

The Virgin Islands Consortium

Things You Need To Know About The Zika Virus

Health / **Published On January 24, 2016 03:30 PM /**

Staff **January 24, 2016**



ST. CROIX -- The Virgin Islands Department of Health [on Friday](#) said that it had discovered the first case of Zika virus in the territory, more specifically St. Croix. The victim, a 42-year-old woman, had no history of previous travel during the incubation period of the virus, which, among some of its more dangerous traits, can cause pregnant women infected with the disease to give birth to children with abnormally small heads.

So what exactly is the Zika virus? Here are some short answers to the hard questions, according to information gathered by the New York Times.

What is the Zika virus?

A tropical infection new to the Western Hemisphere.

The Zika virus is a mosquito-transmitted infection related to dengue, yellow fever and West Nile virus. Although it was discovered in the Zika forest in Uganda in 1947 and is common in Africa and Asia, it did not begin spreading widely in the Western Hemisphere until last May, when an outbreak occurred in Brazil.

Until now, almost no one on this side of the world had been infected. Few of us have immune defenses against the virus, so it is spreading rapidly. Millions of people in tropical regions of the Americas may have had it.

How is the virus spread?

Mosquitoes, but not every species.

Zika is spread by mosquitoes of the Aedes species, which can breed in a pool of water as small as a bottle cap and usually bite during the day. The aggressive yellow fever mosquito, Aedes aegypti, has spread most Zika cases, but that mosquito is common in the United States only in Florida, along the Gulf Coast, and in Hawaii – although it has been found as far north as Washington in hot weather.

The Asian tiger mosquito, Aedes albopictus, is also known to transmit the virus, but it is not clear how efficiently. That mosquito ranges as far north as New York and Chicago in summer.

Although the virus is normally spread by mosquitoes, there has been one report of possible spread through blood transfusion and one of possible spread through sex.

How do I know if I've been infected? Is there a test?

It's often a silent infection, and hard to diagnose.

Until recently, Zika was not considered a major threat because its symptoms are relatively mild. Only one of five people infected with the virus develop symptoms, which can include fever, rash, joint pain and red eyes. Those infected usually do not have to be hospitalized.

There is no widely available test for Zika infection. Because it is closely related to dengue and yellow fever, it may cross-react with antibody tests for those viruses. To detect Zika, a blood or tissue sample from the first week in the infection must be sent to an advanced laboratory so the virus can be detected through sophisticated molecular testing.

Is there a treatment?

No.

The C.D.C. does not recommend a particular antiviral medication for people infected with the Zika virus. The symptoms are mild – when they appear at all – and usually require only rest, nourishment and other supportive care.

How does Zika cause brain damage in infants?

Experts are only beginning to figure it out.

Scientists do not fully understand the connection. The possibility that the Zika virus causes microcephaly – unusually small heads and damaged brains – emerged in October, when doctors in northern Brazil noticed a surge in babies with the condition.

It is not known exactly how common microcephaly has become in that outbreak. About three million babies are born in Brazil each year. Normally, about 150 cases of microcephaly are reported, and Brazil says it is investigating more than 3,500 reported cases.

But reporting of suspected cases commonly rises during health crises.

Does it matter when in her pregnancy a woman is infected with Zika virus?

Earlier in pregnancy seems to be more dangerous.

The most dangerous time is thought to be during the first trimester – when some women do not realize they are pregnant. Experts do not know how the virus enters the placenta and damages the growing brain of the fetus.

Closely related viruses, including yellow fever, dengue and West Nile, do not normally do so. Viruses from other families, including rubella (German measles) and cytomegalovirus, sometimes do.

Is there a vaccine? How should people protect themselves?

Protection is difficult in mosquito-infested regions.

There is no vaccine against the Zika virus. Efforts to make one have just begun, and creating and testing a vaccine normally takes years and costs hundreds of millions of dollars.

Because it is impossible to completely prevent mosquito bites, the C.D.C. has advised pregnant women to avoid going to regions where Zika is being transmitted, and has advised women thinking of becoming pregnant to consult doctors before going.

Travelers to these countries are advised to avoid or minimize mosquito bites by staying in screened or air-conditioned rooms or sleeping under mosquito nets, wearing insect repellent at all times and wearing long pants, long sleeves, shoes and hats.

I'm pregnant and I recently visited a country with Zika virus. What do I do?

Some women should get blood tests, and just about all should get ultrasound scans.

On Jan. 19, the C.D.C. issued [interim guidelines](#) for women in that situation and for their doctors. The guidelines are complex — and may change.

In general, they say that pregnant women who have visited any area with Zika transmission should consult a doctor. Those who have had symptoms of infection like fever, rash, joint pain and bloodshot eyes during their trip or within two weeks of returning should have a blood test for the virus.

That recommendation is controversial, because even women with no symptoms may have been infected — 80 percent of those who get the virus have do not feel ill — and there is no evidence that babies are hurt only when the mother has been visibly ill. But at the time the guidelines were issued, the C.D.C. and state health departments simply did not have the laboratory capacity to test every pregnant woman who visited Latin America and the Caribbean in the last nine months, as well as every pregnant woman in Puerto Rico.

Even for women who get blood tests, the news is not entirely reassuring. Tests for the virus itself only work in the first week or so after infection. Tests for antibodies can be done later, but they may yield false positives if the woman has had dengue, yellow fever or even a yellow fever vaccine.

Under the C.D.C.'s [testing algorithm](#), pregnant women who have been to affected regions — whether they have symptoms or not, and whether they have negative or positive blood tests — should eventually have an ultrasound scans to see if their fetuses are developing microcephaly or calcification of the skull.

Unfortunately, an ultrasound normally cannot detect microcephaly before the end of the second trimester.

Some women also should have amniocentesis to test the fluid around the fetus for Zika virus. But amniocentesis involves piercing the amniotic sac with a long needle through the abdomen; it is slightly risky for the fetus and is not recommended before 15 weeks gestation.

Several companies are working on rapid tests for Zika infection. The C.D.C. also usually distributes test kits and training materials to state health departments during outbreaks, which should increase testing capacity.

If Zika virus has been in Africa and Asia for decades, why wasn't the microcephaly problem detected earlier?

Until now, the virus never struck such a large population without immunity.

Microcephaly is rare, and it has many [other causes](#), including infection of the fetus with rubella (German measles), cytomegalovirus or toxoplasmosis (cat-litter disease); poisoning of the fetus by alcohol, mercury or radiation; or severe maternal malnutrition and diabetes. It is also caused by several gene mutations, including Down's syndrome.

Until recently, health officials paid little attention to Zika virus. It circulated in the same regions as dengue and chikungunya, and by comparison with those two painful infections – nicknamed “break-bone fever” and “bending-up fever” – Zika was usually mild.

The virus is thought to have reached Asia from Africa at least 50 years ago. While it may have caused spikes in microcephaly as it first spread, there was no testing to pin down which of many possible causes was to blame.

In 2007, a Southeast Asian strain of the Zika virus began leap-frogging the South Pacific, sparking rapid outbreaks on islands where no one had immunity to it. Because island populations are small, rare side effects did not occur often enough to be noticed. But in 2013, during an [outbreak in French Polynesia](#), which has 270,000 residents, doctors confirmed 42 cases of Guillian-Barré syndrome, which can cause paralysis. That was about eight times the normal number and the first hint that Zika virus can attack the nervous system, which includes the brain.

Zika was first confirmed in Brazil – a country of 200 million – last May, and it spread like wildfire. The first alarms about microcephaly were raised only in October, when doctors in the northeastern state of Pernambuco reported a surge in babies born with it. Pernambuco has 9 million people and 129,000 annual births. In a typical year, nine are microcephalic infants.

By November 2015, when Brazil declared a health emergency, Pernambuco had had 646 such births.