

ZIKA VIRUS

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ZIKA VIRUS HISTORY

- “Discovered” 1947 Zika Forest of Uganda in rhesus monkeys, thus the name
- Found in humans in Africa in 1952
- Not considered a public health threat until outbreak in French Polynesian Islands in 2013
 - Associated with increase in Guillain-Barré syndrome.
 - Co-outbreak of Dengue Fever, another mosquito borne disease
- Outbreak in Brazil 2014 to 2015
 - Associated with increase in Guillain-Barré syndrome.
 - Associated with increase in newborns with microcephaly
 - Spread widely through South and Central America and Caribbean.

ZIKA VIRUS WHAT IS IT?

- Genre: Flavivirus
- Vector: *Aedes* mosquitoes (which usually bite during the morning and late afternoon/evening hours)
- Reservoir: Unknown

ZIKA VIRUS TRANSMISSION

- Zika virus is transmitted to people through the bite of an infected mosquito from the *Aedes* genus, mainly *Aedes aegypti* in tropical regions. This is the same mosquito that transmits dengue, chikungunya, and yellow fever
- Also appears to be spread through sexual contact
 - Virus found in essentially all body fluids including semen

ZIKA VIRUS THE MOSQUITOS



Yellow Fever Mosquito
Aedes Aegypti



Asian Tiger Mosquito
Aedes Albopictus

Approximate distribution of *Aedes aegypti* in the United States*



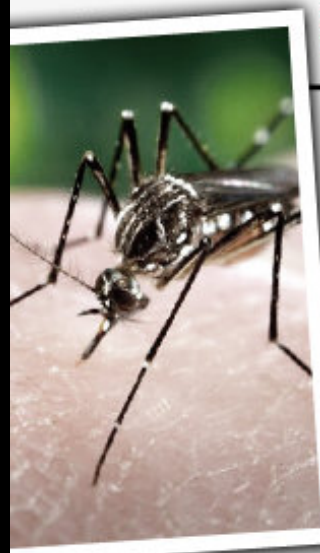
Approximate distribution of *Aedes albopictus* in the United States*



- Yellow Fever Mosquito
 - Yellow fever
 - Dengue
 - Chikungunya
 - Zika

- Asian Tiger Mosquito
 - West Nile
 - Eastern equine encephalitis
 - Japanese encephalitis
 - It can also transmit dog heartworm parasites.

COUNTRIES WITH CONFIRMED **ZIKA** CASES



UGANDA
NIGERIA
TANZANIA
EGYPT
CENTRAL AFRICAN
REPUBLIC
SIERRA LEONE
GABON
INDIA
MALAYSIA
PHILIPPINES
THAILAND
VIETNAM
INDONESIA

MICRONESIA
POLYNESIA
EASTER ISLAND
THE COOK ISLANDS
NEW CALEDONIA
BRAZIL
CHILE
COLOMBIA
EL SALVADOR
GUATEMALA
MEXICO
PARAGUAY
VENEZUELA

SURINAME
CAPE VERDE
FIJI
FRENCH GUIANA
HONDURAS
MARTINIQUE
PUERTO RICO
PANAMA
SAMOA
VANUATU
USA
NETHERLANDS
GERMANY

ZIKA VIRUS THE ILLNESS

- The incubation period (the time from exposure to symptoms) of Zika virus disease is not clear, but is likely to be a few days.
- Up to 80% of those infected may be asymptomatic or have very mild symptoms.
- For those that have symptoms, they are similar to other arbovirus infections and include fever, skin rashes, conjunctivitis, muscle and joint pain, malaise, and headache.
- Symptoms typically are mild and last 2-7 days.
- G-B Syndrome and microcephalic infants are a new concern.

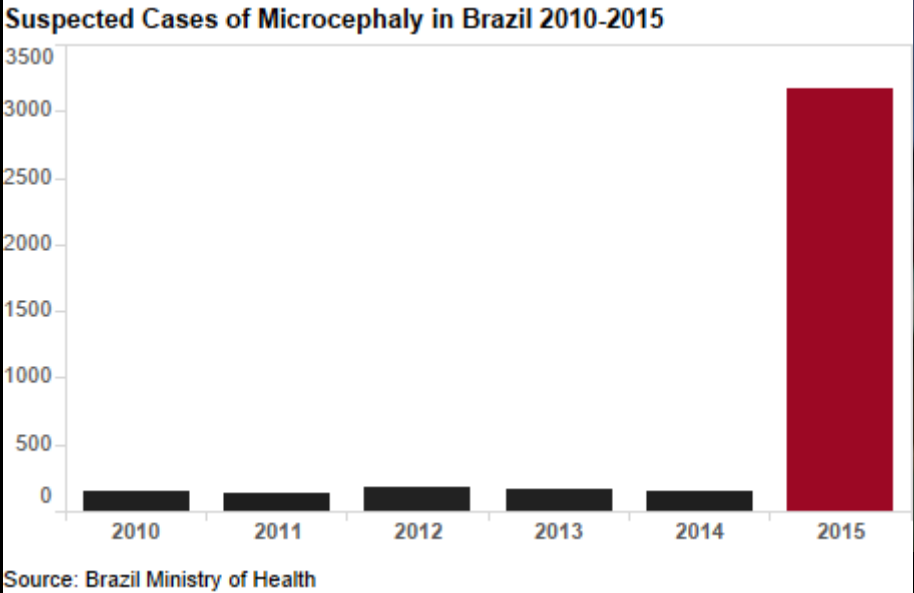
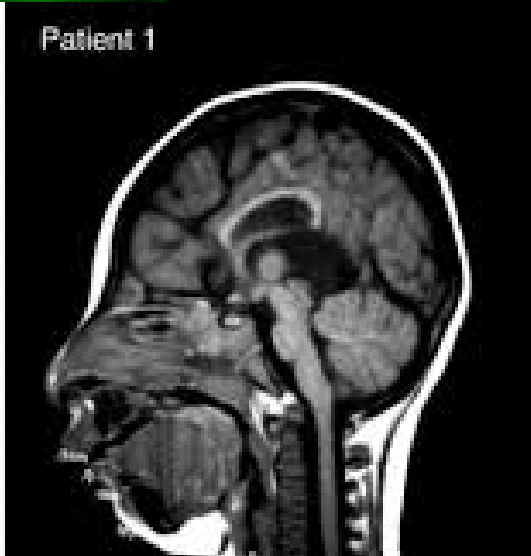
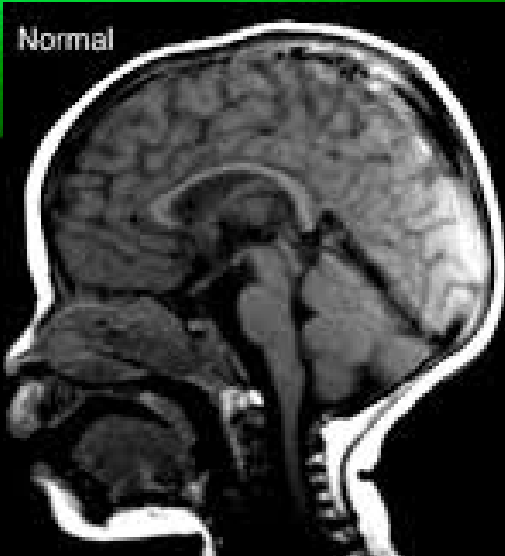
ZIKA VIRUS DIAGNOSIS

- RT-PCR (polymerase chain reaction)
- Virus isolation from blood samples
- Diagnosis by serology can be difficult as the virus can cross-react with other flaviviruses such as dengue, West Nile and yellow fever
- Testing being done by CDC, kits available through LPHA and State Health Department Lab
- Mandatory reporting of testing and positives

ZIKA VIRUS TREATMENT

- Zika virus disease is usually relatively mild and requires no specific treatment.
- People sick with Zika virus should get plenty of rest, drink enough fluids, and treat pain and fever with common medicines.
- If symptoms worsen, they should seek medical care and advice.
- There is currently no vaccine available.
- IF PREGNANT SEEK GUIDANCE FROM OBSTETRICIAN
 - CDC guideline published for testing, evaluation of fetus, ongoing care and followup

ZIKA VIRUS MICROCEPHALY



These babies frequently have neurological sequelae that impacts family and community.

ZIKA VIRUS PREVENTION

- Mosquito control
- Insect repellent use
- Know your travel risks
- Consider postponing pregnancy if female of child bearing age
- If pregnant be extra vigilant about mosquito bite prevention, repellent, clothing coverage, etc.
- If pregnant practice safe sex, use condoms, even if monogamous or married
 - Partner may be asymptomatic yet infected and shedding virus

ZIKA VIRUS KEY FACTS AND TAKEAWAYS

- Zika virus disease is caused by a virus transmitted by *Aedes* mosquitoes.
- People with Zika virus disease usually have a mild fever, skin rash (exanthema) and conjunctivitis. These symptoms normally last for 2-7 days.
- There is no specific treatment or vaccine currently available.
- The best form of prevention is protection against mosquito bites.
- The virus is known to circulate in Africa, the Americas, Asia and the Pacific.
- Infection may be related to increased risk of GBS.
- Infection during pregnancy may increase risk of microcephaly of newborn.
- Disease can be sexually transmitted.

ZIKA VIRUS

WHAT SHOULD THE COMMUNITY DO?

- Encourage mosquito control efforts at city and county government levels
- Educate the professional community
 - Outreach to neonatologists, pediatricians, obstetricians, and primary care providers that care for women of child bearing age.
- Educate the public
 - Use our PIO association to produce and distribute information and material on a regular basis.
 - We want the public to “tune-in” to public health for accurate timely information
 - Target Social Media in particular due to nature of population to be reached.

ZIKA VIRUS RESOURCES AND ACTIONS

- Resources
 - Local Public Health Agency
 - State Public Health Agency and EMS office
 - CDC : <http://www.cdc.gov/zika/index.html>
 - WHO: <http://www.who.int/csr/disease/zika/en/>
- Become an informed employer and spread the information particularly to high risk populations: pregnant women, women of child bearing age, travelers of any gender.

ZIKA VIRUS – QUESTIONS?

Thank-you,

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