

## **What is West Nile virus (WNV)?**

It is a type of encephalitis that was discovered in Africa in 1937. It was unknown in the US until 1999 when an outbreak occurred in New York City. The virus has steadily spread westward and has now been found in all 48 continental states. It spread from the east coast to the west coast at an astonishing rate of only three years.

It is primarily a disease of birds. The virus is spread by mosquitoes and can be transmitted to many other animals including humans, horses, squirrels, dogs, cats, and deer, among others.

Because the virus can survive the winter in hibernating mosquitoes and their eggs, West Nile virus will continue to be present in Indiana.

## **West Nile virus symptoms**

The Centers for Disease Control and Prevention (CDC) estimates that 80% of the people (4 out of 5) who become infected by the virus will not develop symptoms or will develop only mild illness. The incubation period (time from infection to onset of disease symptoms) is usually 2 to 15 days.

About 20% of infected people will develop West Nile fever. Symptoms include fever, headache, tiredness, body aches, swollen lymph glands, and occasionally, a rash on the trunk of the body. West Nile fever may last only a few days, but even healthy people have reported being sick for several weeks.

West Nile encephalitis, meningitis, or poliomyelitis are considered to be severe

forms of the virus. Symptoms include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis. It is estimated that only 1 in 150 infected people develop the more severe forms of the illness. People over 50 and those with compromised immune systems are at highest risk for becoming severely ill.

## **To prevent West Nile virus**

The two main steps are: 1) protect yourself from mosquito bites, and, 2) eliminate mosquito-breeding sites. Mosquito season in Indiana runs from May 1 thru October 1.



To help prevent bites:

- Don't go outside when mosquitoes are searching for blood meals – in the evening and at dawn, although some species bite throughout the day.
- Wear light-colored clothing including long pants, socks, and long-sleeved shirts. Don't look like the shadows where mosquitoes like to hang out.
- Avoid floral fragrances from perfumes, soaps, lotions, etc.
- Apply effective repellents, such as those with DEET, picardin, or oil of lemon eucalyptus to clothes and exposed skin.
- Make sure doors and windows have tight-fitting screens and repair any holes.

**Mosquitoes grow from larva to biting adult in one week.** Most mosquitoes in Indiana DO NOT come from swamps, rivers, streams, farm ponds or lakes – they come from our own back yards! Reduce mosquito breeding sites:



- Properly discard of old tires. Used tires have become the #1 mosquito breeding habitat in the US.
- Do not allow containers to hold water.
- Check birdbaths and animal-watering buckets or troughs for larvae. Empty and refill twice a week.
- Make sure gutters drain properly. Clean clogged gutters.
- Clean and chlorinate pools. If not in use, empty and cover them.
- Drain water from pool covers, boat covers, canoes.
- Aerate ornamental pools or stock with fish.
- Eliminate all standing water on your property. Mosquitoes will develop in any puddle that stands more than 4 days.
- Repair leaking or failed septic systems.
- Lagoons which hold animal waste can produce tens of thousands of disease-spreading mosquitoes.
- Larvaciding is the most efficient type of mosquito control, next to elimination of breeding sites. *Bacillus thuringiensis* is a bacterial spore that kills mosquito larvae but does not harm other animals or fish.

## **West Nile virus and animals**

Dogs and cats have rarely been reported as developing West Nile virus. Usually any that are infected will recover completely.



Horses can get West Nile virus by being bitten by an infected mosquito. Signs may include loss of appetite, depression, fever, weakness or paralysis of hind limbs, impaired vision, head pressing, head tilting, aimless wandering, circling, convulsions, inability to swallow, hyper-excitability, or coma. A positive diagnosis can only be made by a veterinarian. Infected horses cannot infect other horses or humans.

**There is a vaccine against WNV for horses.** It requires two doses, 3 to 6 weeks apart, and an annual booster. In unvaccinated horses, the mortality rate is about 30%. Contact your veterinarian for more information.

Other prevention tips:

- Keep horses inside from dusk to dawn.
- Mosquitoes are attracted to lights – keep lights off in the stables. Place light bulbs 50 yards away to attract mosquitoes away from the horses.
- Remove all birds, including chickens that are in or near the stable.
- Examine your property for potential mosquito breeding sites.

- Mosquito repellents are available for horses. Be sure to read the label and follow instructions for use.

## **West Nile virus and birds**

Birds are the source of the virus, and many birds die when they get it. The Indiana State Department of Health (ISDH) no longer does WNV testing on birds.



# West Nile Virus



Biting mosquito



Mosquito larvae

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