



22 April 2016

## Zika Virus (ZIKV)

- Zika virus (ZIKV), which is transmitted primarily through the bite of an infected *Aedes* species mosquito, was first discovered in Uganda in 1947 and has since caused outbreaks in multiple countries in the eastern region of the world (prior to 2015).
- Brazil reported its first confirmed ZIKV case in May 2015 and an outbreak was declared soon thereafter. As of February 1, 2016, ZIKV has been declared a public health emergency of international concern by the World Health Organization (WHO) due to its association with congenital and neurological disorders and its rapid spread to other western countries.
- Common symptoms of ZIKV include fever, rash, conjunctivitis (pink eye), and joint pain (similar to dengue and chikungunya). Symptoms are usually mild and the infection may go unrecognized because of this. If symptoms do occur, they generally last up to a week. Infection with ZIKV rarely results in death. However, ZIKV is associated with microcephaly, a serious and sometimes fatal birth defect.
- From January 1, 2015 through April 13, 2016, 358 ZIKV cases have been reported in the United States (U.S.). All cases were travel-associated; in contrast, 471 locally acquired cases (and 4 travel-associated cases) have been reported in U.S. territories (Puerto Rico, U.S. Virgin Islands, and American Samoa).
  - ⇒ In the United States, 31 cases were pregnant and 7 cases were sexually transmitted. The Centers for Disease Control and Prevention (CDC) have developed [recommendations](#) for preventing sexual transmission of ZIKV and provided [guidelines](#) for health care providers caring for pregnant women with possible ZIKV exposure.
- To date, four confirmed cases of ZIKV have been diagnosed in AD Army and non-AD beneficiaries.
  - ⇒ Two AD cases and two non-AD cases with travel to Brazil, Puerto Rico, Haiti, and the Philippines.
- Currently, there is no vaccine or specific treatment for ZIKV. ZIKV is carried by the same mosquito vectors, is found in the same geographic distribution, and has similar symptoms as dengue and chikungunya. Until dengue has been ruled out, avoid the use of aspirin or NSAIDs in patients with symptoms consistent with these viral infections. Please refer to the [guidance](#) provided by the Armed Forces Health Surveillance Branch (AFHSB) on detecting and reporting DoD acute ZIKV cases.



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## DoD Army Laboratory Mosquito Surveillance

- Public Health Command Region-Pacific (JBLM) tested 82 *Aedes spp.* mosquitoes from 7 pools in Hawaii and 170 mosquitoes from 15 pools in Guam for Zika, dengue, and chikungunya. An additional 101 mosquitoes from 25 pools in Hawaii were tested for dengue alone. None of the pools were positive for any of these viruses.

## Army Tick Testing

- Public Health Command Region-Atlantic tested 181 *Ixodes scapularis* ticks for *Borrelia burgdorferi*, the pathogen that causes Lyme disease, and *B. miyamotoi*, which produces symptoms typical of tick-borne relapsing fever. 18 ticks (10%) tested positive for *B. burgdorferi* and 10 (6%) tested positive for *B. miyamotoi*. The positive ticks were collected from Fort Drum, NY and Blossom Point, MD (ticks were collected from the environment and deer).
- The DoD Human Tick Test Program conducts pathogen testing in ticks removed from Service Members, dependents, and DoD civilians. Tick testing is species-specific; different tick species transmit different pathogens. Contact information can be found [here](#).
- Of 55 *Ixodes* ticks tested by the Human Tick Test Program, 25% (n=14) were positive for *B. burgdorferi*.

Human Tick Test Program	A. phagocytophilum	B. microti	B. burgdorferi	E. chaffeensis	E. ewingii	E. muris-like	R. parkeri	R. rickettsii
YTD No. Positive (YTD No. Tested)	2 (55)	0 (55)	14 (55)	0 (44)	1 (44)	0 (55)	0 (0)	0 (7)

Note: CONUS data only.

## Vector-borne Disease Prevention

- For both mosquito-borne and tick-borne disease prevention, use the DoD Insect Repellent System:
  - ⇒ Properly worn [permethrin-treated uniform](#) (note: physical fitness uniforms are untreated and provide little protection)
  - ⇒ Applying insect repellent with 20-30% DEET or 20% picaridin to exposed skin
  - ⇒ Sleeping under permethrin-treated bed nets
- Standing water should be removed to prevent mosquito breeding.
- If you live in or recently visited a country that has active ZIKV transmission, wear condoms or avoid having sex to prevent sexual transmission of ZIKV. Please refer to CDC's [recommendations](#).

Disclaimer: Entomology data will be reported and displayed according to the region where the test samples were collected, regardless of testing region.

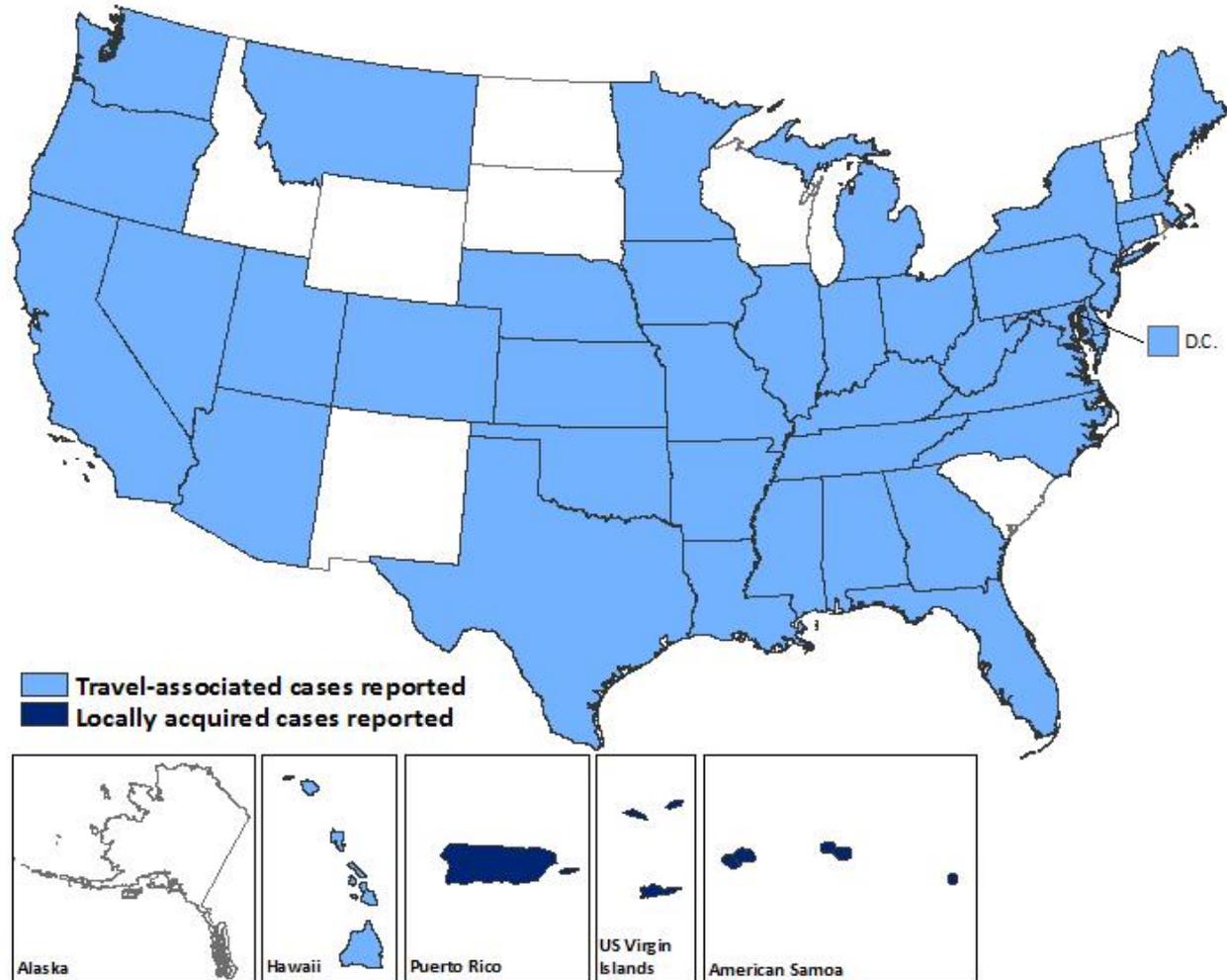
**Resources:** WHO Zika Virus • CDC Zika Virus • APHC Zika Virus • Permethrin Treated Uniforms • Army Vector-borne Disease Reports • APHC

**Key:** CDC Centers for Disease Control and Prevention; DRSi Disease Reporting System Internet; AD Active Duty

Contact us: [APHC Disease Epidemiology](#) or 410-417-2377

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# Zika virus disease in the United States, 2015-2016



Provisional data reported to ArboNET for January 1, 2015 – April 13, 2016. *Data as of April 13, 2016.*

Source: Centers for Disease Control and Prevention (CDC) Arboviral Disease Branch. Zika virus disease in the United States, 2015-2016.

Available at: <http://www.cdc.gov/zika/geo/united-states.html>

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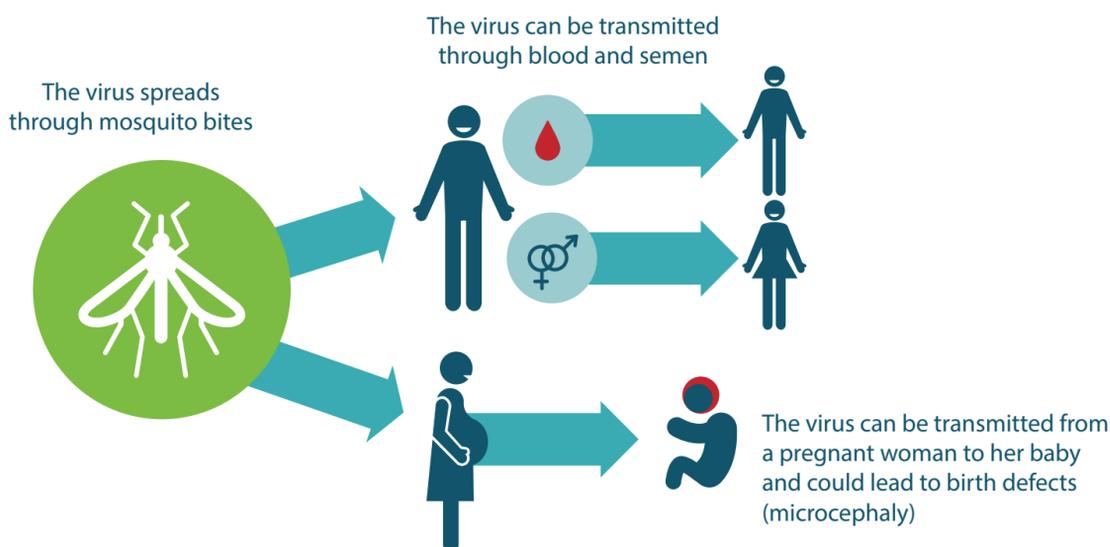
# ZIKA

Zika virus infection is **preventable.**



## SPREAD

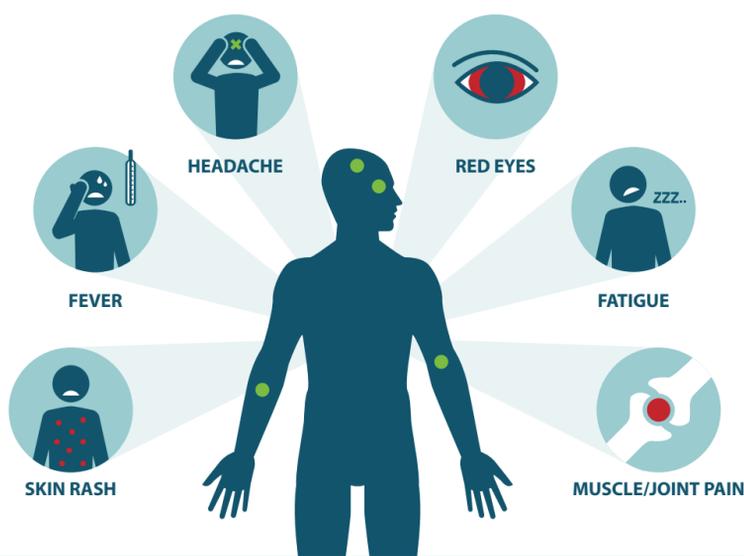
### HOW IS IT SPREAD?



## SYMPTOMS

### ONLY 1 IN 5 PEOPLE INFECTED SHOW SYMPTOMS

\*In a small number of people, Zika virus infection has been linked to Guillain-Barré syndrome, a disorder in which your body's immune system attacks your nerves.



## PREGNANCY

### ZIKA VIRUS CAN BE PASSED FROM A MOTHER TO HER BABY DURING PREGNANCY

- Women who are pregnant or trying to become pregnant should **postpone travel** to areas where Zika is spreading.
- Pregnant women or women who are trying to become pregnant and their male partners should strictly follow steps to **prevent mosquito bites** in areas where Zika is spreading.



- If you have a male sex partner who lives in or travels to an area with Zika, use **condoms** the right way every time you have sex, or do not have sex during the pregnancy.
- Pregnant women who live in or have recently traveled to an area with Zika should talk to a healthcare provider about their travel even if they don't feel sick.
- If you develop the symptoms of Zika, **see a healthcare provider** right away for testing.

## PREVENTION

### AVOID MOSQUITO BITES



Stay in places with air conditioning, and use screens to keep mosquitoes outside



Wear long-sleeved shirts and long pants



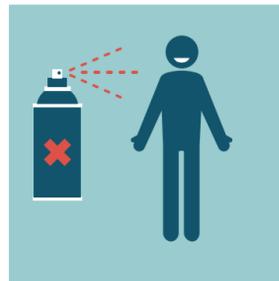
Minimize time outside



Treat clothing & gear with permethrin, if not already treated



Eliminate standing water where mosquitoes breed



Use DEET or picaridin insect repellent on exposed skin

## MORE INFORMATION

### SPEAK WITH YOUR HEALTHCARE PROVIDER

ZIKA HOTLINE: (800) 984-8523; OVERSEAS: DSN (312) 421-3700; STATESIDE: DSN 421-3700.

APHC WEBSITE: [HTTP://PHC.AMEDD.ARMY.MIL/TOPICS/DISCOND/DISEASES/PAGES/ZIKA.ASPX](http://PHC.AMEDD.ARMY.MIL/TOPICS/DISCOND/DISEASES/PAGES/ZIKA.ASPX)

CDC WEBSITE: [HTTP://WWW.CDC.GOV/ZIKA/INDEX.HTML](http://WWW.CDC.GOV/ZIKA/INDEX.HTML)

