

Just the Facts...

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, Zika virus infection may result in fever, rash, joint pain, and red eyes. The illness is usually mild with symptoms lasting from several days to a week. Zika virus was first isolated from a rhesus monkey in the Zika forest, Uganda, in 1947. Outbreaks of Zika have occurred in parts of Africa, Southeast Asia, and the Pacific

Islands. Zika spread to the Western Hemisphere in 2015 and has affected more than a million people in South and Central America, Mexico, and the Caribbean. With the recent outbreaks, the number of Zika cases among travelers visiting or returning to the United States will likely increase. These imported cases may result in local spread of the virus in some areas of the United States. Zika virus infection can be prevented by protecting 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 and chikungunya viruses.

These mosquitoes are aggressive daytime biters with peak activity at dawn and dusk. They will bite indoors, 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. Other *Aedes* mosquito species, notably *Ae. africanus*, *Ae. hensilli*, and *Ae. polynesiensis*, are also considered potential vectors of Zika virus. Some evidence suggests that Zika virus can also be spread from mother to child during pregnancy. The U.S. Centers for Disease Control and Prevention (CDC) is aware of increased numbers of babies with microcephaly (smaller than expected head size) in Brazil and is currently supporting the investigation into a possible link with Zika virus infection. There are currently no reports of infants getting Zika virus through breastfeeding. The CDC is also investigating a possible link between Zika virus and Guillain-Barre syndrome, a rare disorder in which the body's immune system attacks part of the nervous system.



Aedes aegypti (left) and *Aedes albopictus* (right). These mosquitoes are important transmitters of Dengue, Chikungunya, and Zika viruses. Photos: CDC

What are the signs and symptoms of Zika virus infection?

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 as dengue. A high rate of Zika infection with no symptoms is expected, similar to dengue and chikungunya. About one in five people infected with Zika virus will develop symptoms. Most people fully recover without severe complications, and hospitalization rates are low. To date, there have been no reported deaths associated with Zika virus.

Is there a diagnostic test available to confirm Zika virus infection in humans?

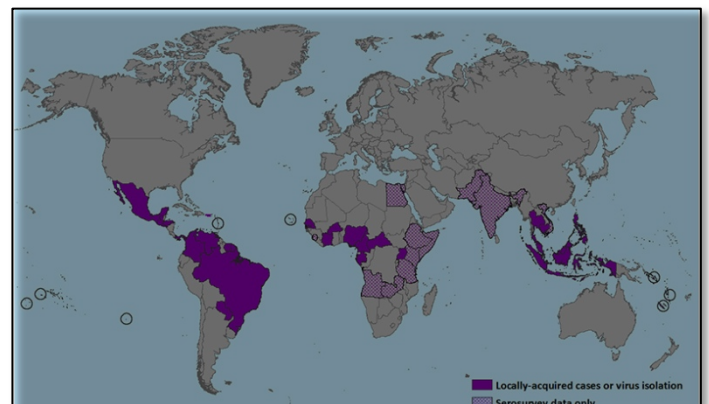
Your healthcare provider may order blood tests to look for Zika or other similar viruses like dengue or chikungunya. The symptoms of Zika are similar to those of chikungunya and dengue, which are diseases caused by other viruses spread by the same type of mosquitoes. See your healthcare provider if you 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 with Zika virus should rest and drink plenty of fluids. Take medicines, such as acetaminophen (TYLENOL®), to relieve fever and pain. Aspirin and other non-steroidal anti-inflammatory drugs should be avoided until dengue can be ruled out to reduce the risk of excessive bleeding.

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 occurs. Be sure to tell your healthcare provider your recent travel history. If you think you have Zika, avoid mosquito bites to prevent the virus from spreading to others.



Zika virus distribution: Countries that have past or current evidence of Zika virus transmission. Source: CDC

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 any area 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. Use of 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 use of approved insect repellents.

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.

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 which are the peak biting times for the *Aedes* spp. mosquitoes that transmit Zika virus.

ELIMINATE MOSQUITO BREEDING SITES! Search and remove unneeded items that collect water such as plastic containers, flower pots, vases, children's toys, old tires or any other items that can hold water.

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

Factory-treated permethrin Army Combat Uniforms (ACU Permethrin) are now available to all Soldiers. The ACU Permethrin 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 6 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.

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:

- **Ultrathon™** (NSN 6840-01-284-3982) contains 33% controlled-release DEET lotion; one application protects for 12 hours.
- **Ultra 30™ Insect Repellent Lotion** (NSN 6840-01-584-8393) contains 30% Lipo DEET; one application protects for up to 12 hours.
- **Cutter® pump spray** (NSN 6840-01-584-8598) contains 25% DEET; one application protects for up to 10 hours.
- **Sunsect** combination sunscreen & repellent (NSN 6840-01-288-2188) contains 20% DEET with SPF 15 sun protection.
- **Natrapel® pump spray** (NSN 6840-01-619-4795) contains 20% picaridin; one application protects for up to 8 hours.

What is considered a “properly worn combat uniform”?

Worn properly, military combat uniforms act as a physical barrier against insects, ticks and other disease transmitters and biting nuisance pests. Wear uniforms 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 skin repellent.

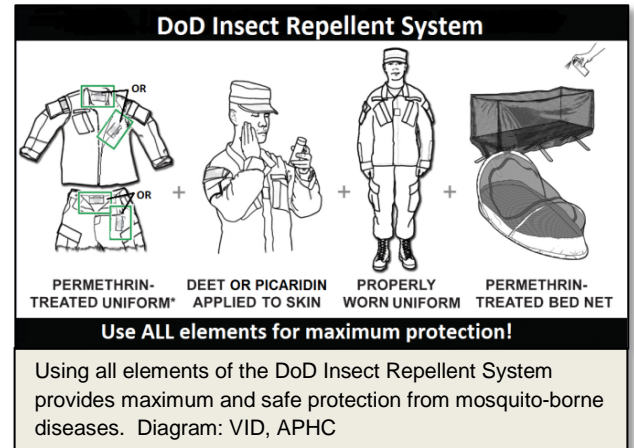
What standard bed nets are available to help protect Soldiers from mosquito bites while sleeping?

Treated bed nets provide a barrier between a sleeping Soldier and pests (e.g., mosquitoes/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.

Where can I get more information on Zika virus?

- Centers for Disease Control and Prevention - <http://www.cdc.gov/zika/>
- World Health Organization - <http://www.who.int/mediacentre/factsheets/zika/en/>

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>



All standard approved skin repellents contain the active ingredient DEET or picaridin, and are registered by the U.S. Environmental Protection Agency (USEPA). These products are safe to use and effectively repel mosquitoes, sand flies, fleas, ticks and other potential disease vectors and pests. Photo: VID, APHC