Exposure to Ticks

Changing weather patterns have enabled various species to advance their habitat north from traditionally southern climates. Blacklegged ticks, also known as the Deer tick (Ixodes scapularis) in particular, pose a risk to human health as they can carry and may transmit the bacterial spirochete *Borrelia burgdorferi,* the organism known to cause Lyme Disease. Each year, Public Health Ontario provides a Lyme Disease Map [1], which outlines the estimated risk area in Ontario. (Please note if link does not work that the Map has been updated for the new year). Ticks can be active in temperatures above 4 degrees Celsius, and the deer ticks are most active in spring and fall; adults ticks don't like the heat and are sensitive to desiccation.

Ticks do not jump, but latch onto passers-by through a method referred to as "questing" or waiting on long grass or brush to grab onto the fur or fabric of unsuspecting passers-by. Homeowners and the general public can reduce their exposure by trimming back field- grass areas and staying on walking paths, but field and forestry workers especially, may face increased exposures to questing ticks.

Only Deer ticks are known to carry Lyme disease and so it is important to be able to identify them from other ticks such as the American dog tick (Wood tick), the Brown dog tick or the Lone Star tick, which do not carry or cause Lyme disease.

Wellington Dufferin Guelph Public Health Unit provides guidance on Ticks and Lyme Disease [2] , including how to differentiate types of ticks and what to do in the event of a tick bite. A downloadable Tick ID [3] card is available. A key factor in identifying tick types is the colour of the plate or scutum located behind the tick's head. A solid, dark coloured scutum identifies the Deer tick, while a multicolour scutum denotes the more harmless dog tick.

In a video, OVC's Dr. Andrew Peregrine [4] provides an update on Ticks and Lyme Disease in Canada and provides specifics for differentiating the potentially harmful Deer tick from the dog tick (from minutes 4:11 – 5:59).

Best practices **to avoid tick bites during fieldwork** including **dressing appropriately:**

- Wear light colours to enable easy spotting of ticks
- Wear tightly woven fabric, such as Tyvek coveralls, to reduce texture for ticks to grip on
- Cover open skin - wear long sleeved tops and long pants
- Wear collared shirt to reduce access at the neckline, as ticks crawl upwards
- Tuck pants into socks and shoes, tape cuffs
- Wear solid material footwear and consider taping fabric laces
- Wear a hat and gloves

Use insect repellents that protect against ticks, checking the concentration and **apply as directed:**

- Read entire label carefully
- Follow directions regarding the number of applications allowed per day
- Apply in well-ventilated areas
- Apply small amount of repellent on exposed skin or on top of clothing
- Repeat applications only as needed and directed on the product label
- Wash the repellent off treated skin with soap and water when you return indoors or when protection is no longer needed.

Follow product precautions - DO NOT:

- Apply on open wounds or on irritate or sunburned skin
- Apply directly on your face

- Apply sprays near food
- Spray in windy conditions, above 30 degrees or in rain
- Apply under clothing if approved for on clothing only
- When applying to outer wear, keep sleeves outside gloves, and pants outside boots.

After Work or when moving inside:

- Remove outer clothes and tape outside
- Shake clothes, footwear and shoelaces
- Perform a careful tick check, have a buddy check your back and difficult to see areas
- Tick check your outdoor gear. Travel with gear in a closed plastic bin or bag.

When home:

- Place outdoor clothes in a dryer on high heat for 60 minutes to kill any remaining ticks
- Tumble dry damp clothes on low heat for 90 minutes or high heat for 60 minutes
- Shower or bathe within two hours
- Conduct daily full-body checks, especially warm dar areas:
    - in hair
    - in and around the ears
    - behind the knees
    - under the arms
    - inside the belly button
    - between the legs and around the waist

Removing a Tick

Removing a biting tick within 24-36 hours can help prevent infection, reducing the likelihood that the infective agent has been transferred.

- Use clean, preferably pointed end, tweezers at skin level
    - squeeze
    - pull straight up (do not twist)
    - check that the head of the tick is removed
    - swab site with alcohol
- Never squeeze or crush tick which may cause it to regurgitate
- Nail polish and petroleum jelly do no kill ticks; which need only 3-15 breaths per hour

Concerned about a Bite?

- Staff should contact Occupational Health and Wellness
    - Alexander Hall, Room 176, 519-824-4120, Ext. 52647
- Students should contact Student Health and Wellness
    - JT Powell Building, 519-824-4120, Ext. 52131
- Or contact your physician
    - document the bite date, location, reaction or swelling
- Reserve the tick in alcohol or freeze in a ziplock bag
- Submit tick to Public Health following the guidelines provided by the WDG Public Health Unit, and using their submission form [5]

References:

Public Health Agency of Canada: Pesticide Use [6]
Public Health Agency of Canada: Preventing Lyme Disease [7]
Public Health Agency of Canada: Tick Removal [8]
Public Health Ontario: Lyme Disease Map Estimated Risk Area in Ontario [9]

Stafford, K. (2004); Tick Management Handbook, Connecticut Agricultural Experiment Station [10]
Ticks and Lyme Disease, a 2017 update with Dr. Andrew Peregrine [4]
Wellington Dufferin Guelph Public Health Unit: Ticks and Lyme Disease [2]

Source
URL:https://www.uoguelph.ca/hr/about-hr/environmental-health-safety-ehs/ehs-programs-policies-guidelines-and-forms/ehs-guidelines-3

Links
[1] https://www.publichealthontario.ca/-/media/Documents/O/2022/lyme-disease-risk-area-map-2022.pdf?sc_lang=en [2] https://www.wdgpublichealth.ca/your-community/ticks-lyme-disease [3] https://www.wdgpublichealth.ca/sites/default/files/tickidcard_2016_access.pdf [4] https://www.youtube.com/watch?v=u8ZyvpzI7nk [5] https://wdgpublichealth.ca/your-community/ticks-lyme-disease [6] https://www.canada.ca/en/health-canada/services/about-pesticides/use-pesticides-safely.html [7] https://www.canada.ca/en/public-health/services/diseases/lyme-disease/prevention-lyme-disease.html [8] https://www.canada.ca/en/public-health/services/diseases/lyme-disease/removing-submitting-ticks-testing.html [9] http://www.publichealthontario.ca/-/media/Documents/O/2022/lyme-disease-risk-area-map-2022.pdf?sc_lang=en [10] https://portal.ct.gov/-/media/caes/documents/publications/bulletins/b1010pdf