



Humboldt County Department of Health and Human Services

DIVISION OF ENVIRONMENTAL HEALTH

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West Nile Virus-Frequently Asked Questions Humboldt County area, July 20, 2006

What is West Nile virus?

- West Nile virus (WNV) is a mosquito-borne disease that is common in Africa, west Asia, and the Middle East. West Nile virus was first detected in the United States in New York in 1999. Since then, WNV has spread to 47 states, Canada, Puerto Rico and Mexico. There were about 10,000 human cases reported nationwide in 2003. During 2005, a reported 2949 human cases and 116 deaths have been confirmed nationwide.

What is the current status of the spread of West Nile Virus in California?

Presence of the virus was confirmed in 54 of 58 California counties in 2005. Humboldt County has confirmed the virus for the second year in a row. WNV was confirmed in four birds from Ferndale, Loleta, Arcata bottoms and Eureka during the 2005 monitoring. There were sixteen positive birds during 2004. They were found in Westhaven, McKinleyville, Arcata, Eureka, Loleta, Ferndale, Weott, Miranda, and Hoopa. No horse cases have been reported in Humboldt County. One human case attributed to Humboldt during 2005 was acquired in the central valley and diagnosed on arrival here. No locally acquired human cases were noted in Humboldt, Mendocino or Trinity counties in 2005. Statewide, 928 human WNV cases and over 3,000 infected birds were reported during 2005. As the mosquito season resumes this spring, local health officials will continue to monitor for the presence of the virus in horses, mosquitoes, birds, and humans. Our cooler coastal climate may play a role in reducing viral amplification and the associated WNV risk locally.

How does someone get West Nile virus?

- People usually get WNV from the bite of an infected mosquito. Mosquitoes bite infected birds, and then transmit the virus to other birds. Any humans or horses bitten by an infected mosquito may acquire WNV. Humans are "dead end hosts", and, if infected, cannot transfer the virus if bitten by another mosquito. There is evidence that WNV can be acquired via a blood transfusion or organ transplant from an infected donor. Local blood banks test donations to insure that any blood donor does not unwittingly pass WNV. The vast majority of acquired WNV cases involve mosquito bites.

What are the symptoms and treatment?

- Most people who are bitten by a mosquito with WNV will not get sick. An estimated 80% of those bitten will ward off the disease with their normal immune response. There will be about 20% of those bitten that will develop **West Nile Fever**, a condition with symptoms that persist for about five to twenty one days. People who do become ill may experience mild to moderate symptoms such as fever, headache and body ache, muscle tremors, and even temporary paralysis. If you have these symptoms for five days or longer, you are urged to call your doctor.

It is estimated that less than 1% of the people who are infected with WNV become severely ill with **encephalitis** and require hospitalization. Those individuals with immune systems that are compromised, such as the elderly, are particularly susceptible to illness caused by WNV. Very few cases in children are reported.

Currently there is no specific treatment for WNV infection. Since it is a virus, it does not respond to antibiotics as bacteria would. In severe cases, hospitalization and supportive care is important. Consult with your doctor for more information, or contact the Public Health Branch weekday afternoons between 1:00 and 5:00 PM and ask for the “On-Call Nurse”.

How can people protect themselves?

- Individuals should avoid spending time outside at dawn and dusk when mosquitoes are active. WNV vector mosquitoes are especially active for two hours after sunset. When outdoors, wear long pants, long sleeve shirts and other protective clothing if the climate allows. Apply insect repellent according to label instructions. The most effective repellants use the active ingredients DEET or Picaridin. Alternative repellent products such as Oil of Lemon Eucalyptus are also available. Most important is to protect yourself with your choice of product if you are out when mosquitoes are biting. Make sure that doors and windows have tight fitting screens. Repair or replace screens that have tears or holes.

Eliminate all sources of standing water that can support mosquito breeding. The mosquito that carries WNV is now routinely found during summer months in Humboldt County, emerging from both natural and man-made sources. Many natural sources have predators and other biological controls. However, we are finding that mosquitoes will flourish in white plastic buckets and other casual water sources found around the home. With no pressure from predators, the untended bucket can produce about two hundred mosquitoes every several weeks. Local residents are being urged to “**Kick the Bucket**” and remove these obvious sources of mosquito breeding. Change the water in horse or stock troughs every ten days, or place goldfish in the troughs.

What are state and local agencies doing to control the spread of West Nile virus?

- California has a long history of conducting surveillance for mosquito-borne viruses and has taken active steps to ensure early detection of WNV. Due to ongoing collaboration between over 70 local mosquito and vector control agencies and state public agencies, California is well prepared to detect, monitor, and respond to WNV.

There is no history of mosquito borne disease in Humboldt, so the county does not have a mosquito control agency like many other areas of California. Humboldt County has been conducting active mosquito surveillance and public education about WNV under the county’s *West Nile Monitoring and Response Plan* since the spring of 2003. The surveillance includes monitoring mosquitoes, testing dead birds, investigating reported veterinary cases in horses, and tracking any human cases that are reported.

Why is the public urged to report dead birds?

- The public is encouraged to assist in the efforts to detect and monitor WNV by calling the WNV hotline if they find a bird that has been dead for about a day. Birds play an important role in maintaining and spreading this virus. Mosquitoes acquire the virus from infected birds, and then transmit the virus to people. Evidence of the virus in dead birds is often the first indication that WNV has been introduced into a new region. The American Crow, common to Humboldt County, is the bird most often submitted and found to be positive for the WNV. If a bird is found, wear gloves or use a plastic bag when carefully handling it. DHS has set up a toll free hotline for the public to report dead birds: **1-877-WNV-BIRD (1-877-968-2473)**. The Environmental Health Division will pick up the bird and send it to UC Davis for testing.

Will the county come and spray my yard for mosquitoes?

- We will only apply pesticides by sprayer if a public health emergency is declared by the county health officer and spraying is directed by the Board of Supervisors. Great emphasis is being placed on more practical and less costly steps before spraying is called for. The reduction of breeding sources and use of bacteria named BTI that specifically kills mosquito larva are examples of very effective first steps at mosquito control. The mosquitoes of Humboldt will bite you and impact outdoor activities and enjoyment, but a relatively small percentage can make you sick. If the situation changes and spraying of insecticide becomes a necessary control step, then specific public notice will be made as to the time and place of any intended application. Residents will be provided the opportunity to “opt out” and not have pesticide applied around their homes if they wish.

Will you come check my pond or supply any mosquito fish?

- The county does not supply mosquito fish like many other California counties. The Well-managed local pond with goldfish, ornamental Koi, or naturally occurring minnows like the three-spine stickleback is very well protected and immature mosquito larva are devoured before they become adult mosquitoes. The mosquito fish (*gambusia affini*) when released into our streams will quickly compete with and displace local fish species, so use of these fish is not encouraged in Humboldt County. Biological controls such as dragonflies, swallows, minnows, bats, and frogs are very successful control mechanisms as seen in both the Eureka and Arcata marsh areas. Mosquito sources with no predator control such as old tires, buckets, gutters, and stock troughs offer a far greater risk of producing disease-bearing mosquitoes than most backyard ponds.

Should I report heavy concentrations of mosquito activity?

- Residents are strongly encouraged to advise the Environmental Health Division at 445-6215 or toll free at 1-800-963-9241 when concentrations of mosquitoes are encountered.. This will assist us in our surveillance and monitoring efforts to help track WNV.

Where is there more information available?

- The following Internet web sites have extensive information on WNV:

www.humboldthealthalert.org Humboldt County web site. Click on the West Nile Virus bar for surveillance info, news releases, etc. This site is updated with WNV information every few weeks.

www.westnile.ca.gov -The California state West Nile Web Site has the most up to date maps and information on WNV throughout California. This site is updated every Tuesday and Thursday, and is very thorough and comprehensive.

www.cdc.gov – The Federal Centers for Disease Control lists maps and information on WNV throughout the US. This site is excellent for gathering a national and historical perspective of WNV in the United States.