

What is West Nile Virus (WNV)?

West Nile virus (WNV) is closely related to St. Louis Encephalitis virus which has been historically found in the United States, including Orange County. WNV has been reported from parts of Asia, eastern Europe, Africa, and the Middle East for many years. The virus was first detected in the United States in 1999 in New York City. WNV is transmitted by infective mosquitoes and can infect humans, birds, horses, and many other animals.

A mosquito acquires the virus by biting an infected bird. The virus then multiplies in the mosquito. It is transmitted to a new host in the mosquito's saliva when it feeds again on a person or animal. Humans and horses are "accidental hosts" for WNV, and cannot pass on the infection to another mosquito. There are records of transmission through blood transfusion and organ transplants, but human-to-human transmission is extremely rare.

Since 1999, WNV has spread remarkably fast; by late summer of 2003, Imperial, Riverside, Los Angeles, and Orange Counties were reporting infected birds and mosquitoes. By the end of 2003, 46 states had reported WNV activity. In March of 2004, evidence of recent transmission was found in birds from Orange County.

Which Animals Get WNV?

Many animals can be bitten by an infected mosquito, but they will not all become ill; some may show no symptoms. WNV most often affects birds, but occasionally causes disease in other animals as well.

Wild birds are the reservoirs for WNV, while most infected birds will not become ill. For some

others, the virus can cause serious illness and death. Birds of prey, crows, ravens, jays, and magpies are seriously threatened by WNV. The virus does not appear to cause extensive illness in dogs or cats.

Horses are extremely susceptible to WNV. Clinical signs of disease consist of central nervous system abnormalities similar to those caused by infection with Eastern Equine Encephalitis and Western Equine Encephalitis. WNV vaccines are now available for horses.

Who to Call for WNV in Horses:

California Department of Food & Agriculture
Animal Health Branch
(916) 654-1447
Toll Free: 1-800-491-1899
www.cdffa.gov/ahfss/ah/wnv_info.htm

What are the Symptoms of WNV?

Most people who are infected with WNV experience no symptoms. Symptoms of mild illness include fever, headache, body aches, nausea, a skin rash on the trunk of the body, and/or swollen lymph nodes. These symptoms generally last a few days. In severe cases, the disease may progress to encephalitis. Symptoms may include high fever, headache, neck stiffness, disorientation, coma, tremors, and paralysis. Symptoms may last several weeks, and neurological effects may be permanent. It is estimated that 1 in 150 people who are infected with WNV will require hospitalization. Those most at risk are the elderly and those who have weakened immune systems.

The time between the mosquito bite and the onset of illness, known as the incubation period, ranges from 5-15 days in humans.

What is Orange County Vector Control District Doing to Combat WNV?

The Orange County Vector Control District (OCVCD) routinely surveys for mosquito-borne diseases such as WNV and other viruses. OCVCD's wild bird surveillance program is an excellent early warning system allowing the District to detect evidence of virus activity before there are any human cases. Dozens of finches and sparrows are bled every two weeks and released. Their blood is tested for antibodies to these viruses. Adult mosquitoes are routinely trapped and tested for these viruses.

District staff controls mosquito breeding on acres of public and private land throughout the County. The District uses an integrated mosquito control strategy primarily directed at the developing mosquito larvae. When larval control is ineffective, adult control is performed. District services include home exterior and yard inspections for mosquito sources and free mosquito fish for use by residents.

A major component of the District's WNV preparedness involves engaging the public in the shared responsibility of vector control. District staff participates in community events, and gives talks to city councils, civic organizations, as well as homeowner and neighborhood associations. Please contact the District if your association would like a speaker for an event or tour District facilities.

The District works closely with the California Department of Health Services, University of California at Davis, Mosquito and Vector Control Association of California, and the Orange County Health Care Agency. This cooperative effort will assist the District in its mission of reducing the risk of vector-borne disease transmission in Orange County.

West Nile Virus Alert!



For More Information: Orange County Vector Control District

13001 Garden Grove Blvd.
Garden Grove, CA 92843
(714) 971-2421 • (949) 654-2421
www.ocvcd.org

Who To Call To Report Dead Birds: Orange County Vector Control District OR Your local animal control

After hours, on weekends, or holidays:
California Department of Health Services
(877) WNV-BIRD (877-968-2473)
www.westnile.ca.gov
LA County Recorded Info: 1-800-975-4448
www.dhs.ca.gov/ps/dcdc/disb/disbindex.htm

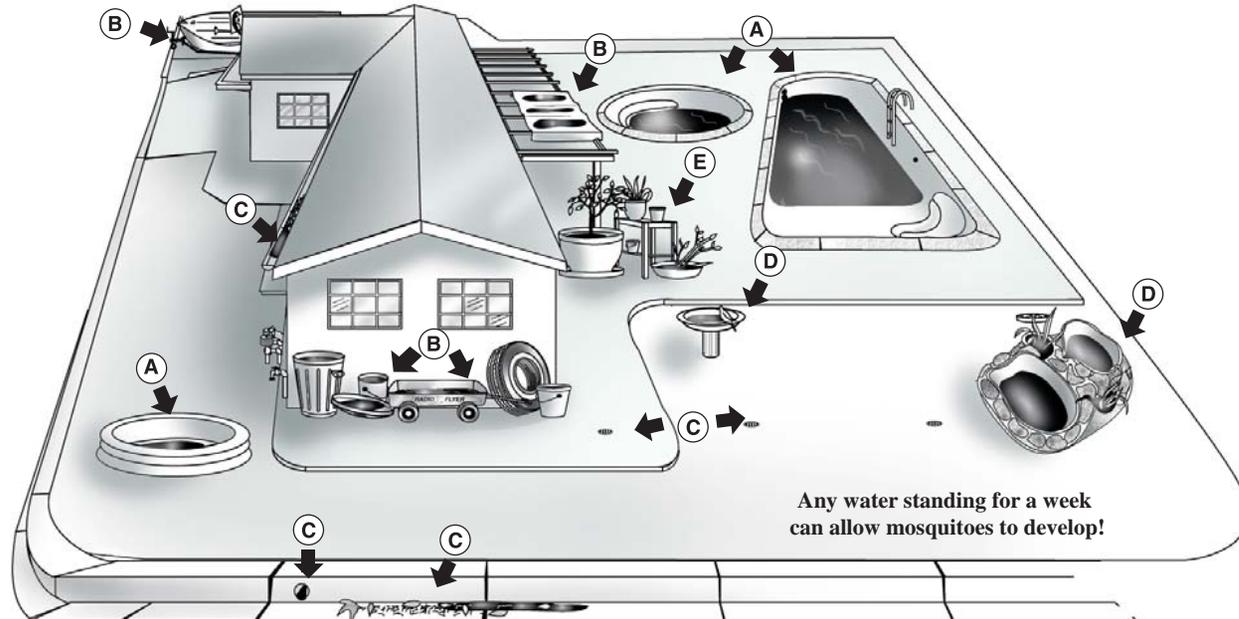
How Can I Protect Myself and My Family From West Nile Virus?

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

- Avoid outside activity at dawn and dusk during the mosquito season (May to October). This is particularly important for elderly and small children.
- Wear long pants and long sleeve shirts when outside.
- Place mosquito netting over infant carriers when outdoors with babies.
- 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 property.
- Stock permanent ponds with fish that eat mosquito larvae. Call the Orange County Vector Control District (OCVCD) for free fish.
- Use approved mosquito repellent with DEET.

Be sure to read and follow the manufacturer's directions for use.

Common Residential Mosquito Breeding Sources



- A** Out of service (often green and dirty) swimming pools, plastic kiddie pools, and spas can breed thousands of mosquitoes.
- B** The list of items that can hold water is endless. Shown here are an open boat, trash can and lid, buckets, an old tire, a wagon, a wheelbarrow and a tarp. Remember, it only takes a week of standing water to produce mosquitoes.
- C** Lawn and patio drains can often hold enough water to produce mosquitoes. Do not allow water to accumulate. House rain gutters and curb gutters often get clogged with leaves and grass clippings. This decaying vegetation will feed developing mosquito larvae. Keep them clear.
- D** Neglected or non-circulating ponds, or ponds containing fish that do not eat mosquito larvae (gold fish, koi), are ideal for mosquito production. The District will provide you with free mosquito fish. Call OCVCD or come by the office. Change the water in bird baths weekly.
- E** The overflow saucer under flower pots can hold enough water to support mosquitoes. Buckets holding plant cuttings can produce mosquitoes if not changed weekly.