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Published October 24th, 2012 West Nile Virus By Mona Miller, DVM

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Dr. Mona Miller lives in Lafayette with her young son, two cats and Luka a new puppy. She has worked at Four Seasons Animal Hospital in Lafayette since moving here in 2001. She attended Cal as an undergrad, and received her DVM from U.C. Davis. She can be reached at Four Seasons, 938-7700, or by email to MonaSDVM@aol.com. West Nile virus (WNV) encephalitis is a neurologic disease causing inflammation of the brain that primarily affects humans, horses and birds. It is fairly new to North America, having been simultaneously diagnosed in these species in New York in 1999. It is now established throughout most of the United States. Transmission is by a mosquito bite. Some types of birds are reservoir hosts, which means that mosquitoes become infected when taking a blood meal from an infected bird. Then the mosquito transmits the virus to the next individual bitten. Mammals are "dead-end" carriers, which means that the amount of virus in the mammalian bloodstream is too low for a mosquito to acquire the virus during a bite.

WNV disease symptoms are related to the neurologic system, and include stumbling, circling around, hind leg weakness, inability to stand, tremors and death. Not all species and not all individuals are equally affected. In humans, less than one percent of those infected will develop serious neurologic disease. About 20 percent of infected people might experience flu-like symptoms, and the majority of people who are infected don't actually get sick.

Crows and other corvid birds (such as jays, ravens and magpies) are most sensitive to the effects of the virus. Other birds such as sparrows and finches can also develop disease and die. Interestingly, chickens and turkeys can become infected but quickly develop bloodstream antibodies to clear their viral load, so do not get sick. Due to this resistance to disease, these birds are often used as sentinels to ascertain the presence of WNV in a geographic location. In California, there are 200 chicken flocks throughout the state that are routinely tested with a blood test during mosquito season to determine if West Nile virus is in the area.

Pets are exposed to WNV in the same way as other species - through a mosquito bite. However, dogs and cats are very resistant and very rarely become ill. Cats might exhibit very mild signs such as slight fever or lethargy, and it is not likely that a pet owner would notice unusual symptoms or need to seek treatment for this. There is no specific treatment other than supportive care. Dogs and cats do not pose a risk of transmission to other animals. Likewise, because mammals are "dead-end" carriers, affected tree squirrels do not pose a threat of transmission to other mammals.

The best precautions against mosquito bites are to protect skin with an insect repellent, to avoid the higher level of exposure that usually occurs at dawn and dusk, and to eliminate sources of standing water on your property. If you find a dead bird or tree squirrel, you may file a report at

www.westnile.ca.gov or call 1-877-WNV-BIRD. This can be important because these dead animals might be the first indication that the virus is active in your area.

Reach the reporter at: info@lamorindaweekly.com

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