

Zika Virus

What is Zika?

Zika is an emerging arbovirus that is spread from mosquitoes to humans and vice versa. Unlike West Nile Virus, there is no bridge vector/reservoir population (birds) for this virus. There are two strains of Zika virus, African and Asian; the strain causing the current outbreaks is the Asian strain. Zika virus may be transmitted by:

1. Infectious mosquito bites
2. Infection of unborn children by their infected mothers
3. Blood transfusions from asymptomatic, Zika - infected blood donors
4. Sexual transmission of Zika virus in infected sperm (this has been documented twice; once in the U.S, and once in French Polynesia).

Who is the Vector?

The most important currently known vectors of Zika virus are species from the *Stegomyia* group and include: *Ae. aegypti*, *Ae. albopictus*, *Ae. hensilli* and *Ae. polynesiensis*. In the City of Newport News, we have one of the vectors, *Aedes albopictus* (Asian Tiger), in high numbers. This species represented 66% of the total adult capture of our summer 2015 surveillance operations. This invasive species lives in close proximity to humans and is a daytime biter. The most effective control measures for this species include manual removal of standing water sources, larvicide application, hand fogging operations of problem areas and education.

Where is Zika?

The Zika virus was first discovered in Africa in 1947. There was a large outbreak in Yap Island in 2007 followed by one in French Polynesia in 2013. Currently, there is a large outbreak in Brazil and surrounding countries. In Virginia, we have had one imported case of Zika virus in Northern Virginia and one in Williamsburg.

Why is it a threat?

The virus produces a range of symptoms including rash, fatigue, fever, conjunctivitis, itching, joint pain, and swelling. The virus is also being correlated with an increase in the birth defect microcephaly and the Guillan-Barre syndrome. Current research is showing that pregnant women that are bit by an infected mosquito within the first trimester are at highest risk. With the exception of the microcephaly and Guillan-Barre syndrome; the Zika virus in itself is not fatal and produces relatively mild symptoms. Also, only about 20% of those afflicted with the virus are symptomatic; the remaining 80% are asymptomatic. This is aiding in the spread of the disease. There is an additional threat in this area because we have so many military and government travelers present here.