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# 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*

If all they did was make your skin crawl when you see them, we might be able to ignore ticks for the most part.

However, Jody Green, Extension Educator, Nebraska Extension in Douglas-Sarpy Counties, says the pathogens ticks carry can result in debilitating and/or life-threatening disease when they bite people. If that weren't enough, the tick species that carry some of these lethal pathogens are present in Nebraska and neighboring states.

"Ticks don't recognize state boundaries," Green says. "Researchers who study ticks are finding increasing geographic expansion of both the black-legged tick (deer tick), which can transmit Lyme disease, and the Lone Star tick, which can cause Alpha-gal syndrome. If we're aware that these species are in our area, we will be better able to respond if we contract an illness they can cause."

Ticks commonly found in Nebraska include the black-legged tick, American Dog tick and the Lone Star tick. That doesn't mean they are the only species in the area.

Many people aren't aware of tick-borne illness other than Lyme disease. Alpha-gal syndrome, which can be transmitted by the Lone Star Tick, causes an allergic reaction to red meat. The reaction can be severe enough to cause death, but the general public is often unaware of the threat. What concerns officials like Green is the fact that research is confirming that deer ticks are present in Nebraska's Douglas, Saunders and Sarpy counties and the number Lyme-like diseases reported in Nebraska is on the rise.

"There may be no indication that you've been bitten by a tick because all of them are tiny at different stages of their life," Green says. "A bite doesn't necessarily leave a wound and any reaction, such as a rash, may not occur at the site of the bite."

The incubation period for some of the diseases carried by ticks is as long as 21 days.

"If someone became infected with Alpha-gal syndrome, they won't become sick for several hours after eating red meat," Green says. "They may not even know they were bitten by a tick and it's likely they won't make the connection between the tick and their illness, which could be fatal."

Ticks commonly latch onto things like grass blades that are near ground level. They extend their back legs so they can attach to anything coming in contact with the grass blade. From there the tick will crawl upward to a feeding area where it's harder to detect them such as the groin, backs of the knees, armpit, in and around the ears, and scalp.

“Ticks don’t fall out of trees, as some people may believe,” Green says. “They’re found in areas where vegetation shifts from grass to woods and areas of heavier vegetation such as shrubs, bushes and tall grass. Immature stages of ticks are frequently found in leaf litter and densely wooded areas. Because their hosts (humans and animals) emit $CO_2$, ticks are drawn to $CO_2$.

Thorough and frequent tick checks after being outside can help detect the bugs before they can attach themselves. Always remove an embedded tick very carefully. Stressing them with elements such as heat can cause them regurgitate their gut contents before disengaging from the skin. This places dangerous pathogens into the host.

“Use a pointy tweezer, grasp the body firmly and slowly pull the tick out,” Green says. “Many times, people are concerned that this method will cause the tick’s head to break off and remain in the skin. If that occurs, the body will naturally remove the remainder of the tick. You want to avoid causing the tick to regurgitate while it’s still attached to your skin.”

Once the tick is removed, there are significant benefits to reporting the incident and supplying a photo of the tick whenever possible.

“Don’t just flush them,” Green says. “Put them in a plastic bag and stick them in the freezer. Once they’re dead, take a photo and submit the picture an account to a tick encounter site (such as Rhode Island’s https://web.uri.edu/tickencounter/) so researchers can track what tick species are found in your area.”

What causes ticks to bite people and animals?

“These creepy-crawly mites use people and animals as hosts to satisfy their need for blood for egg development and transitioning between life stages,” Green says. “Once engorged with the live-

giving plasma, they turn into ugly, bloated, oversized blobs."

One tick doesn't take away enough blood from either humans or animals to cause a health issue. The real danger from these often-microscopic parasites is the pathogens they carry in their saliva and gut contents. Depending on the tick species, a bite could lead to Ehrlichiosis, Lyme disease, Spotted Fever Rickettsiosis (including Rocky Mountain Spotted Fever) or Tularemia.

Diagnosing a tick bite can be complicated, which Green says makes bite prevention a key step in avoiding tick-borne illness. Chemical repellant that contains at least 20% DEET is one protective step. Ticks are attracted to dark colors, so waring light-colored protective clothing, preferably covering arms and legs, can help keep ticks from coming in contact with a person. Pant legs should be tucked into socks.

Permethrin treated clothing can also help repel ticks and insects. Some commercial brands are effective for up to 70 washings.

Avoiding areas where ticks are likely to thrive can help reduce the chance for a tick bite.

"After being outside, you should always check your body for ticks," Green says. "If a tick is attached to your body for more than 24 hours, the risk of developing disease is greater.

Entomologists like Green can't be certain exactly which species of ticks are present in any area. Ticks could travel to new areas with animals or people and begin thriving there. In 2018 researchers documented a Gulf Coast tick in two different locations in Nebraska's Lancaster County. The prevalence of this new species and the area where it's distributed are still unknown. However, the tick

does have potential to carry diseases to livestock, pets, and people.

“It’s also important to realize that the earliest detection of ticks in Nebraska occurred in March,” Green says. “Many pet owners believe they can avoid treating pets for ticks until well into May. However, anytime temperatures are above 45 degrees and we don’t have snow cover, ticks will be active.”

Some online sources regarding tick-borne diseases and prevention steps can be found at: https://www.cdc.gov/ticks/tickbornediseases/index.html.

Green also recently produced a 20-minute video about tick-borne disease in Nebraska which can be found at this link: https://www.youtube.com/watch?v=mvY1WOMCrYs

Other educational resources can be found at these links: https://nda.nebraska.gov/promotion/feature/2019-VIII-Ticks-Article.pdf

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https://extension.unl.edu/statewide/douglas-sarpy/pdfs/ce/resources/ce-infographic-tic-toc-it's-tick-time.pdf

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