ENCEPHALITIS TRANSMISSION CYCLE

PUBLIC INFORMATION SUPPLIED BY:

BUTTE COUNTY MOSQUITO
AND
VECTOR CONTROL DISTRICT

5117 Larkin Road
Oroville, California 95965-9250

From Chico/Paradise
Phone: 342-7350

From Biggs/Gridley/Oroville/Richvale
Phone: 533:6038

Fax: 534-9916

WESTERN EQUINE ENCEPHALITIS

5/08
Western Equine Encephalitis (WEE) is a virus that can be transmitted to humans and horses by mosquitoes. Mosquitoes can transmit several strains of the encephalitis virus, but WEE is the most prevalent type in California. Encephalitis means “inflammation of the brain,” and is commonly called “sleeping sickness” or “summer flu.”

_Culex tarsalis_, is the mosquito considered to be the primary vector of this disease. It is found in all California counties, and likes to breed in relatively clean, standing water sources such as wetlands, rice fields, cemetery urns, and backyard sources.

_Aedes melanimon_, which breeds in wetlands and flooded pastures, has also been found to be a vector of the disease.

Historically, both the San Joaquin and Sacramento valleys have been the regions where most WEE have occurred.

Encephalitis viruses are believed to be brought into the Central Valley by migrating wild birds, which are the natural reservoirs for the disease. When an uninfected mosquito bites an infected bird, the virus is transferred to the mosquito. The insect can subsequently transmit the virus to horses and humans through its bites.

Encephalitis cannot be transmitted directly from person to person, or from birds to people.

**DIAGNOSIS**

Specific laboratory tests are used to confirm a case of WEE. Other viruses such as measles and herpes can also cause encephalitis. Special tests of blood or spinal fluid can reveal which virus is responsible for the disease. Diagnosis and reporting of cases is important in order to alert public health and mosquito control agencies of the risk to others so that preventive measures can be taken.

**SYMPTOMS**

Symptoms of a WEE infection appear 7 to 21 days after a bite from an infected mosquito. A WEE infection may range from mild flu-like symptoms, consisting of severe headache, and stiff neck, to more serious symptoms including delirium, stupor, convulsions and coma.

Acute encephalitis can cause mental retardation, motor impairment, and sometimes death.

All age groups are susceptible to the disease, but infants, children and the elderly are at greatest risk.

There is no medical cure for encephalitis, and while there is a preventative vaccination for horses, there is no vaccination available for people. The only means for preventing human cases of encephalitis is through effective mosquito control.

**SURVEILLANCE**

Butte County Mosquito and Vector Control District uses seven sentinel chicken flocks at various locations throughout the county as an early warning system for detecting encephalitis. Blood samples are taken from the chickens twice a month and tested for the presence of the virus.

If the test samples show positive results, the District expands its aerial spraying of rice fields and wetlands, as well as ULV (Ultra Low Volume) fogging in areas where _Culex tarsalis_ and _Aedes melanimon_ mosquitoes are present in high numbers.

**PRECAUTIONS**

★ Avoid mosquito bites. Stay indoors when mosquitoes are most active (dawn and dusk).
★ If exposure during peak activity is unavoidable, wear protective clothing that covers arms and legs.
★ Use repellents on clothing and exposed skin. (Follow label directions)
★ Make sure window and door screens fit well and are in good repair.