

Tick Bites and Disease

What are ticks?

Ticks are tiny bugs, about the size of a sesame seed, which feed on blood. Different ticks prefer different types of animals. Sometimes a tick will bite a person instead of biting an animal. While most tick bites do not result in disease, some do.

The organism which causes Lyme disease (*Borrelia burgdorferi*) has been found in ticks collected from many areas of British Columbia, and health authorities now believe that ticks carrying Lyme disease may be present throughout the province. To date dozens of Lyme Disease cases have been identified. Many have not travelled outside of the province, and therefore have likely contracted the disease in BC. For updated case numbers, see the BCCDC Web site at www.bccdc.org.

Not all ticks carry this bacterium, and there is only a very small chance of them giving it to you. However, because the resulting disease can be serious, it is worth taking steps to avoid being bitten.

Ticks live in tall grass and wooded areas. They are easiest to spot when they are actually sucking blood. Ticks burrow part way into the skin, bite, draw blood, then drop off. The feeding tick's mouth will be under the skin, but the back parts will be sticking out. They will be full of blood and blue-grey in colour. This is called an "engorged" tick.



**Female
adult tick**
(approximate
actual size)



Immature tick
(approximate
actual size)



Female adult tick
(approximately
10 times actual size)

Diseases spread by ticks

Several human diseases are caused from tick bites. The most well-known is Lyme disease. Others include relapsing fever, tularemia, Rocky Mountain Spotted Fever (RMSF), Q fever and Ehrlichiosis. All of these

diseases are rare in British Columbia. Certain ticks may cause temporary paralysis. In these cases it is very important to remove the whole tick.

What are the symptoms?

If you have the following symptoms within days or weeks after being bitten by a tick, please report them to your family doctor immediately. Tell your doctor when and where a tick bit you.

1. General symptoms of fever, headache, muscle and joint pains, fatigue or weakness of the muscles of the face.
2. Skin rash, especially one that looks like a "Bull's Eye". It may or may not be where the bite was.
3. In some cases paralysis may occur. The paralysis usually starts in the feet and legs and gradually works its way up to the upper body, arms and head. This paralysis can develop from within a few hours to several days.

Treatment

If you have Lyme disease or another tick-related disease, you will need antibiotics to prevent complications.

Avoiding ticks

An effective vaccine is not currently licensed in Canada. Therefore, you should use other protective measures to prevent illness. To protect yourself against tick and insect bites:

1. Walk on cleared trails wherever possible when walking in tall grass or woods.
2. Wear light coloured clothing, tuck your top into your pants and tuck your pants into your boots or socks.
3. Put insect repellent containing 5% Permethrin onto clothing and insect repellent containing DEET on all uncovered skin. Reapply as frequently as directed on the containers.
4. Check clothing and scalp (covered or not) when leaving an area where ticks may live. Check in folds of skin. Have someone help you check hard-to-see areas. When a tick is located, remove it immediately. Check the whole body! Don't stop when you find one tick. There may be more. Make sure the lighting is good so that you will not miss seeing the ticks.

5. Regularly check household pets, which go into tall grass and wooded areas.

What to do if you find a tick?

The most important thing is to make sure that you remove *all* the tick, including the mouth parts that are buried in your skin. Also, *do not squeeze* the body of the tick when you are removing it. This can force its stomach contents into the wound and increase the chance of an infection.

If you have found a tick, you have three choices:

1. Remove the tick yourself.
2. Get someone else to remove the tick for you. If you can't reach it or see it clearly. For example, if it's on your scalp or some other hard-to-reach place.
3. Get your family doctor to remove it.

How NOT to remove a tick!

Some people think you can remove a tick by covering it with grease, gasoline, or some other substance. This does not work! It only increases the chance of you getting an infection. Holding something hot for example, a match or a cigarette against the tick also does NOT work! Again, this will only increase the chance of an infection from accidentally burning yourself. If you decide to remove the tick yourself, follow the instructions below.

When should you get a doctor to remove the tick?

You should go to your doctor to get the tick removed if it has buried itself deep into your skin. This usually happens if the tick has been on you for several hours, or even a day or two. When a tick has burrowed deep into your skin, it is very hard to remove the tick without leaving some mouth parts behind, which can cause an infection.

When should you remove the tick?

You should only remove the tick yourself, or get a friend or family member to remove it, if the tick is not buried very deep into your skin. If the tick has been on your skin for less than two hours, it has probably not had a chance to burrow into your skin. If the tick is just on the surface of your skin, or only biting on to the outside skin layer, you can remove it following the instructions here.

How to remove a tick

Remove the tick right away (if possible, wear latex gloves when handling an engorged tick):

1. Use tweezers or forceps to gently get a hold of the tick as close to the skin as possible. Don't touch the tick with your hands.
2. Without squeezing the tick, steadily lift it straight off the skin. Avoid jerking it out. Try to make sure that all of the tick is removed.
3. Once the tick has been removed, clean the bite area with soap and water then disinfect the wound with antiseptic cream. Wash hands with soap and water.
4. If possible, save the tick in a container with a tight fitting top. If the tick is alive, dampen a small cotton ball and put it into the tick container to keep the tick alive; a live tick is necessary for culturing the *spirochete*, which causes Lyme disease. Label the container with date shipped, name and address of person bitten or what type of animal the tick was from, what part of the body was bitten, and what part of the province the tick probably came from. Also include the name and address of your family physician.
5. For laboratory testing, this container should be mailed as soon as possible to:

BC Centre for Disease Control (BCCDC)
Vector-Borne Diseases Laboratory
655 West 12th Ave
Vancouver BC V5Z 4R4
6. Ask your doctor for further advice.



BC Centre for Disease Control
AN AGENCY OF THE PROVINCIAL HEALTH SERVICES AUTHORITY

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