

(from inside)

that may have poor drainage. Make sure cisterns, cesspools, septic tanks, fire barrels, rain barrels and trash containers are covered tightly with a lid or with 16-mesh screen.

- Empty plastic wading pools at least once a week and store indoors when not in use.
- Change the water in bird baths, pet's water bowls and plant pots or drip trays at least once each week.
- Store boats covered or upside down, or remove rainwater weekly.
- Level the ground around your home so water can run off and not collect in low spots. Fill in holes or depressions near your home that accumulate water, or treat standing water with products containing the bacteria *Bacillus thuringiensis*, var. *israelensis*.
- Fill in tree holes and hollow stumps that hold water.
- If you have an ornamental water garden, stock it with mosquito-eating fish (e.g., minnows, "mosquito fish," goldfish or guppies).
- Repair screening on windows, doors, porches and patios.
- Some mosquito control methods are not very effective. Bug "zappers" are not effective in controlling biting mosquitoes. Various birds and bats will eat mosquitoes, but there is little scientific evidence that this reduces mosquitoes around homes. Scientific studies have repeatedly shown that electronic mosquito repellents do not prevent mosquitoes from biting.

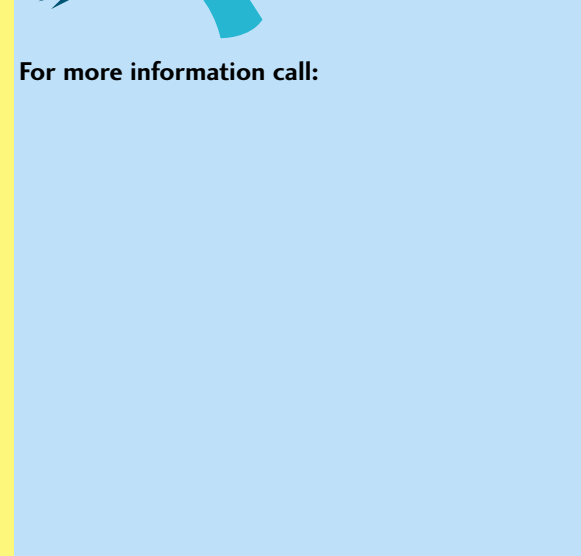


**Dead birds may be an indicator that WN is in your area.**

Please report dead birds on the internet site [www.wildflorida.org/bird/](http://www.wildflorida.org/bird/) (or call your county health department or local Fish and Wildlife Conservation Commission office).



For more information call:



**Florida Department of Health**

Division of Disease Control

Bureau of Epidemiology

[www.doh.state.fl.us/Disease\\_ctrl/epi/htopics/arbo/index.htm](http://www.doh.state.fl.us/Disease_ctrl/epi/htopics/arbo/index.htm)

**(850) 245-4401**

October 2002

# What you should know about **Human Mosquito-borne Disease in Florida**

SLE  
EEE  
WN



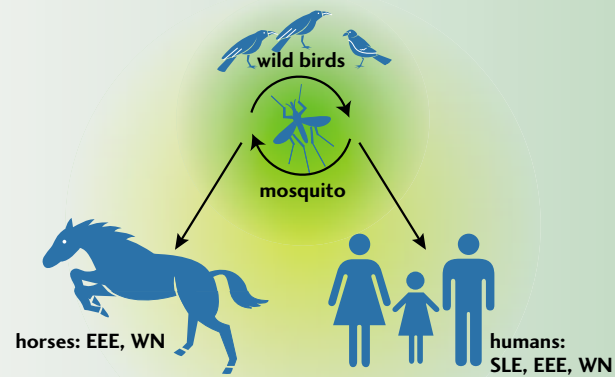
Florida Department of Health

## What mosquito-borne disease is found in Florida?

Viruses that are carried by mosquitoes are called arboviruses. Encephalitis is a general term for inflammation (swelling) of the brain. In the United States, arboviral encephalitis may be due to St. Louis encephalitis (SLE) virus, Eastern equine encephalomyelitis (EEE) virus, Western equine encephalitis virus, LaCrosse virus, or West Nile encephalomyelitis (WN) virus.

SLE is the most common of these diseases in Florida. In an average year, one to 10 cases of SLE are reported. Several large outbreaks involving as many as 200 cases have occurred in the state in recent decades. EEE occurs sporadically in Florida. WN is newly reported in the state.

SLE, EEE, WN Virus Transmission Cycle



## What are the symptoms of Arboviral Encephalitis?

Many people may not even know they are infected with an arbovirus. When symptoms do occur (2–15 days from the bite of an infected mosquito), they may include fever, headache, fatigue, dizziness, weakness and confusion. WN may also cause rash or muscle weakness. People 50 and older tend to be more severely affected by SLE or WN viruses. The most severe cases can lead to coma and death.

## Are there vaccines or treatments for arboviruses?

At this time, there are no human vaccines against SLE or EEE, although a WN vaccine is being developed. Anyone who may be ill with an arbovirus should see a doctor as soon as possible. There is no cure for the infection, but symptoms can be treated.

## How do we know that arboviruses are in an area and that people might become infected?

SLE, EEE and WN viruses pass back and forth between birds and mosquitoes. Mosquito control agencies located throughout the state monitor mosquito populations. In many areas, these agencies and county health departments also keep chicken flocks and monitor these chickens for evidence of exposure to arboviruses. Chickens make good sentinels because they do not get sick from these viruses or transmit them to people.

Dead birds are an indicator that WN virus may be in an area. Please report dead birds on the internet site [www.wildflorida.org/bird/](http://www.wildflorida.org/bird/) (or call your county health department or local Fish and Wildlife Conservation Commission office).

Horses with EEE or WN may be the first indicator that an arbovirus is in an area.

## What is done with this information?

State and county agencies monitor this information regularly. When mosquito populations are large and virus is detected, mosquito control activities are increased—press releases and public education activities are issued to increase awareness of personal protective measures.

## Historically, what parts of Florida are most at risk?

SLE virus has been detected throughout the state, although outbreaks have tended to occur more in Central Florida from coast to coast. EEE virus is detected sporadically across the state. WN has been detected statewide.

## What can you do to prevent infection?

Prevention is the key. The best way to reduce the risk of infection is to avoid getting mosquito bites.

- If you must be outdoors when mosquitoes are active, cover up by wearing shoes, socks, long pants and a long-sleeved shirt;
- For adults and children older than two months of age, the best protection is achieved by using mosquito repellent containing 30 percent DEET (N,N-diethyl-meta-toluamide, now called N,N-diethyl-3-methylbenzamide) according to manufacturer's directions. Greater concentrations provide no additional benefits and risk increased incidence of side effects. For children younger than two months of age DEET is not recommended, use protective clothing and cover with mosquito netting.
- Additional protection can be obtained by applying permethrin repellent directly to clothing and mosquito netting; and eliminate stagnant water in birdbaths, ponds and other receptacles in which mosquitoes might breed.

## What can you do to reduce mosquitoes around your home?

- Remove or empty standing water in old tires, tin cans, buckets, drums, bottles or any other containers. Be sure to check clogged gutters and flat roofs
- (continued on back)*