



Mosquito Life Cycle

Is there a vaccine available to protect humans from West Nile virus?

Currently there is no WNV vaccine available for humans. Many scientists are working on this issue, and there is hope that a vaccine will become available in the next few years.

Can I vaccinate my horse against West Nile virus infection?

A West Nile virus vaccine for horses is available through veterinarians. Horse owners throughout the US should consider vaccinating their equines. Consult your veterinarian for more details on timing of vaccination.

Supporting Links:

Anastasia Mosquito Control District
<http://www.amcdsjc.org>

Center for Disease Control
http://www.cdc.gov/ncidod/diseases/list_mosquitoborne.htm

Division of Environmental Health
<http://www.doh.state.fl.us/environment/community/arboviral/>

Florida Medical Entomology Laboratory
<http://mosquito.ifas.ufl.edu/Index.htm>

United States Department of Agriculture (USDA)
<http://www.usda.gov/wps/portal/usdahome>

Fight the Bite

Reduce the risk of getting ill from viruses carried by mosquitoes.

Practice the 5D's:

- Don't go outdoors between **DUSK & DAWN** when mosquitoes are most active.
- To protect against bites, **DRESS** so your skin is covered with clothing.
- Apply mosquito repellent containing **DEET*** to bare skin and clothing.
- Empty containers and **DRAIN** stagnant water so mosquito wrigglers can't grow up to become biters.

Please contact or visit the following:



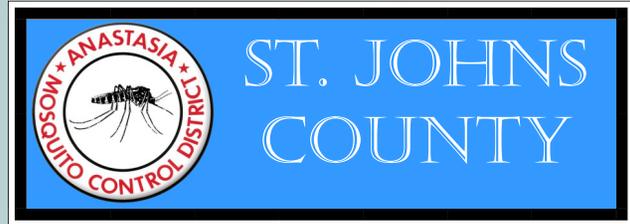
ANASTASIA MOSQUITO CONTROL DISTRICT

500 Old Beach Road

St. Augustine, FL 32080

(904) 471-3107

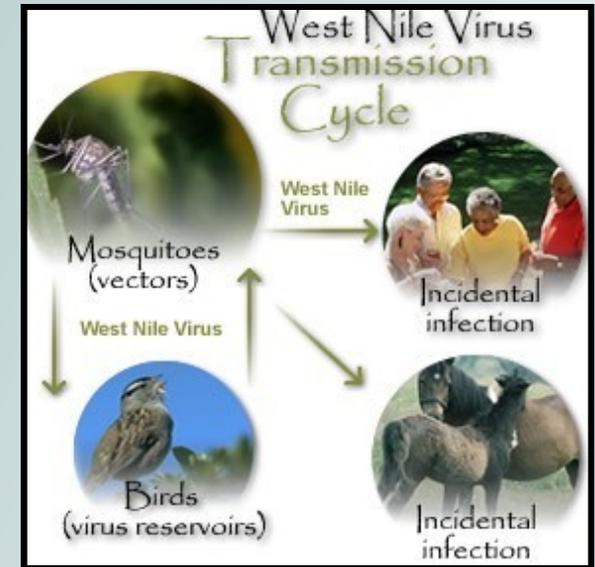
www.amcdsjc.org



MOSQUITO-BORNE

ARBOVIRUSES

& PREVENTION



ANASTASIA MOSQUITO CONTROL DISTRICT
(904) 471-3107

FLORIDA DEPARTMENT OF HEALTH
ST. JOHNS COUNTY HEALTH DEPARTMENT
(904) 825-5055





Florida's diversified and enriched environmental fauna provides the perfect breeding atmosphere for blood-thirsty Culicids (mosquitoes) to feed on a variety of hosts including humans, birds, horses and much more.

What mosquito-borne viruses currently exist in St. Johns County?

Possible mosquito-borne diseases in St. Johns County include but are not limited to the following: (WNV) West Nile Virus, (SLEV) St. Louis Encephalitis Virus, (EEEV) Eastern Equine Encephalitis Virus, (CGV) California Group Virus, and (HJV) Highlands J Virus.

What is an arbovirus?

Arboviruses are viruses spread to people by insect or tick bites. Viruses such as WNV, SLEV, and EEEV are spread by mosquitoes and can cause serious illness in people.



What is Eastern Equine Encephalitis Virus (EEEV) and what are the symptoms?

Eastern equine encephalitis (EEE) is a mosquito-borne viral disease. EEE virus occurs in the eastern half of the United States where it causes disease in humans, horses, and other animals. Because of the high mortality rate, EEE is regarded as one of the most serious mosquito-borne diseases in the United States.

EEE is transmitted to humans through the bite of an infected mosquito. It generally takes from 3 to 10 days to develop symptoms of EEE after being bitten by an infected mosquito.

The main EEE transmission cycle is between birds and mosquitoes. Few species of mosquitoes can become infected with EEEV.

The most important mosquito species in maintaining the bird-mosquito transmission cycle is *Culiseta melanura*, which reproduces in freshwater hardwood swamps. Humans and horses are susceptible to EEEV and some cases are fatal.



In EEEV infected persons who do develop illness, symptoms range from mild-flu like illness to coma and even death. The mortality rate from EEE is approximately one-third, making it one of the most deadly mosquito-borne diseases in the United States. There is no specific treatment for EEE; optimal medical care includes hospitalization and supportive care. Approximately half of those person who survive EEE will have mild to severe permanent neurological damage.

How can people avoid EEEV infection?

A vaccine is available to protect equines. People should avoid mosquito bites by employing personal and household protection measures, such as using an EPA-registered repellent according to manufacturers' instructions, wearing protective clothing, avoiding outdoor activity when mosquitoes are active (some bridge vectors of EEEV are aggressive day-biters), and removing standing



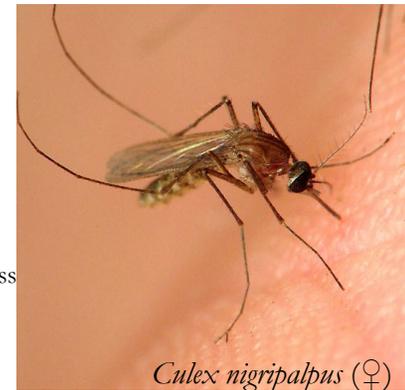
What is West Nile Virus and what are the symptoms?

West Nile Virus (WNV) is a pathogen which may cause a potentially serious illness. Experts believe WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall. Most often, WNV is spread by the bite of an infected mosquito.

Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread WNV to humans, horses and other animals when they bite. The mosquito species vectors responsible for WNV transmission are *Culex nigripalpus* and *Culex quinquefasciatus*.

About 1 in 150 people infected with WNV will develop severe illness. The severe symptom can include:

- High fever
- Headache
- Neck stiffness
- Stupor
- Disorientation
- Coma
- Tremors
- Convulsions
- Muscle weakness
- Vision loss
- Numbness
- Paralysis



These symptoms may last several weeks, and neurological effects may be permanent. Up to 20 percent of the people who become infected have symptoms such as fever, headache, and body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach and back. Symptoms can last for as short as a few days, though even healthy people have become sick for several weeks. Approximately 80 percent of the people (about 4 out of 5) who are infected with WNV will not show any symptoms at all.