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Utah Alert: West Nile Virus

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What Is West Nile Virus?

West Nile Virus (WNV) has killed thousands of crows and caused human and equine deaths in North America since it first appeared in New York City in 1999. It has been detected in 144 species of birds, 22 species of mosquitoes, as well as in horses, bats, cats, rabbits and other animals. Birds carry the virus and mosquitoes spread it to other birds, animals or humans. Animals, other than horses and birds, rarely show any illness from the infection.

Because of the great distances that infected birds can travel, the appearance of this disease in an area is very unpredictable.

Will West Nile Virus Affect Cats & Dogs?

West Nile Virus is not likely to be a problem for dogs and cats, although it has apparently caused a few rare cases of illness. Dogs and cats can be carriers of West Nile Virus, but they don’t transmit it to humans or other animals. West Nile Virus is transmitted by infected mosquitoes. There is no documented evidence of person-to-person, mammal to mammal or animal-to-person transmission of the virus.

Veterinarians and owners should take normal infection control precautions when caring for an animal suspected to have this or any viral infection. Dogs and cats become infected by WNV the same way humans do, by the bite of infectious mosquitoes. The virus is located in the mosquito’s salivary glands. During blood feeding, the virus is injected into the animal. The virus then multiplies and may cause illness. Mosquitoes become infected when they feed on infected birds, which may circulate the virus in their blood for a few days. It is quite unlikely that dogs and cats could become infected by eating dead animals that are infected.

There is no reason to destroy a dog or cat just because it has been infected with West Nile Virus. Full recovery from the infection is likely. Treatment should be supportive and consistent with standard veterinary practices for animals infected with a viral agent.

Will West Nile Virus Affect Other Birds?

Although most West Nile Virus-positive birds in other states have been American crows, infections also have been confirmed in 143 other avian species. There has been no evidence of West Nile Virus in commercial poultry flocks in affected states. But, poultry producers may want to implement effective mosquito control measures.

The extent to which West Nile Virus may be present in wild game birds is unknown. Surveillance studies are currently underway in collaboration with the U.S. Geological Survey (USGS) National Wildlife Health Center and with state and local wildlife biologists and naturalists to answer this question. It is important to remember that even though there is no evidence that birds can transmit WNV to humans, louse / protective gloves should be worn when handling any dead bird or mammal. Because of their outdoor exposure in areas of WNV activity, game hunters may be at risk if they are bitten by mosquitoes.

Hunters should follow the usual precautions when handling wild birds and animals — wear gloves when handling and cleaning animals to prevent blood exposure to bare hands and cook meat thoroughly. As an additional precaution, hunters should not harvest or consume any animals, including birds, that appear to be exhibiting unusual behaviors, or appear to be ill or in poor condition prior to being harvested.
horse's immunity had begun to decrease or was never optimal, this extra vaccination may boost it to the protective level. Additional measures to protect horses include reducing the mosquito population and protecting horses from mosquitoes.

Both pregnant mares and foals can be vaccinated without causing harm. The important decision is about the timing of the vaccination to give the best protection to both mares and foals. Because of the great variation in foaling dates and emergence of mosquitoes, it is best to discuss this with your veterinarian as you make the decision for your horses. Realize that young foals may not develop good immunity to vaccination, so you may want to protect them by vaccinating the dam to provide antibodies that can pass to the foal in the colostrum. However, these antibodies may then interfere with response to the vaccine, so the foal will be older before the vaccine can be effective. Another option to consider is that of giving the foal a series of three vaccinations instead of the usual two. Discuss the specific timing for your situation with your veterinarian.

Reduce Mosquito Numbers for Human and Animal Protection

Home and land owners can have an impact on mosquito numbers by reducing the amount of standing water available for mosquito reproductive sites. Mosquitoes require water on which to lay their eggs and for the new larvae to develop. Even small amounts of water are sufficient, such as that in bird baths, small plastic wading pools and even old tin cans, plastic containers or used auto tires. Even clogged roof gutters, wheelbarrows, boats, ornamental pools or plastic covers may collect enough water to allow mosquito reproduction. Get rid of all these sites or with items like the birdbath, clean it out at least once each week.

Farms or ranches with ponds or waste lagoons may need to implement control methods to reduce the mosquito reproduction. Management practices include: eliminating weedy growth along lagoon shorelines; mowing bank vegetation every one to two weeks; regularly cleaning floating debris from the lagoon surface; and applying approved larvicides in a zone 10 feet wide from the shoreline outward (if pupae numbers become large). Tires used to hold down plastic covers on silage pits should be cut in half and placed or stored so they do not trap and hold water that can become breeding sites for mosquitoes.

Mosquito Abatement personnel are available in many areas and are a great resource in control of mosquitoes. Some areas or communities with high populations of mosquitoes may want to implement a mosquito control district. The use of larvicides enables their control procedures to be much more effective than fogging.

Other Methods to Protect Animals from Mosquitoes

Additional protection can be provided by keeping horses stabled (housed) during dawn and dusk when mosquitoes are most active. Keep screens on the stable windows. Use fluorescent lights, which do not attract mosquitoes. Turn off any lights, at night, which attract mosquitoes. Apply mosquito repellents. Fogging of the stable premises may also help in especially high mosquito population areas.

Humans

Although most people infected with West Nile Virus will show no signs of illness, approximately 20% of those infected will get West Nile Fever. The symptoms associated with West Nile Fever include fever, headache, body aches, occasionally a skin rash on the trunk of the body, and swollen lymph glands. These symptoms typically last 2-7 days.

More severe forms of the illness are West Nile Meningitis and Encephalitis. Approximately 1 in 150 individuals infected with WNV will develop one of these neurologic illnesses. The symptoms of West Nile Meningitis include fever, headache, neck stiffness, and nausea. All of these symptoms are also present with West Nile Encephalitis in addition to altered mental status such as confusion and irritability. Persons over 50 years of age and immunocompromised individuals are at greater risk of developing these more severe forms of West Nile infection.

To decrease the risk of becoming infected with WNV, take the following precautions: keep screens in open windows, avoid mosquito-infested areas especially at dawn and dusk, wear long-sleeved shirts and long pants when outdoors, apply DEET-containing repellents as needed.

Contacts

If you have questions about animals and concerns related to West Nile Virus contact your Utah State University County Extension office, your local veterinary practitioner or one of the Utah State University Extension Veterinarians - Dr. Eleanor Jenson or Dr. Clell Bagley at 435-797-1880.

If you have questions about human health concerns and WNV, contact your local Health Department, your own health provider or the Utah Department of Health (801-538-6191) www.health.utah.gov.