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# **TICK BITE PREVENTION & RESPONSE**

**Leader's Guide, Fact Sheet  
& Quiz**

***This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.***

## **PREPARING FOR THE MEETING**

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

## **CONDUCTING THE PRESENTATION**

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

# 4876 TICK BITE PREVENTION & RESPONSE FACT SHEET

**LENGTH: 16 MINUTES**

## **PROGRAM SYNOPSIS:**

If you spend time in the outdoors in North America, you stand a good chance of having a tick attaching itself to your body and feeding on you. The result of this tick bite could be a serious disease such as Lyme Disease or Rocky Mountain Spotted Fever. In this program, EMT/Firefighter/Best-Selling Author Martin Lesperance stresses the importance of early treatment of tick bites and precautions for preventing them in the first place. It's important to note that throughout Canada and the US, areas that were once low risk for tick bites have become high risk, so everyone in North America can benefit from the information presented in this program.

Topics include various types of ticks and where they live, how ticks spread diseases, Lyme Disease, Rocky Mountain Spotted Fever, preventing tick bites and tick removal.

## **PROGRAM OBJECTIVES:**

After watching the program, the participant should be able to explain the following:

- What types of ticks inhabit North America and how their life cycles evolve;
- How ticks spread diseases;
- What the signs and symptoms of Lyme Disease and Rocky Mountain Spotted fever are;
- What precautions to take to prevent tick bites;
- How to remove a tick and respond to its bite.

## **PROGRAM OUTLINE:**

### **BACKGROUND**

- If you spend time in the outdoors, whether it's for work or recreational activities and if you're in North America, you stand a good chance of having a wood tick attaching itself to you and it may feed from you. That means sucking your blood.
- They do more than that. They transmit diseases and these diseases can make you very sick for a long time and if they go untreated in certain cases, you could die as a result of them.
- In Canada, within five years the number of cases of Lyme disease has quadrupled. In Ottawa, Ontario, within one year, the number of Lyme disease cases has tripled. In the United States, there were well over 18,000 cases of Lyme disease.

### **WOOD TICKS & OTHER TYPES OF TICKS**

- Wood ticks belong in the spider family. They are blood sucking parasites that feed off blood from animals and humans.
- They will feed on a person for about four to seven days for a full meal. During this time, their bodies will expand to incredible sizes. Then, they drop off and lay their eggs.
- When the eggs hatch, they're in the larva stage. In this stage, they do not transmit Lyme Disease, but in the larva stage, they will seek out and feed off of small rodents.
- The next stage in a tick life cycle is the nymph stage. In this stage, they can transmit Lyme Disease.
- They're very small and very difficult to see and you might not notice them until they start feeding on you and getting larger.
- Both in the nymph stage and the adult stage, they will feed off of larger mammals such as dogs, deer and humans.
- When they mature into adults, they can lay eggs. Once these eggs hatch, they need to feed on blood in all stages of their life. This whole tick cycle takes about 2 years.
- Ticks have been known to transmit diseases such as Lyme disease, but also Rocky Mountain Spotted Fever can be transmitted. Both of these are both very serious diseases.
- Blacklegged ticks are also called deer ticks and they're known to transmit Lyme disease while lonestar ticks, rocky mountain wood ticks and dog ticks are known to transmit Rocky Mountain Spotted Fever.
- To the untrained eye, it can be difficult to tell the difference between the species. So to play it safe, treat all ticks with suspicion.

### **TICK HABITAT**

- Ticks are found in many areas of North America. For example, the blacklegged tick or deer tick inhabit the Northeastern,

Mid-Atlantic and North Central USA, while the western blacklegged tick inhabit areas on the Pacific coast.

- Ticks are found across Canada, but eastern Canada and Manitoba have higher rates of Lyme Disease carrying ticks than other areas.
- Areas with high concentration of white-tailed deer have the potential of increased ticks. White-tailed deer are a favorite feeding source for ticks.
- It's important to realize, you don't have to be in the deep bush in order to get bitten by a tick. It can happen as close as your backyard.
- Ticks can spread diseases throughout Canada and the United States and what we are finding is that areas that were low risk areas of ticks are now becoming high risk areas. Things are changing.
- The risk of ticks start in early spring and can continue until winter and freezing temperatures begin.
- Ticks can be found in wooded areas. They have a tendency to cling to grasses and leaves.

### **HOW TICKS SPREAD DISEASES**

- Lyme Disease is carried by mammals such as squirrels, mice and white-tailed deer. They are the source of the disease, but it is the ticks that carry the disease or become the vehicle that transmits it to other animals, including people.
- With Rocky Mountain Spotted Fever, the tick can actually serve as the host or the source and the vehicle that transmits the disease. In both cases, diseases are transmitted as they feed, as they suck your blood.
- Ticks do not jump, fly or spring onto you. They attach themselves to vegetations such as underneath leaves and they wait for animals or yourself to brush against them.
- When they do, they crawl onto you. Then they start to look for a good place to feed. It's common for them to crawl all the way up to your neck or your head.
- Ticks can also attach themselves to you when you handle animals such as your pets.
- Ticks will attach their mouths to your skin and start drinking blood very slowly. You usually won't feel the bite. They will feed on you for days.
- Their bodies will get very large thanks to you and your blood. This is when the diseases are transmitted.

### **LYME DISEASE**

- Certain ticks, especially blacklegged ticks, also called deer ticks, can transmit Lyme Disease.
- For the disease to be spread, the tick has to be attached to you for 24 to 36 hours. This is why it's important to check for and remove any ticks from your body on a regular basis.
- As we learn more about Lyme Disease, the time needed for the disease to be transmitted may be less than we first thought, so always err on the side of caution.
- A common sign of Lyme Disease is a circular rash that forms at the site of the tick bite at three to 30 days. If left untreated, the person may develop fever, chills, muscle and joint pain and headaches.
- Longer-term symptoms include multiple skin rashes, extreme fatigue, general weakness, heart palpitations and arthritic pain.
- This is important. With Lyme disease, not everyone who is infected will develop the circular rash. In fact, about 20 to 30 percent of the people who have contracted Lyme Disease did not show signs of that rash.
- Also, if you develop the signs and symptoms of Lyme Disease and don't remember being bitten by a tick, be sure to mention that to your doctor and ask about Lyme Disease, as it's possible you were bitten by a tick and didn't even know about it.
- If you start to develop these signs and symptoms after being bitten by a tick, seek medical aid and don't forget to tell the doctor that you were bitten by a tick.

### **ROCKY MOUNTAIN SPOTTED FEVER (RMSF)**

- In the United States, there are approximately 3,000 cases of Rocky Mountain Spotted fever every year.
- Rocky Mountain Spotted Fever is a bacterial infection that can also be spread by ticks. The signs and symptoms will usually appear between two and 14 days after the infected tick has bitten the person.
- The following are some of the signs and symptoms that may appear. Few people will show all the signs and symptoms: headache, muscle pain, fever, vomiting, abdominal pain, red eyes, loss of appetite and a rash, which develops two to five days after the fever.
- The rash starts out as a non-itchy spot on the wrists, forearms and ankles that eventually spreads throughout the body. About 10 percent of infected people will not develop a rash.
- If you do start to develop these signs and symptoms, seek medical aid immediately and don't forget to tell the doctor that you were bitten by a tick.
- If left untreated, Rocky Mountain Spotted Fever can become life threatening.

## **PREVENTING TICK BITES**

- When walking or working in areas that may have ticks, wear long pants and long sleeve shirts. Tuck your pants into your socks. This reduces the chance of them crawling up your leg.
- Wear light-colored clothing, as this makes it easier to spot ticks.
- Apply bug repellent with DEET. This will help repel ticks. DEET can be applied to the clothing and skin.
- Caution should be used in using DEET with young children. Always read and follow the manufacturer's directions.
- Permethrin is a chemical you can buy that kills ticks. You can buy clothing that's impregnated with it to help repel ticks. You can also buy it in a spray, but it should not be sprayed on the bare skin.
- Consider spraying it on your hiking boots, camp chairs, tents and other gear to help keep ticks away from you. Always follow the manufacturer's directions.
- At the time of filming this, Permethrin wasn't available in Canada.
- Walk in the middle of trails. There is less chance of brushing against vegetation that ticks may be clinging to.
- Always look for ticks on yourself and the people you are with while outdoors.
- At the end of the day, do a full-body check. Ticks are small, so look carefully. Using a mirror can make this easier.
- Check every part of you: your head, neck, belly button, groin and behind the knees are places ticks may be found; and, don't forget to check your children and pets.
- So, here's a bit more on children and pets. You understand the dangers of ticks and the diseases they can spread. Your children don't, so please, educate them at an early age about ticks and always do a full-body check on each and every child when you come back indoors.
- For your pets, while we were filming this, on the news they had one dog that had over 700 ticks on him. It just about killed the little guy. So, please, check your pets on a regular basis for ticks.
- If you've been in a tick-infested area, when you get home, put your clothes in the dryer and tumble on high heat. Don't leave them in an area where the ticks can crawl out of your clothes into areas of your house, like, don't leave your clothes on your bed.
- Ticks have been known to survive washing cycles with hot water, but most ticks die with the hot dry air of the clothes dryer.

## **TICK REMOVAL**

- If a tick is found, remove it immediately to reduce the chance of disease spread. Do not use petroleum jelly or try to burn it with a match.
- With fine tweezers, grasp the head and the mouth as close as possible to the skin. Slowly pull upwards until the tick is removed. Avoid twisting or jerking as you pull. Also, avoid crushing the body.
- Once the tick is removed, wash the bite area with soap and water followed by an antiseptic.
- Note where you were bitten by the tick. Some people may develop an infection or a reaction that may require medical attention.
- If you are bitten by a tick, you may want to save the tick and have it sent to a medical lab for testing. To help keep the tick alive, put some moist tissue paper at the bottom of a Ziploc bag, put the tick inside and make sure you zip it up closed.
- Ticks are common, but don't let them stop you from enjoying the outdoors, but if you plan on going to a heavily infested area at certain times of the year, be prepared or you may choose not to go to that area at all. That's your decision.
- Prevention is the best course of action from being bitten by a tick, so remember to dress properly, stay in the middle of trails, use repellents with DEET, constantly scan yourself for ticks, do a thorough body check at the end of the day.
- Enjoy the outdoors but be careful.

## **TICK BITE VICTIM IS DIAGNOSED WITH LYME DISEASE**

- In 2015, I was out rock climbing in the mountains for the day and after I got home, I noticed a bite mark on my leg with a red rash around it.
- I didn't really think too much of it, but in the next couple of days I got quite ill. I had a lot of nausea, ringing in my ears, hearing loss, vertigo, dizziness and I was very tired.
- So, I went to the doctor and I didn't know too much about Lyme Disease at the time, but I was told that Lyme Disease doesn't exist in the area.
- I was still sick for about three weeks after that and then eventually I got a little bit better, but I still had some lingering symptoms and I started to develop other symptoms as well. Including joint pain, the fatigue was worsening and I was also getting some tingling in my legs.
- It took me one year and nine doctors before I got my diagnosis of Lyme Disease. I specifically sought out a doctor who was trained in diagnosing and treating Lyme Disease and that's how I got my diagnosis.

- I was started on antibiotics. I had to have multiple antibiotics for several months at a time and with treatment, my symptoms improved, but it's been two years now since my bite and I'm still undergoing treatment and I still have some symptoms.
- I still get joint pain; I still get tired quite easily; I have to maintain a strict diet and this is something that I may be dealing with for the rest of my life.
- Lyme Disease is something that if you catch it right away, it's very easy to treat and had I been put on a couple weeks of antibiotics within a couple days of my bite, that probably would've been the only treatment I needed. But now, two years later, I'm still in treatment and this may be something I'm dealing with for the rest of my life.
- I think it's really important for people to understand the risk of Lyme Disease. It does exist. It may exist in areas you're not expecting it to, like your backyard and not just the mountains.
- So, tick checks are very important on yourself, and your children and your pets, after being in the outdoors so that Lyme Disease isn't a problem for you and your loved ones.

**TICK BITE PREVENTION & RESPONSE**

**ANSWERS TO THE REVIEW QUIZ**

1. a

2. c

3. a

4. b

5. a

6. c

7. a

8. b

9. a

10. b

**TICK BITE PREVENTION & RESPONSE**  
**REVIEW QUIZ**

*The following questions are provided to determine how well you understand the information presented in this program.*

Name \_\_\_\_\_ Date \_\_\_\_\_

1. A tick does NOT transmit Lyme Disease in the \_\_\_\_\_ stage.
  - a. Larva
  - b. Nymph
  - c. Adult
  
2. Blacklegged ticks are also called \_\_\_\_\_.
  - a. Lonestar ticks
  - b. Dog ticks
  - c. Deer ticks
  
3. Areas with high concentrations of white-tailed deer have the potential of increased ticks.
  - a. True
  - b. False
  
4. Ticks attach to the human body after they jump, fly or spring onto you.
  - a. True
  - b. False
  
5. When a tick bites you, you usually won't feel it.
  - a. True
  - b. False
  
6. For Lyme Disease to spread from a tick to a human, the tick must be attached to your for \_\_\_\_\_ hours.
  - a. 6 to 12
  - b. 12 to 24
  - c. 24 to 36
  
7. With Lyme Disease, not everyone who is infected will develop a circular rash.
  - a. True
  - b. False
  
8. Permethrin is a chemical that should be sprayed directly on bare skin to repel ticks.
  - a. True
  - b. False
  
9. Ticks have been known to survive washing cycles with hot water, but most ticks die with the hot dry air of the clothes dryer.
  - a. True
  - b. False
  
10. Upon removing a tick, you should immediately crush its body.
  - a. True
  - b. False