Green Tips

Protecting Against Tick-Borne Diseases

Lucy Revercomb, BS

A rise in temperature often brings an associated rise in outdoor activities, and consequentially, a greater risk for tick bites. Ticks live in grassy, brushy, or wooded areas, and even on animals. Tick bites often occur in people's own backyards and neighborhoods. Tick-borne diseases and associated illnesses are a serious public health problem in the United States (US). The incidence of these diseases continues to rise, and they now represent more than 75% of all reported infections transmitted by ticks, mites, and insects in the US. [1] The most common tick-borne disease in the US is Lyme disease, with the Centers for Disease Control and Prevention (CDC) estimating more than 476,000 new cases of Lyme disease each year. [2] There are many factors attributed to the rise in incidence of tick-borne illnesses, one being the potential impact of climate change. Increasing temperature is suspected to affect tick biting rates and pathogen developmental rates which may increase the risk for disease incidence. [3] Ticks that transmit human disease are now found in all contiguous states and Alaska, and the combination of human activities and a changing climate favor the presence of ticks near people, so it is important to stay educated on how to protect against tick-borne diseases. [3,4]

Children are particularly at risk of tick exposure, tick-borne diseases, and associated complications of tick-borne diseases. [2, 5,6] For example, a recent review reported that 69% of cases of Rocky Mountain Spotted Fever in the US between 1990 and 2017 were among patients ≤ 18. [7] Tick-borne diseases can have significant negative long-term effects on the health and quality of life of affected individuals. [8,9] While the importance of proper and timely treatment for tick-borne diseases cannot be understated and many of these diseases have therapies available for their management, decreasing prevalence of tick-borne disease complications begins with preventing the disease. While governmental agencies undertake efforts such as forest burning and thinning to reduce tick bites, there are certain measures that can be taken to protect yourself and your family.

What can be done to prevent tick borne diseases:

- Reference tick surveillance maps to know which ticks are in your area and which are the months with the highest tick-borne disease transmission.
- Use Environmental Protection Agency (EPA)-registered insect repellants, avoiding products containing OLE or PMD on children under 3 years old.
- Treat clothes and gear with 0.5% permethrin or purchase permethrin-treated clothing which remains protective through several washings.
- If you have a dog talk to your veterinarian about tick prevention products that can help prevent ticks being brought into your home.
- When outside avoid wooded and brushy areas and stay on the center of trails.
- After returning indoors carefully check clothing, gear, and pets for ticks. Place clothing in a hot dryer for 10 minutes to kill ticks on dry clothing.
- Shower within two hours of being outdoors, which has been shown to decrease the transmission of tick-borne diseases. [10]

- Conduct a full body check including in and around the hair and ears, under the arms, around the waist, inside the belly button, behind the knees, and in the groin area.
- In the event of a tick bite remove the tick as soon as possible using the CDC Tick Bite Bot for assistance with removing the attached tick and determining when to seek health care, if appropriate.

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