

# Arboviral Encephalitis Fact Sheet

## Encephalitis is an inflammation (swelling) of the brain

Encephalitis has many different causes including viruses, bacteria, parasites, and toxins. When encephalitis is caused by a virus transmitted by arthropods such as mosquitoes or ticks, it is known as arboviral (short for **arthropod-borne**) encephalitis.

## In the U.S., arboviral encephalitis is usually caused by viruses transmitted by mosquitoes

There are five main causes of arboviral encephalitis in the U.S. These include West Nile encephalitis, eastern equine encephalitis, western equine encephalitis, St. Louis encephalitis, and LaCrosse encephalitis.

These arboviruses, which are usually found in birds or small rodents, are transmitted to humans by the bite of an infected mosquito carrying the virus; they are not spread directly from human to human. Arboviral infections are most common in the summer and early fall.

## Most people who are infected with an arbovirus either do not get sick or have mild symptoms

For those few people who do develop symptoms, those symptoms usually begin 5 to 15 days after a bite from a mosquito carrying the virus. A small percentage of infected people develop encephalitis or meningitis (inflammation of the tissues that cover the brain and spinal cord); symptoms may include:

- High fever
- Headache
- Neck stiffness
- Disorientation
- Personality changes
- Weakness or paralysis
- Seizures
- Coma
- Other brain problems

Young children and the elderly are most likely to have severe illness. No proven treatments exist for arboviral encephalitis. Most people recover from the illness, but permanent brain problems and death can occur.

## Steps you can take to prevent mosquito bites and arboviral encephalitis:

- Remove standing water around your home, as mosquitoes can breed in very small amounts of water:
  - remove or turn over buckets, bottles, and other containers
  - discard old tires or drill drainage holes in tires used for playground equipment
  - clean rain gutters; store canoes, wheelbarrows, and plastic wading pools upside down
  - flush birdbaths and the bottom of plant holders twice a week
  - remove pet food and water dishes that are not being used
  - adjust tarps (over pools, boats, etc.) to eliminate standing water
  - fix dripping faucets
- Inspect window and door screens and repair any holes found.
- Minimize outdoor activities at dawn and dusk, when mosquitoes are most active.
- Wear clothing that covers the arms, legs, and feet when you are outdoors, weather permitting.
- Use an EPA-registered insect repellent sparingly on exposed skin. Follow package instructions carefully. For a list of EPA-registered repellents: <http://www.cdc.gov/ncidod/dvbid/westnile/RepellentUpdates.htm>
- Spray clothing only with repellents containing permethrin (mosquitoes may bite through thin clothing); permethrin is NOT for use on skin. Do not use repellents under clothing.

See the Center for Zoonotic and Vector-borne Diseases West Nile Virus web site at <http://ideha.dhmd.gov/OIDEOR/CZVBD/SitePages/west-nile.aspx> for statistics and other information about West Nile virus and other arboviral encephalitides.