

### What is West Nile Virus (WNV)?

WNV is a virus carried by mosquitoes. It can infect many types of animals including humans, horses, dogs, cats. It prefers birds.

### How is WNV spread?

WNV prefers to infect birds. Mosquitoes can carry the virus from an infected bird to an uninfected person. The virus must enter the bloodstream to cause an infection. That is why casual contact with infected birds, animals or people is not a risk.

### What are the symptoms in people?

If a person is bitten by a mosquito with WNV it can take 5-15 days for symptoms to appear. Most infected people never have symptoms. Some may have mild symptoms such as a headache, swollen glands, muscle aches, flu-like symptoms and often a rash. Rarely will someone who is infected develop severe infection of the brain, called "encephalitis" which can lead to death. Older people with less active immune systems or people who have compromised immune systems, such as people with HIV or organ transplants, are more likely to become ill if they get infected because their bodies cannot fight the virus as well.

### What do you do if you have symptoms of WNV?

Call your doctor or health care provider as soon as possible if you have been exposed to mosquitoes and have symptoms of WNV. There is no cure, but the symptoms can be treated.

### Is there a vaccine against WNV?

There is no human vaccine for WNV, but there is one for horses. If you are concerned about your animal being sick with WNV, call your veterinarian.



## How can you protect yourself from diseases spread by mosquitoes?

### *Avoid mosquito bites:*

- ✦ Wear long-sleeved shirts and long-legged pants so mosquitoes cannot bite you.
- ✦ Avoid places where there are a lot of mosquitoes.
- ✦ Stay inside or in a screened in area when there are a lot of mosquitoes, such as right at dusk.
- ✦ Use repellents to prevent mosquito bites. (See details inside!) \*Be careful to follow the label directions. These are chemicals and can be dangerous in even small doses.

### *Stop mosquitoes from breeding:*

- ✦ Empty, destroy, recycle or cover containers like tires, tin cans, buckets and bottles that hold stagnant water where mosquitoes lay eggs.
- ✦ Change the water in your pet's or livestock's water bowls or troughs or in bird baths at least once a week.
- ✦ Remove or empty trays under potted plants.
- ✦ Stock ponds and ditches with native fish.
- ✦ Cover unused pools.
- ✦ Fix leaky outdoor faucets.
- ✦ Clean out clogged rain gutters.
- ✦ Put special "donuts" made with mosquito-killing bacteria in water where mosquitoes lay eggs.

### *Educate yourself!*

#### CDC Public Response Service:

- ✦ 1-888-246-2675 (English) or 1-888-246-2867 (Español) or 1-866-874-2646 (TTY Service)

#### Websites:

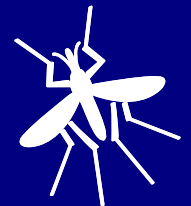
- ✦ [www.cdc.gov/ncidod/dvbid/westnile/index.htm](http://www.cdc.gov/ncidod/dvbid/westnile/index.htm)
- ✦ [www.epi.state.nc.us/epi/arbovirus](http://www.epi.state.nc.us/epi/arbovirus)
- ✦ [http://www.bam.gov/sub\\_diseases/diseases\\_westnile.html](http://www.bam.gov/sub_diseases/diseases_westnile.html) (For Children)
- ✦ <http://www.phppo.cdc.gov/PHTN/westnile/> (For Health Care Providers)



# West Nile Virus

**What can you do?**

**What do you need to know?**



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## Other Mosquito-Borne Diseases Across NC

West Nile Virus (WNV) is one of three viruses carried by mosquitoes in NC that causes encephalitis, a deadly infection in the brain. Human infections are not that common. Most who get infected do not become ill; but it can cause a range of symptoms from fever, headache and other flu-like symptoms to coma and death. Last year there were 6 reported cases in NC and no deaths.

Eastern Equine Encephalitis (EEE) is also carried by birds. The virus is spread to people by mosquitoes that feed on birds and humans. There is usually 1 EEE case in NC every year. Half of the cases have been deadly. EEE can be very serious, causing headaches, muscle aches, seizures, coma or death. Other animals, especially horses, can also become sick or die from EEE.

LaCrosse (LAC) is another virus spread by mosquitoes. It causes mild symptoms that look like flu, but in young children it can cause seizures or coma. In rare cases it causes encephalitis. LAC is usually seen in small animals, such as squirrels and chipmunks; and it is usually only found only in the very western part of the state. There have been around 20 LAC cases in NC over the past few years. Deaths are rare.



## Public Health and West Nile Virus

As WNV made its way across the US, public health officials tracked it by testing dead birds. Public health officials now believe WNV is here to stay. Therefore, birds will not be tested for WNV unless a large number of birds in a small area die ("bird die-offs").

WNV is now considered a summer hazard, like Rocky Mountain Spotted Fever, Lyme Disease, heat rash and sunburns. The best protection against WNV is wearing protective clothing, using insect repellants and eliminating standing water where mosquitoes breed.

### Safety Tips for Handling Dead Birds

It is still a good idea to use protection when handling dead birds regardless of the cause of death. Wear gloves while picking up the bird. Double-bag it in a storage bag or small garbage bag. Take off the gloves by grabbing the cuff of the glove and pulling it over your hand, turning the glove inside out while taking it off. If you do not have gloves, use a plastic bag. Put your hand in the bag so you're touching the bottom seam. Pick up the bird with your bagged hand. Pull the bag over the bird, turning the bag inside out, wrapping the bird in the bag. In either case, throw everything away and wash your hands with soap and warm water!

Hunters should remember that birds can be infected without showing symptoms. Just be careful not to contaminate other foods while cooking the bird and make sure it is fully cooked.

## Insect Repellants: Use and Precautions

One way to prevent mosquito bites is by using repellants. The Centers for Disease Control and Prevention (CDC) recommends repellants with DEET or Picaridin. Oil of Lemon Eucalyptus can also be used. These are chemicals and should be used carefully. Follow the instructions and precautions written on the repellant label.

Repellants must list age restrictions on their labels. If there is not one, the Environmental Protection Agency has not required a restriction. In general, public health officials recommend:

Children Under 2 Months: Do not use DEET on infants younger than 2 months. Use other methods of protection such as long-sleeved shirts and long pants, and placing mesh covers over strollers.

Children Under 3 Years: Do not use oil of eucalyptus on children younger than 3 years. Use other repellants such as DEET, picaridin, or long clothing.

If you have more concerns about using repellants on children, call the National Pesticide Information Center at 1-800-858-7378 or visit their website at [npic.orst.edu](http://npic.orst.edu)

***DEET should always be washed off with soap and water after returning indoors, regardless of age!***

