

How can I help protect my family and myself from mosquitoes and the diseases they may carry?

During the summer, mosquitoes can develop in any standing water that lasts more than 7 to 10 days. Consequently, you can begin protecting your family from mosquitoes by reducing the amount of standing water available for mosquito breeding around your home:

- ☑ Dispose of discarded tires, cans, plastic containers, ceramic pots or other unused similar water-holding containers that have accumulated on your property. Do not overlook containers that have become overgrown by vegetation
- ☑ At least once per week, empty standing water from containers on your property, such as tire swings, or bird baths.
- ☑ Fill in tree rot holes and hollow stumps that hold water.
- ☑ Drill holes in the bottom of recycling containers that are left outdoors. Drainage holes drilled in the sides of containers allow sufficient water to collect in which mosquitoes may breed.
- ☑ Clean clogged roof gutters, particularly if the leaves from surrounding trees have a tendency to plug up the drains. Flooded roof gutters are easily overlooked but can produce hundreds of mosquitoes each season.
- ☑ Turn over plastic wading pools when not in use. A wading pool becomes a mosquito producer if it is not used on a regular basis.
- ☑ Turn over wheelbarrows and do not allow water to stagnate in bird baths. Change water in bird baths and wading pools on a weekly basis.
- ☑ Store boats covered or upside down, or remove rainwater weekly.
- ☑ Aerate ornamental pools or stock them with fish. Water gardens are fashionable but become major mosquito producers if they are allowed to stagnate.
- ☑ Clean and chlorinate swimming pools that are not being used. A swimming pool that is left untended by a family that goes on vacation for a month can produce enough mosquitoes to result in neighborhood-wide complaints. Be aware that mosquitoes may breed in the water that collects on swimming pool covers.
- ☑ Keep drains, ditches and culverts free of grass clippings, weeds and trash so water will drain properly.
- ☑ Fill in low areas on your property to eliminate standing water. Ponds or streams where fish are present or the water is disturbed by current or wave action do not produce many mosquitoes.
- ☑ Repair outside faucets or leaky pipes that drip water that could pool.
- ☑ Report possible mosquito breeding sites to your local mosquito control agency if one exists in your community.



Mosquito Repellents

Mosquito repellents containing [DEET](#) or [Picaridin](#) generally provide protection for a longer time than other repellents. Products containing [Oil of Lemon Eucalyptus](#) (PMD) or [IR3535](#) can provide reasonably long-lasting protection. Depending on your activity level and length of time outside, repellents may need to be reapplied to provide more protection. When using repellents, ALWAYS following the instructions on the product label. For more information on mosquito repellents, see the CDC's page on [mosquito repellents](#) or visit IDPH's webpage on [insect repellents](#). The US EPA also has a page about [active ingredients found in insect repellents](#) that provides good information.

Should we stay indoors?

It is not necessary to limit outdoor activities unless there is evidence of mosquito-borne disease in your area. However, you can, and should, try to reduce the risk of being bitten by mosquitoes.

- Minimize time spent outdoors between dusk and dawn when mosquitoes are most active.
- Be sure door and window screens are tight-fitting and in good repair.
- Wear shoes, socks, long pants and a long-sleeved shirt when outdoors for long periods of time, or when mosquitoes are most active. Clothing should be light colored and made of tightly woven materials to keep mosquitoes away from the skin.
- Use mosquito netting when sleeping outdoors or in an unscreened structure and to protect small babies when outdoors.
- Consider the use of mosquito repellent according to label directions when it is necessary to be outdoors.
- Generally, repellents with about 25-35% DEET work best for adults; use lower concentrations for children. Do NOT use products containing DEET on infants.
- Insect light electrocutors ("bug zappers") or sound devices do little to reduce biting mosquitoes in an area.
- Spraying your backyard with an insecticide fog or mist is effective only for a short time. Mosquitoes will return when the effect of the spray has ended.
- Installing bird or bat houses to attract these insect-eating animals has been suggested as a method of mosquito control. However, there is little scientific evidence that this significantly reduces the mosquito population around homes.

Can pets and livestock get WNV infection?

Horses can become infected with WNV if bitten by mosquitoes that carry the virus. There is a published report of West Nile virus isolated from a dog in southern Africa (Botswana) in 1982 West Nile virus has been isolated from several dead cats in 1999 and 2000. A survey of the blood of dogs and cats in the epidemic area showed a low infection rate.



What signs of infection should I look for in domestic animals?

West Nile virus and other mosquito-borne viruses can cause encephalitis in domestic animals. Sick animals may have a fever, weakness, poor muscle coordination, muscle spasms and signs of a neurological disease, such as change in temperament or seizures.

What should I do if I suspect my pet has WNV?

If your animal is sick, contact your veterinarian. The veterinarian will evaluate your animal, provide treatment and forward samples for laboratory testing to rule out other possible diseases. The Illinois Department of Agriculture can help veterinarians determine if WNV is the cause once the illness is reported.

Can you get WNV directly from birds, game or domestic animals?

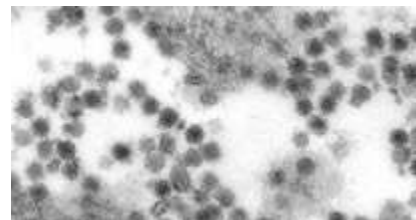
The risk to humans and domestic animals is from the bite of WNV-infected mosquitoes. Although there is no evidence of human infection from handling infected live or dead animals, the U.S. Centers for Disease Control and Prevention recommends that anyone handling sick or dead animals avoid bare-handed contact. Hunters should use gloves when cleaning game animals and persons disposing of dead birds should use a shovel, gloves or double plastic bags to place carcasses in a garbage can. After disposing of the carcass, thoroughly wash your hands with soap and warm water. Veterinarians should use normal veterinary infection control precautions when caring for a horse suspected to have this or any other infection.

Can I get WNV from another person?

WNV has not been shown to be transferred from person-to-person contact such as kissing or touching. WNV has been spread through [blood transfusions](#), [transplants](#), during pregnancy from mother to baby, and breastfeeding. [CDC WNV Fact Sheet](#) [IDPH webpage on WNV & Blood Transfusions](#)

Is there a vaccine for pets and livestock for WNV?

A vaccine is available to protect horses from WNV infection; vaccines for other domestic animals are not available currently.



How is WNV infection in domestic animals treated?

As in people, there are no specific treatments for WNV infection in domestic animals. Treatment is primarily supportive to lessen the severity of the symptoms.

How can I protect pets and livestock from WNV infection?

You can reduce the risk of WNV infection in animals by minimizing their exposure to infected mosquitoes.

Where can I get more information on WNV?

Call your local health department or the Illinois Department of Public Health at the telephone numbers listed below. You may also want to visit the Illinois Public Health Department's [West Nile virus page](#) or the U.S. Centers for Disease Control and Prevention's West Nile virus site at www.cdc.gov/ncidod/dvbid/westnile/index.htm.

[CDC - Five Common Myths about West Nile virus](#)

[CDC - West Nile virus Q & A](#)

[CDC - West Nile virus: What You Need to Know](#)

[CDC - Neato Mosquito: An Elementary Curriculum Guide](#)

Spraying for Mosquitoes

Many municipalities and mosquito control agencies will use spraying or fogging as a mosquito control method. Fogging is generally performed at dusk when mosquitoes are most active. The insecticides used to spray for mosquitoes have been approved for use by the U.S. EPA, and if used properly, there is minimal risk to humans or the environment. Fogging does not kill all mosquitoes. It is primarily used to control adult mosquitoes and will only kill the mosquitoes that come in contact with the insecticide, generally those mosquitoes that are flying. Because of this short-term method of control, spraying or fogging should not be the sole method of mosquito control. Applying mosquito larvicides is another method that can be used to control mosquitoes. Larvicides will kill mosquito larvae before they reach the adult stage and are able to reproduce. Therefore, larvicides provide better long-term control than spraying. More information about spraying for mosquitoes can be found on IDPH's webpage at www.idph.state.il.us/envhealth/factsheets/fog.htm.

Different Species of Mosquitoes Found in Illinois^{*#}

House mosquito (*Culex pipiens*)

Culex pipiens **IS a major vector of West Nile virus and St. Louis encephalitis.** The house mosquito is a brown, medium sized mosquito that generally reproduces in stagnant waters with high organic content, and will also reproduce in other sources of standing water including old tires, buckets, cans, or any other type of artificial container that may hold water. This species is active at night and generally will only migrate short distances. *Cx. pipiens* will feed on birds and mammals including humans. Related species *Cx. restuans* and *Cx. salinarius* are similar in their habitats with both also being potential vectors of disease. *Culex* sp. can also carry dog heartworm.

Tree-hole mosquito (*Ochlerotatus triseriatus*)

The tree-hole mosquito **IS a vector of La Crosse (California) encephalitis.** This species generally breeds in tree holes, old tires, or other artificial containers. Tree-hole mosquitoes are active during the day and are common near wooded areas that are infested. Like the house mosquito, this species usually travels short distances. *Oc. triseriatus* feeds primarily on small mammals, and also children when affecting humans.

Asian tiger mosquito (*Aedes albopictus*)

The Asian tiger mosquito is approximately 1/4-inch long and breeds in artificial containers of water and it has been **found to be a vector of La Crosse encephalitis and West Nile virus.** The species is still relatively new to Illinois and is typically more active during the day feeding on mammals.

Inland floodwater mosquito (*Aedes vexans*)

Aedes vexans **IS NOT** known to be a vector of disease and is commonly a nuisance. This species will breed in most temporary bodies of fresh water, especially floodwater areas and areas where rainwater pools. *Ae. vexans* is very active at dusk and later, and typically will migrate long distances. This species is a vicious biter and feeds on mammals. Floodwater mosquitoes can also carry heartworms in dogs.

Malaria mosquito (*Anopheles quadrimaculatus*)

The malaria mosquito is a somewhat large, dark brown mosquito, and is the primary vector of malaria in the U.S. This species primarily breeds in permanent freshwater pools. *An. quadrimaculatus* is more active at night and will feed on mammals.

**This is not an all-inclusive list. These are species typically associated with being disease vectors in Illinois. #Information used in mosquito descriptions primarily obtained from the Illinois Pesticide Applicator Training Manual 39-12 issued by the University of Illinois Extension, Copyright 2003.*