

Additional Information from the CDC and EPA

Why should I use insect repellent? Insect repellents help people reduce their exposure to mosquito bites that may carry potentially serious viruses such as West Nile virus, and allow them to continue to play and work outdoors.¹

When should I use mosquito repellent? Apply repellent when you are going to be outdoors and will be at risk for getting bitten by mosquitoes.¹

How does mosquito repellent work? Female mosquitoes bite people and animals because they need the protein found in blood to help develop their eggs. Mosquitoes are attracted to people by skin odors and carbon dioxide from breath. Many repellents contain a chemical, N,N-diethyl-m-toluamide (DEET), which repels the mosquito, making the person unattractive for feeding. DEET does not kill mosquitoes; it just makes them unable to locate us. Repellents are effective only at short distances from the treated surface, so you may still see mosquitoes flying nearby. As long as you are not getting bitten, there is no reason to apply more DEET.¹

Which mosquito repellent works the best? The most effective repellents contain DEET (N,N-diethyl-m-toluamide), which is an ingredient used to repel pests like mosquitoes and ticks. DEET has been tested against a variety of biting insects and has been shown to be very effective. The more DEET a repellent contains the longer time it can protect you from mosquito bites. A higher percentage of DEET in a repellent does not mean that your protection is better—just that it will last longer. DEET concentrations higher than 50% do not increase the length of protection.¹

What is DEET? DEET (chemical name, N,N-diethyl-meta-toluamide) is the active ingredient in many insect repellent products. It is used to repel biting pests such as mosquitoes and ticks, including ticks that may carry Lyme disease. Every year, approximately one-third of the U.S. population is expected to use DEET. Products containing DEET currently are available to the public in a variety of liquids, lotions, sprays, and impregnated materials (e.g., wrist bands). Formulations registered for direct application to human skin contain from 4 to 100% DEET. Except for a few veterinary uses, DEET is registered for use by consumers, and it is not used on food. DEET is designed for direct application to human skin to repel insects, rather than kill them. After it was developed by the U.S. Army in 1946, DEET was registered for use by the general public in 1957. Approximately 230 products containing DEET are currently registered with EPA by about 70 different companies.²

Is DEET safe? Yes, products containing DEET are very safe when used according to the directions. Because DEET is so widely used, a great deal of testing has been done. When manufacturers seek registration with the U.S. Environmental Protection Agency (EPA) for products such as DEET, laboratory testing regarding both short-term and long-term health effects must be carried out. Over the long history of DEET use, very few confirmed incidents of toxic reactions to DEET have occurred when the product is used properly.¹

Are there any risks due to using repellents containing DEET? Use of these products may cause skin reactions in rare cases. If you suspect a reaction to this product, discontinue use, wash the treated skin, and call your local poison control center. There is a new national number to reach a Poison Control Center near you: 1-800-222-1222. If you go to a doctor, take the product with you. Cases of serious reactions to products containing DEET have been related to misuse of the product, such as swallowing, using over broken skin, and using for multiple days without washing skin in between use, for example. Always follow the instructions on the product label.¹

How to use DEET products safely: Consumers can reduce their own risks when using DEET by reading and following products labels. Statements on all DEET product labels will be revised to include the following directions:

- Read and follow all directions and precautions on this product label.
- Do not apply over cuts, wounds, or irritated skin.
- Do not apply to hands or near eyes and mouth of young children.
- Do not allow young children to apply this product.
- Use just enough repellent to cover exposed skin and/or clothing.
- Do not use under clothing.
- Avoid over-application of this product.
- After returning indoors, wash treated skin with soap and water.
- Wash treated clothing before wearing it again.
- Use of this product may cause skin reactions in rare cases. The following additional statements will appear on the labels of all aerosol and pump spray formulation labels:

Do not spray in enclosed areas.

To apply to face, spray on hands first and then rub on face. Do not spray directly onto face.²

THREE WAYS TO REDUCE YOUR WEST NILE VIRUS RISK

WEST NILE VIRUS IS A RISK YOU CAN DO SOMETHING ABOUT WITH A FEW SIMPLE STEPS.

1 AVOID MOSQUITO BITES!

Spray! Spray insect repellent containing DEET (Look for *N, N-diethyl-m-toluamide*) on exposed skin when you go outdoors. Spray clothing with repellents containing DEET or permethrin. Products with a higher percentage of DEET (up to 50%) give longer protection.

*Don't spray repellent on skin under clothing.
Don't use permethrin on skin.*

Use Repellent Carefully! Repellents containing DEET are very safe for adults and children when used according to directions. Don't put repellent on kid's hands because it may get in their mouth or eyes.



See www.cdc.gov/westnile for detailed information about prevention and repellent use.



Cover Up! Wearing long sleeve shirts, long pants and socks sprayed with repellent while outdoors can further help prevent mosquito bites.

Avoid Mosquitoes! Many mosquitoes bite between dusk and dawn. Limit time outdoors during these hours, or be especially sure to use repellents and protective clothing.

West Nile virus is now in most of the United States. The most important way people become infected is through the bite of an infected mosquito. You can reduce your chance of getting infected by avoiding mosquito bites.



ADULTS ARE AT HIGHEST RISK

People over age 50 have a higher risk for becoming seriously ill when they get infected with West Nile virus. People under age 50 can also become sick, but it is less likely.



WHAT HAPPENS IF I GET INFECTED?

Most people who get infected with West Nile virus do not have any symptoms. Some people develop a mild illness called **West Nile Fever**. This mild illness gets better on its own. No treatment is needed.

A small number of people (less than 1 out of 100) who get infected with West Nile virus develop severe disease, called **West Nile encephalitis** or **West Nile meningitis** (inflammation of the brain or the area around the brain). This severe disease usually requires hospitalization. In some cases, especially among older persons, it can result in death.

Symptoms of severe illness include headache, high fever, stiff neck, mental confusion, muscle weakness, tremors (shaking), convulsions, coma, and paralysis. See your doctor if you develop these symptoms.

There is no specific treatment for the West Nile virus infection. There is no vaccine available for people.

2 MOSQUITO-PROOF YOUR HOME!

Screens: Keep mosquitoes outside by fixing or installing window and door screens.

Drain Standing Water: Don't give mosquitoes a place to breed. A small amount of standing water can be enough for a mosquito to lay her eggs.

Look around every week for possible mosquito breeding places. Empty water from buckets, cans, pool covers, flower pots and other items. Throw away or cover up stored tires and other items that aren't being used. Clean pet water bowls weekly. Check if rain gutters are clogged. If you store water outside or have a well, make sure it's covered up. Encourage your neighbors to do the same.



3 HELP YOUR COMMUNITY!

Dead birds help health departments track West Nile virus. Check with local or state health department to find out their policy for reporting dead birds.

For more information on West Nile Virus:
Centers for Disease Control and Prevention
www.cdc.gov/westnile

