
Zika Virus: What you need to know

City of Annapolis
Office of Emergency
Management

Adapted from the Maryland Department of Health and Mental Hygiene



What is Zika?

Transmitted primarily by mosquitoes and more recently sexual contact

Largest concerns:

- Pregnancy Complications
- Guillain-Barre Syndrome

Single stranded, enveloped, RNA virus

In the same family as Yellow Fever, West Nile, and Dengue

Zika Virus History

- **First discovered in 1947 in rhesus monkeys in Uganda**
- **Recorded to be found in humans in 1952 in Uganda and Tanzania**
 - **Cases spread throughout Africa and Asia from 1952-1970s**
 - **First case outside of Asia and Africa was recorded in 2007 in Yap, a small island in the western Pacific Ocean.**
 - **Outbreak in French Polynesia began in October 2013**

Zika Virus Transmission

- **The Virus is spread primarily through mosquitos**
- **Sexual transmission has been recorded**
 - **The Virus can be transmitted sexually for up to eight weeks.**
 - **It is advised that anyone engaging in sexual activity (who has traveled to an area with active Zika transmission) should ensure they are taking necessary protective measures for six months following the potential infection**
 - **Studies are ongoing to discover more concrete information regarding the sexual transmission of the virus**

Zika Virus Transmission

- **One case has been documented as a result of a blood transfusion**
- **At this time, there are NO confirmed cases of the Virus being transmitted through organ or tissue donation.**
- **Zika patients do not need to be isolated.**

Zika Virus Infection

- **The Virus' incubation period is typically between 3-5 days; however, it can last up to 14 days**
- **80% of infected victims will not experience symptoms**
- **Zika has a very brief illness duration**
 - **Symptoms usually last for less than one week**
- **The illness is generally mild, but complications are serious**
- **In the event that a pregnant woman is infected with the Zika virus, the baby could be subject to a congenital abnormality called microcephaly.**

What is Microcephaly?

- **Microcephaly: a congenital condition resulting in abnormal smallness of the head due to incomplete brain development**

Zika Virus Symptoms

- **Fever**
 - **Rash**
 - **Conjunctivitis (Pink Eye)**
 - **Arthralgia (Joint Pain)**
-
- **Other secondary symptoms may include: Myalgia (Muscle Pain) and Headache**

Zika and Pregnancy

- **Increased cases of microcephaly recorded in Brazil beginning in late 2015**
 - Evidence and clinical studies have confirmed Zika as the cause of this condition in pregnant women
 - Rate has risen 10-20x passed the average
- **Pregnant women who have traveled to affected areas should be tested as soon as possible**
- **The CDC currently recommends pregnant women defer travel plans to areas with ongoing transmission**

Zika and Guillain-Barré Syndrome

- **Guillain-Barré syndrome (GBS) is an uncommon sickness of the nervous system in which a person's own immune system damages nerve cells, causing muscle weakness, and sometimes paralysis**
 - **The Brazil Ministry of Health has reported an increased number of people who have been infected with Zika virus who also have GBS.**
 - **GBS is very likely triggered by Zika in a small proportion of infections, much as it is after a variety of other infections.**
 - **CDC is working with its Brazilian counterparts to study the possibility of a link between Zika and GBS.**
- **As of July 2016, there have been 5 travel related cases of GBS in the United States**

Areas of Ongoing Zika Transmission

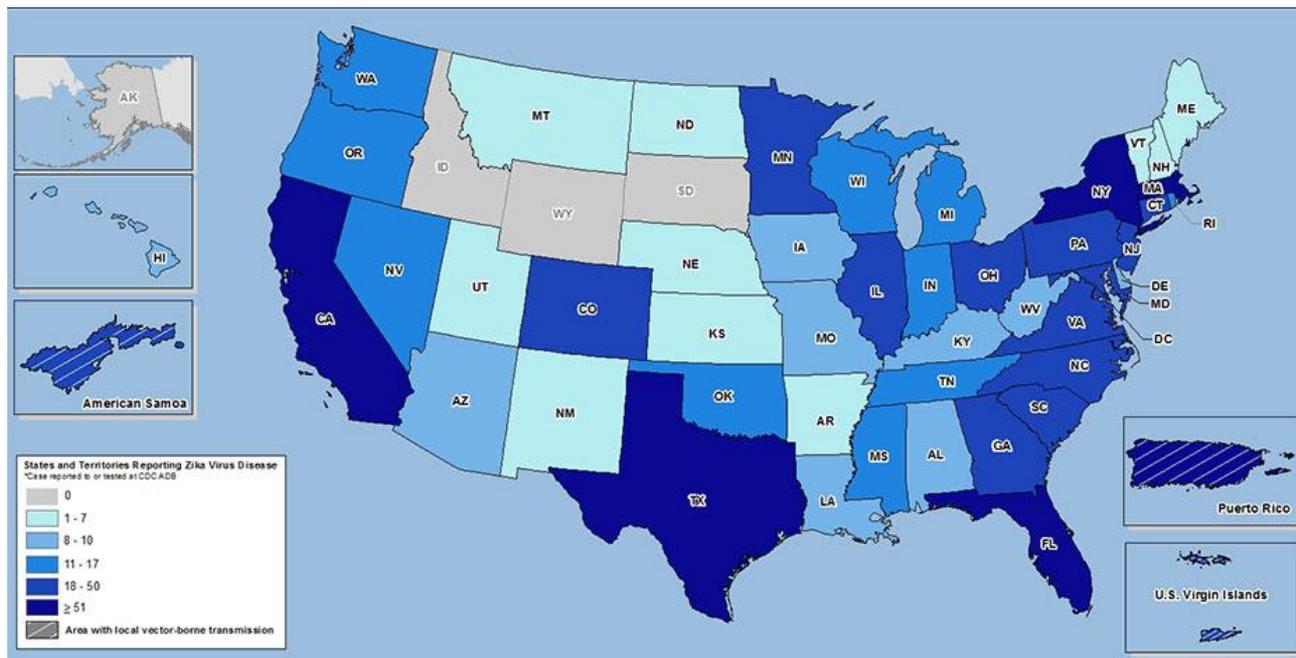


What does this mean for Annapolis?

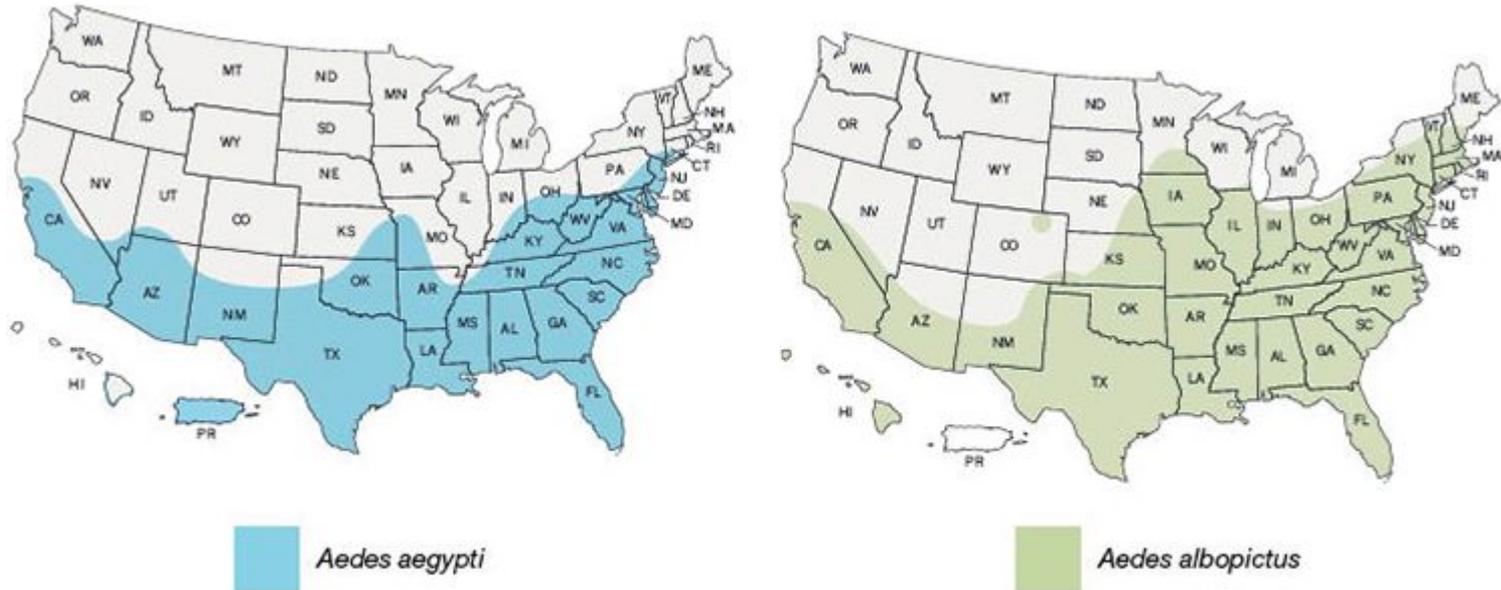
Testing is now available at the Maryland Department of Health and Mental Hygiene (DHMH) public health laboratory in Baltimore. 400 residents have already been approved for testing in the State.

The State Department of Health is maintaining surveillance of the Virus, microcephaly, and the mosquito population

Confirmed Cases of the Zika Virus in the U.S.



States with High Potential for Zika-Infected Mosquitos



Threat to Maryland as of July 2016

- There have been 4 locally acquired mosquito borne cases reported through news outlets, but not yet confirmed by the CDC, within the continental U.S.
- There have been 1,675 travel-associated cases reported in the continental U.S.
 - 48 reported cases in the state of Maryland
- The CDC is expecting the number of travel associated cases to increase, which could result in the local spread of the virus across the US
- Over 80% of cases will go undiagnosed due to a lack of symptoms

Testing and Treatment

Testing

- A blood or urine sample can be tested to detect the Zika Virus in the first week of illness onset
- Testing is now available at the Maryland Department of Health and Mental Hygiene public health laboratory
- Commercial testing is not yet available

Treatment

- No specific antiviral treatment
- No vaccine
- Recommended: Rest, fluids, anti-nausea medication
- Avoid aspirin until Dengue is ruled out

Some Roles of Hospitals in Treatment

- **Obtaining and transporting specimens for testing will allow health professionals to learn more and develop an antiviral to the Zika Virus**
- **Reporting cases of Zika, microcephaly, pregnancy complications, and Guillain-Barre Syndrome**
 - **Currently, there is a registry for those experiencing these symptoms created by the CDC and its international partners**
- **Assist in the monitoring and special treatment of pregnant women exhibiting symptoms**
- **Disseminate information to the public and clinicians around the country**

Government Resources to Fight the spread of the Zika Virus

- **\$1.8 billion in emergency funding has been requested by the Obama administration to be dedicated to fighting the Virus and eliminating mosquito populations that may carry it.**
 - **DHMH is working with the MD Department of Agriculture to develop environmental controls**
- **Different mosquito traps are being used than in previous cases for West Nile Virus**
- **Widespread public education**
- **Maryland Department of Agriculture Mosquito Control Program Sprays**

Maryland Department of Agriculture Mosquito Control Program

- The Mosquito Control Section provides a direct service to approximately 2,100 communities in 16 Maryland counties.
- 200 communities have been sprayed in Anne Arundel County, with many more on the waitlist.
- Spraying occurs in neighborhoods when there are a high number of mosquitoes in traps placed throughout the State, or if landing counts indicate spraying is needed.

Maryland Department of Agriculture Mosquito Control Program

- **Spraying in your neighborhood may be canceled if it is too windy, hot, or cold for the spray to be effective.**
- **Most Annapolis communities are scheduled to be sprayed Monday evening/night.**
- **A complete schedule for Anne Arundel County can be found at <http://mda.maryland.gov/plants-pests/Documents/AnneArundel.pdf>.**

Maryland Department of Agriculture Mosquito Control Program

- Residents should take precautions when sprays are occurring in their neighborhoods:
 - Stay indoors
 - Close windows
 - Bring in pets and their water/food bowls
 - Turn off window mounted air conditioners
- In addition, a form can be sent to the Department of Agriculture to opt-out of the program. This form can be found on their website at http://mda.maryland.gov/plants-pests/pages/mosquito_control.aspx.

What can you do to protect yourself?

Protect yourself and your family from mosquito bites

Use insect repellent

Use an Environmental Protection Agency (EPA)-registered insect repellent with one of the following active ingredients. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breastfeeding women.

Active ingredient		Some brand name examples*
Higher percentages of active ingredient provide longer protection		
DEET		Off!, Cutter, Sawyer, Ultrathon
Picaridin , also known as KBR 3023 , Bayrepel , and icaridin		Cutter Advanced, Skin So Soft Bug Guard Plus, Autan (outside the United States)
Oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD)		Repel
IR3535		Skin So Soft Bug Guard Plus Expedition, SkinSmart

* Insect repellent brand names are provided for your information only. The Centers for Disease Control and Prevention and the U.S. Department of Health and Human Services cannot recommend or endorse any name brand products.



What can you do to protect yourself?

If you have a baby or child



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

Treat clothing and gear



- ◆ Treat items such as boots, pants, socks, and tents with permethrin or purchase permethrin-treated clothing and gear.
 - » 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.

Mosquito-proof your home



- ◆ Use screens on windows and doors. Repair holes in screens to keep mosquitoes outside.
- ◆ Use air conditioning when available.
- ◆ Keep mosquitoes from laying eggs in and near standing 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 inside and outside your home.

Zika Virus Questions/Comments?

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Epidemiology Program
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www.cdc.gov/features/StopMosquitoes

General Questions/Comments?

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