



Expect a Bigger Outbreak of West Nile Virus in 2005

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THIS PROMISES TO BE a BIG season for infections with the West Nile Virus (WNV). All physicians should consider diagnostic tests for individuals who present with the conditions noted in the table below.

During 2004, California recorded 822 human cases of WNV infection with 25 deaths. The median age of those who died was 76. The median age of those who contracted West Nile fever was 50 and of those with neurological disease was 58. El Dorado County had no cases; Sacramento County had 3 cases and no deaths; Yolo County had 1 case and no death.

In 2005 we expect to see more cases. This follows the pattern of other states which have experienced this problem. We can substantially reduce this burden by recognizing the illnesses early and taking appropriate precautionary measures individually and in the outdoors.

WNV is a type of arbovirus, or arthropod borne virus. An arthropod is an insect, in this case a mosquito. California has a large number of resident arboviruses but only a few of which cause human disease. Mosquito control activities are designed to protect us from these viruses. Over the past 50 years this system has worked well.

WNV resides primarily in birds, On which mosquitoes preferentially feed. WNV is a new arrival to California, so birds are not immune and are susceptible to infection and death.

Detection of WNV in birds often provides an early indication that WNV transmission is occurring in an area, triggering intensified mosquito control and public education activities. Since WNV is now well established in birds in this area, and mosquitoes can transmit infection to people, reporting human cases will be important this coming season.

The clinical syndromes that imply WNV infection are listed in the following table. Most of those infected remain asymptomatic; and only 15 percent or so become quite ill. This past season, 63 percent of cases occurred in men. Most symptomatic cases occurred in people over the age of 50 and deaths were most common in those over age 70.

Treatment is largely palliative as we have no antibiotics for this virus. However, there are several investigational protocols for treatment of severe cases, one of which is being conducted out of the University of California at Davis.

Diagnosis is made with acute and convalescent serum antibody titers as well as viral culture of cerebrospinal fluid.

Once diagnosis is suspected, the case must be reported to the county health officer.

What should you and your patients do to prevent infection with this virus?

Establish a physical (screens, clothing with long sleeves and pants) or chemical (insect repellent such as DEET) barrier between you and the mosquito.

Mosquitoes are attracted to dark colors and will bite less readily through light colored clothing. The highest risks are at dawn and dusk when the mosquitoes prefer to feed. Remove breeding sites (standing water) around your home or office or call the mosquito control agency for more vigorous activities when necessary. It is important to eliminate even small amounts of standing water, as found in empty pots, tree hollows, or stagnant pools.

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For assistance with mosquito control, contact the following agencies:

- Sacramento-Yolo Mosquito and Vector Control District (916/685-1022)
- El Dorado County Vector Control (530/573-3450)
- Local health departments can provide assistance on WNV testing and reporting:
- El Dorado - 530/621-6109 or 530/621-6236
- Sacramento - 916/875-5881
- Yolo - 530/666-8645

Other sources of information on the West Nile Virus over the Internet:

- National Centers for Disease Control and Prevention
- US Geological Survey
- California Department of Health Services



Click Here for patient handout "The West Nile Virus and What You Can Do About It."

West Nile Virus Testing
The local public health dept MUST be notified of this case prior to submission of cases.
Specimens will be accepted on cases that meet one of the following case definitions:
<p>A. <i>Viral Encephalitis</i>* characterized by:</p> <ul style="list-style-type: none"> - Encephalopathy (depressed or altered level of consciousness, lethargy, or personality change), and one or more of the following - Fever ($T \geq 38C$), seizure(s), focal neurologic findings, CSF pleocytosis, abnormal EEG, abnormal neuroimaging.
<p>B. <i>Aseptic Meningitis</i> (patients ≥ 17 years of age) characterized by:</p> <ul style="list-style-type: none"> - Fever ($T \geq 38C$), Headache, stiff neck and/or other meningeal signs - CSF pleocytosis
<p>C. <i>Acute Flaccid Paralysis/Atypical Guillain-Barré Syndrome</i> characterized by:</p> <ul style="list-style-type: none"> - Fever ($T \geq 38C$), altered mental status, and/or CSF pleocytosis
<p>*The California Encephalitis Project at the State of California Department of Health Services offers an extensive battery of testing for encephalitis cases. To request testing for additional agents for encephalitis cases, contact Somayeh Honarmand at (510) 307-8608</p>

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