News Release

For more information, contact Pam Palm, 740-507-6533 or ppalm @knoxhealth.com



11660 Upper Gilchrist Rd. Mount Vernon, OH 43050 PH 740-392-2200 Fax 740-2392-9613 www.knoxhealth.com

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Mosquitoes still biting: Several diseases still a threat

The Knox County Health Department has been notified by the Ohio Department of Health that a local horse has tested positive for West Nile virus. The local health department is also awaiting confirmation of encephalitis in a child and two cases of Lyme disease, one in an adult woman and the other in a child.

West Nile virus and encephalitis are spread through the bite of an infected mosquito. Lyme disease is transmitted through the bite of the black legged deer tick.

West Nile virus has been detected in Knox County for over 15 years. Cases of encephalitis have been few, but date back to the 1960s. Blacklegged deer ticks were once considered rare in Ohio, but the disease-carrying insect can now be found throughout the state, including Knox County.

While awaiting conclusive test results, all of the affected humans have been receiving antibiotic treatment. The horse is also receiving treatment and has been responding positively, said Nate Overholt, RS, director of environmental health for the health department. In many cases, a horse has to be euthanized when it contracts West Nile virus.

For humans, there is no vaccine to prevent West Nile virus, encephalitis or Lyme disease. However, horses can be protected from West Nile virus by a vaccine that is readily available from veterinarians. Dogs, which are at risk for Lyme disease, also can be protect by vaccine from a veterinarian.

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There is no documented evidence that West Nile virus can be is transmitted directly between horses or to humans. However, horses with suspected West Nile virus should be isolated so that they do not become a reservoir for infecting more mosquitoes.

"Mosquitoes become infected with West Nile virus when they feed on infected birds. We used to ask residents to bring in dead birds for testing, but that's not necessary anymore," said Overholt. "We know the virus is here and it can be harmful to humans. One bite from an infected mosquito can lead to a severe and possibly life-altering illness"

The environmental health staff will identify ticks if they are brought in alive. While identification does not confirm that a tick is infected with a disease, identification can alert the person to disease symptoms and what to do if the symptoms occur. Confirmation testing by the Ohio Department of Health (ODH) is no longer available.

Not all ticks are infected with disease, but those that are, must bite and remain attached for hours in order to transmit diseases. For the black-legged tick, its 36-48 hours; for the dog tick which transmits Rocky Mountain Spotted Fever, it's four to six hours.

Some symptoms of Lyme disease may not appear until weeks, months or years after a tick bite, affecting joints, nervous system and heart, said Overholt. Diagnosis of Lyme disease is based on history of tick exposure, signs and symptoms and is aided by the use of blood tests. Lyme disease responds to appropriate antibiotic therapy. Early detection and treatment will reduce the risk of arthritis and other complications.

"If you develop symptoms following contact with a tick, you should see your doctor," said Overholt. "Prompt removal of an attached tick will significantly reduce the risk of infection." If you develop symptoms including fever, flu-like illness or a rash within a few weeks of a tick bite, you should tell you doctor about your tick exposure, advised Overholt. He recommends people record the date of any tick bites in case symptoms occur later.

Most people who become infected with West Nile virus do not have any symptoms. About one in five people who become infected develop a fever with other symptoms such as headache, body aches, joint pains, vomiting, diarrhea, or rash. There is no specific treatment for West Nile virus infection, and care is based on symptoms.

To help with the elimination of mosquitoes, the health department applies an EPA-approved pesticide in areas that are prone to mosquito infestation, especially where there will be large gatherings of people, such as at recreation parks and during community festivals. "Unfortunately, we have not been able to spray recently as much as we would like due to wet weather and cooler evenings," said Overholt.

Healthy, active adults who are 50 and older have the highest risk of illness caused by West Nile virus. People who work outdoors in occupations like farming or construction are at greater risk of getting bitten by an infected mosquito.

"Prevention is the key to protection," said Overholt. "In particular, residents are advised to use mosquito repellent products containing EPA-approved active ingredients, such as DEET, picardin, or oil of lemon eucalyptus.

Around the house, Overholt stressed the importance of eliminating standing water, especially with the recent heavy rains. Some common mosquito habitats include: tires, buckets, cans, bottles, plastic containers, pet food containers and water dishes, planters and pots, including saucers and catch trays. Bird baths should be drained and refilled every 3-4 days.

Other easily overlooked areas include vinyl covers for pools, grills and lawn furniture that collect water; clogged gutters and downspouts, leaky outside faucets that create puddles and mature trees that have developed cavities or holes that hold water – fill these voids with sand. "Basically, anything that has the potential to hold even small amounts of water can be a breeding site for mosquitoes. Up to 30 larvae can incubate in a single bottle cap of water," said Overholt.

