

West Nile Virus (WNV)

What is West Nile virus (WNV)?

WNV is an arboviral disease that was first discovered in the West Nile Region of Africa and is transmitted by mosquitoes; arboviral refers to “arthropod-borne virus”. WNV became established in the U.S.A. in 1999. In Virginia, WNV is the most common mosquito-borne infection and occurs during the summer months when mosquitoes are most active. Other mosquito-borne arboviruses in Virginia include La Crosse encephalitis virus, St. Louis encephalitis virus, and eastern equine encephalitis virus.

Who gets WNV infections?

Anyone can become infected with WNV and suffer a severe illness, but persons older than 50 years of age are far more susceptible to illness and account for most of the serious illness cases.

What are the symptoms of arboviral infections?

Most people infected with WNV do not have symptoms. When WNV illness does occur, symptoms can range from a mild fever, headache and body aches, to severe illness which may include symptoms such as: high fever, severe headache, nausea and vomiting, stiff neck, muscle weakness, confusion, disorientation, paralysis, seizures, or coma. Death may occur in about 10% of persons with serious illness.

How soon after exposure do symptoms occur?

Symptoms may occur 3 to 14 days after exposure to infective mosquitoes.

How are WNV infections spread?

WNV is mostly spread from birds to people by the bites of infected mosquitoes. Among the 57 species of mosquitoes that occur in Virginia, there are only five species that potentially transmit WNV. The most important species is the northern house mosquito, and based on extensive mosquito testing data, Asian tiger mosquitoes are also an important WNV vector. Northern house mosquito populations may sometimes develop infection rates of as high as 5%, but these mosquitoes primarily bite birds. Asian tiger mosquito populations typically have very low infection rates (less than 0.01%) but they frequently bite people. Migrating birds may carry WNV from one region to another, but people are unlikely to become infected with WNV from contact with infected birds. Transmission between people does not occur.

Does past infection with WNV make a person immune?

Yes, infection with WNV is thought to provide lasting immunity to the virus.

What is the treatment for a WNV infection?

There is no specific treatment available for WNV infections other than care and support of patients during severe illness.

How can WNV infections be prevented?

Avoid mosquito bites by using insect repellents when outdoors in mosquito-infested areas. Home doors and windows should be well screened to prevent entry of mosquitoes. Eliminate mosquito breeding sites from yards by removing old tires, buckets, toys and other items that hold water. Dump ornamental containers (e.g., bird baths) on a weekly basis, or use mosquito larvicide pellets or dunks periodically to treat larger containers (e.g., ornamental ponds, stagnant swimming pools). Communities or municipalities may establish mosquito surveillance and control programs to reduce mosquito populations by spraying insecticides, treating storm sewers and puddles with larvicides, and draining stagnant water from ditches.

West Nile Virus

March 2013 – page 2

How can I learn more about WNV?

- 1) If you have concerns about WNV, contact your healthcare provider.
- 2) Call your local health department. A directory of local health departments is located at <http://www.vdh.virginia.gov/LHD/index.htm>.
- 3) Visit the Centers for Disease Control and Prevention website at <http://www.cdc.gov/ncidod/dybid/westnile/index.htm>.