

Eastern Equine Encephalitis (EEE) West Nile Virus (WNV)

PRIMEX³ RISK MANAGEMENT BULLETIN

Seasonal wet weather can result in an increased mosquito population and the possibility of being bitten by mosquitoes. If the annoyance of being bitten isn't bad enough, it is possible that these insects may carry the Eastern Equine Encephalitis or West Nile Virus. Although the risk of these diseases is highest in mid to late summer, precautions should be taken at all times to prevent yourself, your employees and others that you may be responsible for from mosquito bites. The greatest risk is during the evening, night and early morning hours.



Outside workers, such as those in recreation departments, school athletics, highway/DPW departments, police, fire/EMS and other employees who may be exposed, should be advised to wear protective clothing and to use insect repellents on a regular basis.

Schools and recreation departments should develop policies and procedures to ensure that children and their parents, as well as other adults participating in recreation programs are informed of the risks from mosquitoes. Program supervisors should enforce policies about protective clothing and the use of insect repellent. This is most important for evening activities and camps, particularly in areas where water is present, such as beaches and parks. *The following information from the New Hampshire Department of Health and Human Services offers prevention guidelines:*

■ West Nile Virus (WNV)

West Nile Virus (WNV) was first seen in the U.S. in 1999 in the New York City area of Queens. WNV can live in a number of types of birds and is passed bird to bird by certain types of mosquitoes. Occasionally, an infected mosquito will pass the virus to humans or other animals. Most healthy people do not get sick from the virus, but sometimes it may cause symptoms. When a human becomes ill from WNV, they may have symptoms including encephalitis (inflammation of the brain) or meningitis (inflammation of the lining of the brain and spinal cord). Encephalitis and meningitis can also be caused by head injury, bacterial infections or, more commonly, other viral infections.

■ Eastern Equine Encephalitis (EEE)

Eastern Equine Encephalitis (EEE) is a rare but serious viral disease also caused by a virus transmitted by the bite of an infected mosquito with more severe symptoms than those of West Nile Virus. EEE is an arbovirus (short for arthropod-borne, meaning spread by insects). Birds are the source of infection for mosquitoes, which can sometimes transmit the infection to horses, other animals, and, in rare cases, people.

■ The Spread of EEE and WNV



EEE and WNV are spread to humans through the bite of an infected mosquito. When a mosquito bites an infected bird, the mosquito becomes infected; the infected mosquito could then bite a human and transmit the infection. Infected mosquitoes are the primary known source for EEE and WNV transmission to humans. These viruses are not spread by person-to-person contact such as touching, kissing, or caring for someone who is infected. No known transmission has occurred from birds to people; however, since dead birds may have the virus, one should not handle birds or any dead animals with their bare hands.

PREVENTION GUIDELINES

1) Eliminate standing water and other mosquito breeding locations:

- In warm weather, mosquitoes can breed in any puddle that lasts more than four days.
- Remove old tires from your property.
- Dispose of tin cans, plastic containers, ceramic pots, or other containers. Don't overlook containers that have become overgrown by aquatic vegetation.
- Drill holes in the bottom of recycling containers that are left outside.
- Make sure roof gutters are clean and draining properly.
- Clean and chlorinate swimming pools and hot tubs. If not in use, keep empty and covered, and keep covers free of standing water.
- Aerate garden ponds or stock them with fish.
- Turn over wheelbarrows and change water in birdbaths at least twice weekly.
- Turn over plastic wading pools when not in use.
- Remind or help neighbors to eliminate breeding sites on their properties.



2) Be aware of where mosquitoes live and breed; keep them from entering your home:

- Mosquitoes lay their eggs in standing water. Weeds, tall grass, and bushes provide an outdoor home for the adult *Culex Pipiens* (the common northern house mosquito) most commonly associated with West Nile Virus.
- Mosquitoes can enter homes through unscreened windows and doors or broken screens. Make sure that doors and windows have tight-fitting screens. Repair or replace all screens in your home that have tears or holes.
- Resting mosquitoes can often be flushed from indoor resting sites by using sweeping motions under beds, behind bedside tables etc., and once in flight, exterminated prior to sleeping at night.

3) Protect yourself from mosquito bites:

- If outside during evening, nighttime, and dawn hours when mosquitoes are most active and likely to bite, children and adults should wear protective clothing such as long pants, long-sleeved shirts, and socks.
- Consider the use of an effective insect repellent such as one containing DEET, (N,N-diethyl-mtoluamide) a repellent containing 30% or less for children and adults. Use DEET according to the manufacturer's directions. Children should not apply DEET to themselves. Repellents that contain Picaridin or oil of lemon eucalyptus have also been determined to be effective.
- Vitamin B, ultrasonic devices, incense, and bug zappers have not been shown to be effective in preventing mosquito bites.

FOR MORE INFORMATION:

Department of Health and Human Services:

<https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/documents/2021-11/arboprotection.pdf>

Centers For Disease Control and Prevention:

<https://www.cdc.gov/easternequineencephalitis/> • <https://www.cdc.gov/westnile/>

For more information, please contact your Primex³ Risk Management Consultant at 800-698-2364 or email RiskManagement@nhprimex.org.