

# Ask A Vet: Mosquito Borne Viruses in the News

*Sunday, February 14, 2016*

Dear Dr. Weldy's,

I've heard a lot about the Zika virus on the news recently. Are my pets at risk to this virus, and what other mosquito-borne diseases should I be worried about for them?

-Worried Animal Lover

Dear Worried,

Yes, the Zika virus is causing quite a stir in South and Central America as well as the southern United States. Currently there are no known cases of Zika affecting animals other than humans and primates (monkeys and apes).

There are hundreds of diseases caused by mosquitoes worldwide in both humans and veterinary species. However, I will only discuss the main 3 that occur in our area. First, in dogs, cats, and ferrets we can see heartworm disease. Heartworms live in the pulmonary arteries (blood vessels leading to the lungs from the heart) in affected animals. These adult worms live in mated pairs and constantly produce larva which swim around in the animal's blood. Once a mosquito feeds on one of these animals, it will ingest hundreds to thousands of the larvae. These larvae mature within the mosquito for 3 weeks, and then can infect another animal. Depending on how many worms have infected your pet, and the damage done to the heart and lungs, death rate can be anywhere between 50-100%. Use of a monthly heartworm preventative is the most common method of preventing this disease. Additionally, there is an injection for dogs that provides protection for 6 consecutive months. For more information on testing your pet and preventing disease, have a discussion with your veterinarian.

Horses are also at risk for 2 main diseases in our area. The first is the infamous West Nile Virus. This virus is spread by mosquitoes which usually feed on birds. Horses infected with this virus often display a fever, muscle tremors or twitching, stumbling, laying down without being able to rise, and not eating. These signs are present because the virus causes inflammation of the brain and nerves. Nationwide, approximately 30% of all horses infected will die. Prevention of this disease is by vaccination. The current recommendations are for vaccinating your horse every 6 months to prevent the disease.

The last mosquito-borne disease that can be seen in our area is Eastern Equine Encephalitis (EEE). This is a virus, like WNV, which is spread by mosquitoes which usually feed on birds. Signs seen in your horse can include a high fever, bumping into things, head pressing, circling, inability to swallow, weakness and paralysis, seizures, and death. These signs appear 9-11 days after being bitten by the mosquito, and progress rapidly from there. Most horses are down within 12-18 hours of signs appearing, and death can occur 2-3 days after signs are first noted. Even with treatment, death rate is frequently 90% or higher. Prevention is the key for this dangerous disease. Almost every vaccine for horses contains this virus. Most veterinarians recommend vaccinating your horse every 6 months.

For more information regarding mosquito-borne diseases in your area which are of concern to your pets, contact your regular veterinarian.

-Dr. Jason Heitzman