

# West Nile Virus: Frequently Asked Questions

## What is West Nile Virus?

West Nile virus (WNV) originates from Africa, West Asia, and Europe. It is carried by mosquitoes and can infect many types of animals.

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## How did WNV come to the United States?

It is not clear how West Nile virus came to the United States. It was first found in New York City during the summer of 1999. This virus seems to be closely related to WNV from Israel. People do not develop enough virus to infect mosquitoes so WNV probably entered this country in an infected bird or mosquito.

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## Where has WNV been found in the United States?

WNV has been found in infected birds and humans throughout the United States, including North Carolina.

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## Will WNV Stay in the United States?

WNV has spread throughout the United States. It has now been found in many types of birds, mosquitoes and other animals. The virus seems to have adapted to conditions in this country, and it is likely to remain here.

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## How is WNV Spread?

WNV is a virus of birds. In nature it is spread from bird to bird by mosquito bites. Some types of mosquitoes feed only on birds while others feed both on birds and humans. People and other animals are infected by the bite of a mosquito that has gotten the virus from feeding on an infected bird. The virus has also been transmitted with infected blood through transfusion. WNV is not likely to be transmitted through casual contact with infected birds, animals or people as the virus must enter the bloodstream to cause an infection.

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## What are the symptoms of WNV in people?

If bitten by an infected mosquito, it may take five to 15 days to become ill. Most people infected with WNV experience only mild illness, but death can occur in rare cases. WNV may cause headache, swollen glands, muscle aches, other flu-like symptoms and often a rash. In severe cases, it may cause an infection of the brain. Older people are more likely to become very ill from WNV.

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## What should be done if someone has symptoms of WNV?

Anyone who may be ill with WNV should see a doctor as soon as possible. There is no cure for the infection, but symptoms can be treated.

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## Does WNV infect other animals?

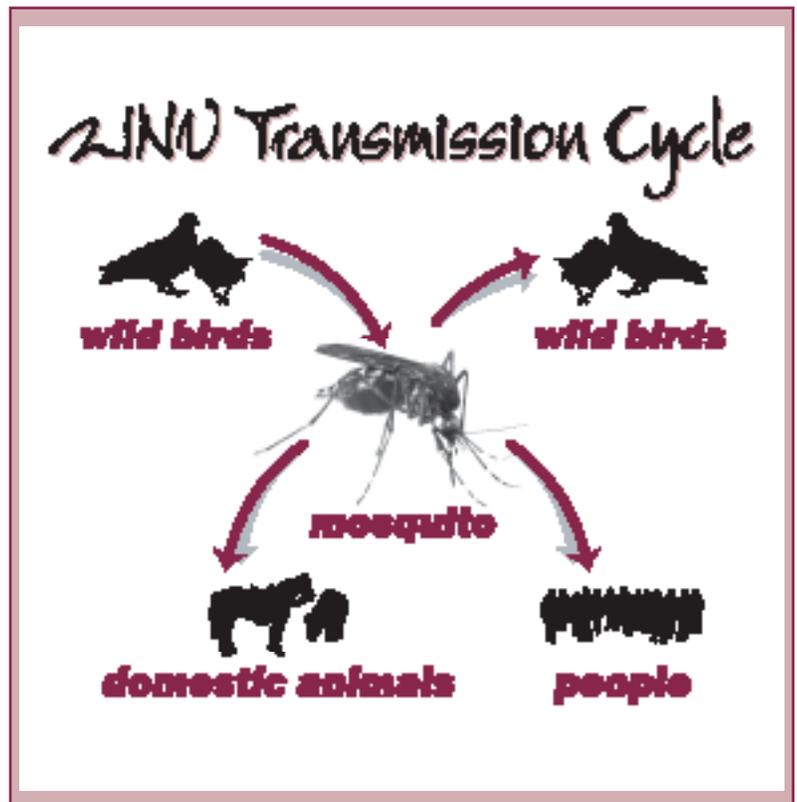
Besides birds and people, WNV has been found in horses. It may also infect sheep, cattle, cats, dogs and other animals. Mosquitoes can only become infected by feeding on birds.

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## Is there a vaccine for WNV?

At this time, there is no vaccine to prevent WNV in people. There is an effective vaccine to protect horses. Contact a veterinarian about vaccinating horses.

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## Can mosquitoes in North Carolina carry other viruses to people?

Mosquitoes in North Carolina carry two other viruses – Eastern equine encephalitis virus (EEE) and LaCrosse encephalitis virus (LAC).

EEE is usually found in eastern North Carolina. Like WNV, it is a virus of birds that is spread to people by mosquitoes. There are only about one to three cases of EEE reported in North Carolina each year. EEE can be a very serious disease. It may cause headaches, muscle aches, seizures, coma and death. Other animals, especially horses, can also be infected with EEE. There is a vaccine to protect horses from EEE.

LAC is a virus of small mammals like squirrels and chipmunks that is spread by mosquitoes. LAC is found only in the very western part of the state. Usually LAC causes a mild disease that may seem like the flu. In young children, LAC may cause seizure and coma. About five to six cases of LAC are reported in North Carolina each year.

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## What time of year are mosquito viruses spread?

Viruses are most likely to be spread during the warm weather months when mosquitoes are most active, usually beginning in the spring and lasting until the first hard frost. Most human cases occur in late summer and fall.

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## What is being done about WNV in North Carolina?

For many years North Carolina has used flocks of chickens to check for EEE virus. Samples of blood taken from these chickens show whether they have been infected. The same birds are being used to check for WNV.

Testing of dead wild birds was very helpful to identify the presence of WNV. However, testing dead birds is no longer needed now that it is known that WNV is present throughout North Carolina. Instead, North Carolina uses the mosquito trapping and testing for WNV as a surveillance tool as well as monitoring cases in horses and other animals.

When signs of a virus are found, people will be advised to avoid mosquito bites. If a town or country has a mosquito control program, the area may be sprayed to control mosquitoes.

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## How can we avoid WNV and other mosquito viruses?

Experts estimate as few as one in 1,000 mosquitoes are infected with a virus at any given time. Because so few mosquitoes carry virus, avoiding mosquito bites can greatly reduce the chance of becoming infected.

### Some ways to avoid mosquito bites:

- Wear long-sleeved shirts and long-legged pants to stop mosquito bites.
- Avoid the places where there are large numbers of mosquitoes.
- Avoid being outdoors when mosquitoes are most active, especially around dawn and dusk.
- Use repellents to prevent mosquito bites. Carefully follow the label directions. For more information on repellents, please see the Centers for Disease Control's website at: [www.cdc.gov/ncidod/dvbid/westnile/repellentupdates.htm](http://www.cdc.gov/ncidod/dvbid/westnile/repellentupdates.htm).

### Some ways to stop mosquito breeding:

- Empty, destroy, recycle or cover containers like tires, tin cans, buckets and bottles where mosquitoes can lay their eggs.
- Change water in pet bowls and birdbaths at least once a week.
- Remove or empty dishes under potted plants.
- Stock ponds and ditches with fish.
- Cover unused pools.
- Clean clogged rain gutters.
- Put special 'donuts' made with mosquito-killing bacteria in water where mosquito eggs may hatch.

## How can I get more information about WNV?

Contact your local health department or the  
Public Health Pest Management Section at  
(919) 733-6407.

N.C. Department of Environment and Natural Resources

Division of Environmental Health

Public Health Pest Management Section

<http://www.deh.enr.state.nc.us/phpm/index.htm>



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