based on the best available evidence and the PDF version can be accessed by clicking on the icon to the right.

PDF

Ontario