



TICK PROTECTION & PREVENTION

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www.kenaukinstitute.org

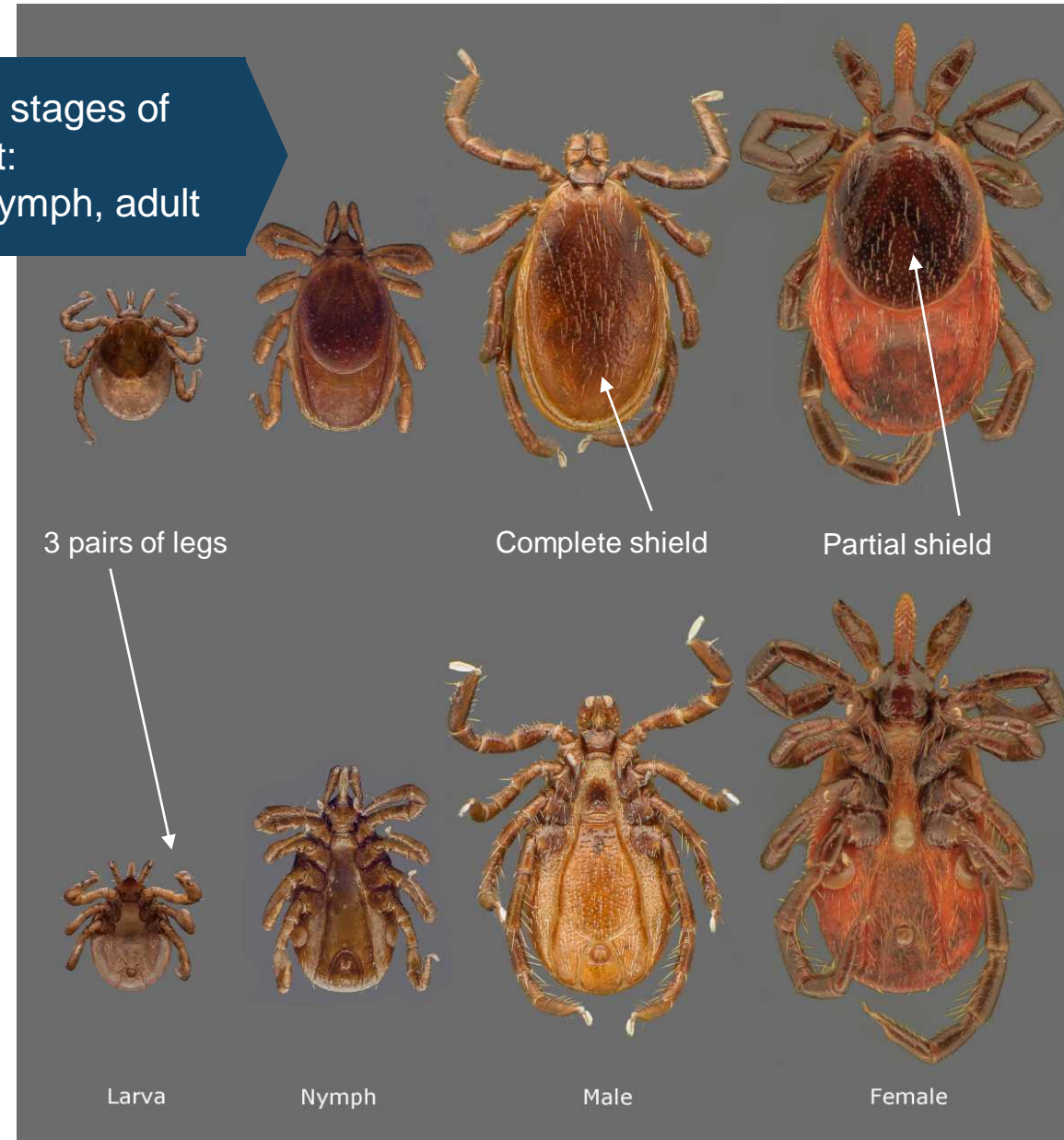
IS IT A TICK?

IDENTIFICATION GUIDE

Ticks have 4 stages of development: egg, larva, nymph, adult

- Ticks attach to their host (unlike other insects)
- To survive, ticks need blood, meals last 3-10 days, then the tick detaches
- Unlike most insects' ticks DON'T have:
 - 3 pairs of legs, they have 4 (except larva)
 - Antennae or wings
 - 3 part segmented bodies (ticks have 2 parts, the head and abdomen)
- Ticks are active once temperatures reach 4°C
- Ticks do not jump, fly or drop out of trees. They wait in low vegetation to grab prey once in direct contact.

Stages of the *Ixodes scapularis* tick (dorsal surface).



Stages of the *Ixodes scapularis* tick (ventral surface).

TICK SIZES

SIZES CAN VARY

- Larvae and nymphs = 1mm (poppy-seed)
- Adults = 3-5mm
- Engorged females = 8-13mm

- A tick's engorgement depends on how long they've been attached to their host and feeding
- A tick's weight can increase x100 during feeding

Various sizes of the *Ixodes scapularis* tick. From the smallest to the largest: larva, nymph, male, unengorged female and engorged female. Distance between each line on the scale: 1mm.



Levels of engorgement of the female *Ixodes scapularis* tick.

TICK SPECIES

IDENTIFICATION GUIDE

- 900 tick species worldwide
- 12 species (identified so far) in ON & QC
- Ticks are grouped into families: hard ticks, soft ticks, and intermediate ticks
- All ticks in ON & QC are hard ticks

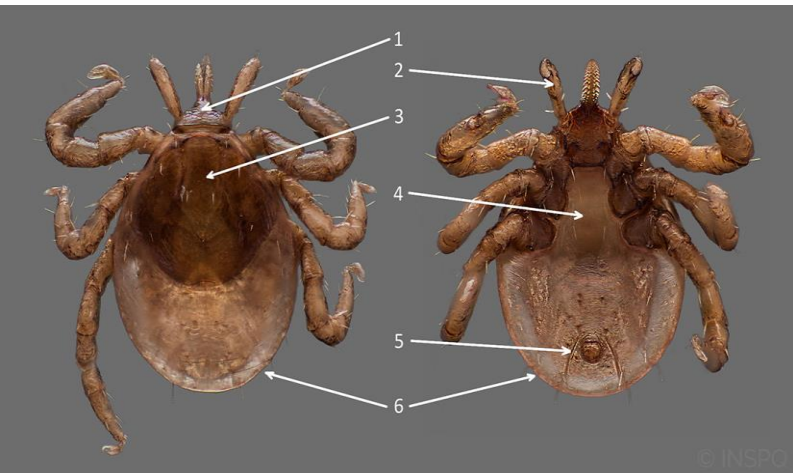
* The black-legged tick or deer tick (*Ixodes scapularis*) is the only tick that can transmit Lyme disease, but not all individuals carry the disease



Different species of female ticks not engorged with blood: (1) *Ixodes scapularis*, (2) *Ixodes cookei*, (3) *Dermacentor variabilis*, (4) *Amblyomma americanum*, (5) *Rhipicephalus sanguineus* and (6) *Haemaphysalis leporispalustris*.

BLACK-LEGGED TICK

IXODES SCAPULARIS



Larval Stage

- Don't usually bite humans
- Prefer small rodents and birds
- Unable to transmit Lyme disease



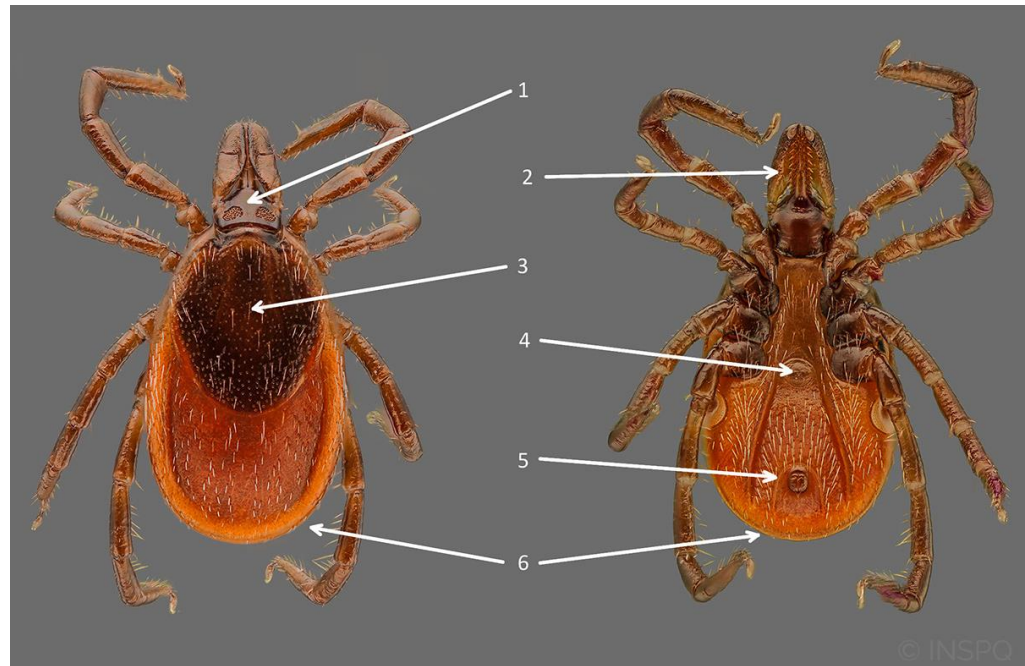
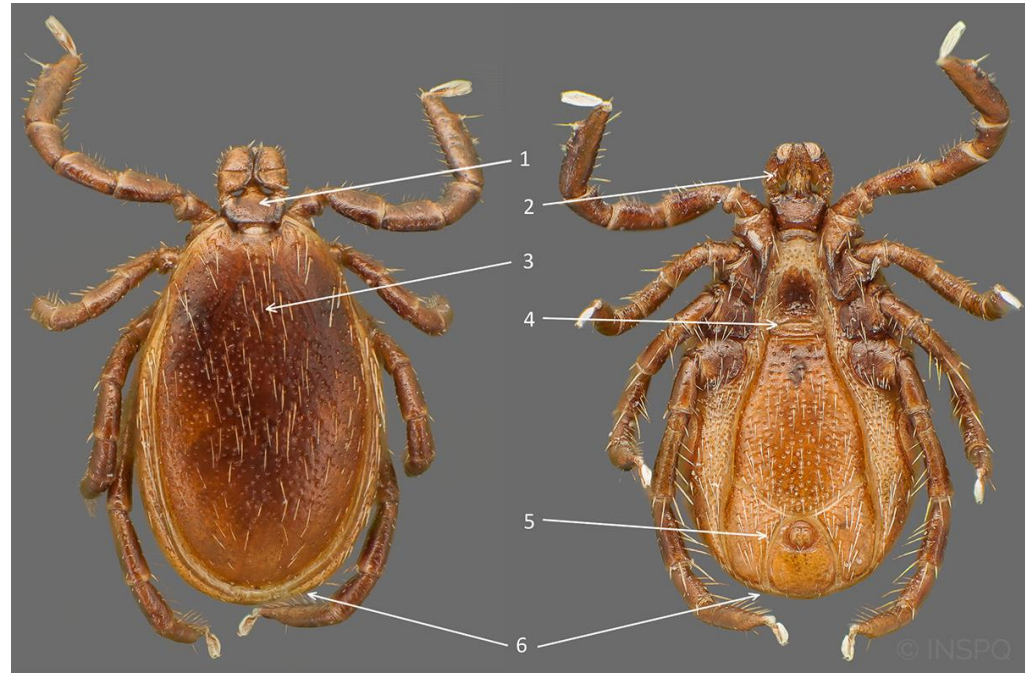
Nymph Stage

- Often responsible for Lyme disease
- Small and stay attached longer
- Active in summer

- **Male Stage**
 - Cannot become engorged
 - Rarely responsible for the transmission of Lyme disease since they don't stay attached long enough

Female Stage

- Often responsible for Lyme Disease



TICKS & LYME DISEASE

TRANSMISSION

- Ticks are the 2nd leading vector of human disease after the mosquito
- The black-legged tick (*Ixodes scapularis*) can transmit many diseases including the bacterium *Borrelia burgdorferi* which is responsible for Lyme disease
- A tick must be attached to its host for **at least 24 hours** before transmitting Lyme disease. If you find an attached tick, remove it immediately!
- Bites are painless and can go unnoticed

ENJOY THE
OUTDOORS,
WITHOUT A
TICK

.....

LYME DISEASE IS
IN CANADA. PREVENTION
IS IMPORTANT.

Canada 



TICKS & LYME DISEASE

TICK BITE PREVENTION

Best way to prevent Lyme disease is to prevent tick bites!

- Wear light-coloured long-sleeved shirts and pants
- Tuck your shirt into your pants and pants into your socks
- Use bug spray containing DEET
- Wear clothing pre-treated with permethrin
- Walk on cleared paths or walkways
- Shower within 2 hours of your outdoor activity (to facilitate a tick check and remove ticks that haven't attached yet)
- Do a daily full-body check for ticks →
- Do a tick check on your outdoor gear and pets
- Put clothes in dryer on high heat for 10+ minutes to kill ticks

TOP 10 TICK HIDING SPOTS ON YOUR BODY

Tick checks are one of the ways you can prevent Lyme disease and other infections spread by ticks. **Check your entire body**, especially:

WHAT TO LOOK FOR?
Feel for **bumps** and look for tiny **dark spots**. Look carefully, most ticks are very small!

Nymph (around 1.15 mm)	
Adult Male (around 2 mm)	
Adult Female (around 3 mm)	
Fed Adult Female (up to 1 cm)	

Real size

Found a tick? Remove it immediately to reduce the risk of infection.

Canada.ca/LymeDisease

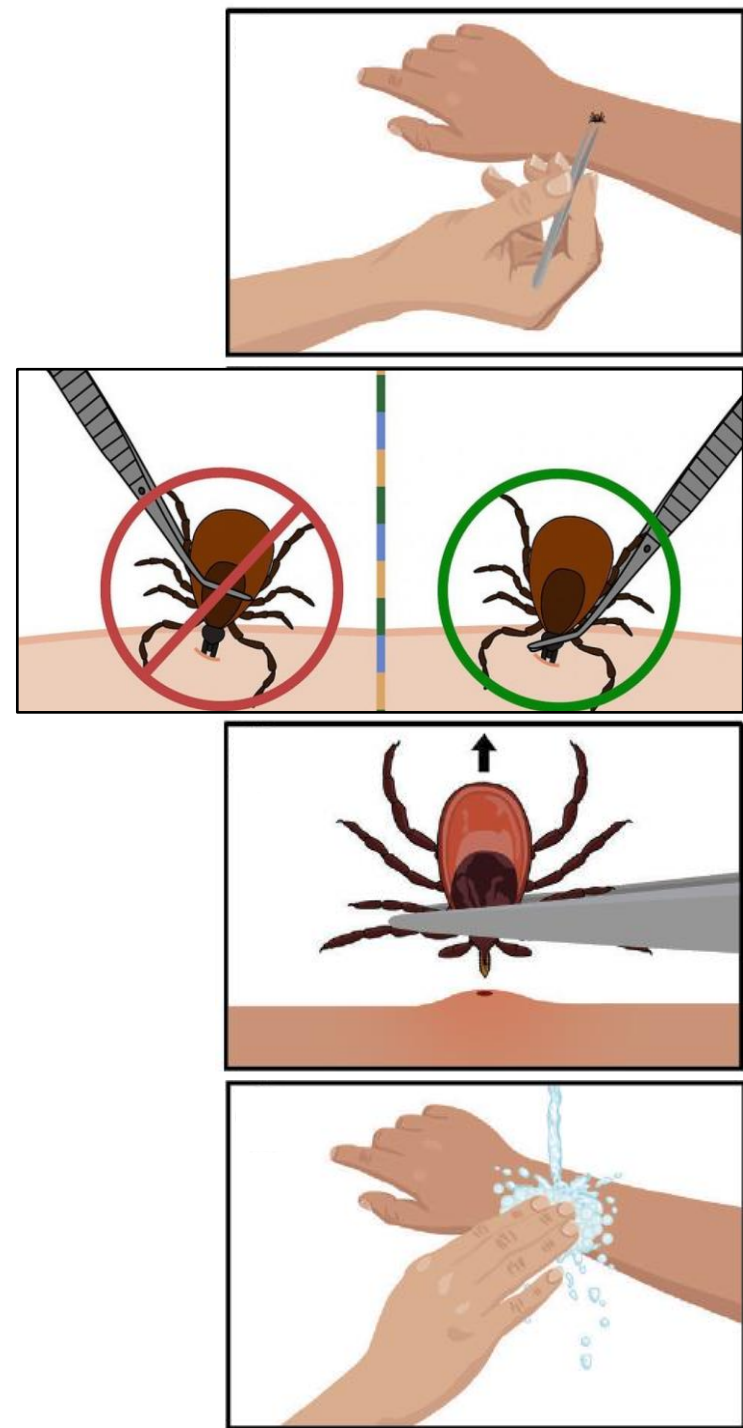
Public Health Agency of Canada / Agence de la santé publique du Canada

Canada

TICK BITES

REMOVING, SAVING, TESTING

1. Using clean tweezers, grasp the head as close to the skin as possible and slowly pull straight out. Avoid pressing the abdomen, this is where the bacteria responsible for Lyme disease is stored. Avoid twisting or crushing the tick.
2. If mouth parts break off and remain in the skin, remove them with tweezers or leave them and let the skin heal.
3. Wash / disinfect the bite area and your hands.
4. Save the tick in a sealed container in the freezer. Record the date, location and site of bite. Bring it to your medical appointment for identification and testing (contact your local public health authority for details on options).



LYME DISEASE

SYMPTOMS & TREATMENT

- If you develop symptoms of Lyme disease, contact your health care provider right away (and bring your saved tick). The earlier a diagnosis is made, the greater the chance of a successful treatment.
- Symptoms can differ between people.
- Most people experience mild flu-like symptoms soon after being bitten, while a small number may have more serious symptoms, sometimes weeks later.
- Most cases can be effectively treated with 2-4 weeks of antibiotics.

EARLY DETECTION IS KEY

The identification of Lyme disease in its early stages is very important. In most cases, if caught early, Lyme disease can be treated effectively with antibiotics.

Symptoms typically occur 3 to 30 days after you've been bitten. They can differ from person to person and **could include any of the following:**

- ▶ Rash (sometimes shaped like a bull's eye)
- ▶ Fatigue
- ▶ Aching muscles and joints
- ▶ Fever
- ▶ Swollen lymph nodes
- ▶ Chills
- ▶ Headache

More severe symptoms (experienced weeks to months after a tick bite, if untreated) could include but are not limited to:

- ▶ Severe headaches
- ▶ Facial paralysis (such as Bell's palsy)
- ▶ Joint pain
- ▶ Irregular heart beat
- ▶ Nervous system disorders (such as dizziness, mental confusion or inability to think clearly, and memory loss, nerve pain, numbness or tingling in the hands or feet)

Contact your health care provider if you're not feeling well or are concerned after being bitten by a tick.

QUESTIONS?

www.canada.ca/en/public-health/services/diseases/lyme-disease.html

<https://inspq.qc.ca/en/it-tick>

<https://www.ontario.ca/page/lyme-disease>