Lyme Disease Training Game Plan

Although OHS regulations don't expressly address Lyme disease or other tick-borne diseases, employers have a general duty to take measures to protect workers against reasonably foreseeable hazards. That includes diseases carried by ticks, especially for workers who work outdoors in the spring and summer. Part of that duty is to provide appropriate safety information and training to workers who are at risk of getting bitten by ticks carrying Lyme and other diseases. Here's a Train-the-Trainer Game Plan to help you comply with these requirements.

What Lyme Disease Safety Training Must Cover

According to NIOSH, by the time they complete their training, exposed workers must understand 6 things:

1. What Lyme disease is.
2. How it's spread.
3. The risks of exposure and infection.
4. How to protect themselves from those risks.
5. How to recognize the signs and symptoms of Lyme disease.
6. What to do if they experience such symptoms.

Let's take a closer look at each of these things.

1. **What Lyme Disease Is**

Lyme disease is an illness caused by a corkscrew-shaped bacterium called *Borrelia burgdorferi*. Although it's not usually fatal, Lyme disease often has lingering effects that can last for months or even years after treatment. **Training Tip:** You can convey the nastiness of Lyme disease by going online and downloading photos of Lyme disease victims to use in your training presentation.

2. **How Lyme Disease Spreads**

Once they understand what Lyme disease is, workers need to know how they can get it. Unlike other infectious illnesses, Lyme disease is **not** spread via human contact. It's caused by ticks, i.e., tiny blood-sucking insects that live in the woods and tall grasses. Ticks pick up the bacterium by feeding on deer and rodents. The infected tick then attaches itself to a human and, if not properly removed, transmits the infection to its host.

3. **Workers' Risks of Exposure**

Lyme disease is a workplace hazard to workers in particular geographic regions who work outdoors during tick season. The fact that you've been asked to deliver Lyme disease safety training is a pretty good indication that somebody at your organization has performed a hazard assessment and found these conditions to be present. Your job is to let workers know that they're at risk and explain how they can get bitten by a tick at work. Some key facts about ticks to relate to workers:

- Ticks are tiny and hard to see with the naked eye even when full grown.
- The ticks that most often spread Lyme disease are less than full grown "nymphs" (less than 2 mm-long).
- Ticks don't jump or crawl onto you—they get onto your body when your clothing or hair brushes a leaf, blade of grass, or other object that the tick is on.

- The things ticks hang out on are generally no higher than 3 feet above the ground.
- Once ticks do get onto the clothes or hair, they crawl around looking for a good place to feed—typically the scalp, armpits, groin, and back of the knees.

4. **What Workers Must Do to Protect Themselves**

Perhaps the most important part of safety training is to ensure that workers understand that the best thing they can do to protect themselves from getting Lyme disease is to avoid getting bitten by infected ticks. List specific measures to take, like:

- Wearing the right protective clothing, including:
- Light-colored clothing (because they make it easier to see any attached ticks).
- A hat.
- Long-sleeved shirts.
- Long pants.
- Socks.
- Long boots or closed shoes that cover the entire foot.
- Tying back long hair.
- Tucking their pants into their socks or boots.
- Using appropriate insect repellant.

After completing outdoor work, workers should:

- Shower.
- Remove their work clothes and wash and dry them at high temperatures.
- Do a careful body check for ticks.
- Use tweezers to remove any ticks they find.
- Use an antiseptic to clean the skin where they found the tick.

5. **Signs & Symptoms of Lyme Disease**

Once a tick attaches to the body and starts feeding on the

bloodstream, it takes about 36 to 48 hours of feeding to transmit the bacterium. The early symptoms of Lyme disease are a lot like the flu—fever, chills, headache, etc. The difference: Many Lyme disease victims get the so called "bullseye" rash, i.e., a skin rash that looks like a round target with a bullseye in the center. If not properly treated, Lyme disease can spread through the body and cause chronic symptoms, i.e., long-term damage such as arthritis, neurological damage and, in some cases, abnormal heartbeat and severe fatigue. Lyme disease can also complicate pregnancy.

Phase	**Time**	**What Happens**
Exposure	Day 0	Infected tick "bites," i.e., attaches itself to victim's body.
Incubation	36 to 48 hours	Tick feeds on host and transmits bacterium to the bloodstream.
Early Lyme Disease	3 to 14 days	Victim experiences early symptoms including: • Bull's-eye skin rash. • Fatigue. • Chills and fever. • Stiff neck. • Headache. • Muscle and joint pain. • Swollen lymph nodes.

Phase	Time	What Happens
Late Lyme Disease	Weeks or even months	Failure to properly treat infection with antibiotics may result in: • Arthritis. • Numbness, pain, headache, paralysis, and other nervous system symptoms. • Irregularities of heart rhythms.

6. **What Workers Should Do If They Experience Symptoms**

As long as you catch it early, Lyme disease is fairly simple to treat with antibiotics. But Lyme disease often goes undetected during the crucial early stages:

- Ticks are tiny and hard to see with the naked eye.
- Tick "bites" aren't painful and can't be felt.
- Victims with early symptoms often think they just have the flu.

Of course, the bullseye rash is a telltale sign. But 20% of victims never develop the rash. And those who do may not recognize it as a sign of Lyme disease.

Bottom Line: If nothing else, make sure that workers performing outdoor work who are exposed to Lyme disease risks leave their training with a sense of how crucial it is to **act immediately**. Urge them to report their illness and see a doctor as soon as possible not only if they get a bullseye rash but experience *any* of the early symptoms of Lyme disease.

Other Tick-Borne Diseases

Although Lyme disease accounts for most tick-borne illness cases in Canada, tick bites can also cause other illnesses,

depending on the tick, including:

- **Tularemia,** aka rabbit fever, transmitted by Rocky Mountain wood ticks, American dog ticks, and Lone star ticks.
- **Babesiosis** transmitted by ticks infected by rodents, cattle, or wild animals.
- **Ehrlichiosis** transmitted by deer ticks and Lone star ticks.
- **Rocky Mountain Spotted Fever** transmitted by dog ticks and Rocky Mountain wood ticks.
- **Anaplasmosis** transmitted blacklegged and western blacklegged ticks.
- **Powassan virus disease** transmitted by blacklegged, groundhog and squirrel ticks.

Tick	**Diseases It Carries**	**Location(s) Established**
Blacklegged tick (deer tick)	• Lyme disease • Anaplasmosis • *Borrelia miyamotoi* disease • Babesiosis • Powassan virus disease	• BC (south) • Manitoba (south) • New Brunswick (mid- to south) • Nova Scotia • Ontario (west, south, southeast) • Québec (south)
Western blacklegged tick	• Lyme disease • Anaplasmosis • *Borrelia miyamotoi* disease	Coastal and Southern interior of BC
American dog tick	• Tularemia • Rocky Mountain spotted fever	• Alberta • BC • Saskatchewan (western)
Groundhog tick	Powassan virus disease	Southcentral and Southeastern Canada

Tick	Diseases It Carries	Location(s) Established
Rocky Mountain wood tick	• Tularemia • Rocky Mountain spotted fever	• Alberta • BC • Saskatchewan (western)
Squirrel tick	Powassan virus disease	• New Brunswick • Newfoundland • Nova Scotia • Ontario • Prince Edward Island • Québec
Lone star tick	• Tularemia • Ehrlichiosis • Bourbon virus disease • Heartland virus disease	• Alberta • Manitoba • Nova Scotia • Ontario • Québec • Saskatchewan

Source: Health Canada