

Health Information Sheet

Lyme Disease

What is Lyme disease?

Lyme disease is an illness caused by the bacterium, *Borrelia burgdorferi*, which can be spread through the bite of certain types of ticks. In Ontario, black-legged ticks (also known as deer ticks) are the main species of ticks responsible for spreading Lyme disease. Ticks live in and around wooded areas, and are infected when they feed on mice, squirrels, birds, and other small animals that carry the bacteria. Ticks then may spread the bacteria to humans through a bite.

What is a tick?

Ticks are small, biting arachnids (related to scorpions, spiders, and mites) that feed on blood. Ticks cannot fly or jump. Ticks vary in size and colour. Before feeding, adult ticks are approximately 1 to 5 mm in length. Ticks feed on blood by attaching to humans and animals.

Where do ticks live?

Ticks live in or near wooded or grassy areas. Humans may come into contact with ticks during outdoor activities where deer and mice are common or when walking through areas with leaf litter or long grass. To avoid ticks, always walk in the center of trails.

Do all ticks carry the Lyme disease bacteria?

No. In fact, the majority of black-legged ticks do NOT carry *Borrelia burgdorferi*, the bacterium that causes Lyme disease. Approximately 1 in 5 ticks in the KFL&A area test positive for this bacteria.

How long does a tick need to be attached to a human to transmit Lyme disease?

Ticks can transmit infection after being attached for more than 24 hours because the bacteria require time to move from the tick's gut to its salivary glands. Because of this delay, prompt detection and removal of ticks is one of the key methods of preventing Lyme disease.

What do I do if a tick is attached to a human?

If there is a tick attached to a human, it should be removed as soon as possible. To remove a tick, grasp the tick as close to the skin as possible and pull it straight out (with tweezers, if possible). DO NOT squeeze or try to burn the tick off. Clean the bite area with soap and water. Sometimes the tick's head is left in the body after it has been pulled out. Do not be alarmed as the tick can no longer transmit Lyme disease.

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If the tick was attached for longer than 24 hours and was removed within the last 72 hours, contact a health care provider to discuss if a preventive dose of antibiotics to decrease the risk of Lyme disease is appropriate.

How is Lyme disease diagnosed?

Health care providers base their diagnosis of Lyme disease on a number of factors including:

- Is there a known tick exposure?
- Where did the tick exposure occur (geographical area)?
- When and how long was the tick attached?
- Are there any signs and symptoms?

Depending on the answers to the questions above, health care providers may provide preventive antibiotics or treatment for Lyme disease. A blood test for Lyme disease is not useful early in the disease and normally is done if there are symptoms other than a rash.

What are the symptoms of Lyme disease?

Symptoms of Lyme disease usually appear three days to several weeks after being bitten by an infected tick. The first symptom is often a red, bulls-eye rash in the area of the bite that usually appears 3 to 10 days after the tick bite. Other symptoms include fever, headache, and muscle pain. Late symptoms can also include weight-bearing joint pain or heart problems. It is important to consult a health care professional if you experience these symptoms.

Is there treatment for Lyme disease?

Yes. Lyme disease is treated with antibiotics. Having a tick bite does not necessarily mean that antibiotics are needed. Treatment decisions need to be made with health care providers and should be based on how long the tick was attached, where the tick came from, and possible signs and symptoms that the patient is experiencing.

How can tick bites be prevented?

One can be protected from tick bites by:

- Wearing light-coloured clothing and long-sleeved shirts and pants when going in long grass or wooded areas. Tuck pants into socks and avoid wearing sandals.
- Use insect repellents that are federally regulated (i.e. contain DEET). Read the manufacturers' directions for safe use.
- When returning from being outdoors, check your clothing, body, and pets for ticks. Having a shower will remove a tick if it hasn't attached yet and may help to identify ticks that are attached.