What You Should Know About Zika

Mississippi State Department of Health
What is Zika?

- Zika is a viral disease spread primarily through the bite of an infected mosquito.
- Many people infected with Zika virus won’t have symptoms, or will only have mild symptoms.
- Zika infection during pregnancy can cause birth defects (such as microcephaly), miscarriage and other problems during pregnancy.
Background

• Prior to 2015, Zika outbreaks occurred in Africa, Southeast Asia, and the Pacific Islands.
• Since it was first identified in Brazil in 2015, Zika has spread rapidly in Central and South America, Mexico and the Caribbean.
• In June 2016, the first local transmission was documented in the US.
How does Zika spread?

- Zika is **primarily** spread through the bite of an infected Aedes species mosquito.
- It can **also** be spread:
  - From a pregnant woman to her fetus
  - Through sex with an infected partner
- Zika could **potentially** be spread through blood transfusion, organ and tissue transplant, fertility treatment, and breastfeeding.
Mosquitoes

- Predominantly *Aedes aegypti*
  - These mosquitoes are the same mosquitoes that transmit dengue/chikungunya

- Possibly *Aedes albopictus*

- Both are widely distributed throughout Americas.

- At this point, *Aedes aegypti* has not been identified in MS.
Historical Data: Aedes aegypti
Historical Data: *Aedes albopictus*
Zika Virus Transmission Cycles

Can start with an infected animal

Sylvatic (jungle) cycle

Epidemic (urban) cycle
Could a Zika outbreak happen here?

- Infected people enter the US.
- An Aedes mosquito in the US bites the infected person while they have the virus in their blood (up to 7 days after onset).
- The now infected mosquito lives long enough for the virus to multiply and the mosquito to bite another person.
What are the symptoms?

- The most common symptoms of Zika are:
  - Fever
  - Rash
  - Joint pain
  - Conjunctivitis (pink eye)
- Symptoms last several days to a week.
- Fatalities are rare.
- Many people will not have symptoms or have mild symptoms.
Example of rash
Zika and Pregnancy

- Infection during pregnancy can cause severe birth defects, such as:
  - Microcephaly
  - Absent or poorly developed brain structures
  - Eye defects
  - Hearing deficits
  - Impaired growth
More on microcephaly

- **Microcephaly**
  - A birth defect where a baby’s head is smaller than expected when compared to babies of the same sex and age.
  - These babies often have smaller brains that have not developed properly.
Sexual Transmission: What We Know

- Zika can be transmitted through vaginal sex, anal sex, oral sex, and the sharing of sex toys.
- Zika can be passed from an infected person to their sex partners before the symptoms start, while symptoms are present, and after the symptoms end.
- Persons infected with Zika who never develop symptoms may also be able to pass the virus to their sex partners.
- Zika virus can stay in semen longer than in blood.
Sexual Transmission: What We Don’t Know

- Exactly how long Zika stays in semen or how long it can be passed to sex partners.
- If Zika can be passed through saliva during kissing.
- If Zika passed to a pregnant woman during sex has a different risk for birth defects than Zika transmitted by a mosquito bite.
Zika in the US:

- Lab tests have confirmed Zika virus in travelers returning to the United States from Zika-affected areas.
- With the recent outbreaks in Mexico, the Caribbean, Central America, and South America, the number of Zika cases in the United states among travelers to areas with local Zika transmission is increasing.
- Lab tests have confirmed Zika virus in US non-travelers exposed through sex with a traveler.
What does this mean for MS and US?

- Reports of travel associated cases are likely to continue.
- Imported cases may result in further spread of the virus and local spread in the US.
- MS does not currently have the Aedes aegypti – the mosquito that typically spreads Zika virus.
What are the risks here in MS?

- Who is at risk for Zika infection?
  Travelers to Zika-affected areas and their sexual partners
- Who is not currently at risk for Zika infection?
  Mississippians without travel history or sexual exposure to travelers who have been to Zika-affected areas
Travel Recommendations

Before travel

- Pregnant women, or women planning to get pregnant, should **not** travel to affected countries or areas!
- Anyone (both men and women) traveling to a Zika-affected area should strictly follow steps to prevent mosquito exposures during the trip ([http://wwwnc.cdc.gov/travel/page/avoid-bug-bites](http://wwwnc.cdc.gov/travel/page/avoid-bug-bites));
- If pregnant women or women planning to get pregnant **must** travel, they need to speak to their obstetrician first, and strictly follow steps to avoid mosquito exposures during the trip.
Travel Recommendations

After you return

- To prevent spreading Zika virus to local mosquitoes, all returning travelers should take every measure possible to avoid mosquitoes for the 3 weeks after returning to Mississippi.
  - Stay indoors as much as possible.
  - If you must go outside for any length of time, use DEET or other EPA approved repellants, and wear long sleeves if possible.

- Returning travelers from Zika-affected areas should not donate blood for at least 4 weeks after return from affected country.
Planning a pregnancy

- **Women**—delay pregnancy at least 8 weeks after onset of symptoms or exposure.

- **Infected men AND exposed men**—delay attempted conception and use condoms or abstain from intercourse for at least 6 months after onset of symptoms.

- Pregnant women should avoid sex or use condoms correctly and consistently for the duration of the pregnancy if they, or their sexual partner have been infected by or exposed to Zika.
Testing Recommendations

- All pregnant women with *exposure* to Zika
  - Exposure to Zika may occur from:
    - Travel to an area with local Zika transmission *or*
    - Sexual contact with someone who traveled to an area with local Zika transmission

- Persons with one or more *symptoms* (fever, rash, joint pain, or pink eye) within 2 weeks of *exposure* to Zika
Testing at Public Health Lab

- Patients concerned about Zika exposure should contact their healthcare provider.
- Testing for Zika is available through the Mississippi State Department of Health.
- While testing is not available in county health departments, we will work with your healthcare provider to arrange testing.
Community Clean-up & Mosquito Control

- Remove standing water where mosquitoes could lay eggs
- Kill mosquitoes inside and outside your home
- Keep mosquitoes out of your home
Mosquitoes can breed in small amounts of standing water

Especially water with increased organic matter
  ◦ Obstructed gutters
  ◦ Flower pots
  ◦ Tires
  ◦ Styrofoam cup

As standing water evaporates it concentrates the organic matter
Remove Standing Water

- Once a week, empty, turn over, cover, or throw away any items that hold water.
- Cover storage containers so that mosquitoes can not get inside to lay eggs.
- Use wire mesh to cover containers without lids.
- Use larvicides to treat large containers of water that can not be covered, and will not be used for drinking.
- Repair any cracks or gaps in septic tanks and cover any open vent or plumbing pipe with wire mesh.
Mosquito Breeding Sites
Kill Mosquitoes

- Mosquitoes rest in dark, humid areas such as the carport or garage, under sinks, in closets, or in the laundry room.
- When using sprays indoors, verify that the spray is labeled for indoor use.
Keep Mosquitos Out of the Home

- Install or repair and use window and door screens.
- Do not leave doors propped open.
- Use air conditioning when possible.
Remember:

- Zika virus infection during pregnancy is associated with severe birth defects, including microcephaly.
- Pregnant women, or women planning to become pregnant in the near future, should not travel to countries with active Zika transmission.
Remember:

- All travelers to Zika-affected countries should take every precaution to avoid mosquito bites.
- Since Zika virus can be transmitted sexually, special precautions need to be taken, especially during pregnancy.
Remember:

- All travelers returning to Mississippi from Zika affected countries should avoid mosquitoes for 3 weeks to prevent transmission to the local mosquito populations