



Diseases can be transmitted through the bite of an infected mosquito. The most commonly reported mosquito-transmitted disease in West Virginia is La Crosse encephalitis (LAC), particularly in the south-central part of the state.

Cases of West Nile encephalitis (WN) have occurred throughout the state. Symptoms of encephalitis include fever, headache, nausea, vomiting, abdominal pain, stiff neck, and fatigue. Disease progression could result in further neurological problems, such as tremors, seizures, movement disorders, and coma. Since there is no specific treatment for encephalitis, the only way to prevent mosquito-transmitted encephalitis is through reducing contact with infected mosquitoes.

Reduce Mosquito Populations

The most important responsibility of camp administration is to assure that mosquito populations are minimal or low in the main camp environment, i.e. around living and activity areas and around the mess hall and bathroom facilities. In addition, secure, intact screens should be installed on windows and doors to prevent mosquitoes from invading indoors.

Mosquito vectors of LAC breed in containers holding water. Water-holding cavities in trees and rock pools are the natural habitat for LAC, but old tires, rain barrels, buckets, concrete basins, clogged gutters, and wading pools are good mosquito-breeding grounds. Removing artificial containers – any container that can hold water -- and sealing tree holes with gypsum wool rock around the campsite will lower mosquito populations and reduce disease incidence.

Mosquito vectors of WN also breed in temporary and permanent pools, storm sewer catch basins, ditches, and cesspools. Reduce the number of pools by filling or properly draining areas that collect water. *Bacillus thuringiensis israelensis* (Bti) and *Bacillus sphaericus* (Bs) are safe, commercially available microbial insecticides useful in reducing mosquito larvae in ground pools, storm sewer basins, ditches and cesspools.

West Virginia Department of Health & Human Resources and local health departments monitor mosquito activity throughout West Virginia from summer through early fall. Camp directors can get assistance with mosquito problems through your local health department or by calling the Division of Infectious Disease Epidemiology at **(800)-423-1271, extension 1** or **(304)-558-5358, extension 1**. Your local health department or DIDE can help with identification of mosquito breeding sites and make recommendations on mosquito control.

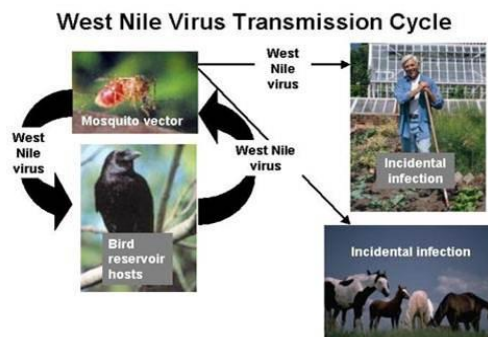
Avoid Mosquito Bites

When campers and staff venture into mosquito habitat, they should be encouraged to take these additional precautions :

- Encourage use of mosquito repellents containing DEET, picaridin, IR₃₅₃₅, or oil of eucalyptus on campers and staff before going into 'mosquito habitat.' Hardwood forests (oak, maple) serve as suitable 'mosquito habitat.' LAC mosquito larvae develop in the tree holes and the forest undergrowth provides protection for the adult mosquitoes.
- Encourage campers and staff to carefully read and follow the label directions when using repellents. Repellents should be used sparingly. After leaving mosquito habitat, wash with soap and warm water to remove traces of repellent.
- Encourage campers and staff to wear long sleeves, pants, and socks when going into mosquito habitat.
- Special considerations for young children: Never apply repellents to the face of young children. Oil of eucalyptus should not be used on children less than three years old.
- Encourage campers and staff to wash with soap and warm water. Since mosquitoes are attracted to cues produced by living, mammalian hosts (such as lactic acid, octenol, and carbon dioxide), regular bathing is encouraged.

Birds and West Nile Encephalitis

Since West Nile virus is maintained in a transmission cycle between infected mosquitoes and birds, infection rates in the bird population can serve as an indicator of WN in the community. If you see a dead bird, make a note of where and when you saw the bird and then call your local health department. If the local health department asks you to do so, put one garbage bag inside another garbage bag, and place the dead bird inside the double garbage bags. Always use gloves when handling a dead bird. Wash your hands with soap and water after removing your gloves.



Although there is no indication that West Nile can be transmitted from handling a bird, people should always be cautious when handling any sick or dead animals.



MOSQUITO SAFETY INFORMATION

www.wvcampsafety.com



The following websites provide additional information about camping, mosquitoes, and mosquito-transmitted disease

www.cdc.gov/family/camping

www.nps.gov/public_health/di/vb_ia.htm

For more information about recent mosquito activity and incidence of mosquito-transmitted disease in West Virginia and the rest of the country

www.dhhr.gov/oeps/disease/Zoonosis/Mosquito/Pages/default.aspx

www.cdc.gov/ncidod/dvbid/westnile/USGS_frame.html

For a Fun Instructional Resource, For Kids, From the CDC

<http://www.cdc.gov/ncidod/dvbid/arbor/neato.htm>