

Do All You Can to Prevent The Bite

Last October, on Halloween day, I was in Boston, sitting in Senator Pacheco's office listening to parents who had lost children to Eastern Equine encephalitis (EEE). One phrase used repeatedly was "If only I had known...." They were emphasizing that public health officials need to use multiple methods and modes of educating the public about infectious disease. Some people hear a message on the radio. Some people read the newspaper; others do not. As they described various ways of getting the message out, I was mentally checking them off. I wanted to succeed at this. One mother asked why there weren't signs up warning people about mosquitoes. After all, she reasoned, signs go up at a beach when the water is not safe. She wanted to know why there weren't signs about mosquitoes. At first I thought this was impractical. I couldn't put them up and take them down and put them up again without causing confusion or complacency. But then I thought again. Why not design a sign that served as visual reminder and keep it posted all year long? I quickly drew a sketch of a tick and a mosquito, with a few words and contact information.

That sign is now a reality. Some State funding to support educational efforts for emerging infectious diseases helped to provide the signs to many towns in Massachusetts. Used in conjunction with pamphlets and fact sheets provided by our Department of Public Health, we are getting the word out that infectious disease is a major cause of death and chronic illness throughout the world and that we can make a difference when it comes to diseases such as West Nile virus, EEE and Lyme disease. We can make a difference. Yet, I still acquired Lyme disease. Again. Yup. This is my third case.

My sign says, "These carry disease. Do all you can to prevent the bite." It is meant to be empowering and yet the word needing underscoring here is "all". Do everything you can to protect yourself. Some of the protective measures may not be enough in and of themselves.

After giving this considerable thought, I have identified at least two areas of my personal protection needing improvement and they are related. My job brings me outdoors at times. I have traditionally used the repellants with DEET. When I am at a perc test, my legs are covered with jeans and socks and boots and a liberal application of repellant. This summer, however, I was paying attention to announcements that permethrin should only be applied to clothing, not to skin. As the temperatures were rising and I was sometimes leaving my car only briefly for an inspection, I was not using spray because I was wearing sandals and Capri pants. Lesson learned: wear long pants and apply permethrin to the clothing. I now remember the difference between the sprays by keeping in mind that DEET only repels and so might be OK for the skin. Permethrin kills ticks and so might not be good for your skin. (DEET is not as effective in repelling ticks as it is mosquitoes.)

I am comfortable recommending the permethrin on clothing for several reasons. It has been used and studied for a long time. It is prescribed at a much higher rate for temporary but direct use on children and infants to kill lice and mites. Permethrin adheres tightly to clothing and once dried, can be washed numerous times in cold water but does not enter the skin. That's right. You can make your own tick killing clothing, as it was developed decades ago for the military, by soaking clothing, gloves, socks etc,

and allowing them to air dry before use. Sawyer sells a kit that will treat a whole outfit for about six dollars.

I highly recommend two easy to use websites for information on Lyme disease. www.tickencounter.org and MA DPH tick borne disease website. You will learn that ticks in our area carry several diseases and a person can be co-infected with two or all of them.

Up until last week I was emphasizing the difference between the deer tick, which carries *Borrelia burgdorferi*, *Ehrlichia*, *Babesia*, or *Bartonella* and the wood or dog tick, which I thought was safe. Last week I received notice of a Halifax case of Rocky Mountain Spotted Fever. The name is apparently misleading with only a small percentage of cases occurring in that area. The common wood or dog tick carries Rocky Mountain Spotted Fever.

While ticks are the transmitters of these diseases, the bacteria causing the disease grows in a cycle involving other animals. Lyme disease, for instance, depends upon the white-footed mouse and deer to complete the cycle. One little mouse can have 350 tick larvae feeding on it, picking up the disease from the mouse. Thousands may be on a deer, dropping off on one area, after the deer rests. You can help to break the cycle by discouraging deer and mice in your yard. You can actually treat the mice by placing, around your yard, cotton balls and thread that have been soaked in permethrin and allowed to dry. Mice cannot resist the cotton and thread as nesting materials. The permethrin kills the ticks. The mice are fine. Some towns are experimenting with treating deer in the same way by luring them to corn filled feeding stations requiring the deer to push its head through permethrin soaked rollers to get to the food.

I am itchy just thinking about it but the bottom line is insects can carry serious diseases. Here's what I want you to take away from this column:

Talk about this in your family and with friends and neighbors.

Change your attitude (and behaviors) to one of empowerment. You can make a difference.

Kill ticks by treating clothing and boots and gloves with permethrin and allow it dry.

Be aware of early signs of illness and seek medical treatment. If you find yourself saying "I feel like I have the flu but it is not flu season.", get to the doctor and ask to be tested for tick borne and mosquito borne disease.

Remember: Ticks suck. Don't let them bite.