

West Nile Virus and Other Arboviral Diseases



Clinical Description:

Arboviruses are viruses that are transmitted by mosquitoes and other insects. Arboviruses found in the United States include West Nile virus (WNV), Saint Louis encephalitis (SLE) virus, Eastern equine encephalitis (EEE) virus, Western equine encephalitis (WEE) virus, and La Crosse (LAC) encephalitis and other California serogroup viruses. Chikungunya (CHIK) virus is not currently endemic in the United States, but cases are occasionally seen in international travelers.

WNV is the most commonly diagnosed arbovirus in the US. Most WNV infections are asymptomatic. Approximately 20% of infected people will develop a systemic febrile illness called West Nile fever (WNF), and less than 1% will develop neuroinvasive disease, such as aseptic meningitis, encephalitis, or flaccid paralysis. People with WNF typically have an abrupt onset of fever, headache, myalgia, weakness, and often abdominal pain, nausea or vomiting; a rash may also develop on the chest, stomach, and/or back. The acute phase usually resolves within several days, but fatigue and weakness can linger for weeks.

Incubation Period:

The incubation period is usually 3 - 15 days.

Mode of Transmission:

WNV is primarily transmitted to humans through the bite of infected mosquitoes. WNV may also be transmitted through blood transfusion, organ transplant, breastfeeding, and mother to unborn child. WNV is not spread through casual contact from person-to-person.

Exclusion/Attendance:

For information on laws and rules regarding arboviral disease see the ISDH Communicable Disease Reporting Rule (410 IAC 1-2.3-65) at [http://www.in.gov/isdh/files/comm_dis_rule\(1\).pdf](http://www.in.gov/isdh/files/comm_dis_rule(1).pdf). There are no specific recommendations on the exclusion of children or staff with WNV from school or other domestic arboviral infections. Children and staff with suspected Chikungunya virus infections should avoid mosquito exposure for the first seven (7) days of their illness. Any suspect case of arboviral disease (WNV, EEE, SLE, LAC, or CHIK) must be immediately reported to the local health department where the student or staff member resides and the ISDH.

Prevention/Care:

- Avoid exposure to mosquitoes during hours of biting or use mosquito repellants.
- Destroy larvae, kill mosquitoes, and eliminate areas for mosquito breeding.

Outbreaks:

According to the ISDH Communicable Disease Reporting Rule (410 IAC 1-2.3) the definition of an outbreak means cases of disease occurring in a community, region, or particular population at a rate in excess of that which is normally expected. The local health department should be notified of suspected and/or documented cases of WNV or other arboviral infection if the number of cases is in excess of what is normally experienced in your school or occur with a common connection (same class, sports team, etc.). For additional information and recommendations regarding the preparation for, and the management of an outbreak situation in a school setting, see Appendix A,

“Managing an Infectious Disease Outbreak In a School Setting.” Any suspect case of arboviral infection (WNV, EEE, SLE, LAC, or CHIK) must be immediately reported to the local health department and the ISDH.

Other Resources:

Indiana State Department of Health Quick Facts Page (found on disease/condition page):

<http://bit.ly/12lJLfD>

http://www.in.gov/isdh/files/2012QuickFact_Arboviral.pdf

Centers for Disease Control and Prevention (CDC):

http://www.cdc.gov/ncidod/dvbid/westnile/wnv_factsheet.htm