

HOW TO PROTECT AGAINST MOSQUITO BITES



Mosquitoes bite during the day and night. They live indoors and outdoors. Protect your family from mosquito bites. Use insect repellent, wear long-sleeved shirts and pants, and take steps to control mosquitoes indoors and outdoors.

Use insect repellent

- Use Environmental Protection Agency (EPA)-registered insect repellents with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon eucalyptus, para-menthane-diol, or 2-undecanone.
- Always follow product label instructions.
- Reapply insect repellent as directed.
 - » Do not spray repellent on the skin under clothing.
 - » If you are also using sunscreen, apply sunscreen first and insect repellent second.
- The effectiveness of non-EPA registered insect repellents, including some natural repellents, is not known.



Wear long-sleeved shirts, pants Treat clothes and gear

- Wear long-sleeved shirts and pants.
- Treat items such as boots, pants, socks, and tents with permethrin or buy permethrin-treated clothing and gear.
 - » Permethrin is an insecticide that kills or repels mosquitoes.
 - » Permethrin-treated clothing will protect you after multiple washings. See product information to find out how long the protection will last.
 - » If treating items yourself, follow the product instructions.
- Do not use permethrin products directly on skin.



EPA-registered active ingredients

Higher percentages of active ingredient provide longer protection

DEET

Picaridin (known as KBR and icaridin outside the US)

IR3535

Oil of lemon eucalyptus (OLE)

Para-menthane-diol (PMD)

2-undecanone

The EPA's search tool is available at: www.epa.gov/insect-repellents/find-insect-repellent-right-you



Find the insect repellent that's right for you by using [EPA's search tool](http://www.epa.gov/insect-repellents/find-insect-repellent-right-you).



**U.S. Department of
Health and Human Services**
Centers for Disease
Control and Prevention

Protect babies and children

- Always follow instructions when applying insect repellent to children.
- Do not use insect repellent on babies younger than 2 months old.
 - » Instead dress your child in clothing that covers arms and legs.
 - » Cover strollers and baby carriers with mosquito netting.
- Do not use products containing oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD) on children younger than 3 years old.
- Do not apply insect repellent onto a child's hands, eyes, mouth, cuts or irritated skin.
 - » Adults: spray insect repellent onto your hands and then apply to a child's face.



Control mosquitoes indoors

- Keep windows and doors shut and use air conditioning if possible.
- Use, install, or repair window and door screens.
- **Once a week**, empty or throw out any items that hold water like vases and flowerpot saucers.
- Use an indoor insect fogger or indoor insect spray to kill mosquitoes and treat areas where they rest. These products work immediately, but may need to be reapplied. Always follow label instructions.

Control mosquitoes outdoors

- **Once a week**, empty or throw out any items that hold water like vases and flowerpot saucers.
- Tightly cover water storage containers (buckets, rain barrels, etc.)
- For containers without lids, use mesh with holes smaller than an adult mosquito.
- Use larvicides to treat large containers of water that will not be used for drinking and cannot be covered or dumped out.
- Use an outdoor insect spray in dark humid areas where mosquitoes rest, like under patio furniture or in the carpet or garage. Always follow label instructions.
- If you have a septic tank, repair cracks or gaps. Cover vent or plumbing pipe openings using mesh with holes smaller than an adult mosquito.



Mosquitoes

Prevent Mosquito Bites in the United States

Protect yourself and your family from mosquito bites

Use Insect Repellent

Use [Environmental Protection Agency \(EPA\)-registered insect repellents](#) [↗](#) with one of the active ingredients below. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breastfeeding women.

- DEET
- Picaridin (known as KBR 3023 and icaridin outside the US)
- IR3535
- Oil of lemon eucalyptus (OLE)
- Para-menthane-diol (PMD)
- 2-undecanone

Find the right insect repellent for you by using [EPA's search tool](#) [↗](#).

Tips for babies and children

- Dress your child in clothing that covers arms and legs.
- Cover strollers and baby carriers with mosquito netting.
- When using insect repellent on your child:
 - Always follow label instructions.
 - Do not use products containing oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD) on children under 3 years old.
 - Do not apply insect repellent to a child's hands, eyes, mouth, cuts, or irritated skin.
 - Adults: Spray insect repellent onto your hands and then apply to a child's face.

Tips for everyone

- Always follow the product label instructions.
- Reapply insect repellent as directed.
 - Do not spray repellent on the skin under clothing.
 - If you are also using sunscreen, apply sunscreen first and insect repellent second.

Natural insect repellents (repellents not registered with EPA)

- We do not know the effectiveness of non-EPA registered insect repellents, including some natural repellents.
- To protect yourself against diseases spread by mosquitoes, CDC and EPA recommend using an EPA-registered insect repellent.
- Choosing an EPA-registered repellent ensures the EPA has evaluated the product for effectiveness.

Wear long-sleeved shirts and long pants

Treat clothing and gear

- Use 0.5% permethrin to treat clothing and gear (such as boots, pants, socks, and tents) or buy permethrin-treated clothing and gear.
 - Permethrin is an insecticide that kills or repels mosquitoes.
 - Permethrin-treated clothing provides protection after multiple washings.
 - Read product information to find out how long the protection will last.
- If treating items yourself, follow the product instructions.
- Do not use permethrin products directly on skin.
- Watch the [video](#), What You Need to Know About Permethrin.

Take steps to control mosquitoes indoors and outdoors

- Use screens on windows and doors. Repair holes in screens to keep mosquitoes outdoors.
- Use air conditioning, if available.
- Stop mosquitoes from laying eggs in or near water.
 - Once a week, empty and scrub, turn over, cover, or throw out items that hold water, such as tires, buckets, planters, toys, pools, birdbaths, flowerpots, or trash containers.
 - Check for water-holding containers both indoors and outdoors.

[Learn how to control mosquitos inside and outside your home >>](#)

Related Resources

Mosquito Bite Prevention for the United States

- [English](#)  [PDF – 2 pages]
- [Spanish](#)  [PDF – 2 pages]

Mosquito Bites Can Make You Sick

- [English](#)  [PDF – 1 page]
- [Spanish](#)  [PDF – 1 page]

Protect your home against *Mosquitoes*

Mosquitoes can develop in any standing water that is present for more than five days. To reduce the mosquito population around your home and property, eliminate all standing water and debris. Here are some spots where water can collect or where poor maintenance can cause problems.



Pool cover that collects water, neglected swimming pool, hot tub or child's wading pool



Birdbath (clean weekly) and ornamental pond (stock with fish)



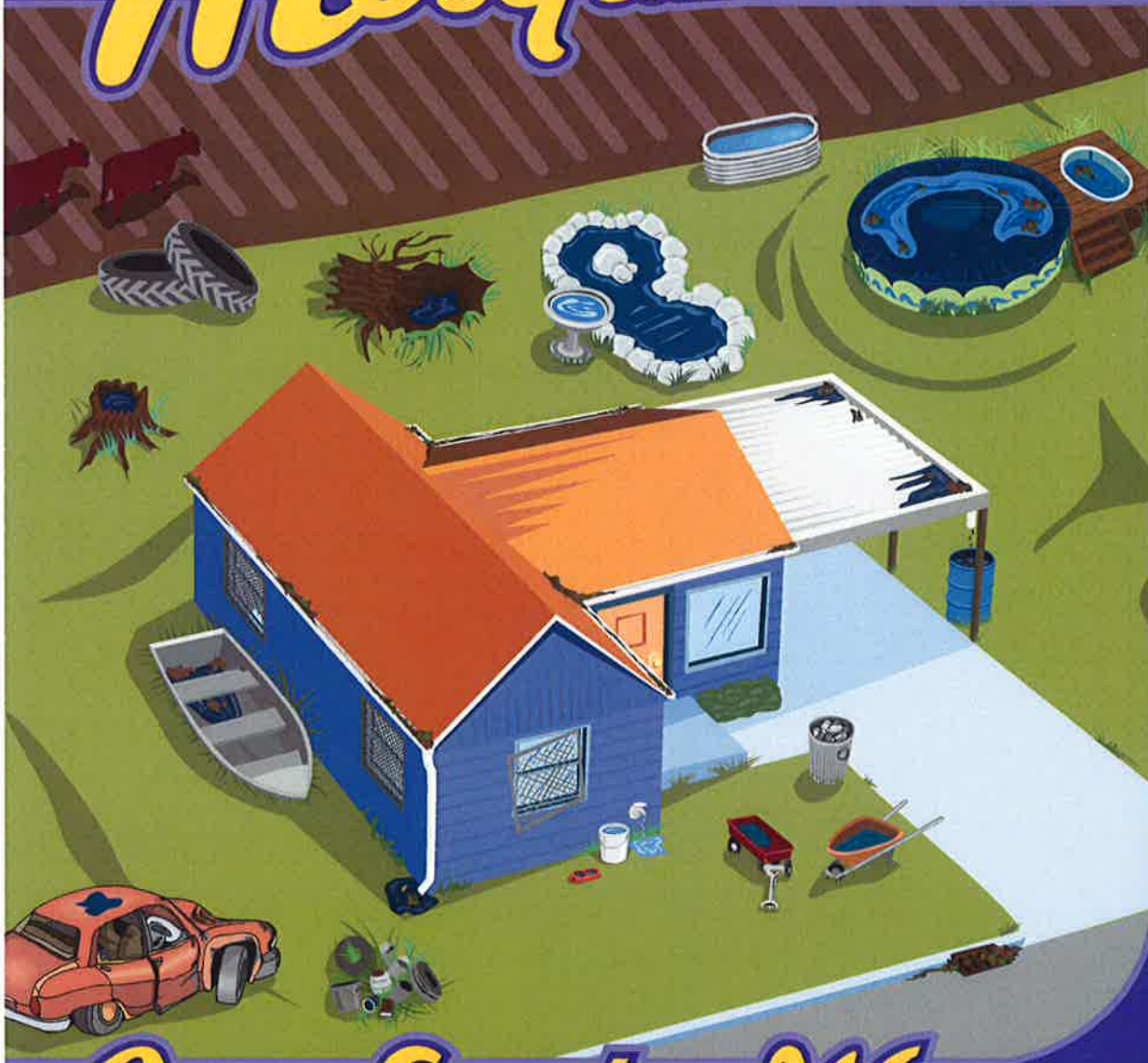
Broken down vehicle, garden equipment, any toy or container that can hold water



Water trough (refresh regularly)



Clogged rain gutter (home and street)



Drain Standing Water



Junk and discarded tires (drill drain holes in tire swings)



Tree rot hole or hollow stump



Missing, damaged or improperly installed screens



Leaky faucet or pet bowl (change water daily)



Uncovered boat or boat cover that collects water

Wyoming Department of Health
www.badskeeter.org • 1-877-WYO-BITE



WNV Severity

What are the symptoms of West Nile virus?

Although the majority of those infected with WNV do not become ill, people can develop severe infections with high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, paralysis, body aches, skin rash, and swollen lymph glands. This is called West Nile encephalitis.

People with less severe infections may experience fever, headache, body aches, skin rash, and swollen lymph glands. This is called West Nile fever.

If you have any of these symptoms, contact your health care provider.

Are there long-term consequences of West Nile virus?

While most infections are usually mild, West Nile encephalitis can result in brain damage or death. The Centers for Disease Control and Prevention notes that neurological effects may be permanent. Some improvements may be seen over time.

Is there treatment or a vaccine?

There is no specific treatment for WNV infection nor is a human vaccine available.

Contact Information

For more information on West Nile virus or to learn more about dead bird or human sample submissions, visit our website at:

<http://www.badskeeter.org>

or call:

1-877-WYO-BITE

1-877-996-2483

Concerned horse owners are encouraged to contact their veterinarian for vaccine information or any other questions on WNV. Alternatively, phone the Wyoming Livestock Board at 1-307-777-7515.

Wyoming Department of Health

1-877-WYO-BITE

www.badskeeter.org

badskeeter@state.wy.us



What is West Nile Virus?

West Nile virus (WNV) is a mosquito-borne disease that can cause encephalitis or brain infection. Mosquitoes spread this virus after they feed on infected birds and then bite people, other birds, or animals. WNV is not spread by person-to-person contact and there is no evidence that people can get the virus by handling infected animals.

WNV Susceptibility

Who's at risk?

In 2003, over 9,500 people in the United States became ill from WNV infection and over 250 people died. Anyone from infants to the elderly can get WNV; however, people over 50 years of age have the highest risk of developing West Nile fever or West Nile encephalitis. People with compromised immune systems (for example, cancer, HIV/AIDS, and other illnesses) are also at increased risk.

How can I get West Nile virus?

The main route of human infection is through the bite of an infected mosquito. In 2002, additional routes became apparent; however, this represented a very small proportion of cases. These routes include receiving transplanted organs and blood transfusions, transplacental (mother to unborn child) and possibly breastfeeding transmission, and laboratory workers working with West Nile infected products.

How to Protect Yourself

Steps you can take to minimize the chance for infection include remembering the 5 D's of West Nile virus prevention:

Dawn and Dusk- When possible, avoid spending time outside at dawn and dusk. Dawn and dusk are times that mosquitoes are most active.

Dress- Wear shoes, socks, long pants, and a long-sleeved shirt when outdoors for long periods of time or when mosquitoes are most active (dawn and dusk). Clothing should be light colored and made of tightly woven materials to keep mosquitoes away from the skin.

DEET- For additional protection from mosquitoes, use an insect repellent containing DEET (N,N-diethyl-m-toluamide). Spray clothing with repellents containing permethrin or DEET because mosquitoes may bite through thin clothing. Products containing DEET must be used properly according to the directions on the product label.

Drain- Drain standing water and containers that collect water on or near your property. Mosquitoes may lay eggs in areas with standing water.

Birds & Horses

Birds and horses typically become infected with West Nile virus (WNV) before humans, so dead birds and sick and dead horses are an indicator of WNV activity. The Wyoming Department of Health and other state and local agencies use animal surveillance to map the distribution and prevalence of WNV so that health and mosquito control officials are aware of its presence and can take measures to alleviate the impact of WNV on human and equine populations.

For information on submitting dead bird samples for testing in Wyoming, call the West Nile toll-free number at 1-877-WYO-BITE for instructions. DO NOT contact your local health agency or take the dead bird to them. You will be advised on how to handle and submit the carcass(es) if the bird(s) is/are suitable for testing. Only dead crows, ravens, jays, and magpies will be accepted for testing. For information on submitting horse samples for testing in Wyoming, contact the Wyoming State Veterinary Laboratory at 307-742-6638 or 1-800-442-8331.



Pregnancy & Breast-Feeding

If I become infected with WNV during pregnancy does it pose a health risk to my unborn child?

One case of transmission of West Nile virus from mother to fetus during pregnancy was reported in New York in 2002. The newborn presented severe medical problems at birth; however, it is unclear whether WNV infection caused these problems. The CDC is currently working to learn more about WNV in pregnancy.

I am pregnant, and I have been bitten by a mosquito.

Should I be tested for West Nile virus?

Most mosquitoes are not infected with West Nile virus and illnesses related to mosquito bites are uncommon. However, pregnant women who become ill should see their health care provider. Those who have an illness consistent with acute WNV infection should undergo appropriate diagnostic testing.

Can West Nile virus be transmitted through breast milk?

There is one case where mother-to-child transmission through breast milk is believed to have occurred. An infant with minimal outdoor exposure tested positive for WNV. Laboratory analysis showed evidence of WNV in the mother's breast milk.

Should I continue breast-feeding if I am

symptomatic or test positive for West Nile virus?

Because the health benefits of breast-feeding are well established, and the risk for West Nile virus transmission through breast-feeding is unknown, the CDC does not recommend a change in breast-feeding recommendations. The current American Academy of Pediatrics recommendations are that infants should be breast-fed exclusively for the first six months of life and continued for at least the first full year of life.

West Nile Virus!

Information for Pregnant and Breast-Feeding Women

For more information on West Nile virus in pregnant and breast-feeding women visit our website at

<http://www.badskeeter.org>
or call 1-877-WYO-BITE
(1-877-996-2483)



WYOMING
DEPARTMENT
OF HEALTH

1-877-WYO-BITE
WWW.BADSKEETER.ORG

What is West Nile Virus?

West Nile virus (WNV) is a potentially serious mosquito-borne disease that can lead to encephalitis or swelling of the brain. Mosquitoes spread this virus after they feed on infected birds and then bite people, other birds, or animals. Experts believe WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall.

Susceptibility

Who's at risk?

People who spend a lot of time outdoors are more likely to be bitten by an infected mosquito. Anyone from infants to the elderly can get WNV; however, people over 50 years of age have the highest risk of developing severe symptoms if they are infected. Pregnancy and nursing do not increase the risk of becoming infected with WNV.

How can I get West Nile virus?

The main route of human infection is through the bite of an infected mosquito. In a very small number of cases, WNV has also been spread through blood transfusions, organ transplants, breast-feeding, and even during pregnancy from mother to baby.

How to Protect Yourself

Because of ongoing concerns that mother-to-child transmission may occur with possible adverse health effects, pregnant women should take precautions to reduce their risk for WNV. You can do this by remembering the 5 D's of West Nile virus prevention:

Dawn and Dusk- When possible, avoid spending time outside at dawn and dusk. Dawn and dusk are times that mosquitoes are most active.

Dress- Wear shoes, socks, long pants, and a long-sleeved shirt when outdoors for long periods of time or when mosquitoes are most active (dawn and dusk). Clothing should be light colored and made of tightly woven materials to keep mosquitoes away from the skin.

DEET- Spray insect repellent containing DEET (N,N diethyl-m-toluamide) on exposed skin and clothing when you go outdoors. DEET is considered safe for pregnant women when used according to the directions on the product label. Although the most effective repellents contain DEET, there are other options such as a soybean oil based repellent that provide limited term protection. There are no reported adverse events following use of repellents containing DEET in pregnant or breast-feeding women.

Drain- At least once or twice a week, drain standing water and containers that collect water on or near your property. Mosquitoes may lay eggs in areas with standing water.

Symptoms

The majority of people infected with WNV do not become ill. People with mild infections may experience fever, headache, body aches, skin rash and swollen lymph glands. This is called West Nile fever.

People with more severe infections may experience high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, and paralysis. This is called West Nile encephalitis.

If you have any of these symptoms, contact your health care provider.

Birth Outcomes Registry

During 2003, the Centers for Disease Control and Prevention (CDC) and state and local health departments formed a registry to follow birth outcomes among women with WNV illness in pregnancy. This will help scientists better understand the effect of WNV in pregnancy. As we continue to learn more, the best way to protect yourself and your child is to take precautions to avoid infection. If you have any questions or would like to learn more about WNV in pregnancy please contact the Wyoming Department of Health's West Nile virus hotline at 1-877-WYO-BITE.

DEET Use and Safety

Wyoming Department of Health

What is DEET and why is it recommended?

DEET (N,N-diethyl-m-toluamide) is the **most effective and best-studied** insect repellent available. DEET does not kill mosquitoes, it interferes with their ability to locate people. By wearing DEET, you can reduce your exposure to potentially serious viruses carried by mosquitoes such as West Nile virus and continue to play and work outdoors.

Are non-DEET repellents effective?

The Centers for Disease Control and Prevention (CDC) has stated that another insect repellent, Picaridin (KBR 3023), is also highly effective. Two other scientific studies have also suggested that oil of lemon eucalyptus, a plant based repellent, is also effective and provides protection similar to those products containing low concentrations of DEET. Permethrin is an extremely effective insecticide/repellent that can be used on clothing, shoes, bed nets, and camping gear, but should not be used on bare skin.

While many new products have been shown to provide some protection against mosquito bites, DEET has been the most studied and reliable mosquito repellent for personal use. Product labels should be consulted to determine the length of time that protection can be expected from a product.

Is DEET safe?

Yes, products containing DEET are considered to be safe when used according to the directions. Because DEET is so widely used, a great deal of testing has been done.

How often should repellent containing DEET be reapplied?

Follow the directions on the product to determine how frequently you need to reapply repellent. Sweating or participating in water activities may mean that you need to reapply repellent more frequently. If you are not being bitten, it is not necessary to reapply repellent. Repellents containing a higher concentration of DEET (up to 50%) provide longer-lasting protection. Heavy application is not necessary to achieve protection.

What are some general considerations to using products containing DEET safely?

- Always follow the recommendations on the product label.
- Use just enough repellent to cover exposed skin or clothing; do not apply to skin that is under clothing.
- Do not apply repellent to cuts, wounds, or irritated skin.
- After returning indoors, wash treated skin with soap and water.

- Do not spray aerosol or pump products in enclosed areas or near food or drink.
- Do not apply aerosol or pump products directly to your face. Spray your hands and then rub them carefully over the face, avoiding eyes and mouth.

Should I take special precautions when applying DEET to my child?

Serious illness has not been reported in children from the use of DEET when applied in accordance with the recommendations of the manufacturer. Parents should choose the type and concentration of repellent to be used by taking into account the amount of time that a child will be outdoors, exposure to mosquitoes, and the risk of mosquito-transmitted disease in the area. Always follow the recommendation on the product label when using repellent. The following precautions should be taken:

- Do not allow young children to apply insect repellent themselves.
- When using repellent on a child, apply it to your own hands and then rub them on your child avoiding the eyes and mouth and using it sparingly around their ears.
- Do not apply repellent to children's hands.
- Keep insect repellents out of the reach of children.
- The American Academy of Pediatrics (AAP) has suggested using products with a low concentration of DEET, 30% or less, on children.
- The AAP and other experts suggest that it is acceptable to apply repellent with low concentrations of DEET to infants over 2 months old. Other guidelines cite that it is acceptable to use repellents containing DEET on children over 2 years of age.

Is DEET safe for pregnant or nursing women?

According to the national Centers for Disease Control and Prevention (CDC), adverse events following use of repellents containing DEET in pregnant or breastfeeding women have not been reported. As a precaution, prior to handling infants, nursing mothers should wash repellents off their hands and areas of the breast that an infant may come into contact with.

Are there any risks due to the use of repellents containing DEET?

Use of repellents that contain DEET may cause skin reactions, among other symptoms, in rare cases. If you suspect a reaction to the product, please contact your healthcare provider.

If you have any other questions about West Nile virus, please contact the Wyoming Department of Health, Preventive Health and Safety Division, Epidemiology Section at 1-877-WYOBITE. Alternatively, you can also find additional information on our website at (www.badskeeter.org).

West Nile Virus (WNV) Fact Sheet

What Is West Nile Virus?

West Nile virus infection can cause serious disease. WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall. This fact sheet contains important information that can help you recognize and prevent West Nile virus.

What Can I Do to Prevent WNV?

The easiest and best way to avoid WNV is to prevent mosquito bites.

- When outdoors, use repellents containing DEET, picaridin, IR3535, some oil of lemon eucalyptus or para-menthane-diol. Follow the directions on the package.
- Many mosquitoes are most active from dusk to dawn. Be sure to use insect repellent and wear long sleeves and pants at these times or consider staying indoors during these hours.
- Make sure you have good screens on your windows and doors to keep mosquitoes out.
- Get rid of mosquito breeding sites by emptying standing water from flower pots, buckets and barrels. Change the water in pet dishes and replace the water in bird baths weekly. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.

What Are the Symptoms of WNV?

- **Serious Symptoms in a Few People.** About 1 in 150 people infected with WNV will develop severe illness. The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent.
- **Milder Symptoms in Some People.** Up to 20 percent of the people who become infected will have symptoms which can include fever, headache, body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach and back. Symptoms can last for as short as a few days to as long as several weeks.
- **No Symptoms in Most People.** Approximately 80 percent of people who are infected with WNV will not show any symptoms at all, but there is no way to know in advance if you will develop an illness or not.

How Does West Nile Virus Spread?

• Infected Mosquitoes.

WNV is spread by the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread WNV to humans and other animals when they bite.

• Transfusions, Transplants, and Mother-to-Child.

In a very small number of cases, WNV also has been spread directly from an infected person through blood transfusions, organ transplants, breastfeeding and during pregnancy from mother to baby.

• Not through touching.

WNV is not spread through casual contact such as touching or kissing a person with the virus.

How Soon Do Infected People Get Sick?

People typically develop symptoms between 3 and 14 days after they are bitten by the infected mosquito.

How Is WNV Infection Treated?

There is no specific treatment for WNV infection. In cases with milder symptoms, people experience symptoms such as fever and aches that pass on their own, although illness may last weeks to months. In more severe cases, people usually need to go to the hospital where they can receive supportive treatment including intravenous fluids, help with breathing, and nursing care.

What Should I Do if I Think I Have WNV?

Milder WNV illness improves on its own, and people do not need to seek medical attention for this infection though they may choose to do so. If you develop symptoms of severe WNV illness, such as unusually severe headaches or confusion, seek medical attention immediately. Severe WNV illness usually requires hospitalization. Pregnant women and nursing mothers are encouraged to talk to their doctor if they develop symptoms that could be WNV.



What Is the Risk of Getting Sick from WNV?

- **People over 50 at higher risk to get severe illness.** People over the age of 50 are more likely to develop serious symptoms of WNV if they do get sick and should take special care to avoid mosquito bites.
- **Being outside means you're at risk.** The more time you're outdoors, the more time you could be bitten by an infected mosquito. Pay attention to avoiding mosquito bites if you spend time outside, either working or playing.
- **Risk through medical procedures is very low.** All donated blood is checked for WNV before being used. The risk of getting WNV through blood transfusions and organ transplants is very small, and should not prevent people who need surgery from having it. If you have concerns, talk to your doctor.

What Is CDC Doing About WNV?

CDC is working with state and local health departments, the Food and Drug Administration and other government agencies, as well as private industry, to prepare for and prevent new cases of WNV.

Some things CDC is doing include:

- Coordinating a nation-wide electronic database where states share information about WNV
- Helping states develop and carry out improved mosquito prevention and control programs
- Developing better, faster tests to detect and diagnose WNV
- Creating new education tools and programs for the media, the public, and health professionals
- Working with partners to develop vaccines.



What Else Should I Know?

West Nile virus infects birds. In nature, West Nile virus cycles between mosquitoes and birds. Some infected birds can develop high levels of the virus in their bloodstream and mosquitoes can become infected by biting these infected birds. Some, but not all infected birds get sick and die of disease. One way health officials conduct surveillance for West Nile virus is by testing local birds. Finding dead birds may be a sign that West Nile virus is circulating between birds and the mosquitoes in an area. By reporting dead birds to state and local health departments, you can play an important role in monitoring West Nile virus. State and local agencies have different policies for collecting and testing birds, so check with your county or state health department to find information about reporting dead birds in your area.

If you find a dead bird: Don't handle the body with your bare hands. Contact your local health department for instructions on reporting and disposing of the body. They may tell you to dispose of the bird after they log your report.

For more information, visit www.cdc.gov/westnile, or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).



How to Win the Battle of the Bugs

You don't need harsh chemicals to keep the biters at bay. We reveal new, safer options.

WOULD YOU RATHER be eaten alive by mosquitoes and ticks that can carry debilitating—and even deadly—diseases or douse yourself in harmful repellents full of potentially dangerous chemicals? Almost three-quarters of Americans say they worry more about insect-carried diseases, such as Lyme and West Nile as well as newer threats like chikungunya and Powassan, according to a recent Consumer Reports survey of 2,011 U.S. adults.

Here's the real dilemma, though: Most people also say that safety is key when they choose a repellent, but only about a third think the products now on the market are safe for adults. Even fewer—23 percent—think the repellents are safe for kids.

If you're conflicted about what to do, we have good news: For the first time ever in Consumer Reports' tests of insect repellents, new, safer products—made with milder, plantlike chemicals—were the most effective. (See Ratings on page 36.) The top scorers outperformed products that contained DEET, a chemical that did best in our previous Ratings but can cause serious side effects (see the facing page). The active ingredients in the top repellents

are picaridin and oil of lemon eucalyptus, both chemically synthesized compounds that are similar to or come from natural ingredients. The secret sauce in best-scoring Sawyer Fisherman's Formula is picaridin; in Repel Lemon Eucalyptus, it's oil of lemon eucalyptus. They are not side-effect-free, but "those problems are much less severe than DEET," says Urvashi Rangan, Ph.D., executive director of Consumer Reports' Food Safety and Sustainability Center. "Still, all repellents should be used sparingly and only for the time you need them—especially on children and older people."

That's why an effective bug-avoidance strategy requires a full arsenal. Our new tests provide clarity on that, too, identifying non-chemical approaches that offer some relief (setting up a fan on your back patio, for example) and those that don't help much if at all (think citronella candles, wristbands, and "all-natural" products with geraniol, lemongrass, and rosemary oils).

The Swat Team Bares Arms

To find effective spray-on repellents, we went to an outside lab and tested 15 pump sprays and aerosols. The products contained

deet, oil of lemon eucalyptus, picaridin, a chemical called IR3535, and products made with natural plant oils.

Our brave testers had a different repellent applied to each of their forearms and, 30 minutes later, reached into an 8-cubic-foot cage containing 200 disease-free, female mosquitoes in need of a blood meal to lay their eggs. We used culex mosquitoes (the kind that transmit West Nile and are most active between dusk and dawn) and aedes (a variety that likes to feed on humans, is active all day long, and carries chikungunya). Our experts watched and recorded bites every hour.

A repellent failed if a tester was bitten two or more times in one 5-minute session, or once in two consecutive sessions. For ticks, we marked each tester's bare arms with three lines, then released, one at a time, five disease-free deer ticks to crawl on them. The repellent failed if two ticks crossed into the treated area.

What Bugs a Bug Most?

The top-performing products contained 20 percent picaridin (Savvy Fisherman's Formula) and 30 percent oil of lemon eucalyptus (Repel Lemon Eucalyptus). They kept mosquitoes and ticks away for at least 7 hours. Two deet products also earned at least Very Good scores, and the repellent that was 15 percent deet (Repel Scented Family) outperformed the 25 percent deet product (Off! Deep Woods VIII), possibly because of its inactive ingredients. The IR3535 products, Coleman SkinSmart and BullFrog Mosquito Coast, didn't make our list of top sprays. Some of the plant-oil products couldn't ward off the aedes mosquitoes for even half an hour. To see the bugs in action on our testers' arms, go to ConsumerReports.org/cro/insects0715.

Repellents: The Bottom Line

GO PLANTLIKE Look first for products with 20 percent picaridin or 30 percent oil of lemon eucalyptus; we think they're safer than those with deet.

LIMIT DEET If you do opt for deet, avoid concentrations of more than 30 percent (which are potentially dangerous) or below 8 percent (which may not work as well).

SKIP THESE Don't bother with "all-natural" plant-oil repellents. Skip wristbands, too. Neither worked well in our tests.

Get a Pest-Free Backyard

We tried a candle, a diffuser, and a fan. Here's what worked.

TO FIND OUT HOW WELL area repellents worked, we simulated a backyard barbecue in a 25x30-foot room and unleashed 250 aedes mosquitoes, known to be aggressive biters. We suited up four testers in protective suits and sat them at a "picnic" table, where we lit an Off! Citronella Bucket, \$8.50, containing a candle with 0.5 percent oil of citronella. Then we counted how often mosquitoes landed on them. We tested again with the Bug Band Portable Diffuser, \$20, which uses a battery-operated blower to propel the scent of 20 percent geraniol, another plant oil. Last, we cranked up an oscillating pedestal fan to its highest speed to see whether it could literally blow mosquitoes away.

What we found. Neither the citronella bucket nor the geraniol diffuser kept the mosquitoes at bay. But the fan showed some promise: It cut mosquito landings by 45 to 65 percent, at least among people sitting close to the fan. Our survey found similar results: 45 percent of people who used fans said they were especially helpful, compared with 31 percent of those who tried candles. **What else can you do?** Clean out gutters and empty old tires and bird-baths (where mosquitoes breed) and clear away ivy and decaying leaves (where they hide). For ticks, keep your lawn mowed, remove leaves, and let in as much sun as you can. Consider fencing, to keep out deer and other animals that carry ticks.



AGAINST THE WIND
A fan will blow away a lot of those pesky skeeters.

The Scoop on Deet and Its Alternatives

DEET (N, N-diethyl-meta-toluamide) has been the go-to insect repellent since it was introduced in the 1950s. But consumers are still confused by it: 64 percent of people we surveyed admit that they don't know how much deet a repellent should contain for it to be considered safe. And balancing safety and effectiveness is tricky. Products with 15 percent or more deet do work, though concentrations above 30 percent are no better, past tests have found. And deet, especially in high concentrations, can cause rashes, disorientation, and seizures. That's why we say you should avoid repellents with more than 30 percent deet and not use it at all on babies younger than 2 months. But go too low—such as 7 percent deet—and it won't stop bites for long.

PICARIDIN AND OIL OF LEMON EUCALYPTUS—two repellents introduced in the last decade—make good alternatives to deet. Here's why.

They work. The repellents we tested that contain 20 percent picaridin and 30 percent oil of lemon eucalyptus (p-menthane-3,8-diol) warded off mosquitoes for at least 7 hours and kept deer ticks away for at least 6 hours. But the concentration is important: A spray that contained just 5 percent picaridin performed worse than the 7 percent deet product we tested.

They're safer. Picaridin is made to resemble the compound piperine, which occurs naturally in black pepper plants. Oil of lemon eucalyptus comes from the gum eucalyptus tree. Both have less serious side effects than deet has. Oil of lemon eucalyptus can cause temporary eye injury. The Food and Drug Administration says it should not be used on children under age 3. Of the two, picaridin is a better choice for kids, although it can cause some irritation of skin, eyes, and lungs.

NATURAL REPELLENTS DON'T DO THE JOB

Products with natural plant oils, such as citronella, lemon-grass, and rosemary, often have labels that talk a good game, with claims such as "proven effective" or "repels mosquitoes for hours." But don't believe it. Unlike repellents with chemically synthesized ingredients (including picaridin and oil of lemon eucalyptus), plant-oil products are exempt from scrutiny by the Environmental Protection Agency. That's because the EPA considers them "minimum risk." But none of those products we tested lasted more than 1 hour against aedes mosquitoes, and some failed almost immediately. In addition, the names of two products—Babyganics Natural and EcoSmart Organic—imply that they're organic. But neither contains certified organic ingredients or bears the Department of Agriculture organic seal.

WRISTBANDS ARE A BUST

They're marketed as being safer, because you don't have to rub anything into your skin. But when our testers stuck their arms into a cageful of mosquitoes while wearing one of two wristbands—the Coleman Naturals Insect Repellent Snap Band (containing citronella oil) or the Super Band Wristband (containing geraniol oil)—the bugs started biting immediately. Given those results, we've rated them as poor performers and recommend that you skip them.

In February the Federal Trade Commission charged another maker of repellent wristbands, Viatek, with deceptive marketing of its Mosquito Shield Bands, which the FTC says contain mint oil. The FTC says the company's claim that the bands protect against mosquitoes wasn't backed up with scientific evidence. The case will be decided by a U.S. District Court; the FTC is seeking penalties and consumer refunds.

TRY THESE



A1 Sawyer A2 Repel A3 Repel A4 Natrapel A5 Off!

AVOID THESE



A14 Off! A15 EcoSmart

Ratings: Insect Repellents

Scores in context: Of the 15 insect repellents we tested, the highest scored 96; the lowest, 7. All products are listed in order of performance.

CR Best Buy Recommended

Excellent Very Good Good Fair Poor

INSECT REPELLENTS

50% OFF More than enough!!!

Recommended	Rank	BRAND & PRODUCT	PRICE	COST per Oz. (\$)	SCORE	Active Ingredients	Type	Effectiveness Against Mosquitoes (Hr)	Effectiveness Against Mosquitoes (Hr)	Effectiveness Against Mosquitoes (Hr)	Resists Damage to Materials
☒	1	Sawyer Fisherman's Formula Picaridin	\$8.25	2.06	96	Picaridin 20%	Pump	8.0	8.0	8.5	○
☒	2	Repel Lemon Eucalyptus	\$7	1.75	87	Oil of lemon eucalyptus 30%	Pump	7.0	8.0	7.3	●
☒	3	Repel Scented Family	\$7.50	1.15	82	Deet 15%	Aerosol	5.0	8.0	8.5	○
☒	4	Natrapel 8 Hour	\$8	1.33	81	Picaridin 20%	Aerosol	7.8	8.0	8.0	○
☒	5	Off! Deep Woods VIII	\$7	1.75	74	Deet 25%	Aerosol	8.0	8.0	4.9	○
	6	Coleman SkinSmart	\$8	1.33	68	IR3535 20%	Aerosol	3.1	8.0	8.2	○
	7	Cutter Skinsations	\$4.50	0.75	33	Deet 7%	Pump	1.3	2.9	6.0	○
	8	Cutter Natural	\$5.50	0.92	28	Plant oils	Pump	0.9	0.8	2.9	●
	9	Burt's Bees Herbal	\$8	2.00	28	Plant oils	Pump	1.0	1.3	6.2	●
	10	Babyganics Natural	\$9	1.50	28	Plant oils	Pump	0.5	1.0	6.6	●
	11	ShilFrog Mosquito Coast	\$8	1.33	28	IR3535 20%	Aerosol	0.8	3.5	4.7	○
	12	All Terrain Kids Herbal Armor	\$9	2.25	22	Plant oils	Pump	0.6	1.1	6.6	○
	13	California Baby Natural Bug Blend	\$15.50	2.38	22	Plant oils	Pump	0.5	0.5	6.7	●
	14	Off! FamilyCare II Clean Feel	\$6	1.00	18	Picaridin 5%	Pump	0.5	0.9	5.2	○
	15	EcoSmart Organic*	\$7	1.17	7	Plant oils	Pump	0.5	0.5	6.3	●

*Does not contain certified organic ingredients.

Find the Best Insect Repellent for You

BEST ALL-AROUND

• 1 Sawyer Fisherman's Formula Picaridin \$8.25

This pump spray stood out in several ways. It protected for 8 hours against mosquitoes, including the aggressive ones that spread chikungunya. And it protected for more than 8 hours against ticks. It also has less serious side effects, especially for kids. The only negatives: It's a little pricey, and it discolored leather and vinyl and removed nail polish.

LESS LIKELY TO STAIN

• 2 Repel Lemon Eucalyptus \$7

Of the top repellents, the Repel Lemon

Eucalyptus pump was least likely to damage or discolor materials. But it did take off nail polish.

PLEASANT SCENT AND FEEL

• 2 Repel Lemon Eucalyptus \$7

• 4 Natrapel 8 Hour \$8

• 5 Off! Deep Woods VIII \$7

When it comes to scent and feel, these stood out. The Repel had a mostly eucalyptus scent with a hint of lemon, and it was slightly oily. The Natrapel had a floral perfumey aroma, and it was oily. The Off! had a mild aroma that was mostly floral and a little fruity. It left a thin, dry coating.

Don't Spray It on Your Face, and Other Tips

Proper use is essential, even with safer repellents. That means:

- Apply repellents only to exposed skin or clothing (as directed on the product label). Never put it on under clothing. Use just enough to cover and only for as long as needed; heavy doses don't work better.

- Don't apply repellents over cuts, wounds, or irritated skin.
- When applying to your face, spray first on your hands, then rub in, avoiding your eyes and mouth, and using sparingly around ears.
- Don't let young children apply. Instead, put it on your own hands, then rub it on. Limit

use on children's hands, because they often put their hands in their eyes and mouths.

- Don't use near food, and wash hands after application and before eating or drinking.
- At the end of the day, wash treated skin with soap and water, and wash treated clothing in a separate wash before wearing again.

The Danger in the Bite

MOSQUITO-BORNE DISEASES

West Nile was reported in 47 states last year and killed 85 people in the U.S. **Chikungunya** isn't as widespread—yet—or as deadly. Of the almost 2,500 cases reported in the continental U.S. since January 2014, there were no deaths, and only 11 cases were from bites received in the continental U.S. (all in Florida). The rest were brought back from the Caribbean, Asia, or Africa. But experts worry that chikungunya may be prone to large outbreaks in urban settings. The mosquitoes that carry it bite all day long. Plus, roughly 70 to 90 percent of infected people develop symptoms, compared with 20 percent of those infected with West Nile.

WHAT TO DO See a doctor if you develop signs of either disease: fever, headache, and body aches for West Nile; and fever and joint pain for chikungunya. Both are viral, so antibiotics won't help. But over-the-counter pain relievers can ease symptoms.

TICK-BORNE DISEASES

Lyme disease affects about 300,000 people each year, mostly in the Northeast and Upper Midwest. But that geographic reach is expanding, and doctors in new areas may be less familiar with the disease. Other tick-related diseases include Rocky Mountain spotted fever, most often in North Carolina, Oklahoma, Arkansas, Tennessee, and Missouri; babesiosis, in the Northeast and Upper Midwest; ehrlichiosis, in the Midwest and South; and an emerging virus, Powassan, mainly in the Northeast and Great Lakes region.

WHAT TO DO See a doctor if you develop a bull's-eye rash accompanied by flu-like symptoms, which indicates Lyme. Prompt treatment can stop the infection and prevent more serious complications, such as joint pain and facial paralysis (Lyme disease); heart, joint, or kidney failure (Rocky Mountain spotted fever); blood clots and bleeding (babesiosis); difficulty breathing or bleeding disorders (ehrlichiosis); and neurological problems (Powassan).



CULEX MOSQUITO
Carries deadly West Nile virus.



AEDES MOSQUITO
Spread chikungunya in Florida last year.



TICK, TICK, TICK
Carriers of Lyme disease and Rocky Mountain spotted fever.



SKIP COMBO PRODUCTS
Repellents with sunscreen aren't a good idea.

The Deal With Skin So Soft

How did a bath oil develop a reputation as an insect repellent? Avon's Skin So Soft makes no repellent claims, and its ingredients—mineral oil and emollients—are purely cosmetic. But because it had so many fans, we tested the pump spray—in 1993—and found that it did not fend off mosquitoes at all. Other Skin So Soft products are now marketed as repellents. One, Skin So Soft Bug Guard Plus IR3535 Expedition, combines a repellent with sunscreen. But we think such products are a bad idea: Sunscreens should be applied liberally and often, so the combo could lead to unnecessarily high doses of the repellent. We haven't yet tested Avon's stand-alone repellent, Skin So Soft Bug Guard Plus Picaridin, but we plan to include it in our next round of testing. That product contains just 10 percent picaridin. In our tests of similar products, the two with 20 percent picaridin performed very well, and the one with 5 percent didn't.

CÓMO PROTEGERSE DE LAS PICADURAS DE MOSQUITO



Los mosquitos pican de día y de noche. Viven adentro y afuera de las casas. Proteja a su familia de las picaduras de mosquito. **Use repelente de insectos, camisas de manga larga y pantalones largos, y tome medidas para controlar los mosquitos adentro y afuera.**

Use repelente de insectos

- Use un repelente de insectos registrado en la Agencia de Protección Ambiental (EPA) cuyo ingrediente activo sea DEET, picaridina, IR3535, aceite de eucalipto de limón, para-mentano-diol, o 2-undecanona.
- Siga siempre las instrucciones de la etiqueta del producto.
- Vuelva a aplicarse el repelente según las indicaciones.
 - » No se aplique repelente en la piel debajo de la ropa.
 - » Si también usa filtro solar, aplíquese primero el filtro solar y después el repelente de insectos.
- No se sabe si los repelentes de insectos no registrados en la EPA, incluidos algunos repelentes naturales, son eficaces.



Use camisas de manga larga y pantalones largos, y trate la ropa y otros artículos

- Use camisas de manga larga y pantalones largos.
- Trate con permetrina los artículos como las botas, los pantalones, las medias y las carpas o cómprelos ya tratados.
 - » La permetrina es un insecticida que mata o repele los mosquitos.
 - » La ropa tratada con permetrina seguirá brindando protección después de varias lavadas. Vea la información del producto para saber cuánto durará la protección.
 - » Si va a tratar los artículos usted mismo, lea las instrucciones del producto.
- No se aplique directamente sobre la piel productos que contengan permetrina.



Ingredientes activos registrados en la EPA

Mientras más alto sea el porcentaje del ingrediente activo, más larga será la protección.

DEET

Picaridina (conocida como KBR e icaridina fuera de los EE. UU.)

IR3535

Aceite de eucalipto de limón (OLE)

Para-mentano-diol

2-undecanona

La herramienta de búsqueda de la EPA se encuentra en

<https://espanol.epa.gov/control-de-plagas/encuentre-el-repelente-de-insectos-adequado>



Encuentre el repelente de insectos adecuado para usted con la herramienta de búsqueda de la EPA.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Proteja a los niños y los bebés

- Vista a su hijo con ropa que le cubra los brazos y las piernas.
- Cubra los cochecitos y portabebés con mosquiteros.
- Cuando use repelente de insectos a los niños:
 - » Siga siempre las instrucciones cuando les aplique repelente de insectos a los niños.
 - » No use productos que contengan aceite de eucalipto de limón (OLE) ni para-mentano-diol (PMD) en los niños de menos de 3 años.
 - » No les aplique repelente de insectos a los niños en las manos, los ojos ni sobre la piel cortada o irritada.
 - » Adultos: Para aplicarles repelente de insectos en la cara a los niños, pónganse primero el repelente en las manos.



Control de mosquitos adentro de la casa

- Mantenga cerradas las puertas y ventanas y, si es posible, use aire acondicionado.
- Instale mallas en las puertas y ventanas o use o repare las existentes.
- **Una vez a la semana**, bote o vacíe todos los objetos que contengan agua, como los floreros y los platos debajo de las macetas.
- **Use un insecticida en rociador o nebulizador para interiores para matar a los mosquitos** y tratar las áreas donde descansan. Estos productos funcionan de inmediato, pero podría ser necesario repetir la aplicación. Siga siempre las instrucciones de la etiqueta del producto.

Control de mosquitos afuera de la casa

- **Una vez a la semana**, bote o vacíe todos los objetos que contengan agua, como los floreros y los platos debajo de las macetas.
- Cubra bien los recipientes de almacenamiento de agua (baldes, barriles de agua de lluvia, etc.).
- Para los que no tienen tapa, use una malla que tenga agujeros más pequeños que el tamaño de un mosquito adulto.
- Use larvicidas para tratar los contenedores grandes de agua que no se vaya a usar para beber, que no se puedan tapar ni vaciar.
- Fumigue con insecticida para espacios exteriores las áreas oscuras y húmedas donde descansan los mosquitos, como debajo de los muebles del jardín, en la alfombra o el garaje. Siga siempre las instrucciones de la etiqueta del producto.
- Si tiene un tanque séptico, repare las rajaduras o grietas. Cubra las rejillas de ventilación o salidas de tuberías con malla que tenga agujeros más pequeños que el tamaño de un mosquito adulto.



Severidad del Virus del Nilo Occidental

¿Cuáles son los síntomas del Virus del Nilo Occidental?

Personas con infecciones moderadas pueden tener fiebre, dolor de cabeza, dolor en el cuerpo, sarpullido, y glándulas linfáticas hinchadas. Esta condición se llama Fiebre del Nilo Occidental.

A pesar de que la mayoría de personas infectadas con el Virus del Nilo Occidental no se enferman, personas que tienen una infección más severa pueden tener fiebre alta, dolor de cabeza, dolor del cuello, atonamiento, confusión, coma, temblor, convulsiones y parálisis. Esta condición se llama Encefalitis del Nilo Occidental.

Si usted tiene alguno de estos síntomas, llame a su doctor.

¿Hay consecuencias permanentes causadas por el Virus del Nilo Occidental?

Por lo general, la mayoría de las infecciones son usualmente moderadas. La Encefalitis del Nilo Occidental puede resultar en daño al cerebro y hasta puede causar la muerte. Los Centros del Control y Prevención de Enfermedades (CDC) informan que los efectos pueden ser permanentes. Después de un tiempo, la persona podría mejorarse.

¿Hay tratamiento o una vacuna?

No existe ningún tratamiento específico para el Virus del Nilo Occidental ni tampoco existe una vacuna. Algunos casos severos pueden requerir hospitalización pero raramente resultan en la muerte.

Información de Contacto:

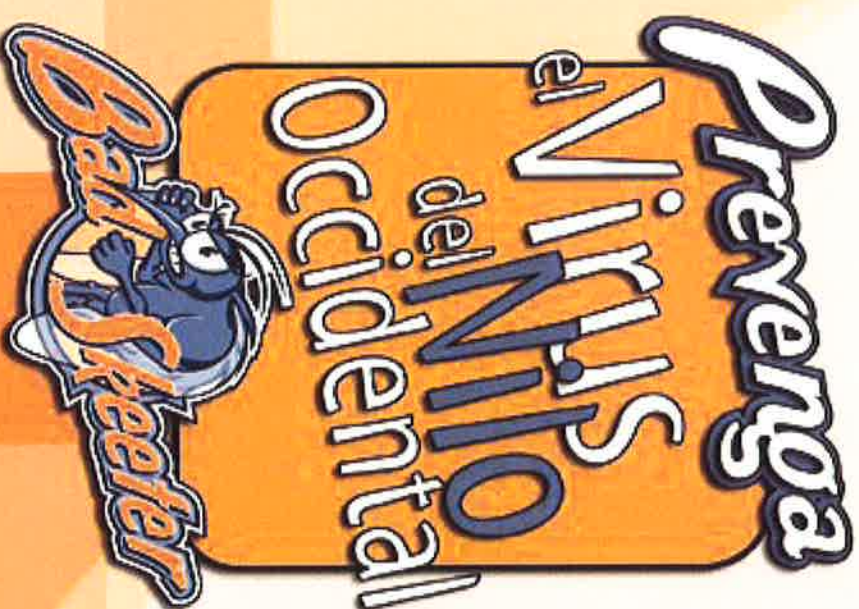
Para más información sobre el Virus del Nilo Occidental, o para aprender más acerca de cómo someter pájaros muertos o muestras humanas, visítenos en su computadora en la siguiente dirección:

<http://www.badskeeter.org>

O llame:

1-877-WYO-BITE

1-877-996-2483



Departamento de Salud de Wyoming

1-877-WYO-BITE

www.badskeeter.org

badskeeter@state.wy.us

¿Qué es el Virus del Nilo Occidental?

El Virus del Nilo Occidental es una enfermedad causada por mosquitos, que puede resultar en encefalitis o en una infección del cerebro. Los mosquitos propagan este virus después de haberse alimentado de pájaros infectados. Luego pican a la gente, a otros pájaros y animales. El Virus del Nilo Occidental no es propagado de una persona a otra y no existe prueba de que las personas pueden contraer el virus si han tocado algún animal infectado.

Susceptibilidad

¿Quién está a riesgo?

En el año 2002, 4,161 personas contrajeron infecciones causadas por el Virus del Nilo Occidental en los Estados Unidos y 284 murieron. Cualquiera, desde un infante a una persona anciana puede contraer el Virus del Nilo Occidental. Sin embargo, personas mayores de 50 años corren el riesgo más alto de desarrollar una enfermedad severa. Personas que tienen su sistema inmune arriesgado (por ejemplo, cáncer, SIDA, y otras enfermedades) también corren un riesgo más alto.

¿Cómo puedo yo contraer el Virus del Nilo Occidental?

La ruta más directa para que a un ser humano le dé una infección es a través de la picazón de un mosquito infectado. En el año 2002, rutas adicionales fueron descubiertas, sin embargo, esto representó un pequeño número de casos. Estas rutas incluyen, la transplatación de órganos de una persona a otra, transfusiones de sangre, una mujer embarazada puede contagiar al bebé que lleva en su vientre, y también es posible que una madre que le da el pecho a su bebé transmita la enfermedad. Personas que trabajan en laboratorios con productos infectados por el Virus del Nilo Occidental también pueden transmitir la enfermedad.

Siga los siguientes pasos para protegerse

Los pasos que usted debe seguir para reducir el riesgo de contraer infección son:

El amanecer y el atardecer - Cuando sea posible, evite pasar tiempo afuera al amanecer y al atardecer. Los mosquitos están más activos al amanecer y al atardecer.

Ropa - Lleve zapatos, medias, pantalones largos, y camisa de mangas largas cuando esté afuera por largos períodos de tiempo o cuando los mosquitos están más activos (al amanecer y al atardecer). La ropa debe ser de colores pálidos y deben estar hechas de materiales de tejido apretado. Esto evitará que los mosquitos lo piquen.

DEET - Para más protección contra los mosquitos, use un repelente contra insectos que contenga DEET (N,N diethyl-m-tolamide). Rocée sus ropas con repelentes que contengan Permethrin o DEET porque los mosquitos pueden picarlo a través de ropa liviana. Los productos que contienen DEET deben ser usados de acuerdo a las instrucciones en el rótulo del producto.

Vade - Vade recipientes y areas donde hay agua en su propiedad. Los mosquitos pueden poner huevos en areas donde hay agua estancada.

Pájaros y Caballos

Generalmente, pájaros y caballos son infectados con el Virus del Nilo Occidental antes de que las personas sean infectadas. Así es que pájaros muertos y caballos enfermos son una indicación de que existe actividad del Virus del Nilo Occidental. El Departamento de Salud del estado de Wyoming y otras agencias del gobierno local y estatal vigilan a los animales para determinar donde existe el Virus del Nilo Occidental. De esa forma, los oficiales del control de mosquitos reciben la información y toman los pasos que sean necesarios para aliviar el impacto del Virus del Nilo Occidental en seres humanos y caballos.

Para información acerca de cómo someter muestras de pájaros muertos para ser examinadas, llame al número de teléfono gratis 1-877-996-2483 para recibir instrucciones.

NO LLAME su agencia de salud local ni tampoco lleve el pájaro muerto a la oficina. Usted recibirá instrucciones para manejar y someter el cuerpo del animal o de los animales muertos para que sean examinados. Solamente cuervos, gayos y maricás muertas serán aceptados para examinación.

Para información sobre cómo someter muestras de caballos para ser examinadas en Wyoming, llame el Laboratorio Veterinario del Estado de Wyoming at 307-742-6638 o 1-800-442-8331.



Preveniga el Virus del Nilo Occidental

- Cualquiera, desde un infante a una persona anciana puede contraer el Virus del Nilo Occidental.
- El virus del Nilo Occidental puede resultar en una enfermedad severa, hospitalización, y en casos raros, hasta puede causar muerte.

Lo Que Usted Puede Hacer:

- Vacíe recipientes y areas donde hay agua en su propiedad.
- Use ropa con mangas largas y pantalones largos.
- Use repelente para mosquitos que contenga DEET, según sea especificado en el rótulo de contenidos.
- Si es posible, evite estar afuera al amanecer y al atardecer.

Para reportar pájaros muertos, llame al 1-877-WYO-BITE. Nunca tenga duda para llamar a su Director local de Obras Públicas cuando se relacione con problemas específicos para controlar los mosquitos.



1-877-WYO-BITE
www.badskeeter.org

DEPARTAMENTO DE SALUD DE WYOMING