



ZIKA VIRUS

Talking Points™

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Over the past year, Zika Virus has become a significant point of concern in our communities. As with any emergent illness or disease, it is important that residents are accurately informed, to help protect them and their families and avoid any unnecessary alarm or actions.

To this end, Gila County Health & Emergency Management has compiled the following speaking points. These are aimed to educate you — our staff — and assist you in addressing our constituencies' questions and providing accurate, up-to-date information in the course of your daily duties. This list will be continually updated as new data, alerts, and treatments become available from the state health department, the CDC, the WHO, and other health agency partners. Email envhealth@gilacountyaz.gov for the latest Zika Virus Talking Points.

VIRUS DATA & HISTORY



What is Zika Virus?

Zika Virus is a single-stranded RNA virus transmitted primarily by a bite from the *Aedes aegypti* mosquito.

It can also be transmitted via sexual contact.

While illness resulting from Zika Virus is typically minor, it can be severe for those carrying an unborn child. Zika has been linked to birth defects in pregnant women, most notably microcephaly (a condition where the brain and skull do not fully develop, resulting in numerous physical and intellectual abnormalities). Additionally, in rare cases, Zika has been correlated with Guillain-Barré Syndrome, a disorder in which the body's immune system attacks part of the peripheral nervous system. This can result in long-term nerve damage and/or paralysis.



Where did Zika Virus come from?

According to the World Health Organization (WHO), Zika Virus was first discovered in Uganda in 1947. From the 1960s through the 1990s, it was largely confined to Africa and Asia and attributed only to minor illness. Zika's first large outbreak in 2007 marked its move across the Pacific, and linked it to more aggressive effects. Since then, it has been traveling steadily and has now been reported in every U.S. state except Alaska.



If it's been around for 70 years, why are people just becoming alarmed now?

Zika Virus became a worldwide concern in 2015, when global Zika spread evoked alarm. Zika Virus is now considered in "epidemic" status in more than 45 countries, including many in Southeast Asia and South America, as well as Puerto Rico. At current rates, 1 in 5 residents of Puerto Rico are expected to be infected by Zika Virus at year's end.

In the U.S., Zika is also spreading quickly, with local mosquito-borne transmission found in south Florida (Miami-Dade County), including Miami Beach, a popular tourist destination. Zika Virus is expected to continue to spread and affect large numbers of individuals in every area of the U.S.





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TRANSMISSION



How is Zika Virus spread?

Zika Virus is most often transmitted via bite from the *Aedes aegypti* mosquito. Theoretically, it can also be spread by a different mosquito species biting an infected person then biting another person. In addition, it has recently been confirmed that Zika can also be passed through sexual contact (including oral sex) with an infected person.



Is an infected person contagious?

Unlike those with a respiratory illness or influenza, a person with Zika Virus is not necessarily contagious to others. Zika is not airborne; an infected person cannot spread Zika by coughing or touching common items without hand-washing. That said, some symptoms of Zika, such as conjunctivitis (“pink eye”), are extremely contagious. If pink eye presents with Zika symptoms, it is typically contagious for 24 hours after medication begins. Additionally, an infected person can transmit Zika Virus to another person through sexual activity. See additional talking points for protection recommendations.



How can people who have Zika Virus reduce transmission?

People who test positive for Zika can take an active role in protecting their families and loved ones. Some symptoms of Zika, such as conjunctivitis, can be transmitted easily to people you live with or are close to. Visit your physician and start treatment swiftly. Stay a safe distance away from loved ones for at least 24 hours after starting conjunctivitis medication.

Sexual activity, too, may need to be restricted. Since Zika can be present in a man’s semen long after it disappears from his blood, it is recommended that an infected man abstain from sexual activity (including oral sex) for six months after testing positive for Zika Virus. Women who have tested positive for Zika are warned to abstain for 8 weeks.

SYMPTOMS



What are Zika Virus symptoms? How long does the illness last?

In general, symptoms of Zika are mild to none. In fact, 80% of people who contract Zika Virus are asymptomatic. Of those who *do* exhibit symptoms, such symptoms are typically contained to: 1) low-grade fever or chills, 2) headaches, 3) Arthralgia (joint pain, particularly in the joints of the hands and feet), 4) muscle pain or weakness, 5) maculopapular skin rash, and 6) conjunctivitis, all within 3–12 days of exposure. Symptoms last approximately 4–7 days.

In pregnant women, Zika Virus is extremely serious. While pregnant women do not experience symptoms any worse than others, their exposure to Zika can be very dangerous. Pregnant women who have tested positive for Zika have been found to deliver babies with severe birth defects, most notably microcephaly.

Also, in rare cases (.3% of U.S. cases, .15% of U.S. Territory cases), Zika Virus is believed to have resulted in Guillain-Barré Syndrome, both in males and females.

TESTING



How is Zika diagnosed?

Zika Virus can be confirmed by blood, urine, CSF, amniotic fluid, or serum test — or a combination. **Serum is the preferred modality.** The type of testing is based on time since exposure, the presence (or lack of) symptoms, and pregnancy status. Results take 3–4 weeks, as there are only about 30 local public health labs that handle this analysis. Until recently, patient samples were all tested in Atlanta at the CDC. When testing for Zika, it is recommended that samples also be tested for Dengue Fever and Chikungunya. There is no treatment for Zika Virus. People who are symptomatic — and test positive — are provided the same regimen as those with the flu: rest, drink plenty of water, take acetaminophen to reduce fever, and follow your doctor-prescribed care.



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How accurate are Zika Virus tests?

There are a number of issues with accuracy. The first and foremost is that in order to test positive, the infected person must be tested no more than 5–7 days from the time he/she was bitten for an accurate blood test, and within two weeks from bite for an accurate urine test. It takes roughly four days for Zika to show up in the blood stream. Since 80% of infected people do not exhibit symptoms — and many others have only mild symptoms — many people are not tested in time. Other issues are that testing requires specialized training. Zika’s “newness” means there are fewer trained specialists.

Zika testing can lead to inconclusive results due to Immunglobulin (IgM) antibody cross-reactivity with infections from other flaviviruses including Dengue Fever and West Nile Virus, as well as yellow fever and Japanese encephalitis virus vaccination. Thus, a positive or an inconclusive serologic test result might not indicate true Zika Virus infection.



Does Gila County have a Zika testing lab?

No, but all suspect cases should be reported to the health department. This way, the county can better identify potential mosquito-breeding sites and protect other residents from infection. We refer people who believe they may be infected from travel or exposure to an individual who has tested positive for Zika to either their primary care physician or the Arizona state laboratory in Phoenix for testing.



What are the guidelines for Zika Virus testing?

For men and non-pregnant women — Test only if two or more Zika-specific symptoms (fever, maculopapular rash, Arthralgia, or conjunctivitis) are present. *For patients who are fewer than two weeks since symptom onset*, a serum, urine, and blood test are recommended and used for a Reverse Transcription–Polymerase Chain Reaction (RT–PCR) test. If the RT–PCR test is positive, Zika is confirmed. If it is negative, an Immunoglobulin M (IgM) test is warranted. If the IgM is positive, the patient should be tested by Plaque-Reduction Neutralization Test (PNT). If the IgM is negative, it is not Zika. *For patients who are 2–12 weeks since symptom onset*, collect serum and test by IgM. If the IgM is positive, then test by PNT. If IgM is negative, it is not Zika.

For pregnant women — All pregnant women in the U.S. should be assessed for possible Zika exposure during every prenatal visit, especially if they have traveled to an area where there is a high Zika prevalence. Beyond that, if a pregnant woman has symptoms of Zika *at any time during pregnancy*, she should be tested for Zika. Pregnant women should be tested whether or not they are symptomatic by the following guidelines from the Arizona Department of Health Services:

For patients less than 2 weeks since symptom onset — or exposure — a serum, urine, and blood test are recommended and used for a RT–PCR test. If the test is positive, check again with PRNT test. If negative, an IgM test is called for. If the IgM is positive, then test by PNT. If IgM is negative, it is not Zika. If 2–12 weeks since symptom onset — or exposure — collect serum and test by RT–PCR or IgM. If IgM is negative, it is not Zika. If the IgM is positive, then test by RT–PCR. If the RT–PCR is negative, test by PRNT. If RT–PCR is positive, Zika is confirmed.

Current tests for Zika Virus

Reverse Transcription–Polymerase Chain Reaction (RT–PCR) — looks for traces of the virus’ genetic material in the blood. This is effective only for finding active Zika illness, and can deliver a negative result if the virus has been cleared from the body. Thus, the RT–PCR test needs to be performed 4–7 days after mosquito bite or sexual contact with an infected person.

Zika MAC-ELISA (also called IgM) — looks for a specific antibody (Immunglobulin M [IgM]) in the blood that shows a person has recently fought off Zika Virus. This is faster and cheaper than RT–PCR, and it is seen as a better option because Zika antibodies appear in the blood 4–5 days after infection and last for up to 12 weeks — meaning Zika does not need to be active in the system. This test may be best repeated, as it sometimes delivers a false negative. The CDC has produced 100,000 of these test kits, which it is distributing to qualified labs free of charge. This is the preferred way to test for Zika.

Plaque-Reduction Neutralization Test (PRNT) — serum measures virus-specific neutralizing antibodies and may be able to determine the cause of primary flavivirus (mosquito-borne) infection. PRNT tests are expensive and take longer than other tests.



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EDUCATION & PREVENTION



Who's at risk? Are pregnant women more susceptible?

There is no population (age, color, pregnancy status, etc.) that is more susceptible to Zika Virus than any other.



Is there an immunization against Zika?

There are currently no vaccines that protect against or medicines that treat active Zika Virus. The best prevention is vigilance against mosquitoes (wearing concealing clothing, using bug spray, monitoring and abating standing water and other mosquito-breeding grounds, etc.) and avoiding travel to areas where Zika is in outbreak.

There are some faulty claims as to the availability of a vaccine. Gila County cautions against claims found on the Internet. The CDC, WHO, and FDA are the ultimate authorities on efficacy, testing, and approval of a possible vaccine.

There are a number of pharmaceutical companies working on a vaccine, including Inovio (www.inovio.com) and Intrexon Corporation (www.dna.com). The FDA has approved human testing for a vaccine development, which theoretically will speed up a cure. (Typically, a vaccine goes through animal testing first.)

Gila County will post any approved immunizations and research updates on readygila.com. Sign up for notifications via Everbridge to be amongst the first to learn of late-breaking developments.



How can people protect themselves against Zika Virus?

Gila County Health & Emergency Management advises individuals and their families to be aggressive in their precautions against mosquito exposure. 1) Use DEET mosquito repellent any time you are outdoors, 2) add mosquito netting around beds or patio areas, 3) ensure all window and doors screens are intact, 4) use outdoor mosquito spray or mosquito traps, and – most important – 5) eliminate any standing water where mosquitoes could breed. This includes wading pools, gutters, flowerpots, old tires, toys, and other areas where rain may collect, as well as confined spaces under leaky faucets.

When applying insect repellent, do not spray under clothing. If using along with sunscreen, apply your sunscreen first.

Additionally, limit or avoid travel to high-Zika areas. See cdc.gov for the latest maps.



How should pregnant women – and those considering getting pregnant – protect themselves?

Do not travel to areas with Zika. If your sexual partner travels, always use a condom during sexual activity) including oral sex). If you or your sex partner is exposed to, or infected by, Zika – and you are trying to get pregnant – avoid sex for at least 8 weeks after symptoms present (if you are female) and at least 6 months after symptoms present (if you are male). Talk with your doctor before you begin trying again.



What are the sexual contact guidelines for those who have contracted Zika, if you are not pregnant and not trying to get pregnant?

The CDC recommends that couples with possible Zika exposure, who are not pregnant and are not planning to become pregnant, but who want to minimize their risk for sexual transmission, should use a condom or abstain from sex per the guidelines above.



Once a person has contracted Zika Virus, does he/she develop immunity to getting the virus a second time?

According to the CDC, it is believed that, like many other viruses, once exposed to Zika, a person may develop antibodies to prevent him/her from contracting Zika again in the future. Further research is needed to confirm this hypothesis.



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Are Zika Prevention Kits available in Gila County?

Gila County is working on educational materials that will be posted to our readygila.com site and made available in print at our Globe and Payson offices. We currently have packets from the state of Arizona, which include Zika resources, including insect repellent, a bug swatter, and a graphic of mosquito breeding sites around homes available free of charge.

We encourage residents to create more expansive kits for themselves and their families. Tools in this kit could include: bed nets, standing water treatment tabs, DEET insect repellent, Permethrin spray (for outdoor spraying), condoms, citronella candles, and mosquito swatters, as well as educational materials. The CDC offers guidance on creating these at <http://www.cdc.gov/zika/prevention/prevention-kit.html>.

KEY STATISTICS



What is the likelihood that a pregnant woman who has contracted Zika Virus will deliver a baby with birth defects?

It is not a certainty that every woman infected with Zika will deliver a child with Zika-related birth defects. However, there is evidence that in several cases, this is occurring. There are currently no estimates for likelihood of birth defects.

Also, there is not enough research to indicate if there is any particular *stage* in pregnancy where contracting Zika will make birth defects more likely. In limited studies, birth defects have been found when the mother was infected in the first trimester as well as the second and third. **Pregnant women themselves exhibit symptoms no worse than the average Zika patient, and some may be asymptomatic.**



What is the current prevalence in the U.S.?

As of November 2, 2016, the CDC reports a total of 4,128 reported Zika cases in the U.S. (99.2% attributed to vector bite; .8% sexually transmitted). The total for all U.S. Territories was 30,178 cases. While most Zika cases stem from foreign travel, the mosquito that spreads Zika has now been confirmed in Miami-Dade County.



What is the prevalence in Arizona, and specifically Gila County?

As of November 9, 2016, there are 51 confirmed “travel” cases of Zika Virus in Arizona, with one case recently confirmed as being sexually transmitted. None of these cases are in Gila County. “Travel” cases indicate people who have returned from travel to South America and other high-affect areas and now present with Zika symptoms. There have been zero fatalities.



What is the likelihood that Zika will become an epidemic in the U.S.?

Unfortunately, the answer is high. In the U.S., Zika is spreading quickly, with local mosquito-borne transmission now found in south Florida. While public health officials are actively spraying for mosquitoes and working to eliminate mosquito breeding grounds, these efforts may not be enough. The Gulf States present an ideal climate for mosquito breeding. Additionally, in poorer parts of the south, many residents still live without window screens or air conditioning and in proximity to stagnant water sources that are ideal mosquito breeding grounds. Additionally, travel continues to these areas as well as affected countries across the globe. Thus, Zika Virus is expected to continue to spread and affect large numbers of individuals in every area of the U.S. In a recent interview, CDC Director Thomas Frieden warned that Zika spread is not effectively controllable with current technologies, stating, “We will see this become endemic in the hemisphere.”

http://www.usatoday.com/story/news/2016/10/25/zika-virus-not-controllable-centers-for-disease-control-and-prevention/92728476/?utm_source=newsletter_537&utm_medium=email&utm_campaign=nphic-news-highlights



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GENERAL QUESTIONS



What is the CDC doing to combat Zika Virus?

U.S. and worldwide health organizations are committing significant resources to control Zika. The CDC cut funding to other programs to allow for increased spending on Zika initiatives. In September 2016, the CDC fought for and won a Congressional \$1.1 billion emergency spending bill specifically for Zika. This funding is going toward education and mosquito control. Additionally, the CDC has developed numerous outreach, educational, and support resources. There are special items for consumers, travelers, schools, state & local health departments, healthcare providers, and laboratories. The CDC has also created 100,000 Zika testing kits, which are free to qualified laboratories. **Visit www.cdc.gov/zika.**

GENERAL GILA COUNTY QUESTIONS



What is Gila County Health & Emergency Management doing to protect and inform residents?

Our environmental specialists and sanitarians are monitoring high-risk areas, and we are actively fighting Zika by testing, trapping, and spraying for mosquitoes. Every reported and confirmed public area of standing water is treated with larvicide to kill mosquitoes and their eggs within 24–48 hours from time of discovery. Typical mosquito eggs hatch within 10–14 days.

On private properties, Gila County is working with homeowners and landlords to abate and treat standing water. We also are helping educate residents on all potential mosquito breeding grounds.

We have updated our emergency preparedness site — **readygila.com** — to include a page specifically dedicated to Zika Virus. There, residents and constituencies can find the latest information, statistics, and advisories. In addition to this site, we are developing a number of resources to further educate and prepare our community families. These will be available on our website as well as in our Globe and Payson offices.



What Zika Virus support does Gila County offer for pregnant women?

Our clinics can provide for free pregnancy testing for residents who need it. We are currently developing some free Zika Virus educational materials that will be available during their visit.



What Can Gila County residents do to stay informed?

Through its partnership with Everbridge, Gila County offers an mass notifications system whereby residents and other constituencies can stay abreast of all pending emergencies — and receive all notifications issues on Zika Virus. To sign up, visit: **<https://member.everbridge.net/index/892807736724090#/login>**

Also, you can receive Zika updates from the CDC with its new text messaging service. Text PLAN to 855-255-5606 to subscribe.

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