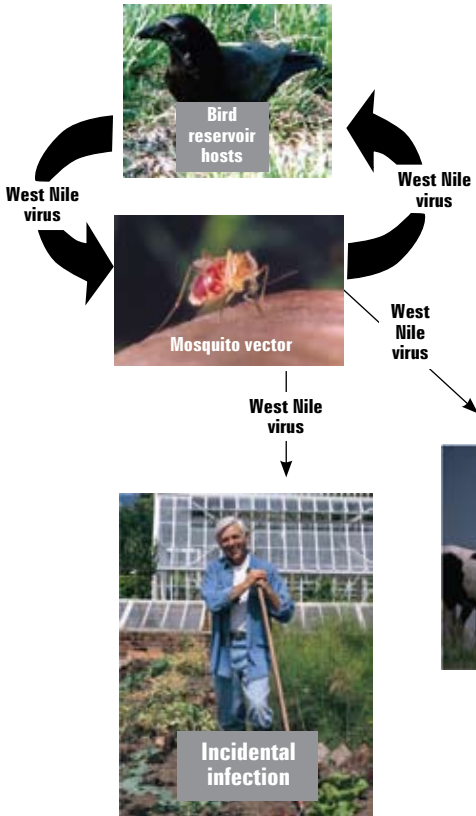


# West Nile Virus and Mosquitoes

## What is West Nile Virus?

West Nile virus (WNV) is a virus that is transmitted to people by the bite of an infected mosquito. WNV was first detected in Fairfax County in 2000 and has since affected many residents, sometimes resulting in serious illness and even death.

## The West Nile Virus Transmission Cycle



Courtesy of CDC

## The West Nile Virus Transmission Cycle

- The natural transmission cycle of West Nile virus is between a few types of birds and some mosquitoes.
- Very few mosquitoes are actually infected with the West Nile virus.
  - A bird infected with WNV is bitten by a mosquito.
  - The mosquito picks up the virus from the bird and after about a week, the mosquito can transmit the virus.
  - The infected mosquito will then feed on an uninfected bird and transmit the virus to the bird.
- Sometimes, the infected mosquito will feed on humans or horses. Some of these humans and horses can get sick or die from the infection.

## What are the Signs and Symptoms of West Nile Virus?

Symptoms generally appear three to 15 days after being bitten by an infected mosquito.

- **SERIOUS SYMPTOMS in a few people:** About one in 150 people infected with West Nile virus will develop severe illness. This may include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness or paralysis. These symptoms may last several weeks and neurological effects may be permanent. West Nile virus infection can be fatal.
- **MILDER SYMPTOMS in some people:** Up to 20 percent of people infected with West Nile virus develop West Nile fever, symptoms of which may include fever, headache, body aches, nausea, vomiting and sometimes swollen lymph glands or a skin rash on the chest, stomach and back. Symptoms may last a few days to several weeks.
- **NO SYMPTOMS in most people:** Approximately 80 percent of people who are infected with West Nile virus will not show any symptoms at all.


## Who is at Risk for West Nile Virus?


While everyone is equally susceptible to West Nile virus, people over the age of 50 are at greatest risk for developing more severe forms of the disease. No vaccine against WNV is available for people at this time.





# The Mosquito Life Cycle


- There are four stages in the life of a mosquito: egg, larva, pupa and adult.

 Mosquitoes eggs are laid so that they hatch in water.

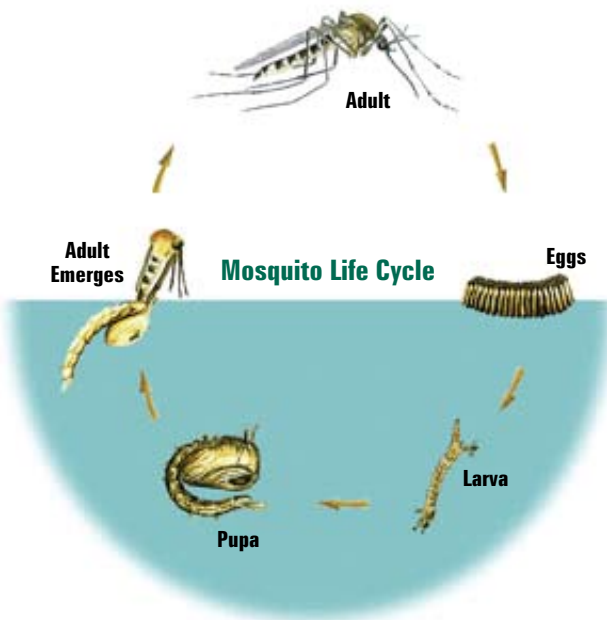
 A larva emerges from the egg and feeds and grows in the water for about a week.

 The larva then turns into a pupa, which is also found in water but does not feed.

 After about two days, the adult mosquito that has developed inside the pupa will emerge into the familiar flying form.

 There are both male and female mosquitoes, but only the female bites because she needs the blood to provide nutrients for her eggs.

- Female mosquitoes will lay 200-300 eggs each time they have a blood meal. She may lay eggs three or four times during the month that she is alive.



*Courtesy of Leon County Mosquito Control*

## How to Get Rid of Adult Mosquitoes Around Your Home

- Applying a permethrin barrier spray to your yard will provide temporary relief from biting adult mosquitoes.
- Permethrin is an insecticide that both repels and kills mosquitoes.
- Permethrin has low human toxicity and is readily available in garden centers and hardware stores.
- When looking for permethrin products, make sure to check the labeling—permethrin is the name of the active ingredient, not the product brand name.
- Apply permethrin to ivy, shrubs, trees, ornamental grasses and to any other plants where mosquitoes are resting.
- Permethrin will not harm your garden plants.
- Treatment will last two to three weeks, depending on the rain.
- Reapply as needed depending on mosquito presence and annoyance.
- Always read and follow the label instructions before applying insecticides.

### Applying Permethrin to Vegetation



## *Culex* Mosquitoes and West Nile Virus

**Scientific names:** *Culex pipiens*,  
*Culex restuans*

**Appearance:** Small, brown mosquito.

**Personality:** Shy, not aggressive;  
likes to feed from dusk until dawn.

**Her Favorite Meal:** Birds, but she will  
occasionally feed on mammals.

**Preferred Breeding Sites:** Stagnant,  
organic, nutrient-rich water. Places  
like catch basins (storm drains),  
clogged rain gutters and sites where  
the water stands for a longer period  
of time (usually a few weeks).



**Hangouts:** Adults like to spend  
time in trees, bushes and tall grass  
during the day—as long as it's cool  
and humid.

**Health Risk:** These are the most  
important mosquitoes in the West  
Nile virus transmission cycle. Even  
though they prefer to feed on birds,  
they will bite humans, horses and  
other mammals, which can get sick if  
they become infected.

**Additional comments:** These  
mosquitoes are not as aggressive as  
other mosquitoes, so you may not  
notice when one is biting you—  
another good reason to wear insect  
repellent.



*Courtesy of CDC*

The Health Department has a  
pro-active catch-basin treatment  
program to help reduce the number  
of mosquitoes.

Be sure to use the “Breeding Site  
Check List” on page nine to help  
get rid of mosquito larvae around  
your home.