

Zika (zee-kah) virus is primarily spread from an infected person to an uninfected person through the bite of an infected Aedes species mosquito. Although most infections do not cause symptoms and do not require treatment, Zika infection may cause birth defects in pregnant women. Outbreaks of Zika have occurred in parts of Africa, Southeast Asia, and the Pacific Islands. Zika spread to the Western Hemisphere in 2015 and is estimated to have affected more than a million people in South and Central America, Mexico, and the Caribbean, including Puerto Rico and the Virgin Islands. In the United States, cases of Zika virus infection have been identified in travelers returning from areas with ongoing disease transmission. Mosquito-transmitted (“locally transmitted”) Zika virus infections have occurred in two U.S. locations. Prevent Zika virus infections by protecting yourself against mosquito bites and eliminating mosquito breeding areas.

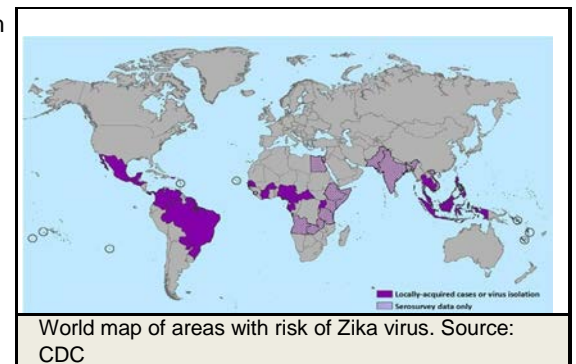


How do people become infected with Zika virus? The disease is spread to people primarily through the bite of an infected *Aedes* species mosquito. These are the same mosquitoes that spread dengue, yellow fever, and chikungunya viruses. These mosquitoes are aggressive daytime biters. They can also bite at night, indoors, and around the outside of homes. The yellow fever mosquito (*Ae. aegypti*), and the Asian tiger mosquito (*Ae. albopictus*) have been implicated in large outbreaks of Zika virus. Zika virus can also be spread through sexual activity, possible blood transfusion, and from mother to fetus during pregnancy. Zika infection during pregnancy can cause a birth defect called “microcephaly” where the skull and brain do not fully develop. It is also linked to other problems including miscarriage, stillbirth, and other birth defects. There have also been increased reports of Guillain-Barré syndrome— an uncommon nervous system disorder— in areas affected by Zika. According to the U.S. Centers for Disease Control and Prevention (CDC), Zika virus has been found in breast milk, and there have been several reports of Zika virus infection in babies from breastfeeding. However, there have been no reported health problems in babies consuming Zika virus-infected breastmilk.

What are the signs and symptoms of Zika virus infection? Most people infected with Zika virus won’t have symptoms or will only have mild symptoms. Symptoms usually begin 2-7 days after being bitten by an infected mosquito. Common symptoms include fever, rash, joint pain and red eyes. Other symptoms include muscle pain, headache, pain behind the eyes, and vomiting. As symptoms are often mild, infection may go unrecognized or be misdiagnosed. Approximately one in five people infected with Zika virus will develop symptoms. Once a person has been infected with Zika, they may have immunity to future infections.

Is there a diagnostic test available to confirm Zika virus infection in humans? Yes, your healthcare provider may order blood or urine tests for Zika or other viruses with similar symptoms spread by the same mosquitoes. See your healthcare provider if you have recently traveled to affected areas and have developed the symptoms described above.

Is there a treatment for Zika virus infection? There is no vaccine or specific treatment available. Persons experiencing Zika virus symptoms should rest and drink plenty of fluids. Take medicine such as acetaminophen (TYLENOL®), to relieve fever and pain. **DO NOT TAKE** aspirin and other non-steroidal anti-inflammatory drugs until other diseases can be ruled out by your medical care provider.



What should I do if I think I am infected with Zika virus? Seek medical attention if you experience the symptoms described above and have traveled to an area where Zika virus occurs. Be sure to tell your healthcare provider your recent travel history. If you think you have Zika virus, avoid mosquito bites to prevent the virus from spreading to others.

What can I do to reduce my risk of becoming infected with Zika virus? If you are pregnant or trying to become pregnant and traveling to areas where Zika virus transmission is ongoing the CDC has provided the following interim recommendations (<http://wwwnc.cdc.gov/travel/notices>):

- Women who are pregnant (in any trimester): Consider postponing travel to areas where Zika virus transmission is ongoing. If you must travel to one of these areas, talk to your doctor first and strictly follow steps to prevent mosquito bites during your trip. Using approved insect repellents is safe during pregnancy.
- Women who are trying to become pregnant: Before you travel, talk to your doctor about your plans to become pregnant and the risk of Zika virus infection. Strictly follow steps to prevent mosquito bites during your trip, including using approved insect repellents.

Zika virus and sex? The CDC recommends that men with pregnant partners who live in- or have traveled to- an area with active Zika virus transmission should abstain from sexual activity or consistently and correctly use condoms during sex for the duration of the pregnancy.

Avoid mosquito bites. Using the DoD Insect Repellent System provides the best protection from mosquito bites. It incorporates permethrin repellent on the uniform, DEET or picaridin repellent on exposed skin, a properly worn uniform, and sleeping inside a permethrin-treated bed net. Civilian personnel can also purchase or treat clothing with permethrin. Wear long-sleeved shirts and long pants.

Stay in air-conditioned areas or make sure door and window screens are in place and do not have holes. If practical, minimize time spent outdoors during daylight hours.

Eliminate mosquito breeding sites. Search for and remove items that collect water such as plastic containers, flower pots, vases, children's toys, old tires or any other items that can hold water. All standing water is potential mosquito breeding habitat.

How do I know if my uniform is treated with permethrin repellent? Factory treated permethrin Army Combat Uniforms (ACU Permethrin) or Operational Camouflage Pattern uniforms (OCP) 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 6840-01-2781336), which should be reapplied after six weeks and the sixth washing. When applying permethrin, always read and follow the label directions. Permanently mark the uniform label with the permethrin field-treatment date. **NEVER APPLY PERMETHRIN TO THE SKIN!** Aerosol products containing 0.5% permethrin and clothing factory-treated with permethrin are also commercially available for civilian use.

Is it safe for Soldiers who are pregnant, nursing or trying to get pregnant to wear permethrin-treated uniforms? The OCP and ACU Permethrin are safe to wear; however, if you are pregnant, nursing, or trying to get pregnant, you are authorized to temporarily wear an ACU or OCP without permethrin. If your uniform is not treated with permethrin (maternity or have a profile) and you and your healthcare provider decide that wearing an OCP or ACU Permethrin is the best choice, you can learn how to treat your uniform by following the directions in the question above.

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 to sensitive or damaged skin.** Available military repellents are:

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

Note: Do not use insect repellents on babies younger than 2 months old. Do not use products containing oil of lemon eucalyptus or para-menthane-diol on children younger than 3 years old.

What is a “properly worn Army Combat Uniform”? Worn properly, the ACU is a physical barrier against insects, ticks and other disease vectors and biting nuisance pests. Wear ACUs with the sleeves rolled down; 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 insect 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/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 netting and keep loose edges off the ground by tucking them under the sleeping bag. Mosquito netting can be used to cover babies younger than 2 months old in carriers, strollers, or cribs.

Where can I get more information on Zika virus?

- Army Public Health Center (APHC) Zika virus website: <http://phc.amedd.army.mil/topics/discond/diseases/Pages/Zika.aspx>
- Centers for Disease Control and Prevention - <http://www.cdc.gov/zika/>
- World Health Organization - <http://www.who.int/mediacentre/factsheets/zika/en/>

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