



CALIFORNIA SURVEILLANCE  
AND FACTS ABOUT

# West Nile Virus



## WEST NILE VIRUS PREVENTION & CONTROL

To decrease exposure to mosquitoes and the infections they may carry:

-  Avoid outside activity at dawn and dusk during the mosquito season (May to October). This is particularly important for the elderly and small children.
-  Wear protective clothing (long pants and long sleeves) and apply insect repellent when outside.
-  Make sure that doors and windows have tight fitting screens. Repair or replace screens that have tears or holes in them.
-  Drain all standing water on private property and stock permanent ponds with fish that eat mosquito larvae.
-  Make sure roof gutters drain properly. Clean clogged gutters in the spring and fall.

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(916) 327-0332  
[www.dhs.ca.gov/ps/dede/dedeindex.htm](http://www.dhs.ca.gov/ps/dede/dedeindex.htm)

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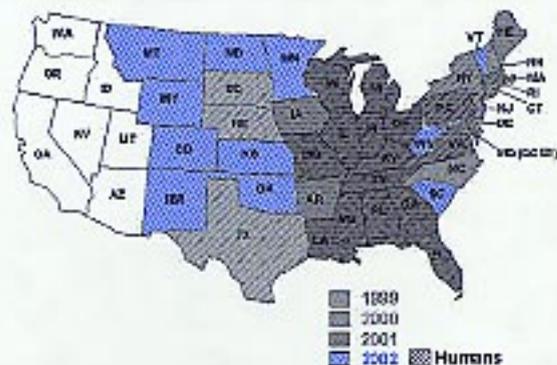
*-Prepared April 2002-*

*For further information call:*



Greater Los Angeles County Vector Control District  
12545 Florence Ave.  
Santa Fe Springs, CA 90670  
Tel (562) 944-9656  
Fax (562) 944-7976  
[www.glacvcd.org](http://www.glacvcd.org)

## Spread of West Nile Virus in the United States 1999-2002



### WHAT ARE THE SYMPTOMS OF WEST NILE VIRUS IN PEOPLE?

Most people who are infected with WN virus have no symptoms whatsoever. However, of those who become ill, symptoms can include fever, headache, nausea, body aches, mild skin rash, or swollen lymph nodes. In a few cases, the disease will progress to encephalitis (inflammation of the brain). The time between the mosquito bite and the onset of illness, known as the incubation period, ranges from 5-15 days in humans. It is estimated that 1 in 150 people who are infected with WN virus will require hospitalization. Of the 66 confirmed human cases of WN virus in the eastern U.S. in 2001, nine (14%) died. The elderly are particularly susceptible to clinical illness caused by WN virus. There is no specific treatment for infection with WN virus, although supportive care is important.

### WHICH ANIMALS GET WEST NILE VIRUS?

An infected mosquito can bite any animal, but not all animals will become infected. The disease most often affects birds, but occasionally causes disease in other animals as well.

#### *Birds*

Wild birds are the animals from which the mosquito vector primarily acquires the virus. Infection has been reported in more than 70 bird species. Although many birds that are infected with WN virus will not appear ill, WN virus infection can cause serious illness and death in some birds. The most severe illnesses are seen among the corvid birds, which include crows, jays, ravens, and magpies. American crows constitute the majority of birds reported dead due to WN virus.



#### *Horses*

Horses are also susceptible to WN virus. The disease does not seem to be specific to a particular breed or age of horse. Clinical signs of disease consist of central nervous system abnormalities similar to those caused by infection with eastern equine encephalitis (EEE) and western equine encephalitis (WEE). EEE and WEE vaccines are available for horses and are recommended for use in the spring. An equine WN virus vaccine recently became available for horses. For more information, see [http://www.cdffa.ca.gov/ahfss/ah/wnv\\_info.htm](http://www.cdffa.ca.gov/ahfss/ah/wnv_info.htm).



## WHAT IS WEST NILE VIRUS?



## HOW DO PEOPLE AND ANIMALS GET WEST NILE VIRUS?

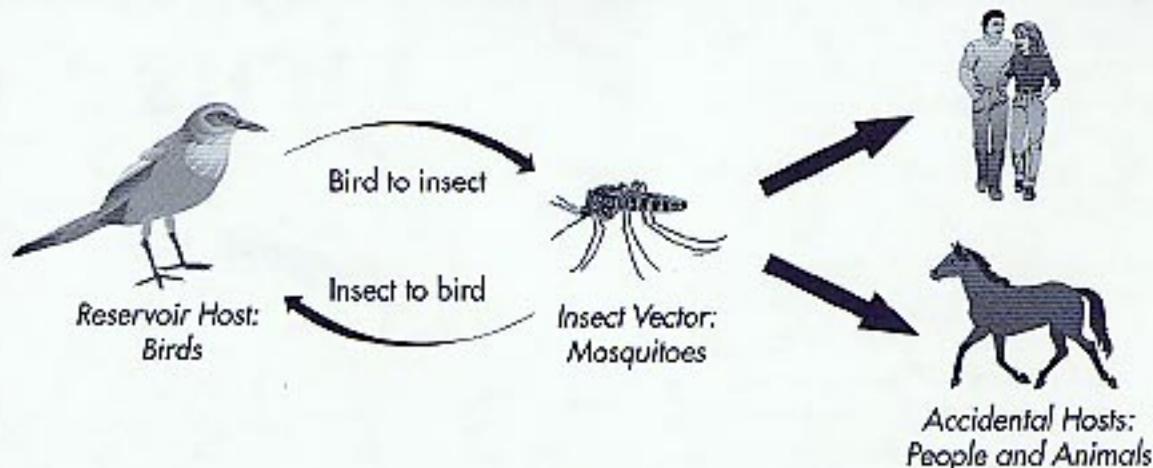
West Nile (WN) virus is a mosquito-borne virus that has been found in parts of Asia, eastern Europe, Africa, and the Middle East. The virus was first detected in the United States (U.S.) in 1999 in New York City.

The majority of people and animals that are infected with the virus have a mild illness or no symptoms. In rare cases, the virus can cause a more serious condition called encephalitis, an inflammation of the brain. The elderly are at a higher risk for disease caused by WN virus. At the end of 2001, a total of 28 states had reported WN virus activity. The virus is expected to move further westward during 2002.

WN virus is transmitted to people and animals by infected mosquitoes. Only certain species of mosquitoes carry the virus and very few mosquitoes are actually infected. A mosquito first acquires the infection by feeding on a bird with virus in its blood. The virus lives in the mosquito and is transmitted to a new host in the mosquito's saliva when the insect bites a person or animal.

Humans and horses are accidental hosts for WN virus. Human-to-human transmission does not occur. The virus is most prevalent from May to October when mosquitoes are most abundant.

## TRANSMISSION CYCLE OF WEST NILE VIRUS



## WHAT IS THE CALIFORNIA WEST NILE SURVEILLANCE PROGRAM?

WN virus has not been found in California as of March 2002. The California Department of Health Services (DHS) has overseen a statewide mosquito-borne encephalitis surveillance program since 1969 for WEE, St. Louis encephalitis (SLE), and other viruses. In 2000, DHS and other agencies expanded the program to enhance the ability to detect WN virus. A protocol to report and test dead birds was added to the existing surveillance system for encephalitis cases, mosquito testing, and monitoring of sentinel chickens.

### *Encephalitis Case Surveillance*

DHS tracks cases of human, horse, and ratite (e.g., emu, ostrich) encephalitis. The routine testing of encephalitis cases for WN virus will assist in the early detection of the virus in California. Human and animal encephalitis cases are also routinely tested for WEE and SLE viruses.

### *Mosquito Testing*

Mosquitoes throughout the state are sampled for the presence of WN, WEE, and SLE viruses. Local mosquito and vector control agencies also monitor the abundance and type of mosquitoes.



### *Sentinel Chicken Testing*

Approximately 200 chicken flocks are strategically placed throughout the state and are tested routinely during the mosquito season to detect evidence of infection from WN, WEE, or SLE viruses.



### *Dead Bird Surveillance*

California began to test dead crows and related birds for WN virus in 2000. Although the virus has not yet been reported in California, monitoring dead crows and other corvids will help identify the virus if it enters the State. State agencies, private organizations, and individuals participate in the surveillance program by reporting dead bird sightings. DHS arranges to collect the dead bird from the location it was found if WN virus testing is indicated.

## WHAT DO I DO IF I SEE A DEAD BIRD?



### AMERICAN CROW

American crows are found throughout most of California. They have entirely black plumage, black beak, and black feet. Adult size is 17-21 inches from tip of tail to tip of beak.

If you find a dead bird, particularly a crow or other corvid (e.g., jay, magpie, raven), please call the number below promptly. Do not touch the bird. DHS will record all dead bird reports and will arrange for pickup and laboratory testing for WN virus when appropriate.

### **Dead Bird Surveillance and Contact Information:**

West Nile Virus Dead Bird  
Surveillance Program

Division of Communicable Disease Control  
California Department of Health Services

Toll Free Telephone: 877-WNV-BIRD (877-968-2473)

E-mail: [arbovirus@dhs.ca.gov](mailto:arbovirus@dhs.ca.gov)

Website: <http://westnile.ca.gov>