

## **Mosquito-Borne Viruses**

It is important to note mosquito-borne viruses are found every year in Arizona. The presence of St. Louis Encephalitis virus (SLE) and Western Equine Encephalitis (WEE) have been detected in parts of Maricopa County. Maricopa County's Vector Control conducts regular surveillance on mosquitos to detect these viruses.

Recently, Maricopa County has expanded it's mosquito-borne virus surveillance network to include the West Nile virus (WNV).

Encephalitis viruses, such as SLE, WEE and WNV are spread by mosquitoes. Vector Control's surveillance includes detection, monitoring and control. Surveillance is most prevalent from May through October when mosquitoes are most abundant. The focus of the surveillance program is to detect virus activity in mosquitoes and sentinel chicken flocks. With the upcoming introduction of WNV to Maricopa County, an additional surveillance method has been put into place for detection of WNV in migrating birds.

### **Virus Types**

#### **St. Louis encephalitis (SLE)**

- Associated with mostly Culex species.
- Incubation time in humans 5 – 15 days
- Symptoms: Mild infections occur without apparent symptoms other than fever with headache. More severe infection is marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions (especially in infants) and spastic (but rarely flaccid) paralysis.  
Case fatality 3% to 30 % (especially in the aged).

#### **West Nile virus (WNV)**

- Associated with: Culex species
- Incubation time in humans 3-15 days
- Symptoms: fever, headache, body aches, skin rash (occasionally), swollen lymph nodes (occasionally) More severe: stiff neck, disorientation, stupor, tremors/convulsions, muscle weakness or paralysis.

#### **Western equine encephalitis (WEE)**

- Associated with: Culex tarsalis
- Incubation time in humans 5 – 10 days

- Symptoms: Symptoms range from mild flu-like illness to frank encephalitis, coma and death. Mild to severe neurological deficits in survivors.
- Encephalitis is spread through mosquitoes that feed on infected birds. The mosquitoes then bite people or horses, who may or may not become infected. Encephalitis is not spread by person-to-person contact, nor animal to human contact.
- The chance of getting encephalitis is very rare even in areas where the virus is circulating. Fewer than 1 percent of all mosquitoes carry the virus, and fewer than 1 percent of the people who are infected develop the illness.
- Most people who are infected will show no symptoms at all, or have mild flu-like symptoms such as headache, fever and body aches. Rarely do symptoms get more severe. Generally, those who do experience more severe symptoms, including higher fever and neck stiffness, are over age 50.

**For more information on mosquito-borne illness, contact the Arizona Department of Health Services at (602)230-5932.**