



Extension FactSheet

Veterinary Preventive Medicine, 1900 Coffey Road, Columbus, OH 43210

West Nile Virus and Scrap Tires

What Is West Nile Virus?

West Nile Virus (WNV) is a viral disease previously seen only in Africa, Asia, and southern Europe. This virus can cause encephalitis, an infection of the brain and the spinal cord. For the past three years, WNV has caused disease in the United States. In 1999, at least 62 people became seriously ill, and seven of those died. Since then, WNV has rapidly spread throughout 27 states and the District of Columbia. During the year 2000, 21 human cases of WNV encephalitis were reported in the United States, with two deaths. In 2001, 56 cases with 7 deaths were reported. In Ohio, WNV was first identified in a blue jay collected in Lake County. No human or horse cases were identified. It is expected that WNV will continue to be a disease threat in 2002.

The West Nile Virus is spread to people by the bite of an infected mosquito. The principal transmitter of West Nile Virus is the Northern House Mosquito (*Culex pipiens*). Mosquitoes first become exposed to the virus when they feed on birds that are infected with WNV. Once the mosquito is infected, it may transmit the virus to people or other animals when it bites them. Many birds can be infected with WNV, but crows and blue jays are most likely to die from the infection. Horses, too, are prone to severe WNV infection. People cannot get WNV from another person or horse that has the disease.

Continued spread of this disease among wild birds and mosquitoes is anticipated. In Ohio, state, federal, and local agencies are working together to address the potential health risks of WNV to Ohio families and their animals. Public health officials found WNV in crows, blue jays, and mosquitoes in 29

Ohio counties during 2001. Once this was known, mosquito control efforts were increased in those areas to protect people from the disease.

How to Prevent West Nile Virus

Scrap tires can be a prime breeding source for mosquitoes, including the northern house mosquito, which can carry WNV. When discarded, tires can accumulate small pools of water, where adult mosquitoes will lay eggs. Over the course of one breeding season, thousands of mosquitoes can be generated from just one tire. If tires infested with eggs, larvae, or pupae are transported, the potential to spread mosquitoes carrying the virus increases. Breeding takes place in water-filled tires where the egg is laid and the larva and the pupa can grow. The adult mosquito emerges from the water in as little as seven days after hatching.

Businesses such as retail tire sales locations, retreading operations, fleet maintenance garages, and motor vehicle salvage dealers routinely remove tires in the course of business. Ohio regulations allow such facilities to accumulate a limited number of scrap tires generated by their business operations but also require them to control mosquitoes at their facilities. Ohio's tire rules require that these facilities either keep water from accumulating in scrap tires stored at their site, or apply either larvicide or pesticide to the tires each month from April to November each year. Businesses choosing to treat scrap tires must maintain records to document their compliance with the rule requirements.

Scrap tires may also be found around farms and private residences. Scrap tires are often found mixed with other solid



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waste at open dump sites. Such sites often provide additional containers (such as discarded cartons, packaging, buckets, and more) that provide breeding locations for mosquitoes.

If you have scrap tires on your property, farm, or business location, you are responsible for making sure they do not create a nuisance. There are a number of ways to eliminate mosquito breeding in scrap tires:

- Remove and properly dispose of the tires.
- Eliminate standing water in the tires if the tires cannot be removed. This can be done by properly storing dry tires under a tarp and making sure rainwater does not accumulate.
- Make use of larviciding, which is the most effective control technique, where breeding areas cannot be eliminated. Some larvicides can only be applied by certified pesticide applicators.

If you are concerned about a tire pile in your area, contact local health officials or the Ohio EPA (see web address later in this publication) to find what mosquito control measures are being taken or could be taken.

West Nile Virus Symptoms

People with mild infections may experience fever, headache, body aches, skin rash, and swollen lymph glands. People with more severe infections may experience high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions, and paralysis. If you have any of these symptoms, contact your doctor.

How You Can Reduce the Number of Mosquitoes Around Your Home or in Your Neighborhood, Farm, or Business Location

Breeding sites can be eliminated by removing standing water available to mosquitoes. Here are some simple steps:

- Dispose of tin cans, plastic containers, ceramic pots, or similar water-holding containers that have collected on your property.
- Promptly clean up solid waste and scrap tires that have been dumped or discarded on your property.
- Pay special attention to discarded tires. Stagnant water in tires is an ideal site for mosquitoes to breed.
- Drill holes in the bottom of recycling containers left outdoors and in tires used for swings, barriers, running exercises, etc., so they won't hold water.

- Have clogged roof gutters cleaned every year, particularly if leaves from surrounding trees have a tendency to plug the drains. Roof gutters can produce millions of mosquitoes each season.
- Turn over plastic wading pools when not in use. Stagnant water in a wading pool becomes a place for mosquitoes to breed.
- Turn over wheelbarrows and don't let water stagnate in bird baths. Both provide breeding habitats for domestic mosquitoes.
- Aerate ornamental pools or stock them with fish. Water gardens can become major mosquito producers if they are allowed to stagnate. Clean and chlorinate swimming pools not in use. A swimming pool left untended by a family on vacation for a month can produce enough mosquitoes to result in neighborhood-wide complaints. Mosquitoes may even breed in the water that collects on pool covers.
- Use landscaping to eliminate standing water that collects on your property. Mosquitoes may breed in any puddle that lasts for more than four days.

You can call your local health department or your nearest Ohio EPA district office for locations where you can take tires for disposal. To locate the phone number, log onto the web site at <http://www.epa.state.oh.us/dsiwm/pages/dolinks.html>.

Don't dump tires anywhere! Tires last a long time. Sooner or later, someone will be exposed to the mosquitoes breeding in them. Take them to a licensed scrap tire facility. A list of licensed facilities can be found at:

<http://www.epa.state.oh.us/dsiwm/pages/general.html>.

What Is the Status of WNV in Ohio?

As of August 2001, WNV has been confirmed in Ohio. Infected mosquitoes and birds were found in 29 Ohio counties in 2001. Therefore, it is likely that the virus is present throughout the state. Contact your local health department in your area, or log on to the web sites listed here.

For the current status on WNV in Ohio and for more information, you can log on to the following web sites:

Ohio State University:

<http://prevmed.vet.ohio-state.edu/>

Ohio Department of Health:

<http://www.odh.state.oh.us/ODHPrograms/ZOODIS/ZooMain1.htm>

National Pesticide Telecommunication Network website:

<http://ace.orst.edu/info/nptn/>

Visit Ohio State University Extension's WWW site "Ohionline" at:
<http://ohionline.ag.ohio-state.edu>

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Keith L. Smith, Associate Vice President for Ag. Adm. and Director OSU Extension

TDD No. 800-589-8292 (Ohio only) or 614-292-1868

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