

# West Nile Virus and White-tailed Deer

by Larry Castle, Wildlife Biologist

Due to the increasing occurrence and resultant public health significance of West Nile virus (WNV), questions related to the potential for human exposure during the upcoming deer season have been numerous. Two themes of questions seem to occur; number one, is WNV negatively impacting the deer herd and two, is there a danger in eating venison this year due to the high prevalence rate of WNV? The general response to both of these questions is no, but each deserve some discussion or qualification.

Since being detected in birds in the New York City area in 1999, WNV has been confirmed in a growing number of states, including Mississippi. Of significance to white-tailed deer, no deer mortality nor clinical illness has been observed. According to wildlife veterinarians at the Southeastern Cooperative Wildlife Disease Study in Athens Georgia, deer have several advantages in the fight against WNV. First, the species of mosquito that is the primary culprit in the transmission of WNV feed primarily on birds. However, it is well documented that they do not feed solely on birds, hence the cases in horses and humans. Secondly, the virus does not replicate in deer. In more friendly or non-veterinary terms, this means that once the virus does infect deer, it apparently does not continue to grow, producing more and more of the virus. Therefore, in deer WNV is what we call a "dead-end" host. It does not cause clinical illness within the deer and the virus goes no further. The disease is stopped once it enters a white-tailed deer host. Therefore, a decrease in deer population numbers and vigor should not be noticed this fall by hunters as a result of the increasing spread of WNV.

Additional good news in the deer world is that there has never been any evidence to indicate that humans can become infected with WNV from handling or eating wild game or birds. However, according to the Mississippi State Department of Health, there is a "theoretical" risk, so hunters should take some common sense precautions when processing any game animal or bird. Two simple precautions are sufficient; wear latex gloves and thoroughly cook the meat. Even if the virus is present in an animal, thorough cooking will destroy the infectious agent and make the meat safe for human consumption.

Obviously, the greatest risk from WNV for hunters this year will be from personal exposure to mosquitoes. The level of risk is virtually nil by the November gun season, but archery hunters should make provisions to limit exposure from mosquito bites. Proper clothing which includes gloves, long-

sleeved shirts, and a mosquito head net will provide a good first level of protection. A good insect repellent containing a high percentage of DEET will provide hunters the best second level of protection. The third level of protection is to avoid going outdoors during the late afternoon and early evening when mosquito activity is highest. This third level is completely unacceptable, this is when the deer walk, we really need to be up a tree then, so I guess most of us will settle for two out of three.

Around my house, 'skeeters are much worse while raking leaves, running the weedeater, and such than they are at higher elevations (10 - 15 feet) in the woods. Therefore, I have a theory that we are safer deer hunting than working in the yard. Hunt ethically and safe this year, a future hunting trip could depend on it.

For more information from the experts on WNV in Mississippi, contact the Mississippi State Department of Health or visit their web site at [www.msdh.state.ms.us](http://www.msdh.state.ms.us).

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