

PUBLIC HEALTH AGENCY OF CANADA LYME DISEASE WEB OPTIMIZATION 2020

To assist with your review of the content, here are the links to the previous version of the **Lyme disease: Symptoms and treatment** page:

- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/symptoms-lyme-disease.html>
- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/treatment-lyme-disease.html>
- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/provincial-territorial-resources.html>

Lyme disease: Symptoms and treatment

On this page

- [Symptoms of Lyme disease](#)
- [If you become ill](#)
- [Diagnosing Lyme disease](#)
- [Treating Lyme disease](#)
- [Provincial resources for Lyme disease](#)

Symptoms of Lyme disease

Signs and symptoms of Lyme disease can vary from person to person.

Early symptoms of Lyme disease usually start 3 to 30 days after you have been bitten by an infected blacklegged tick.

Most people experience mild flu-like symptoms after being bitten, while some may have more symptoms weeks after the bite.

Early signs and symptoms of Lyme disease may include:

- a rash that is sometimes shaped like a bull's eye
- fever
- chills
- headache
- fatigue
- muscle and joint aches
- swollen lymph nodes

If left untreated, the infection could spread to other body parts, which could lead to:

- severe headaches

- facial paralysis (Bell's palsy)
- muscle, joint, tendon and bone aches that occur irregularly
- arthritis with joint pain and swelling, particularly the knees and less commonly in other joints, such as the ankle, elbow and wrists
- heart disorders (heart palpitations, abnormal heartbeat), known as Lyme carditis
- neurological disorders that can include:
 - dizziness
 - nerve pain
 - memory loss
 - inflammation of the brain and spinal cord
 - numbness or tingling in the hands or feet
 - mental confusion or inability to think clearly

In rare cases, death could occur due to the complications involving infection of the heart.

If you become ill

If you develop symptoms of Lyme disease, consult your health care provider right away.

Since ticks are tiny, you may not feel the tick attach to the skin or remember being bitten by a tick. It is still important to contact your health care provider.

If you saved the tick that bit you, take it to your medical appointment and tell your health care provider:

- where on your body the tick was attached
- how long you think the tick was attached to you
- where you were at the time you were bitten by the tick

Diagnosing Lyme disease

Diagnosing Lyme disease can be challenging as symptoms vary from person to person. They can also mimic other illnesses, such as the common cold, flu and arthritis.

A diagnosis of Lyme disease is based on the presence of Lyme disease symptoms and a history of possible exposure to infected [blacklegged ticks](#). Laboratory testing should only be used to supplement clinical findings, not as a basis for diagnosis of early Lyme disease.

Treating Lyme disease

Lyme disease is treated with antibiotics. The earlier you receive treatment for Lyme disease, the greater the chance of a successful recovery.

Some people who are treated for Lyme disease may continue to have symptoms following treatment. This condition is known as post-treatment Lyme disease syndrome (PTLDS).

Provincial resources for Lyme disease

For local information on Lyme disease, consult your provincial or territorial health authority:

- [Alberta](#)
- [British Columbia](#)
- [Manitoba](#)
- [New Brunswick](#)
- [Newfoundland and Labrador](#)
- [Northwest Territories](#)
- [Nova Scotia](#)
- [Nunavut](#)
- [Ontario](#)
- [Prince Edward Island](#)
- [Quebec](#)
- [Saskatchewan](#)
- [Yukon](#)

To assist with your review of the content, here are the links to the previous version of the **Lyme disease: Prevention and risks** page:

- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/causes-lyme-disease.html>
- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/prevention-lyme-disease.html>
- <https://www.canada.ca/fr/sante-publique/services/maladies/maladie-lyme/risque-maladie-lyme-chez-canadiens.html>
- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/pregnancy.html>

Lyme disease: Prevention and risks

On this page

- [How Lyme disease spreads](#)
- [Preventing Lyme disease](#)
- [Risks of getting Lyme disease](#)
- [Lyme disease and pregnancy](#)

How Lyme disease spreads

Lyme disease is caused by bacteria that is spread through the bite of an infected tick.

More than 40 different types of ticks live in Canada but there are 2 main types that can spread the bacteria that can cause Lyme disease:

1. [blacklegged tick](#) or deer tick, common to southeastern and south-central regions of Canada
2. western blacklegged tick, common to British Columbia

Ticks need blood to survive, so they attach onto animals and humans to feed. Ticks can become infected with the Lyme disease bacteria by feeding on infected wild animals, such as birds and rodents.

Once infected, ticks can spread the bacteria to humans and pets, particularly dogs. Dogs are very vulnerable to tick bites and tick-borne diseases.

Animal to person

Humans **cannot** be infected directly by their pets. However, pets can carry unattached and potentially infected ticks into your home and your yard, which could increase your chance of being bitten by a tick.

Person to person

At this time, there is no conclusive evidence that Lyme disease can spread from person to person, such as through:

- sex
- kissing
- touching

Blood transfusions

At this time, there are no known cases of Lyme disease linked to blood transfusion.

Ask your local blood donor clinic about possible restrictions to donating blood if you have had a tick-borne disease, including Lyme disease.

For more information, consult [Canada Blood Services](#).

Preventing Lyme disease

Currently, there is no vaccine available for humans. However, we are actively monitoring the ongoing clinical trials in Europe and the U.S.

To receive information on what we are doing to raise awareness about Lyme disease or opportunities to collaborate, join our mailing list.

[Subscribe to mailing list](#)

Ticks are often found in and near areas with trees, shrubs, tall grass or piles of leaves. They are active when temperatures are above freezing. In below freezing temperatures, they are not active and hide under fallen leaves or snow.

The best way to protect yourself against Lyme disease and other diseases that ticks can carry is to prevent tick bites.

Before you go outdoors:

- wear light coloured long-sleeved shirts and pants to spot ticks more easily
- tuck your shirt into your pants and pull your socks over your pant legs
- Wear closed-toe shoes
- [use approved bug spray safely](#) (repellents) containing [DEET](#) or [Icaridin](#) on your skin and clothing (always follow label directions)
- you can also wear permethrin-treated clothing, now available in Canada (always follow label directions) (will link to permethrin-treated clothing factsheet)

While you are outdoors:

- walk on cleared paths or walkways

- avoid wooded and brushy areas

After you come indoors:

- shower or bathe as soon as possible to remove loose ticks
 - this is also a good opportunity to do a [full body tick check](#)
- do a daily full body tick check on yourself and your children. Be sure to pay careful attention around the toes, knees, groin, armpits and scalp.
- if you find an attached tick, [remove it](#) immediately
- do a tick check on your outdoor gear and your pets as they could carry ticks inside your home
- put dry clothes in a dryer on high heat for 10 minutes to kill ticks on dry clothing
 - if clothes are damp, more time may be needed to dry the clothes
 - if clothes require washing, hot water is recommended (cold and medium temperature water will not kill ticks)

Reducing tick habitats near your home

The following advice will help limit exposure to ticks near your home.

- Mow the lawn regularly to keep the grass short, as ticks have difficulty surviving in sunny areas.
- Remove leaf litter, brush and weeds at the edge of the lawn and around stonewalls and woodpiles to reduce places where ticks can live.
- Create a 1-metre or wider wood chip, mulch, or gravel border between your lawn and shrubs, woods or stone edges. This helps reduce ticks on your lawn.
- Prevent animals from bringing ticks into the yard by:
 - putting barriers around your home to stop deer
 - sealing stonewalls and small openings to discourage rodent activity
- Place patios, decks and children's playground sets away from the yard edges and trees where ticks are more likely to live.
 - If possible, place them on a woodchip or mulch foundation and in sunny areas where ticks have difficulty surviving.
- Treat pets that are exposed to ticks with oral or topical acaricides (poison for mites or ticks), as recommended by your veterinarian.
 - This will prevent pets from carrying ticks into the home, as acaricides kill ticks through direct contact with the animal's blood, fur or skin.

Risks of getting Lyme disease

If you work outdoors or participate in outdoor activities, you may be at a greater risk for tick bites. You should always take precautions against tick bites, particularly when:

- hiking
- fishing

- golfing
- hunting
- camping
- gardening

Lyme disease and pregnancy

Pregnant women should always take steps to prevent tick bites.

It is important to remember that contracting any infectious disease during pregnancy can be a concern for the baby as well as the mother. If you are pregnant and don't feel well or are concerned about your health, consult your health care provider.

If a pregnant woman gets Lyme disease, she can be safely and effectively treated with antibiotics. If infection of the placenta does occur, this could cause pregnancy complications, so early treatment of pregnant women with Lyme disease is prudent.

If it occurs, the spread of Lyme disease from mother to fetus is rare. No adverse outcomes have been seen in children born to women who acquired infection during pregnancy and received appropriate treatment.

If you suspect that you may have Lyme disease, consult your health care provider as soon as possible.

Breastfeeding while being treated for Lyme disease:

If you are breastfeeding and concerned about Lyme disease, consult your healthcare provider.

Use of insect repellents to prevent tick bites during pregnancy:

It is safe to use approved insect repellent containing DEET or Icaridin if you are pregnant.

Related links

- [Insect bite prevention](#)

To assist with your review of the content, here are the links to the previous version of the **Lyme disease: Removing and identifying ticks** page:

- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/removing-submitting-ticks-testing.html>

Lyme disease: Removing and identifying ticks

Learn how to identify and remove a tick from your body.

On this page

- [Removing ticks](#)
- [Saving ticks](#)
- [Testing ticks](#)
- [Identifying ticks](#)

Removing ticks

Different types of ticks live in Canada. Some can transmit diseases while others are only a nuisance. Infected [blacklegged ticks](#) can transmit bacteria that causes Lyme disease.

Removing ticks as soon as possible after a tick bite can prevent infection. You can remove a tick that has latched onto you by doing the following.

1. Use clean, fine-point tweezers to grasp the head as close to the skin as possible and slowly pull straight out. Try not to twist or squeeze the tick.
 - Do not try to remove the tick by using nail polish or petroleum jelly, or heat to burn the tick.
2. If the mouthparts break off and remain in the skin, remove them with the tweezers. If you are unable to remove them easily, leave them alone and let the skin heal. If you have any concerns, consult your health care provider.
3. Wash the bite area and your hands with soap and water or disinfect with alcohol-based hand sanitizer.
4. Try to [save the tick that bit you](#).

Visit your health care provider as soon as possible if:

- you are not comfortable with removing a tick
- you cannot remove the tick because it has buried itself deep into your skin

If you develop [symptoms of Lyme disease](#), contact your health care provider right away. Tell them:

- where on your body the tick was attached
- how long you think the tick was attached to you
- where you were when you were bitten by the tick

Killing ticks

Ticks can be killed by drowning them in rubbing alcohol or by freezing them for several hours. Avoid squashing ticks with exposed fingers. You can dispose of them in household garbage once they are dead.

Saving ticks

It may be helpful to save attached ticks to show your health care provider during your medical appointment. To save the tick for your medical appointment:

1. Put the tick in a plastic bag that you can seal or container such as a pill bottle. Record the location and date of the bite.
2. Store the container for up to 10 days in the:
 - o refrigerator, for live ticks
 - o freezer, for dead ticks

Testing ticks

Submitting a tick for identification and testing will **not** lead to a diagnosis or treatment. However, this information helps to understand:

- how blacklegged ticks have spread in Canada
- the risk of human exposure to infected blacklegged ticks

Tick identification may be done in some provinces of Canada.

Identifying ticks

Ticks can be identified virtually by submitting a picture to various websites such as eTick.ca and [Manitoba Tick Checker](#).

Contact your local public health authority for details on:

- the tick identification program available in your area
- how to submit a tick

For more information, check out [provincial resources for Lyme disease](#).

If you live in a province that does not accept ticks for surveillance or testing, it may be possible to send ticks directly to the National Microbiology Laboratory (NML); however, please contact the laboratory via email or phone before submitting the specimens.

NML:

By phone at 204-789-2000

By e-mail at ticks@canada.ca

To assist with your review of the content, here are the links to the previous version of the **Lyme disease: For health professionals** page:

- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/health-professionals-lyme-disease.html>

Lyme disease: For health professionals

On this page

- [What health professionals need to know](#)
- [Clinical manifestations](#)
- [Clinical diagnosis](#)
- [Laboratory testing](#)
- [Treatment](#)

What health professionals need to know

Lyme disease is a vector-borne zoonotic disease caused by the bacterium *Borrelia burgdorferi*. The bacterium is a spirochete transmitted by infected nymphal and adult female Ixodes ticks. The ticks mainly responsible for Lyme disease are the:

- blacklegged tick (*Ixodes scapularis*), sometimes called deer ticks



- western blacklegged tick (*Ixodes pacificus*)



The ticks feed on animal reservoirs, in particular, wild rodents, deer and birds in which the bacterium circulates. These ticks could also transmit other pathogens, which can cause disease in humans, including:

- anaplasmosis
- babesiosis
- Powassan disease

Most infections occur during the warmer months, but cases can occur throughout the year.

With an increase in the number of [Lyme disease cases in Canada](#), it is necessary that health professionals are knowledgeable about this emerging infection. Most cases of Lyme disease can be managed successfully with a timely diagnosis and appropriate treatment.

Subscribe to our mailing list for information about work in progress, new projects and programs, and opportunities for collaboration and involvement.

[Subscribe to mailing list](#)

Clinical manifestations

The incubation period is 3 to 30 days.

It is important to note that some people with Lyme disease may have no or minimal symptoms. Others may experience more severe symptoms.

Individuals who do not develop symptoms until weeks after the tick bite may not remember being bitten or associate the illness with the bite. Furthermore, because nymphal blacklegged ticks are very small and tick bites are usually painless, most people may not even know that they were bitten.

Clinical manifestations are not necessarily specific to the stage of infection. They can overlap and form a continuum in some untreated patients.

Early localized Lyme disease (less than 30 days)

Early localized Lyme disease usually presents as an acute illness characterized by:

- flu-like symptoms, such as:
 - fever
 - malaise
 - myalgias
 - headache
 - migratory arthralgias
- lymphadenopathy
- erythema migrans

Erythema migrans

Erythema migrans is an annular homogenous erythematous expanding skin rash greater than 5 cm in diameter at the site of the tick bite, sometimes with central clearing. It is usually painless and non-pruritic. Classic rash may not be present in all cases.




Most patients will present with erythema migrans within 7 days of the initial tick bite. In dark-skinned people, the rash may appear more as a bruise.




A patient presenting with an erythema migrans may be clinically diagnosed with Lyme disease, if they have a history of exposure. That is, if they live in an endemic area or have recently travelled to an area where infected ticks are prevalent. In this instance, treatment is recommended, without laboratory testing.

If a patient has a history of tick exposure and presents with other non-specific symptoms, such as headache, fever, and muscle and joint pain, but does not present with an erythema migrans, the patient may still have Lyme disease.

In this scenario, laboratory testing is recommended, and a convalescent sample (2 to 4 weeks after the initial sample) may be required to obtain laboratory support for a diagnosis of Lyme disease. However, some individuals who receive treatment during the acute phase may not seroconvert (i.e., IgG antibodies may not be detected in their serological tests).

Images of erythema migrans

		
<p>Image 1: A skin lesion called erythema migrans can develop into a bull's-eye at the site of a tick bite. It is shown here on a patient's upper arm.*</p>	<p>Image 2: A typical sign of early non-disseminated Lyme disease is an expanding rash called erythema migrans. This can take on the appearance of a bull's eye.*</p>	<p>Image 3: Some Lyme disease skin lesions are uniformly red and do not appear with the classic ring.*</p>

		
<p>Image 4: Some patients present with a central blistering lesion, commonly mistaken as a spider bite.*</p>	<p>Image 5: Some skin lesions caused by Lyme disease have a blue-purple colour. They are distinct from bruises because of their sharply demarcated border.*</p>	<p>Image 6: Disseminated Lyme disease (multiple skin lesions, taking variable shapes).*</p>
<p>* All images reproduced with permission from John Aucott, Director, Lyme disease Clinical Research Center, Division of Rheumatology, Johns Hopkins University.</p>		

Early disseminated Lyme disease (less than 3 months)

If untreated, the bacterium causing Lyme disease can:

- disseminate via the bloodstream and lymphatic system to other body sites
- provoke damage to body tissues at those sites, most commonly nervous and musculoskeletal systems

Signs and symptoms can include:

- fatigue and general weakness
- multiple erythema migrans lesions
- cardiac manifestations, such as:
 - atrioventricular block
 - myocardial dysfunction

- myopericarditis
 - tachyarrhythmias
- neurological manifestations
 - aseptic meningitis
 - cranial neuropathy, especially facial nerve palsy (i.e., Bell's palsy)
 - encephalitis, encephalomyelitis, subtle encephalopathy or pseudotumor cerebri (all rare)
 - motor and sensory radiculoneuropathy and mononeuritis multiplex
 - subtle cognitive difficulties
- rare manifestations, such as:
 - conjunctivitis
 - keratitis
 - mild hepatitis
 - splenomegaly
 - uveitis

Late disseminated Lyme disease (more than 3 months)

If Lyme disease remains untreated or diagnosed later, it can persist for months or even years.

Possible musculoskeletal manifestations include:

- Baker's cyst
- intermittent episodes of swelling and pain in one or multiple large joints (especially the knees) leading to chronic arthritis
 - if untreated, arthritis may recur in the same or different joints

Possible neurological manifestations include:

- subacute mild encephalopathy, affecting:
 - memory
 - concentration
- chronic mild axonal polyneuropathy, manifested as:
 - distal paresthesia
 - radicular pain (less common)

- encephalomyelitis (rare)
- leukoencephalopathy (rare)

Lyme disease and pregnancy

If a pregnant woman gets Lyme disease, she can be safely and effectively treated with antibiotics. If infection of the placenta does occur, this could cause pregnancy complications, so early treatment of pregnant women with Lyme disease is prudent.

If it occurs, the spread of Lyme disease from mother to fetus is rare. No adverse outcomes have been seen in children born to women who acquired infection during pregnancy and received appropriate treatment.

For more information, consult the [Society of Obstetricians and Gynaecologists of Canada](#).

Clinical diagnosis

The diagnosis of acute Lyme disease is primarily clinical, supported by a history of possible tick exposure.

Patients with symptoms of early localized Lyme disease and exposure history should be diagnosed and treated without laboratory confirmation, as [serologic tests](#) are insensitive at this stage.

Since some people may have minor symptoms, diagnosis should not be based solely on the presence or absence of an erythema migrans. As such, it is important to ask patients if they have travelled to or live in an [area where blacklegged ticks are established or emerging](#).

Ticks can be found outside currently identified risk areas, so while a known history of exposure to blacklegged ticks helps with the diagnosis, absence of a history of exposure does not rule out Lyme disease.

Consider other signs and symptoms as part of your differential diagnosis of the disease, including:

- fatigue
- headache
- arthralgia
- low-grade fever

Laboratory testing

Laboratory testing should only be used to supplement clinical findings. Currently, the main laboratory tests consist of two-tiered antibody testing. These tests:

- may yield false positive results due to slow antibody response to *Borrelia burgdorferi* in early localized disease
 - this is a reflection of the pathogen's slow replication
- may be negative for patients treated early with antibiotics

Two-tiered serological testing

The two-tiered serological testing approach is recommended when testing for antibodies to *Borrelia burgdorferi*. This approach is validated for use in Canada and includes:

- an enzyme immunoassay (EIA)
- a confirmatory immunoblots (e.g., western blots or line blots) which are performed on samples that are positive or equivocal on the EIA

Interpretative criteria for the EIA and immunoblot (IB) have been standardized and summaries of the diagnostic approaches for Lyme disease are available.

If testing is required, indicate the presumed exposure area (for example, North America or Europe) on the requisition. The location will determine which specific test kits will be used, as different IB are used when exposure occurs in Europe versus North America. In suspected Lyme meningitis, testing for intrathecal IgG or IgM antibodies may be helpful.

Serological tests cannot be used to measure treatment response, as antibody persistence precludes the distinction between active and past infection from being made on positive results.

Enzyme immunoassays

Most EIA have a high sensitivity if done at least 2 weeks after the possible exposure. They have low specificity as they may cross-react with antibodies to commensal or pathogenic spirochetes (e.g., varicella, Epstein-Barr virus, syphilis) or to certain autoimmune diseases (e.g., lupus).

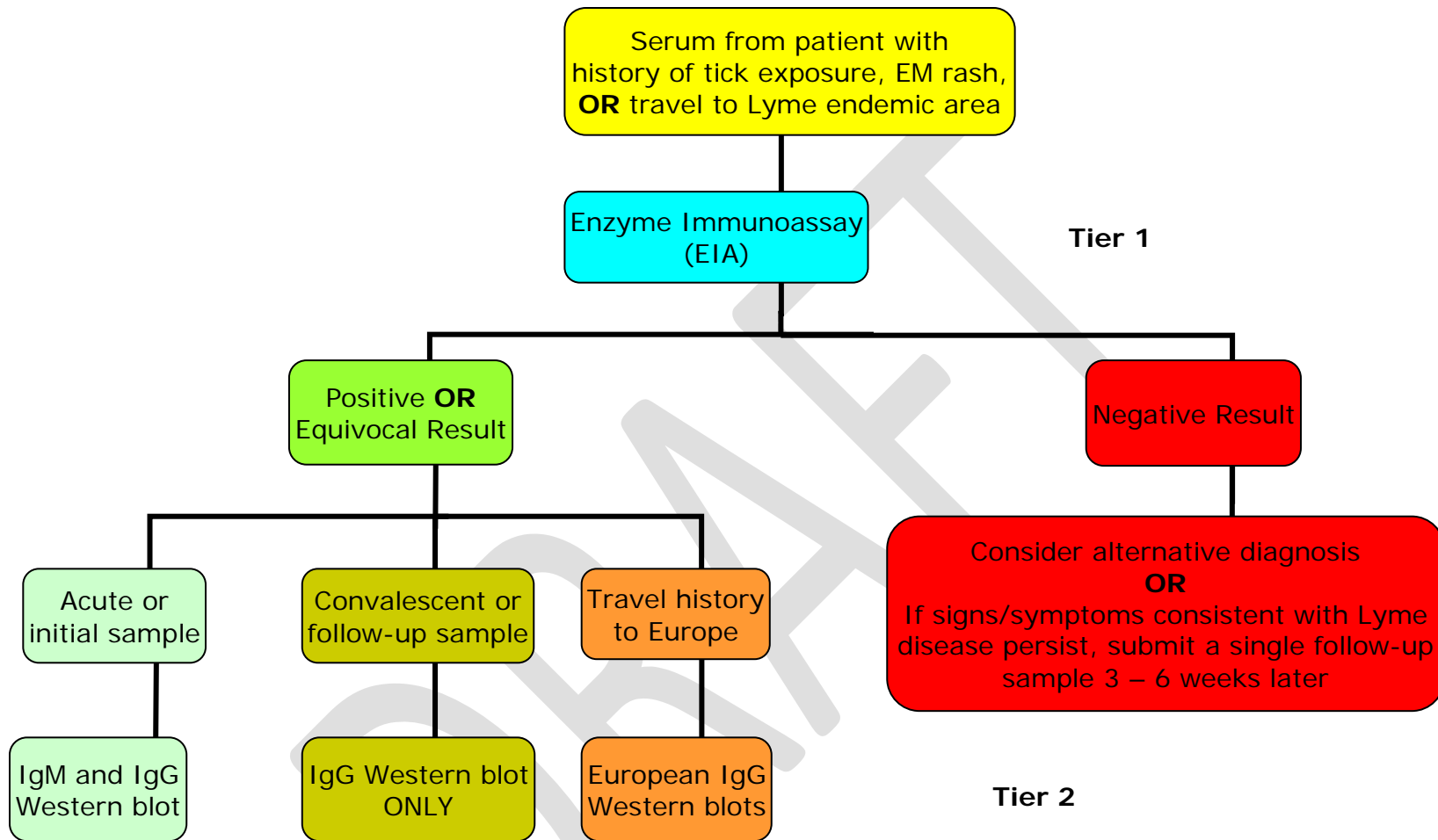
EIA cannot differentiate between a past and current infection, and may yield false-positive results when used as a stand-alone test.

Immunoblots

Immunoblots are performed only if the EIA is positive or equivocal. It is highly specific and can be used to rule out other infections or conditions. False negatives may occur if the test is performed before IgG antibodies develop, which typically occurs after 4 weeks post infection.

As IgM antibodies can persist for months to years (despite effective antibiotic treatment), a positive IgM IB is not sufficient to diagnose current disease in patients with symptoms of longer duration. A positive IgG IB is required.

When testing patients with illness duration greater than 1 month, only IgG IB should be performed (not IgM).



Treatment

A patient with erythema migrans who lives in and/or travelled to an endemic area should be treated for Lyme disease promptly, without the need for serological testing.

Most cases of Lyme disease can be treated successfully with appropriate treatment.

Doxycycline and amoxicillin are the most commonly recommended oral antibiotics, whereas ceftriaxone is the drug of choice for intravenous use.

Doxycycline is not recommended for pregnant women.

For more information, consult the [Association of Medical Microbiology and Infectious Disease Canada \(AMMI\)](#).

Post-treatment Lyme disease syndrome (PTLDS)

Some patients who were treated for Lyme disease may continue to have persistent symptoms following treatment. This condition is known as PTLDS. To date, there is no definitive evidence that persistent symptoms represent ongoing infection.

Serological tests cannot be used to measure treatment response, as antibody persistence precludes the distinction between active and past infection from being made on positive results.

Research continues into the causes and treatment of PTLDS.

For more information, consult the [Association of Medical Microbiology and Infectious Disease Canada \(AMMI\)](#).

To assist with your review of the content, here are the links to the previous version of the **Lyme disease: Surveillance** page:

- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/surveillance-lyme-disease.html>

Lyme disease surveillance

On this page

- [Monitoring for Lyme disease in Canada](#)
- [How we classify cases](#)
- [Human cases of Lyme disease in Canada](#)
- [Provincial resources](#)

Monitoring for Lyme disease in Canada

Canada monitors Lyme disease with surveillance activities that:

- keep track of the number of people infected with Lyme disease
- identify the areas where people are most at risk for getting Lyme disease

To get as much information as possible, we work with:

- local health authorities
- provincial and territorial public health organizations
- other experts, such as researchers and academia

The types of national Lyme disease surveillance include:

1. **human surveillance**, using reported cases of Lyme disease (voluntarily reporting by provincial and territorial public health organizations)
2. **tick surveillance**, using ticks that are collected:

- in their environment, during field studies (active tick surveillance)
- from people and pets through voluntary submission by doctors and veterinarians (passive tick surveillance)

How we classify cases

We use the [national case definition for Lyme disease](#) to classify cases reported to the Public Health Agency of Canada.

We developed the first national case definition in 2009, when Lyme disease became nationally notifiable. Nationally notifiable diseases are infectious diseases that have been identified by the federal government, provinces and territories as priorities for monitoring and control efforts. We last updated it in 2016.

Human cases of Lyme disease in Canada

Between 2009 and 2018, health professionals have reported 7,516 human cases of Lyme disease across Canada.

Year	Number of cases
2009	144
2010	143
2011	266
2012	338
2013	682
2014	522
2015	917
2016	992
2017*	2,025
2018*	1,487

* Reported Lyme disease cases include cases caught in Canada and internationally (travel-related).

All 10 provinces provided data over the 10 year period. This does not include territories. Territories have not reported Lyme disease cases to the Public Health Agency of Canada since the disease became notifiable in 2009.

Reported cases for 2016, 2017 and 2018 use the updated Lyme disease case definition.

Provincial resources

For local information on Lyme disease, consult your provincial or territorial health authority.

<ul style="list-style-type: none">• Alberta• British Columbia• Manitoba• New Brunswick• Newfoundland and Labrador• Northwest Territories	<ul style="list-style-type: none">• Nova Scotia• Nunavut• Ontario• Prince Edward Island• Quebec• Saskatchewan• Yukon
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For more information

- [Surveillance for Lyme disease in Canada: 2009 to 2015](#)
- [National Lyme Disease Surveillance in Canada 2009 to 2012](#)



To assist with your review of the content, here are the links to the previous version of the **Lyme disease: Awareness resources** page:



- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/lyme-disease-awareness-resources.html>
- <https://www.canada.ca/en/public-health/services/diseases/lyme-disease/indigenous-resources.html>

Lyme disease: Awareness resources

The following are resources you can download, print or order to help prevent tick bites. Some resources are accompanied by Indigenous-specific alternative formats.

Resources

Preview	Format	Description	Published date
	Exhibit	Details about the children's travelling exhibit (a display showcasing the fascinating world of ticks)	2019-07-30
	Wallet card	How to check for ticks	2020-06-15

	<p>Poster</p>	<p>Top 10 tick hiding spots on your body</p>	<p>2020-06-15</p>
	<p>Pamphlet</p>	<p>Enjoy the outdoors without a tick: (detailed information)</p>	<p>2020-06-15</p>

	<p>Poster</p>	<p>Protect your pets from ticks and Lyme disease</p>	<p>2020-06-15</p>
	<p>Poster and postcard</p>	<p>Enjoy the outdoors without a tick (simplified information)</p>	<p>2020-06-15</p>
	<p>Video</p>	<p>Enjoy the outdoors, without a tick: Tips to protect yourself and your family</p>	<p>2017-05-30</p>

	Video	Stay tick-free: Tips to prevent Lyme disease (geared for youth)	2017-05-30
	Infographic	Tackling Lyme disease in Canada: A federal action plan infographic	2017-05-30