HEALTH ZIKA

10 Zika Facts You Need to Know Now

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TIME answers the tough questions about who should worry—and what the U.S. government is doing to protect its citizens

As the Zika virus continues to spread through the Americas—and with hundreds of imported cases here in the United States—here's what every American needs to know about the virus and their risk.

1. Why is there no treatment for Zika?

There are no approved drugs or vaccines for Zika, mainly because scientists long assumed the virus was so benign that it wasn't worth the resources required to investigate treatment. Zika has not been widely examined, and while some early research noted that the virus could infect brain cells, the connection between Zika and microcephaly—a severe neurological birth defect—is relatively new. Even now, many people who get infected will never know it, and if they start showing signs of infection, such as a rash, red eyes, fever or joint pain, doctors have little to offer other than advice to stay hydrated or take Tylenol as needed.

Vaccine development is under way at the National Institutes of Health (NIH). Scientists are tweaking a vaccine that was initially developed for the West Nile virus, and they expect to launch a safety trial for it in September. "The need for a drug is less compelling than the need for a vaccine," says Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases at the NIH. "Since Zika is an infection that in most people is usually gone within a few days,

it may be tough to have a major impact with a drug as opposed to prevention, with a vaccine."

2. How can I find out if I have it?

Right now there are no commercial diagnostic tests for Zika, so unless you're pregnant or are a traveler with symptoms, your doctor may not test you. That's because of the high volume of blood samples already waiting to be tested, which right now can be done only by state and federal health authorities. Getting results can take weeks, and tests for people who have traveled to Zika-affected areas but do not have symptoms will likely be considered low priority.

An exception is pregnant women who have traveled to one of the 44 countries where Zika has spread—all of them should be tested, according to the CDC. For each test, a doctor will send a sample to a state or federal lab. There's also a test that looks for antibodies in blood that show whether a person's immune system has ever fought the virus, but it's imperfect; it can mistake Zika for similar viruses like dengue and chikungunya.

3. Who is most at risk?

Pregnant women who live in or have traveled to Zika-infested regions are vulnerable to the most serious complications from the virus: birth defects. Zika can also be transmitted through sex, though, which spreads the risk of infection to the bedroom.

People living in Southern states and Hawaii—where the climate, geography and the presence of *A. aegypti* mosquitoes make eventual local transmission likely—are not currently at high risk of getting the virus in their home states, according to the CDC. "The one exception is that if their partner has been traveling to an area of Zika transmission, there is a risk of sexual transmission," says Margaret Honein, chief of the CDC's Birth Defects branch. Over time that risk may be enough to encourage U.S. women of childbearing age to consider using birth control.

Access to effective birth control is of particular concern in Puerto Rico, where about two-thirds of all pregnancies are unplanned. "I am extremely concerned about sexual transmission," says Brenda Rivera-García, the Puerto Rico department of health's state epidemiologist."If pregnancy is not in your plans, then make sure you use an effective method to reduce your risk of an unintended pregnancy."

4. If I'm pregnant and I get Zika, what should I do?

Pregnant women with Zika should get more frequent ultrasounds, which is the only reliable way to detect microcephaly before a baby is born. The birth defect often cannot be identified until the second trimester, which means that for now, many couples will have to make decisions about their pregnancy with incomplete information.

"The question of 'Should I consider an abortion because of the potential effects on a baby from a variety of exposures' is not new, but I think this outbreak is re-

raising it," says Dr. Richard Beigi, chief medical officer at Magee-Womens Hospital of the University of Pittsburgh Medical Center. Babies with microcephaly can cost up to $2 million to raise in the first few years of life—though many may not live that long.

"Abortion is a legal medical procedure in the U.S., and in the context of Zika, couples need to make complex, highly personal decisions about their pregnancies," says Dr. Denise Jamieson, chief of the CDC's Women's Health and Fertility Branch.

5. If I'm not pregnant, why should I care?

With 40 million Americans traveling to Zika-affected countries every year, it's only a matter of time before some local transmission of the virus occurs, say infectious-disease experts. It's most likely to happen when an infected traveler returns to the U.S. and is bitten by a local mosquito that's capable of spreading disease. It's essentially every person's responsibility, then, to make it harder for mosquitoes to spread the virus.

"We want people to take action to get rid of the mosquito-breeding sites on their property to protect pregnant women as well as themselves," says Dr. Lyle Petersen, director of the CDC's division of vector-borne diseases. That means dumping standing water, where mosquitoes lay their eggs, putting in screens if you don't already have them and running an air conditioner. Mosquitoes hate the cold.

Both men and women have something else to grapple with: Zika appears to cause other brain and autoimmune problems, including Guillain-Barré syndrome (GBS), a disorder in which the immune system attacks nerves, leading to weakness and temporary paralysis. "It's a small percentage of people who would get that, but it's still a risk," says Petersen. At least 13 countries have reported an increase in GBS diagnoses during the current outbreak, and a person in Puerto Rico recently died after the virus triggered a bleeding disorder that ultimately killed him.

What's clear is that there is a lot that doctors still don't know. "If my daughter had gotten Zika two years ago and she wanted to get pregnant, I would say, 'Don't worry,'" says Dr. Beth Bell, director of the CDC's National Center for Emerging and Zoonotic Infectious Diseases. "But we don't know how long that immunity lasts. Is it lifelong? Is it five years? We don't have an answer."

6. What should I do to protect myself?

Cover up and use bug spray, for starters. Preventing mosquito bites is the best way to prevent Zika, and while that may seem obvious, it can take some work. If you're in an area with disease-spreading mosquitoes, wear long-sleeved shirts and pants no matter how warm it is—mosquitoes are more infectious when the mercury rises. Then, according to the CDC, use insect repellents that contain one of the following ingredients: DEET (20% to 30% concentration is best, according to the CDC), picaridin, oil-of-lemon eucalyptus, para-menthane–diol or IR3535.

You should also make sure windows have screens and the air conditioner is on if you're home during the day; the mosquitoes that spread Zika are day biters. And since a mosquito needs only a tiny bottle-cap-size pool of water to lay as many as 200 eggs, you should remove any standing water around your home and clean any vessels you find. Because even after the water source has dried out, the eggs can remain dormant and survive for months, sometimes even up to a year, on the inside of a container.

7. Can the government do more to protect me?

It depends on where you live. The CDC has activated its Emergency Operations Center (EOC) to a Level 1 response for Zika, something that's happened only three other times: during Hurricane Katrina, the H1N1 flu outbreak and the Ebola crisis. In the EOC in Atlanta, scientists monitor cases of the virus, work on better diagnostics and run studies of pregnant women with Zika. Some progress has been made. The agency has sent better testing tools to state laboratories and recently concluded that the link between Zika and microcephaly—which had previously been suspected but not proved—is definite.

But the government's ability to conduct mosquito control is limited. While some cities or regions have funding for robust programs equipped with pesticide-spraying helicopters, others do not. "Some places, like Houston, have a very sophisticated operation," says the CDC's Petersen. "Other places may have the guy running the garbage truck doing mosquito control." New York City, for example, targets a type of mosquito that spreads West Nile virus but not the kind that spreads Zika. Though the city doesn't have *A. aegypti* mosquitoes right now, it does have *A. albopictus*, which may also be able to spread the disease. The city is investing $21 million over three years to modify its mosquito control and test travelers for Zika. Other states, like North Carolina, have eliminated mosquito-control programs in recent years and are now in the position of having to start from scratch, which they are doing with proposed funding. "There used to be funding for localities to do mosquito control that is no longer available," Dr. Megan Davies, state epidemiologist at the North Carolina department of health and human services, said in a Zika presentation in Raleigh. Your protection, then, varies greatly based on geography.

8. What do we still not know about Zika?

A lot more than we do know, that's for certain. Doctors still don't understand why some pregnant women infected with Zika give birth to babies with microcephaly while others do not. They also don't know at which point during pregnancy the risk of infection is greatest and how likely it is for babies born with the disease to survive longer than a year. And while Zika definitely causes microcephaly, how the virus halts brain development remains unclear. Also unknown is what other brain problems the virus may cause. This is probably just the tip of the iceberg. The uncertainty is another cause of anxiety. "These are the kinds of things that we typically use to counsel women about infectious diseases in pregnancy and how it may affect them," says the ob-gyn Beigi. "We have a scary outbreak, and we just don't have that data." Some of these questions may never yield a satisfying answer. "I think there is a significant likelihood we may not know why," says the CDC's Honein.

9. So should couples wait to try to get pregnant?

Some countries are recommending women put off getting pregnant: El Salvador has told women to wait two years, and some health officials in Puerto Rico have said to wait for the time being. The CDC has issued no such advisory. “I think everyone would agree that this is a decision for the woman and her partner to make with their doctor and not for government officials,” says the Centers for Disease Control director Dr. Tom Frieden.

“It’s difficult because a lot of patients are older, and they don’t have time to burn,” says Dr. Jamie Grifo, program director of the NYU Langone Fertility Center. “Right now the risk in the United States is low. Everybody’s antennas are up, and we are trying to do everything we can to reduce the chance of a problem. No one can control this completely. If insects in the U.S. start getting this virus, there’s going to be a lot of anxiety. Don’t panic, but take measures to reduce your risk of exposure.”

10. And what about the Olympics in Rio?

The 2016 Summer Olympics and Paralympics are set to take place in Brazil, which has reported over 1,000 cases of microcephaly. Nearly 800,000 international visitors, including 15,000 athletes from over 200 countries, are expected to attend. This is worrisome to health officials—and some athletes. Hope Solo, a star goalie for the U.S. women’s soccer team, has expressed misgivings about attending the Games. She has said: “I do want to start a family and I don’t want to be worried.”

Olympic organizers are recommending that athletes do what they can to avoid mosquito bites. “In the case of Zika, we need to inspect the venues every single day, especially for stagnant water,” says Mario Andrada, spokesman for the Rio 2016 committee. South Korea, for its part, recently announced that its athletes will wear uniforms with mosquito-repellent chemicals.

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