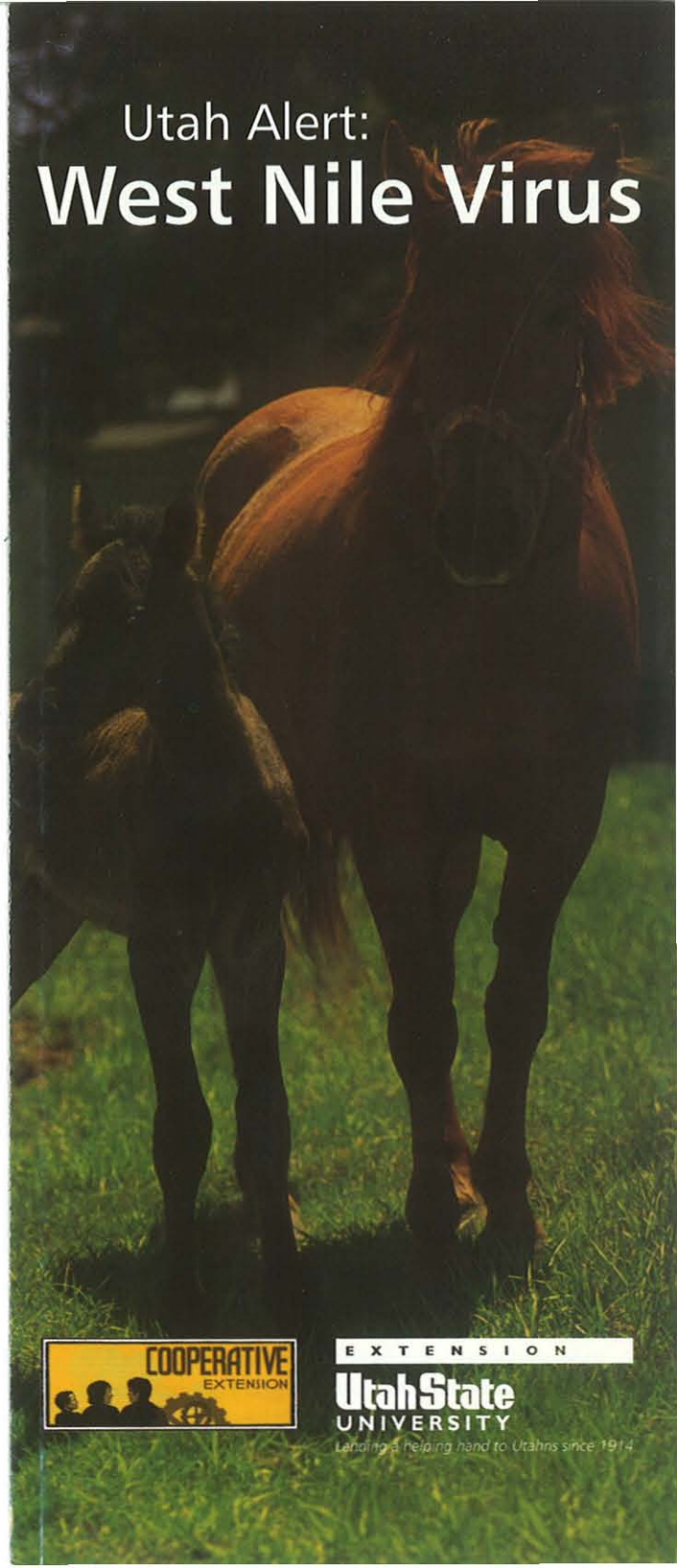
Utah Alert:

West Nile Virus



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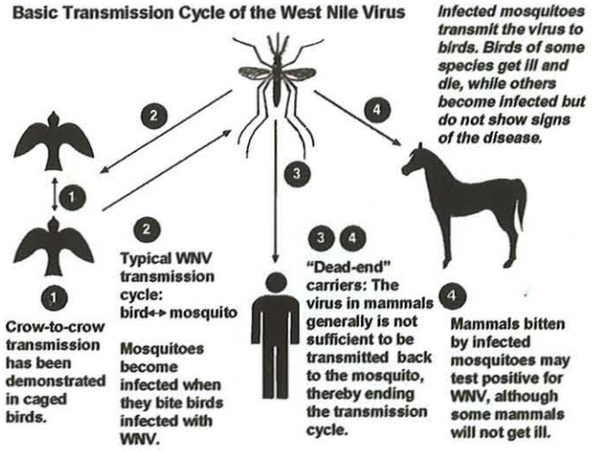
What Is West Nile Virus?

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.

Transmitting West Nile Virus



Mosquitoes become infected after biting infected birds that serve as the primary host of the virus. The virus multiplies inside the mosquito and accumulates in the salivary glands. Mosquitoes are capable of transmitting the virus 10 to 14 days after feeding on an infected bird. They salivate every time they bite, so bites after that time are infectious. Only female mosquitoes bite, but female mosquitoes require a blood meal before they can lay eggs. They bite every few days during their entire adult lives, which may last several weeks.

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.

WNV and Birds

WNV is not likely to be a problem for indoor birds because of their protection from mosquitoes. But other zoo and aviary birds could be at risk. Corvids and raptors are two types of birds that are most commonly affected by West Nile Virus. Corvids are large perching birds that have strong bills like those of ravens, crows, jays, and magpies. Raptors include eagles and hawks. These birds have long curved talons and strong hooked beaks. When handling a dead bird, take precautions to avoid exposure to diseases the bird might have. Wear latex / protective gloves to pick up the bird. If WNV is suspected, it is also recommended that you wear a facemask. All dead birds should be double-bagged prior to disposal in an outdoor waste container, with a cover to prevent access by scavenger animals.

Birds that have recently died (within 24 hours) may be submitted for WNV testing. To do so, contact your local Health Department or call the Utah Department of Health at 1-888-374-8824. The deceased bird should be double-bagged and placed in a refrigerator or a cooler on ice for transport to the lab.

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, latex / 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.

West Nile Vaccine Ready for Utah Horses

There were almost 15,000 confirmed cases of WNV illness in equines in 2002. Data from the last two years would predict that 25 percent of the horses infected with WNV will die or require euthanasia.

Clinical signs in horses are related to encephalitis and the effects of the virus on the brain function of the horses. These signs may include: loss of appetite, depression, fever, weakness or paralysis of the hind limbs, staggering, head pressing, inability to swallow, circling, hyperexcitability, convulsions or coma.

If WNV is almost certain to occur and if 25 percent of affected horses die or must be euthanized — what should horse owners do?

The one small piece of good news about this disease is that a vaccine is available for use in horses to protect them against WNV. It is produced by Fort Dodge Laboratories, has received full licensure and is available through veterinarians. It has been used widely in horses the past two years with minimal reactions or problems, confirming that it is safe for use. The vaccine effectiveness is currently calculated to be 94 percent, which is high for any vaccine. Kentucky reported for 2002 that 175,000 doses of vaccine were used and of 129 horses that died or were euthanized because of WNV disease, only three had been vaccinated as recommended. Vaccination of all accessible horses is recommended. Give the first dose at least two months prior to the expected mosquito season. Give a second dose three weeks later. Realize that the horse will likely not achieve a protective level of immunity until two to three weeks after the second dose of vaccine.

If WNV activity is heavy in your area during the summer, a booster (third) dose could be given at 3-4 months after the second dose. If an individual

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 birdbaths, 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 immunocompromized 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 repellants 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.

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