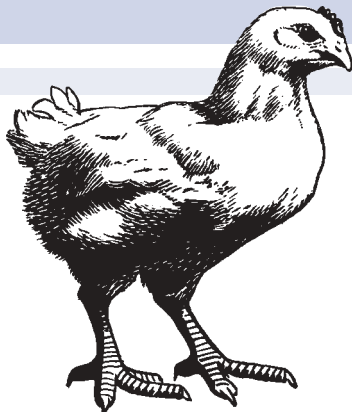


West Nile Virus and Chickens

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Since about 1999, West Nile Virus (WNV) has become a public health concern in the United States. Previously known to exist in Africa, Asia, and the Middle East, WNV first occurred on the East Coast and has spread west to other states, including Kansas.

Since appearing in the United States, there have been WNV cases in wild and exotic birds, bats, horses, small mammals and humans. Crows and blue jays are particularly susceptible to the effects of WNV and often die. However, most healthy animals seem to be able to overcome the infection with no apparent illness.

How the virus spreads

The virus is spread by mosquitos. Mosquitos become infected with WNV after biting and feeding on infected wild birds. The infection is spread when the mosquitos bite people, animals or other birds. The virus results in encephalitis, which is inflammation of the brain.

Although chickens may become infected by the virus, they show few or no signs of the infection. The virus can be isolated for eight days from infected chickens. However, the level of virus in chicken blood is low and is probably not high enough to infect other mosquitos. Chickens develop antibodies to the virus within five to seven days. Thus, chickens are unlikely to amplify the WNV infection in mosquitos. There is no evidence of animal-to-animal or animal-to-person transmission of WNV. People can only become infected through the bite of an infected mosquito, and only a small number of mosquitos carry the virus.

Poultry as sentinels

When WNV came to the United States, researchers needed a way to track the spread of the virus. They chose chickens because they were inexpensive, easy to handle, would not become ill from the infection, nor become sources of infection. Researchers penned healthy birds outdoors and monitored them for a WNV infection. When these sentinel birds were infected, researchers knew mosquitos in the area were capable of spreading the disease. Because all types of chickens were used as sentinels, many people began to associate the virus with chickens and believe chickens were the source of WNV. People who believe chickens cause WNV may have misunderstood the sentinel programs.

What are the signs of infection?

Chicken and turkeys infected with WNV may show no signs of infection. Because WNV causes inflammation of the brain, expect clinical signs of the virus to be nervous system problems. Abnormal head posture, a wobbly gait, inability to stand, staggering and tremors are common symptoms. Many of these symptoms have been observed in birds, but not in chickens.

What other common poultry diseases may have similar symptoms to WNV?

As you can imagine, the clinical signs of WNV are common to many other poultry diseases that may occur in Kansas. Of particular importance are Newcastle Disease and Marek's Disease. However, avian influenza, fowl

cholera and infections or injury to the brain or spinal cord, and certain vitamin deficiencies could have clinical signs similar to WNV in chickens.

Can I get WNV from my chickens?

No. Infected mosquitoes transmit the virus to birds, but there is no evidence that direct transmission from birds to humans can occur. Infected chickens housed with uninfected chickens did not transmit the virus.

Can I still eat the eggs and meat?

Yes, provided that your birds are generally healthy. Unhealthy birds or their eggs should not be consumed. Remember to follow proper cooking procedures to safely prepare poultry meat and eggs.

What should I do with birds that have died?

Always handle dead animals with gloves for disposal. Wash your hands after handling. You will not be exposed to WNV, but you could be exposed to other harmful bacteria.

How do I protect my chickens from a WNV infection?

Because most small poultry flocks are allowed access to the outdoors, it is almost impossible to totally eliminate their exposure to mosquitoes. The best you can do is reduce the population of mosquitoes around the area where the chickens are housed. Focus on eliminating standing water

where mosquito larvae could develop. Old tires and house gutters are common sources of standing water. Turn over buckets and feeders when not in use. Small pools or ponds for waterfowl can be stocked with fish to consume mosquito larvae.

Is there a treatment for chickens that may have a WNV infection?

No. Viruses are difficult to treat and must often be left to run their course. Reduce the stress on the animals as much as possible. Some poultry flock owners will temporarily administer a broad spectrum antibiotic to prevent opportunistic bacterial infections from taking advantage of the bird's poor state of health. Consult your agriculture supply dealer for the proper use of antibiotics in your flocks. Remember to follow label directions carefully when using antibiotics.

Can I vaccinate my flock for WNV?

Not yet. A poultry vaccine for WNV has not been approved for use; however, because the virus is neutralized by the bird's immune system, there is hope that a vaccine can be developed.

Could my turkeys become infected with WNV?

Yes, but the virus appears to have little effect. The USDA inoculated turkeys with the virus and found that they did not develop enough of the virus to infect feeding mosquitoes. They determined that wild and domestic turkeys will not

be a significant source of the virus for infecting mosquitoes.

Are my game birds susceptible to WNV?

Little research is available for game birds. But it is likely that pheasant, quail and wild turkeys could become infected.

Should I worry about my waterfowl?

Ducks and geese have been infected with WNV, and some have died. Because waterfowl are around water where mosquitoes are present, it may be particularly difficult to reduce their risk. More research is needed to know the effect on domestic and wild waterfowl.

What about my pet birds?

Less is known about WNV infection in exotic birds. Because most pet birds, such as parrots, canaries, and cockatiels, spend most of their time indoors, it is likely their risk will be low. Keeping mosquitoes out of the house should protect you and your pet birds.

Should I worry about WNV in game birds that I hunt?

Because the virus was shown to cause a mild reaction in turkeys, followed by a rapid immune response, it is unlikely that hunters will encounter significant numbers of birds with active infections of WNV. Hunters should use standard precautions such as proper cleaning, storage temperatures and cooking methods to reduce the risk of foodborne pathogens when consuming game birds.

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