

## Mosquito Facts

Mosquitoes are small flying insects that feed on human and animal blood or plant juices. Female mosquitoes bite to get a blood meal for their growing eggs. New York State is home to about 70 species of mosquitoes. Mosquitoes usually are considered a nuisance pest, but occasionally they can transmit disease. Some mosquito species have the potential to transmit disease-causing viruses, should those viruses be present in NY. These viruses include the ones described here. These viruses are not spread from other animals to humans or from humans to animals. There are no human vaccines for these, but there are simple steps you can take to reduce your risk of mosquito bites and infection.

## West Nile Virus (WNV)

West Nile Virus has been found in mosquitoes in Africa, Asia and the Middle East for over 75 years. New York State reported the first case of WNV in the U.S. in 1999. WNV is now established throughout the U.S., Canada and Central America. Most people infected with WNV will not have any symptoms, and for those that do, symptoms are typically mild. Very few infections can lead to severe disease that affects the central nervous system, leading to inflammation of the brain (encephalitis) or the membranes of the brain and spinal cord (meningitis). Most people recover completely from even severe WNV disease. There have been cases of WNV from every county in New York.

## Zika Virus

Zika virus was first found in humans in Africa in 1968. Since then, Zika virus has been reported in parts of Africa and Asia. The current outbreak in Central America, South America, and the Caribbean started in May 2015. As of April 2016, all cases of Zika virus in New York have been associated with travel to where outbreaks are taking place. Infection with Zika virus is usually mild, with most people showing no symptoms. Serious complications are rare,

however it may be linked to severe birth defects. If you are pregnant or are trying to get pregnant and think that you may have been exposed to the Zika virus, or if your partner recently traveled to an area with Zika virus, you should discuss it with your OB-GYN or primary care provider. Mosquitoes that may be able to transmit Zika virus are currently limited to Long Island, New York City, and the counties just north of New York City.

## Eastern Equine Encephalitis Virus (EEE, “Triple E”)

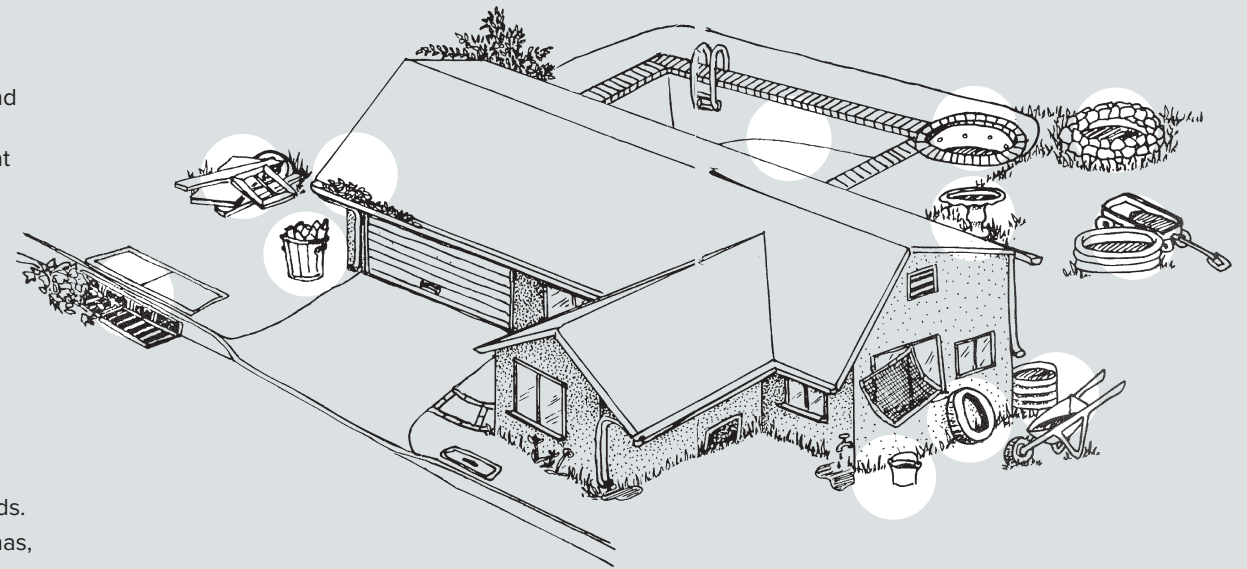
EEE can be a life threatening illness in people and horses. Most people with EEE infection do not experience any noticeable illness, but those that do can develop a severe illness that leads to inflammation of the brain (encephalitis). There is no specific medication to treat EEE. About one third of people who develop symptoms of EEE will die of the illness, and of those who survive, many have lifelong mild to severe brain damage. EEE is most commonly found in mosquitoes in the swampy areas in north central New York.

## Reduce Mosquitoes around Your Home and Yard

Make sure all windows and doors have screens, and that screens do not have rips, tears or holes. Mosquitoes can develop in any standing water that lasts more than 4 days.

To reduce the mosquito population around your home and property, reduce or eliminate all standing water and debris:

- Dispose of tin cans, plastic containers, ceramic pots or similar water-holding containers.
- Dispose of used tires, which are a significant mosquito-breeding site. Call your local municipal public works office or the DEC Regional Office to find out how to dispose of used tires properly.
- Drill holes in the bottoms of recycling containers that are kept outdoors.
- Make sure roof gutters drain properly, and clean clogged gutters in the spring and fall.
- Turn over plastic wading pools and wheelbarrows when not in use.
- Remove leaf litter from yards and gardens.
- Use landscaping to eliminate stagnant water that collects on your property.
- Drain temporary pools of water or fill with dirt.
- Change the water in birdbaths twice weekly.
- Clean vegetation and debris from the edges of ponds.
- Clean and chlorinate swimming pools, outdoor saunas, hot tubs and other water features such as fountains and garden ponds.
- Drain water from pool covers.



## Where Mosquitoes Live and Breed

Mosquitoes lay their eggs in or near water, and their offspring “grow up” in water before emerging as adults that fly and bite. Therefore, mosquitoes can be controlled by controlling water. Many types of mosquitoes, including those that can transmit disease, lay their eggs in even small amounts of standing water around the home such as flowerpots, birdbaths and discarded tires. Others lay their eggs in small ponds or other bodies of water. Adult mosquitoes, when not flying, will rest in weeds, tall grass and shrubbery, and other protected areas.

## Mosquito Activity

Some mosquitoes are most active between dusk and dawn when the air is calm and when females are most likely to bite. Others will feed at any time of the day.



### Protect Yourself from Mosquito Bites

Most mosquitoes are not infected with disease-causing viruses. However, to reduce your risk of being bitten, take the following steps:

- Cover your skin as completely as possible. Wear shoes and socks, long pants and a long-sleeved shirt when outdoors for long periods or when mosquitoes are more active.
- Use mosquito repellent, which should always be applied according to label directions.
- Cover baby carriers with mosquito netting when outside.
- Stay indoors at sunrise, sunset and early in the evening when mosquitoes are most active.
- Close doors and make sure open windows have screens on them.

### Use Mosquito Repellents Correctly

Use EPA-registered insect repellents:

- DEET (N,N-diethyl-m-toluamide) can be applied to exposed skin. Products that contain 20% or more DEET can provide protection that lasts up to several hours. Use the lowest concentration that you will need for the time you will be outdoors. Products containing more than 30-35% DEET should be avoided.
- Picaridin is a colorless, nearly odorless ingredient that can be applied to exposed skin. Products containing a range of 5 to 20% of the active ingredient can provide adequate protection.
- Products containing oil of lemon eucalyptus (OLE), p-menthane 3,8-diol, or IR3535 can also offer protection on skin.
- Permethrin is a repellent used to treat fabrics. Clothes, shoes and camping gear can be treated or purchased pretreated with permethrin. Its protection can last through many washes. Never apply permethrin to skin.

### Take these precautions when using mosquito repellents:

- Read and follow label directions.
- Avoid prolonged and excessive use of repellents.
- Do not allow children to apply repellents themselves. Do not apply repellents directly on children’s skin—apply repellent to your own hands and then put it on the child. Do not apply repellent to children’s hands.
- Do not apply near eyes, nose or mouth and use sparingly around ears.
- Do not apply to skin that is sunburned, cut, bruised or irritated.
- After returning indoors, wash treated skin and clothing.
- If you believe someone is having an adverse reaction to a repellent, wash the treated area immediately. Then contact your health care provider or poison control center.
- Store repellents safely out of the reach of children and animals.

For more information on how to prevent mosquito-borne diseases, contact your local health department. Contact information for your local health department and more can be found by visiting the Department of Health website at [www.health.ny.gov](http://www.health.ny.gov).



Department of Health

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# Mosquitoes and Disease



Department of Health