

Summer's Unwanted Intruder: Tick-borne Diseases

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Here's something unnerving to consider when you're outdoors during the final weeks of summer: ticks want to have you for dinner...as their main course. For dessert, they can serve up tick-borne diseases.

No one wants to think about ticks during summer vacation, a weekend at the shore, while hiking in the woods, or playing with the dog at the park. But ticks are definitely thinking about where to get their next meal. If you spend any time outside, that could be you.

These blood-sucking bugs are as stealthy as vampires but they don't need the cover of darkness to find and feast on their prey. Ticks sit on the ends of branches, tall grasses and bushes and wait for an unwary warm-blooded being to pass by and brush against them. Fallen logs and wood piles are a favorite haunt, too.

Rob,* now in his 40s, recalls that Lyme disease was a hot topic in the news and among his friends' mothers during his teen-aged years. He knew Lyme was spread by the blacklegged deer tick and he took precautions not to be bitten: wearing long pants and boots when walking in the woods on his family's property and using insect repellent. But heavy clothes aren't practical for chopping firewood on a hot summer day. Wearing shorts and a T-shirt, Rob spent several mornings splitting and stacking firewood for the

winter. He spent the next several months paying for the mistake of forgetting to apply bug spray or checking for ticks when he went indoors.

The first sign of trouble was a rash on the inside of his upper arm, but it wasn't the typical bull's-eye shape rash commonly associated with Lyme disease. Rob then developed flu-like symptoms that lingered. His mother took him to the doctor several times over the next few months. "A diagnosis was hard to pin down because my symptoms kept changing," Rob said. "My joints were achy and swollen. I was tired and wanting to sleep all the time. I developed headaches and a fever."

About two months after the rash first appeared, his doctor prescribed antibiotics. Rob slowly recovered from each symptom, but not in time to play varsity football that fall.

Rob was bitten about 25 years ago and since then reports of Lyme disease have increased steadily with annual cases estimated at 300,000 to 329,000 in the U.S. However, some studies indicate there could be as many as one million new cases each year.¹ Due to the explosion of deer populations that are moving into urban areas, Lyme disease has now become a threat in city parks.²

Ticks, dangerous because they can be infected by bacteria, viruses or parasites, are a growing health risk. The bite from a tiny tick can also cost big bucks. Americans pay about \$1.3 billion annually in direct medical costs to treat Lyme disease³ and this figure doesn't include lost wages. And up to 20% of tick-infected victims will experience symptoms months or even years after the initial illness strikes.

Lyme is just one of 16 tick-borne diseases reported in the U.S.⁴

While most tick bites don't cause diseases and or produce symptoms, many tick species do pose serious health threats. [These Centers for Disease Control and Prevention \(CDC\) maps](#) show where human-biting ticks live throughout the country. The brown dog tick that spreads Rocky Mountain Spotted Fever is found all over the U.S.

Lyme is the most common tick-caused disease in the United States⁵. Here are three more illnesses to know about:

Powassan Virus (POW)

Powassan virus infections have been reported from the Northeastern U.S. and the Great Lakes region. There are no vaccines to prevent POW or medicines to treat the infection. Victims often need hospitalization to receive support with breathing and for treatment of brain swelling.⁶

The black-legged tick that causes POW has spread throughout the Eastern half of the U.S. In 2019, a New Jersey man infected by the virus has died.⁷

Rocky Mountain Spotted Fever (RMSF)

RMSP is transmitted by the American dog tick in the Eastern, Central and Western U.S., by the Rocky

Mountain wood tick in the Rocky Mountains states and by the brown dog tick in the Southwest. Antibiotics, such as Doxycycline and similar medications, are the most effective treatment for Rocky Mountain spotted fever; medical authorities recommend that treatment begin within a few days after a tick bite.⁸ Waiting too long can result in brain swelling, tissue death and multiple organ damage.

Heartland Virus

Spread by the Lone Star tick, the Heartland virus is relatively new, having been discovered in 2009 and first written about in 2012.⁹ As of September 2018 (the most recent published information found during our research), about 40 cases have been reported in the Midwest and Southern United States. Heartland virus is potentially deadly. So far there is no test to diagnose it, no vaccine to prevent it and no treatment to cure it.

Tick Bite Symptoms

Tick disease symptoms may develop within a few days to a few weeks following a bite¹⁰. Symptoms vary according to the tick-borne illness, such as:

- Red spot or rash near the bite site
- Full body rash
- Neck stiffness
- Headache
- Nausea, fever and chills
- Weakness
- Muscle or joint pain
- Swollen lymph nodes

Treatment will vary according to the type and severity of a tick-borne illness, if present. Be sure to seek medical treatment.

Tick Disease Prevention

The CDC says the best prevention is to avoid ticks. The next-best way to prevent illness is avoid getting bitten.

Here's how:

- Avoid wooded and brushy areas with high grass and leaf litter.
- Walk in the center of trails.
- Wear insect repellent; treat clothing and gear.
- Wear light clothing so you can see a tick that's landed on you.
- Check yourself, pets and kids for ticks after being outdoors. To learn how to check for ticks on people, see our infographic.
- Shower as soon as possible after spending time outdoors, especially if in areas where ticks are common.
- Use Environmental Protection Agency-registered insect repellents containing DEET, picaridin, IR3535, Oil of Lemon Eucalyptus (OLE), para-menthane-diol (PMD), or 2-undecanone. (Be sure to check with your doctor before using insect repellents on young children).
- Treat your pets with veterinary-approved monthly flea and tick medication.

**Rob likes his privacy, so we've changed his real name.■*

¹[Healthline.com](#), "13 Signs and Symptoms of Lyme Disease"

²[HealthDay](#), "Lyme Disease Now a threat in City Parks"

³[U.S. Department of Health and Human Services](#), "Tick-borne Disease Work Group Report to Congress"

⁴[Centers for Disease Control and Prevention \(CDC\)](#), "Tick-borne Diseases of the United States"

⁵[National Institute for Occupational Safety and Health](#), "Lyme Disease"

⁶[CDC](#), "Powassan Virus"

⁷[94.3, The Point](#), "Tick Carrying Deadly Brain Swelling Virus Found in New Jersey"

⁸[WebMD](#), "Rocky Mount Spotted Fever"

⁹[WebMD](#), "New Tick-Borne Disease Found"

¹⁰[Healthline.com](#), "What are the Symptoms of a Tick Bite?"

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