2023

PRESS RELEASE

For More Information:
ELLEN G. DUYSEN
Central States Center for Agricultural Safety and Health
University of Nebraska Medical Center
College of Public Health, Room 3035
984388 Nebraska Medical Center
Omaha, NE 68198-4388
402.552.3394

FOR IMMEDIATE RELEASE

By UNMC, Central States Center for Agricultural Safety and Health, Omaha, NE

BLOOD-SUCKING BUGS: BE AWARE OF THE RISKS
Take every precaution to avoid ticks and tick bites.

© Can Stock Photo / CurtisPerry

Some of them are difficult to detect, some might have fed and left the host undetected, so the only evidence of a tick bite may be a resulting rash or illness. But be aware that anyone spending time out of doors is likely to encounter ticks at some point.

Jody Green, University of Nebraska-Lincoln Extension Educator/Entomologist, says reports of ticks discovered in the region are on the increase, which means the public is becoming more aware of the dangers posed by these disease carrying vectors.

"People are bringing in ticks to be identified instead of pulling them off in a panic and disposing of them," Green says. "Reports show it could be 3 to 30 days after a tick bite before symptoms of Illness show up. Knowing which ticks you've been exposed to may help physicians in narrowing down the tickborne diseases and help with a quick diagnosis."

Common symptoms of tick-related illnesses include:

- Fever/chills – all tickborne diseases can cause fever.
- Aches and pains. Tickborne diseases can cause headache, fatigue and muscle aches. People with Lyme disease may also experience joint pain.
- Rash. A distinctive rash is a symptom common in Lyme disease, Southern tick-associated rash illness (STARI), Rocky Mountain spotted fever (RMSF), ehrlichiosis, and tularemia.

Health care providers should consider symptoms and the geographic region where a tick bite did or may have occurred. Laboratory tests recommended by the doctor can confirm the diagnosis and determine the course of treatment.

Tick paralysis is a symptom that authorities believe to be caused by a toxin the saliva of an attached tick. Persons affected with tick paralysis can experience weakness or paralysis that gradually moves up the body. The symptoms sometimes resemble other neurologic conditions (i.e. Guillain-Barre` syndrome or botulism). Movement is generally regained within 24 hours of removing the tick.

When removing a tick, Green recommends using a set of pointy tweezers that allows for grasping the mouthparts of the tick as close as possible to the host's skin.

"Using a steady movement, not twisting or jerking, pull the tick out," she says. "Afterward, disinfect the area around the bite and treat it as necessary to prevent infection. Sometimes the mouthparts will break off when trying to remove an embedded remove an embedded tick. Don't freak out about that. That body part is similar to a wood splinter. Your body will reject it on its own. The most important thing is to remove the tick's body."

In some cases, people seek a physician to remove the tick's mouthparts, which can be done, but isn't necessary in preventing disease.

"A tick's mouth works like a two-sided saw, and it's barbed to enable it to hold on," Green says. "Don't rely on home remedies that call for coating the tick with something like peppermint oil or dish soap. Attempting to force the tick to back out on its own could cause it to expel it's digestive contents or saliva under the skin, which increases the potential for contracting a tickborne disease."

Capturing a photo of the tick while its attached can be helpful in identifying the tick in case it gets damaged during removal. If it is in good condition after removal, take another photo and save the tick in a plastic bag in the freezer. This way, if a physician's care is required, there is documentation of the species, date and time. Consider where you were, especially take note if you were traveling out of state or out of the country. Different ticks exist in different geographic regions.

"Black-legged ticks carry the bacteria that causes Lyme disease," Green says. "If you can identify that the tick attached to you isn't this species, you can know that Lyme disease will not be an issue. Anytime a physician is needed to treat an unidentified illness, having a photo of a tick that was recently discovered on you or on your property will allow the doctor to narrow down the focus on tickborne illness rather than starting from scratch. Many symptoms are flu-like and often people don't think about ticks first."

Nebraska's Department of Health and Human Services (DHHS) has two websites dedicated to tick-borne disease information that includes information for health care providers and steps to help prevent these diseases. Find the sites at https://dhhs.ne.gov/Pages/Lyme-Disease.aspx#:~:text=Lyme%20disease%20is%20a%20tick,%2C%20Sarpy%2C%20Saunders%2C%20Thurston and https://dhhs.ne.gov/Documents/TickExposure_TickborneDisease_SyndromicSurveillanceReport_Comprehensive2022.pdf.

Among the steps that help prevent tick bites are:

- Applying repellants which contain 20-30% DEET on exposed skin and clothing prior to spending time outdoors.
- Treating clothing and gear with repellants containing 0.5% permethrin.
- Avoiding wooded and brushy areas with high grass and leaf litter and walking in the center of trails if you are in a wooded or grassy area.
- Examining your entire body, as well as gear and pets, after returning indoors. Promptly removing any attached ticks.

Additional steps include:

- Showering as soon as possible.
- Looking for ticks on the body and in bedding for three days. Some ticks are only the size of a poppy seed and can be anywhere on the body.
- Looking in armpits, hairline, behind ears and knees, in the belly-button area, and in the groin area. Family members can assist with checking areas that a person cannot easily see.
- Put clothes that were worn outside in the dryer on high for 30 minutes to kill any ticks that may be on the clothes. Just washing clothes may not kill ticks.
- Check pets for ticks, too after they come in from being outside. Place them on a tick control medicine as recommended by your veterinarian.

In Nebraska, ticks may be active all year round. Nebraska DHHS staff use “tick dragging or flagging” methods to search for ticks and help monitor tick species in the state. Information obtained through these activities is used to help understand when and where ticks are active in Nebraska and what types of pathogens they may be carrying.

When people are aware of the types of ticks and tick-borne diseases potentially circulating in their area, they can better protect themselves and healthcare providers can identify appropriate testing and treatment for illnesses.

Known tick species in Nebraska that are of medical concern include the American Dog Tick, which poses a high risk of bites during spring and summer. Sometimes called wood ticks, this species is found in the eastern half of the United States and is known to transmit tularemia and Rocky Mountain spotted fever. The adult females of this species are the ones most likely to bite humans.

The Brown Dog Tick is also found in Nebraska and across the United States. Dogs are the primary host for this species, but the tick may also bite humans or other mammals. It transmits Rocky Mountain spotted fever. One strange thing about this tick is that it can complete its life cycle indoors.

The Lone Star tick, described as a “very aggressive feeder,” emits saliva that can irritate the skin, causing redness and discomfort at a bite site. The redness doesn’t necessarily indicate infection. This species transmits ehrlichiosis, tularemia, Heartland virus, Bourbon virus, and STARI. Growing evidence suggests the bite of this tick may also trigger Alpha-Gal Syndrome, which is an allergy to red meat.

The Rocky Mountain Wood Tick and Blacklegged Tick are also found in Nebraska, though not as frequently. Details about these species is found on the DHHS site mentioned here.

"Take every opportunity to avoid ticks tick bites and be aware of the risks they pose," Green says. "Ticks can be active anytime temperatures rise above 45 degrees when there is no snow cover. Be informed and take action to protect yourself, your family, and your pets."

Funding for this educational article comes from the Central States Center for Agricultural Safety and Health and the University of Nebraska Medical Center.