

Preventing West Nile Virus: A Community Effort

What is West Nile virus?

West Nile virus (WNV) is a disease that is transmitted by mosquitoes to people. In Colorado, only three species of the *Culex* group of mosquitoes can effectively transmit WNV to people. *Culex* mosquitoes primarily feed on birds and act as a reservoir for the virus. Once WNV reaches a high enough level in the bird population, the virus can eventually be spread to humans.

Who is at risk of getting West Nile virus?

Anyone can get WNV if bitten by an infected mosquito. Since most mosquitoes are not infected, the odds of contracting the virus are low. If a person is bitten by a WNV-infected mosquito, most people (around 80 percent) will not become ill or even be aware that they have WNV. For those who have been infected by the virus:

- About 20 percent will have symptoms similar to a very bad case of the flu; and
- About 1 in 150 will develop a serious form of the disease that can cause permanent disability or death.

People over the age of 50 or with an underlying illness are more likely to experience serious complications. Although the odds are low of contracting the serious form of WNV, the consequences are serious enough to warrant the entire community taking action to reduce the risk.

Actions We Can All Take to Decrease the Risk

The city's Mosquito Management Plan was developed specifically to reduce the number of *Culex* mosquitoes to decrease the risk of WNV transmission, but it's important for the whole community to work together to reduce the number of *Culex* mosquitoes. All *Culex* mosquitoes lay their eggs on standing water and even tiny amounts of water can breed mosquitoes. If water persists for several days, mosquitoes can lay their eggs and complete the life cycle to adult very rapidly. The warmer the temperature, the faster mosquitoes can develop, and under the right conditions, mosquitoes can emerge as adults in less than a week. The following tips can help to reduce the risk of WNV for you and your family.

For more information,
visit www.BoulderColorado.gov/IPM
or call 303-441-3400.



What the city is doing

The most effective way to decrease the *Culex* mosquito population is to **reduce the breeding habitat** or areas with standing water where mosquitoes lay eggs. The city maps all potential mosquito breeding sites on public lands. During mosquito season from April through September, these sites are monitored weekly and treated with *Bacillus thuringiensis israelensis* or *Bti*. This soil bacterium targets mosquitoes and other aquatic flies to effectively kill the larvae, while they are concentrated in specific locations and before they emerge as biting adults.

The city is making improvements to the irrigation systems of agricultural fields to enable water to drain more quickly.

The city is also restoring native vegetation in wetland areas. Restoration to healthier and more diverse wetlands reduces the number of mosquitoes.

A grid of adult mosquito traps is maintained throughout the city to assess the number of mosquitoes and how many are infected with WNV to **estimate the risk to people**.

City staff from multiple departments, experts from the city's mosquito control and ecological consulting firm, and Boulder County Public Health officials work together to provide the best program possible to prevent WNV and are prepared to take quick action if risk becomes elevated.

What You Can Do

Culex mosquitoes can breed readily in the environments found in urban properties. The role of the public is crucial for reducing the risk of WNV.

Mosquito-Proof Your Property

Reduce standing water to keep mosquitoes from breeding on your property. Any item or depression in your yard that can hold a small quantity of water longer than a few days can breed mosquitoes.

Inspect your property and empty water from lawn ornaments, plant pots, toys, garbage cans and lids, recycle containers, bottles, wheelbarrows, birdbaths, pool and hot tub covers, etc. Keep gutters clear and flowing and avoid overwatering your lawn. Keep mosquitoes from entering your home by keeping your **screens tight-fitting and free from holes**.

If you have areas that collect water and can't be drained, use mosquito dunks (*Bti*) to kill mosquito larvae.

In outdoor areas like patios, decks or backyards, try using a fan for extra protection against mosquitoes. Mosquitoes cannot navigate the fast-moving air and it also disrupts their ability to locate you.

Protect Yourself from Mosquito Bites

The only way to ensure that you will not get WNV is to prevent mosquito bites. Avoid being outdoors during peak *Culex* activity from **dusk until dawn**. If you're outside during this time, keep your skin from being exposed by dressing in **long sleeves and long pants**.

Always wear an insect repellent when outdoors during peak mosquito hours. DEET and picardin can provide several hours of protection, depending on the concentration. If you're concerned about using DEET, natural repellents are effective and safe. Choose products with 2% soybean oil or oil of lemon eucalyptus. Natural repellents may need to be applied as frequently as once an hour. Always follow label directions on all repellents.



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