

Mosquito-Borne Diseases (Arboviruses)

Many people believe that mosquitoes are simply annoying insects that bite and leave an itchy bump that will simply disappear in a few days. What we don't realize is that these tiny pests can carry deadly diseases that cause thousands of illnesses and deaths each year and can even transmit disease and parasites to dogs and horses. The importance of controlling mosquitoes is critical this year, since Stokes County had such a mild winter; expect mosquitoes to emerge early and in larger numbers.



Arbovirus is the name given to arthropod-borne viruses. These viruses are transmitted to vertebrates, such as people and mammals, by blood-feeding insects called arthropods, such as mosquitoes. Vertebrate infection occurs when the infected insect bites an animal or person and takes a blood meal. Arboviruses are also known as vector-borne diseases.

In North Carolina, there are three main arboviruses that are transmitted to both people and animals by various types of mosquitoes:

- West Nile virus (WNV)
- Eastern equine encephalitis (EEE)
- La Crosse encephalitis (LAC)

Most cases of arboviral disease occur from June through September, when mosquitoes are most active. Arboviruses usually cause either no symptoms or mild, flu-like illness. They can cause more serious conditions, including encephalitis, meningitis, meningoencephalitis and can be fatal.

Dengue fever, malaria and yellow fever are also reportable mosquito-borne illnesses in North Carolina. They are not transmitted by mosquitoes in this state but North Carolinians may contract one of these diseases if they travel to certain countries or regions where these diseases are found, such as the tropics or sub-Saharan Africa.

Mosquito-borne illness can be prevented in major ways:

Use repellent:

- When outdoors, use insect repellent containing DEET, picaridin, IR3535 or oil of lemon eucalyptus on exposed skin as well as on clothing (mosquitoes will bite through thin cloth). Remember always to follow the manufacturer's recommendations. Permethrin is a repellent/insecticide that can be applied to clothing and will provide excellent protection through multiple washes. You can treat clothing yourself or purchase pre-treated clothing. For best protection it is still necessary to apply other repellent to exposed skin.

Wear protective clothing:

- Wear long sleeves, pants and socks when weather permits.

Avoid peak biting hours:

- Avoid outdoor activity or use protective measures when mosquitoes are active, typically from dawn until dusk.

Install and repair screens:

- Have secure, intact screens on windows and doors to keep mosquitoes out.

Eliminate breeding areas from your home and yard:

- Mosquitoes can lay eggs even in small amounts of standing water. Fill tree holes in/around your yard with soil and empty standing water from flower pots, buckets, barrels, children's wading pools and tires. Drill holes in tire swinas so water drains out. Change the water in pet dishes and replace the water in bird baths.