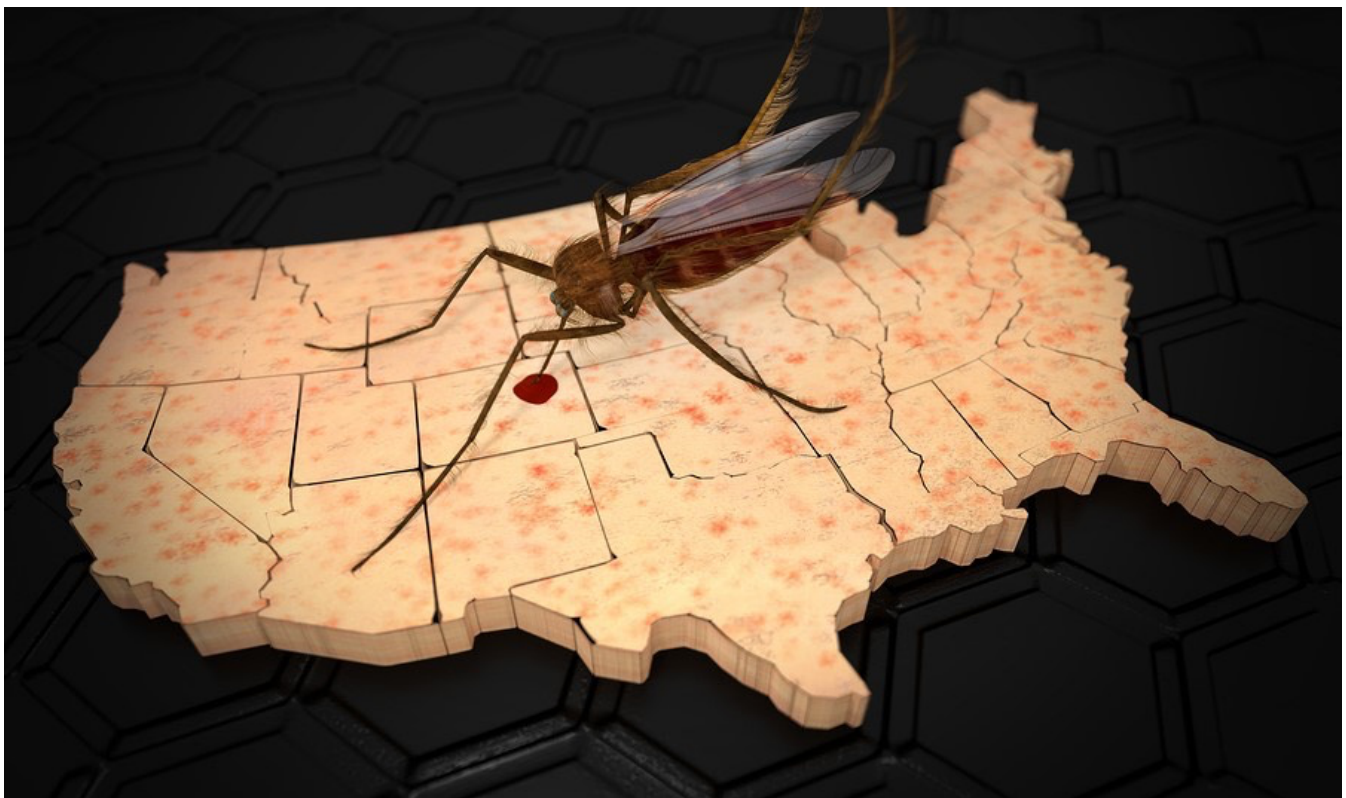


U.S. Prepares for Zika-Carrying Mosquito Arrival

Conditions in Country Will Prevent Brazil-Like Spread



May 11, 2016 | Robert Borkowski



An illustration related to the outbreak of the Zika Virus in the US with a mosquito on a US map with skin rash texture. Symptoms of Zika Virus include mild headaches maculopapular rash fever malaise conjunctivitis and arthralgia.

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As the number of travel-related US cases of the microcephaly-linked, mosquito-borne [Zika](#) virus rises and spring temperatures follow, mosquito bites have grown into more than a fair-weather nuisance.

“Basically, don’t get bitten by a mosquito,” said Dr. Don Thea, professor of Global Health and director of the Center for Global Health and Development at Boston University, summing up the best known advice on protecting yourself from Zika.

Thea’s advice acknowledges Zika virus’s spread through the southern part of the Western Hemisphere earlier this year, a trend he says will continue farther north as travel-related cases crop up in the United States, albeit slower than in South America. Some of the insects are going to wind up carrying Zika virus as spring temperatures usher in the start of mosquito season

“We will begin to see some local spread in the US in the spring,” Thea said. Local spread differs from the current reports of imported cases in 41 US states, he said. The former involves the disease spreading from people infected by mosquito bites.

Brazil, which has been the subject of intense scientific and media attention after reports of the spread of the disease, which the Centers for Disease Control and Prevention has recently linked to microcephaly and other fatal brain defects, is an example of local spread of the disease.

Fortunately, Thea said, “It’s not going to be as bad as it is in Brazil,” for a few reasons. First, air conditioning is in greater use in the United States, particularly in the warmer areas of the country, than it is in Brazil.

“It’s not going to be as bad as it is in Brazil”

Fewer open windows will slow the spread of the virus from mosquito bites.

The spread of the disease in the US will also be limited in northern states, thanks to the species of mosquito carrying the virus.

Zika is spread by two types of mosquito: *Aedes aegypti* and *Aedes albopictus* (*A. aegypti* and *A. albopictus*), according to the CDC.

They’re the same mosquitoes that spread dengue fever and chikungunya viruses.

A. aegypti, the species most likely to carry Zika, has a range limited primarily to southern states, with some encroachment as far as the southern parts of New York and Connecticut.

A. albopictus, while less likely to carry Zika, has a larger range extending to parts of every New England state and leaving all but eight western states and Michigan untouched.

Each species of mosquito lives near people and are hardy breeders.

“This particular mosquito is very well adapted to breeding in very small amounts of water,” Thea said, sometimes in as little as a bottle cap full.



Research into a vaccine is in the early stage.

The [National Institute of Health](#) reports a team led by [Purdue University](#) researchers has mapped the structure of Zika virus, which will provide critical insight into a vaccine and treatments. Recently, Creative Medical Health Inc. filed a patent for using stem cell therapy to limit the damage of Zika and repair damaged neural tissue.

“There have been recent advances in studying the structure of the virus and the growth and pathogenesis of the virus in developing nerve cells. These will hopefully provide the underpinnings for efforts to understand who is at risk of disease and, possibly, to devise new drugs and vaccines,” said [Dr. Eric Rubin, Harvard University School of Public Health](#).

Some concern has risen about Zika vaccines’ possible link to [Guillain-Barre Syndrome \(GBS\)](#), an autoimmune disorder pitting a person’s body against their nervous system, according to [Scientific American](#).

Zika infection already carries a risk of GBS, but, “the risk associated with the vaccine might also be higher. But this is very speculative at this point,” Rubin said.

The first human trials could begin this year, but a proven vaccine could take years, [Nature.com](#) reports.

In the meantime, the best defense against Zika is mosquito avoidance and control, Rubin and Thea agree. Standing water near your home or outdoor recreational areas should be upturned. In your home use bed nets and use screened windows and doors to keep mosquitoes out of your house.

Consider wearing long sleeves and pants, and use insect repellent, DEET officials advise.

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The CDC has listed a number of additional mosquito-avoidance tips on its [website](#).



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