



## West Nile Virus and Scrap Tires

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### 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. WNV was first detected in the United States in 1999 when at least 62 people became seriously ill, and seven of them died. Since then, WNV has rapidly spread throughout the continental United States. In Ohio, WNV was first identified in birds and mosquitoes in 2001. The following year, the first human cases and deaths were reported in Ohio. By the end of 2002, WNV was reported in all 88 Ohio counties, either in birds, mosquitoes, humans or horses. There were 441 human and 644 horse cases identified. WNV is now established in Ohio where cases occur each year and seasonal epidemics can flare up under certain conditions in the summer and continue into the fall.

WNV 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 the 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.

### How can West Nile virus be prevented?

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 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.
- If the tires cannot be immediately removed, standing water in tires should be eliminated. This can be done by properly storing dry tires under a tarp and making sure rainwater does not accumulate.
- Where breeding areas cannot be eliminated, larviciding is the most effective control technique. 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.

### **What are the symptoms of West Nile virus?**

Most people who become infected with WNV do not develop any symptoms. About 1 in 5 people who are infected develop a fever with other symptoms such as headache, body aches, joint pains, vomiting, diarrhea or rash. Less than 1% of people infected with WNV develop a serious neurologic illness such as meningitis or encephalitis, which can involve headache, high fever, neck stiffness, disorientation, coma, tremors, seizures or paralysis. If you have any of these symptoms, contact your healthcare provider.

### **How can I reduce the number of mosquitoes breeding around my home, neighborhood, farm or business?**

Breeding sites can be eliminated by removing standing water available to mosquitos. 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, visit the web site at <http://epa.ohio.gov/Contact.aspx>.
- 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://epa.ohio.gov/dmwm/Home/ScrapTires.aspx>.

### **What is the current status of West Nile virus in Ohio?**

Contact your local health department or visit the Ohio Department of Health's website for the current status of WNV in Ohio: <http://www.odh.ohio.gov/wnv>.