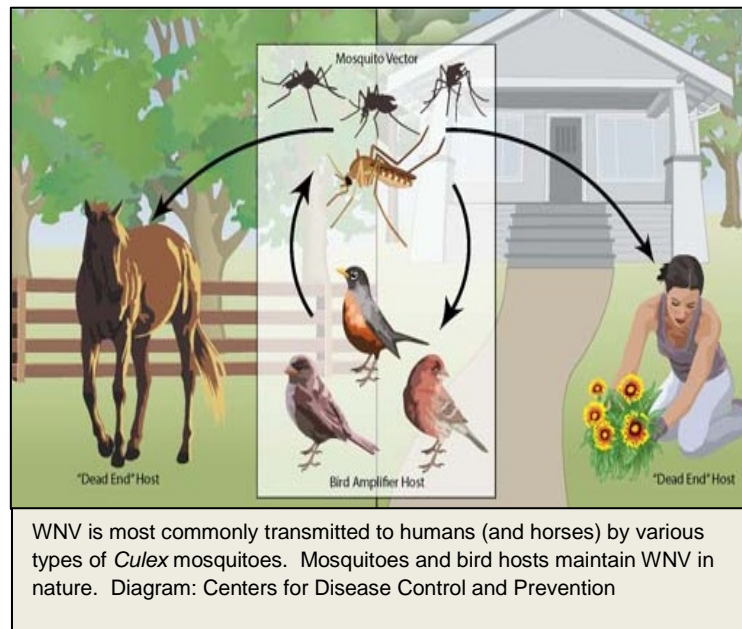


West Nile virus (WNV) is a mosquito-borne virus that was first seen in the United States in 1999. The Centers for Disease Control and Prevention (CDC) reported that 47 states and the District of Columbia detected West Nile virus infections in people, birds, or mosquitoes in 2017. In the last 18 years, WNV infected mosquitoes have been found in every state except Alaska and Hawaii.

How do people become infected with West Nile virus?

People and horses contract WNV through the bite of an infected mosquito, particularly *Culex* mosquitoes, which are common around human habitats. These mosquitoes breed in standing water and are most active at dusk and dawn. WNV is maintained in nature by a cycle between mosquitoes and common back-yard birds. People and horses become infected by accident, and are not a part of the transmission cycle in nature. However, during an average year, hundreds of human cases of WNV are reported.

WNV has also been transmitted through blood transfusions, organ transplants, breastfeeding and during pregnancy from mother to baby in a very small number of cases. WNV is NOT transmitted from person-to-person. For example, you cannot get the virus from touching or kissing a person who has the disease or from a health care worker who has treated someone with WNV.



Can you get West Nile virus directly from birds or other animals?

There is no evidence that a person can get WNV from handling either live or dead infected animals. Always wear gloves when handling dead animals, including dead birds, and use double plastic bags when disposing of them in the trash as a general precaution.

What are the symptoms of West Nile virus infection?

Most people infected with WNV will not experience any symptoms at all. Less than 20% of infected people will have mild, flu-like symptoms between 3 and 14 days after they are bitten by an infected mosquito. Severe neuroinvasive disease affecting the nervous system involving encephalitis (an inflammation of the brain) occurs mainly with the elderly and those with weakened immune systems. Neuroinvasive disease is marked by rapid onset of severe headache, high fever, stiff neck, disorientation, muscle weakness, paralysis, coma and even death. Diagnosis is based on tests of blood or spinal fluid.

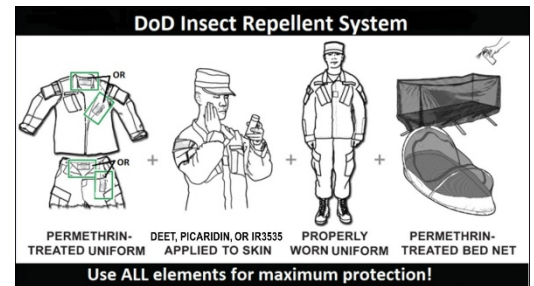
What is the treatment for West Nile virus infection?

Seek medical attention if you experience the symptoms described above and have been in an area with WNV activity. No human vaccine or specific antiviral treatment is available for WNV infection. Treatment is mainly supportive, directed at relieving the symptoms and preventing complications. Although mild WNV illness improves on its own, pregnant women and nursing mothers should talk to their doctor if they develop symptoms that could be WNV.

What can I do to reduce my risk of becoming infected with West Nile virus?

The best way to prevent diseases spread by mosquitoes is to protect yourself from mosquito bites by using the DoD Insect Repellent System. It incorporates permethrin repellent on the uniform, DEET, picaridin, or IR3535 repellent on exposed skin, a properly worn uniform, and sleeping inside a permethrin-treated bed net.

Another important preventive measure is to eliminate mosquito breeding sites. Do not allow water to accumulate in outdoor containers and drain any standing water. Stay in air-conditioned areas or make sure door and window screens are in place and do not have holes. Minimize time outdoors and wear repellents at dusk and dawn, which are the peak biting times for mosquitoes that transmit WNV.

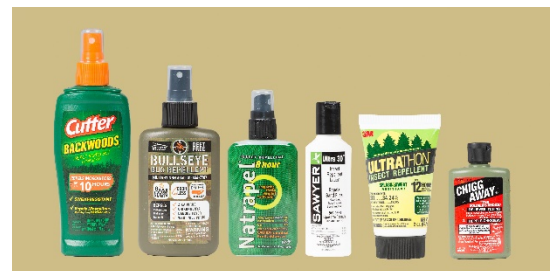


How do I know if my uniform is treated with permethrin repellent?

Factory-treated permethrin Army Combat Uniforms (ACU Permethrin) and Operational Camouflage Pattern (OCP) combat uniforms are now available to all Soldiers. The ACU Permethrin and OCP trouser and coat will have a sewn-in label indicating the uniform is factory-treated with permethrin. If not factory-treated, Soldiers can field-treat using either the IDA Kit (NSN 6840-01-345-0237), which can last up to 50 washings, or the 0.5% aerosol spray can (NSN 6840-01-278-1336), which should be reapplied after six weeks and the sixth washing. Always read and follow the label directions when applying permethrin. Permanently mark the uniform label with the permethrin field-treatment date. **Never apply permethrin to the skin.** Aerosol products containing 0.5% permethrin and permethrin factory-treated clothing are also commercially available for civilian use. **What standard military insect repellent products are available for exposed skin?**

Approved military insect repellents for use on exposed skin come in a variety of formulations. Always refer to the label to determine frequency of repellent application based on activity. **Do not apply repellent to eyes, lips or sensitive/damaged skin.** Available military repellents are:

- **Cutter® pump spray** (NSN 6840-01-584-8598) contains 25% DEET; one application protects for up to 10 hours.
- **Bullseye™ Bug Repellent** (NSN 6840-01-656-7707), contains IR3535®, repels mosquitoes for 8 hours.
- **Natrapel® pump spray** (NSN 6840-01-619-4795) contains 20% picaridin; one application protects for up to 8 hours.
- **Ultra 30™ Insect Repellent Lotion** (NSN 6840-01-584-8393) contains 30% Lipo DEET; one application protects for up to 12 hours.
- **Ultrathon™** (NSN 6840-01-284-3982) contains 33% controlled-release DEET lotion; one application protects for 12 hours.



What is considered a “properly worn” combat uniform?

Military combat uniforms act as a physical barrier against insects, ticks and other disease transmitters and biting nuisance pests when worn properly. Wear uniforms with the sleeves rolled down as well as tuck pants into boots and undershirt into pants. Wear uniform loosely since mosquitoes can bite through fabric that is pulled tight against the skin. A permethrin-treated uniform does not provide protection to exposed skin. Protect exposed skin with an approved skin repellent.

What standard bed nets are available to help protect Soldiers from mosquito bites while sleeping?

Treated bed nets provide a barrier between a sleeping Soldier and pests (e.g., mosquitoes and ticks). Lightweight, self-supporting, pop-up bed nets factory-treated with permethrin are available in coyote brown (NSN 3740-01-518-7310) or green camouflage (NSN 3740-01-516-4415) or the Egret bed net (NSN 3740-01-644-4953). Untreated mosquito bed nets (NSN 7210-00-266-9736) should be treated with 0.5% permethrin aerosol spray and assembled properly on a cot. Check for holes in the netting and keep loose edges off the ground by tucking them under the sleeping bag.

Where can I find more information on West Nile virus and other insect-borne diseases?

- Army Public Health Center, Entomology and Pest Management: <http://phc.amedd.army.mil/topics/envirohealth/epm/Pages/default.aspx>
- Centers for Disease Control and Prevention (CDC): <http://www.cdc.gov/westnile/index.html>

*Use of trademarked name does not imply endorsement by the U.S. Army but is intended only to assist in identification of a specific product.
For more information please consult the APHC website - <http://phc.amedd.army.mil>*