

For More Information

Local

WSU Cooperative Extension

1000 N. Forest St., Suite 201
Bellingham, WA 98225
(360) 676-6736
<http://whatcom.wsu.edu/commun/wnv.htm>

Whatcom County Health Department

509 Girard Street
Bellingham, WA 98225
(360) 676-6724
<http://www.co.whatcom.wa.us/Health/home.htm>

State

WSU—<http://www.wnv.wsu.edu>

Health 888-586-9427

<http://www.doh.wa.gov/ehp/ts/Zoo/WNV/WNV.html>

Agriculture

Pesticides 877-301-4555

<http://www.wa.gov/agr/PestFert/default.htm>

Veterinarian 360-902-1878

<http://www.wa.gov/agr/FoodAnimal/default.htm>

Ecology 800-633-6193

<http://www.ecy.wa.gov/programs/wq/pesticides/index.html>

Fish & Wildlife 360 902-2200

<http://www.wa.gov/wdfw/>

NW Mosquito and Vector Control

Association 406-454-6920

<http://www.nwmvca.org/>

National

Center for Disease Control 888-246-2675

<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

Cornell University

<http://www.cfe.cornell.edu/erap/WNV>

Guidelines for Preventing Mosquito Bites

Using pesticides to kill adult mosquitoes is not practical and often not successful in your backyard. Suppression of adult mosquitoes is temporary and will not solve mosquito problems. (See “Guidelines for Reducing Mosquitoes at Home” for other management options around the home.) Using insecticides to kill mosquito larva around the home is not recommended. A better way can be found by selecting a mosquito bite prevention method that best suits your outdoor activities.

Barriers

To reduce the risk of mosquito-borne diseases and annoyances caused by biting mosquitoes:

- Limit outdoor activities when mosquitoes are active, such as at dusk.
- Keep windows and doorways tightly sealed. Install and maintain window and door screens to prevent mosquitoes from entering the house.
- When working outside during mosquito season, wear protective clothing such as shoes, long-sleeved shirts, and pants.
- Mosquito netting can also be used to protect one’s face and neck or used on infant carriages, strollers and playpens.

Repellents

Mosquito repellents are volatile chemicals that deter or mask the mosquito’s ability to find its host. They are commonly used to prevent mosquito bites during outdoor activities, such as sports, hunting, hiking and gardening. The same respect and caution should be used when using repellents as with other insecticides.

- Choose a repellent that best fits your outdoor activity.
- Apply repellents to areas that are exposed. Do not apply repellents underneath clothing.
- Do not apply repellents to open wounds, eyes or mouth.
- People with sensitive skin should avoid using repellents.
- Test a small area of skin to ensure that your skin is not adversely sensitive to the repellent.
- Wash off repellents after going indoors to reduce the amount of time of unnecessary exposure to repellents.

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WSU Cooperative Extension



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Repellents (Continued)

- Repellents, especially those containing diethyltoluamide (commonly known as DEET), prevent mosquito bites for at least several hours up to a full day. DEET can be applied to both skin and clothing. For most conditions, products with 10-40% DEET are sufficient for repelling mosquitoes on adults. Products containing 23% DEET offer over five hours of protection on average. Increased concentrations over 50% do not offer significantly longer protection. Some people experience adverse reactions from DEET and other repellents. Be sure to read and follow the directions on the container. The EPA states that products containing 10% or less of DEET are suitable for use on children. Repellents should not be used on infants. Consult your physician or local health department for inquiries about use on infants and children.
- Citronella is a commonly used repellent that is applied topically or volatilized in citronella candles. Protection of topically applied citronella is short lasting. Studies show that 10% citronella lasts less than 30 minutes on average; multiple applications may be needed for longer protection. Candles can offer some reduction of mosquito bites but there is no evidence attributing this repellency to citronella.
- Permethrin has both insecticide and repellency characteristics. Products containing permethrin, labeled for mosquito repellency can be used on clothing and other fabrics, such as tents, but should not be applied directly to skin. Read the label and follow directions carefully when using these mosquito repellents and insecticides.
- Some bath oils, such as Avon Skin-So-Soft®, do offer some protection from mosquito bites and contain repellents recognized by the Environmental Protection Agency. Tests have shown repellency works for less than 30 minutes on average. Multiple applications may be needed to offer limited mosquito repellency.
- Using mosquito-repelling plants, such as the citrosa plant, are not known to significantly reduce mosquito numbers or mosquito bites.
- Repellents containing plant-derived chemicals, such as soybean oil, may have some mosquito repellent properties but durations of repellency are not as long lasting as products containing DEET. Products containing 2% soybean oil have shown repellency to last for over one hour, on average.
- Electronic repellents that emit high frequency sounds do not repel mosquitoes, or other pests. Additionally, electronic bug zappers do not control mosquitoes or other flying pests. In fact, they work indiscriminately, killing many beneficial insects that prey on pests.

For further reading:

Insect Repellent Use and Safety

http://www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm

Fradin M.S., Day J.F. Comparative efficacy of insect repellents against mosquito bites. *New England Journal of Medicine* 2002;347(1):13-8. Web access restricted.

<http://content.nejm.org/cgi/content/full/347/1/13>

Fradin M.S. Mosquitoes and Mosquito Repellents: A clinician's guide. *Annals of Internal Medicine* 1998;128:931-940. Web access restricted.

<http://www.acponline.org/journals/annals/01jun98/mosquito.htm>

Products and Promotions That Have Limited Value for Mosquito Control

<http://www-rci.rutgers.edu/~insects/proprom.htm>

