Zika Virus

Dr. John Bergman
What is Zika?

• Zika Virus Disease: a disease caused by Zika virus is spread to people primarily through the bite of an infected Aedes species mosquito.
Symptoms of Zika

• fever
• rash
• joint pain
• conjunctivitis (red eyes)

• Illness is usually **mild** with symptoms lasting for **2-7 days**
• About **1 in 5 people** infected with Zika virus become ill
• Once a person has been infected, he or she is likely to be protected from future infections.

Center for Disease Control and Prevention
Zika Virus Facts

• First discovered in 1947
• named after the Zika forest in Uganda
• In 1952, the first human cases of Zika were detected
• outbreaks of Zika have been reported in tropical Africa, Southeast Asia, and the Pacific Islands
• The virus is known to circulate in Africa, the Americas, Asia and the Pacific.

• In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil
• Feb 1, 2016, the World Health Organization (WHO) declared Zika virus a public health emergency of international concern (PHEIC).  

1 Center for Disease Control and Prevention (CDC)
Areas with Active Zika Virus Transmission

Center for Disease Control and Prevention (CDC)
Medical Treatment for Zika

• Treat the symptoms:
• Get plenty of rest.
• Drink fluids to prevent dehydration.
• Take medicine

CDC Recommendations

So Why is everyone freaking out about Zika?
Microcephaly

Know Causes of Microcephaly

• can be **genetic**: fusing of bone sutures (gaps) in the skull preventing growth of the brain

• due to **complications in pregnancy** or faulty delivery leading to deprivation of oxygen in the brain

• **Exposure** to drugs, alcohol or toxic chemicals in the womb

• **Severe malnutrition**

• inability of the body to break down a chemical, and any other insult or injury.
Child with normal head size

Child with microcephaly
Brazil and Microcephaly

• Normally 150 cases annually
• 4,780 cases since October 2015.
• Around 1/3 of these cases have been in the state of Pernambuco

• Brazilian government has admitted to dramatic over-reporting
• When re-examined they realize many of the babies were actually healthy

"Of the cases examined so far, 404 have been confirmed as having microcephaly. Only 17 of them tested positive for the Zika virus..."
Brazil and Microcephaly

Another 709 babies have been ruled out as having microcephaly … underscoring the risks of false positives making the epidemic appear larger than it actually is. The remaining 3,670 cases are still being investigated.”

“there was consensus among the medical groups that the current criteria is too broad and is drawing too many false positives.”

Maria Teresa Vieira Sanseverino, a pediatrician and medical geneticist

“There’s actually very little scientific evidence tying the Zika virus to this particular condition.”

Is there a Problem?

World Health Organization (WHO) declared the Zika virus a global health emergency on February 1, noting that the "main worry" is the virus' potential link to microcephaly and subsequent brain damage.

New York Times February 1, 2016
The U.S. and Microcephaly

• In the US, approximately **25,000** infants are diagnosed with microcephaly each year
• Brazil has about 70% of the population the U.S. has
• Brazil reports just over **400 cases** of microcephaly, **17** of which tested positive for the Zika virus.

And Yet....

• On February 8, 2016, President Obama announced a request for **$1.8 billion** in emergency funds for several agencies to accelerate research into a vaccine and educate populations at risk for disease.

Washington Post February 6  
Center for Disease Control and Prevention (CDC)
No Link between Zika and Microcephaly

“Previous Zika epidemics did not cause birth defects in newborns, despite infecting 75 percent of the population in those countries,”

“Also, in other countries such as Colombia there are no records of microcephaly; however, there are plenty of Zika cases.”
No Link between Zika and Microcephaly

• Colombian president announced that many of the country's citizens were infected with Zika but that there was not a single case of microcephaly.

• 3,177 pregnant women in the country were infected with Zika, but these women are carrying healthy fetuses or had given birth to healthy babies.

• Experts examined 732 cases out of 4,180 Zika-related microcephaly, more than half were not related to Zika at all. Only 270 cases were confirmed as Zika-linked microcephaly.

The Washington Post 8
No Link between Zika and Microcephaly

• The World Health Organization (WHO) has been careful not to explicitly link Zika to microcephaly.

"Although a causal link between Zika infection in pregnancy and microcephaly **has not been established**, the circumstantial evidence is suggestive and extremely worrisome,"

Margaret Chan, WHO General Director
The Real Cause of Microcephaly

• Poverty and Vitamin Deficiencies
• Pesticides, Herbicides, and Larvicides
• Vaccinations
Poverty and Vitamin Deficiencies

• The "outbreak" is occurring in a largely poverty-stricken agricultural area of Brazil.

• Lack of sanitation and widespread vitamin A and zinc deficiency.

• Vitamin A and zinc deficiency is an endemic in Brazil.

• Known to depress immune function.
Vitamin Deficiency Linked to Microcephaly

- **Vitamin A** deficiency linked to an increased risk of microcephaly \(^{19,20}\)
- **Zinc** is known to play an important role in the structure and function of the brain. \(^{21}\)

The CDC lists:

Malnutrition and exposure to toxic chemicals as two of the three known risk factors for Microcephaly. \(^{22}\)
The Deadly Mixture of Malnutrition and Pesticides

• Environmental pollution and toxic pesticide exposure
  Linked to birth defects $^{23,24}$
• Brazil cultivates GM crops and uses Glyphosate which has been
  linked to birth defects in experiments with laboratory animals $^{25}$
Larvicide By Sumitomo (Partnered with Monsanto)

Pyroproxyfen
- In Use for the past 18 months
- has been applied to the drinking water in Brazil.
- Part of a government-run program to control mosquito population
- a chemical larvicide that causes malformations in mosquitoes
- inhibits growth in mosquito larvae
- producing malformations that disable and/or kill the mosquitoes.
- it's an endocrine disruptor and teratogenic which causes birth defects.

Argentine Physician's Organization 7
Malformations detected in thousands of children from pregnant women living in areas where the Brazilian state added Pyroproxyfen to drinking water are not a coincidence, even though the Ministry of Health places a direct blame on the Zika virus for this damage.

The Brazilian Health Ministry had injected pyroproxyfen to reservoirs in the state of Pernambuco. 

Pernambuco is the first state in Brazil to notice the problem.

The state contains 35% of the total microcephaly cases in the country

Argentine Physician's Organization "Physicians in the Crop-Sprayed Towns"
Atrazine and Microcephaly

- Atrazine is used to prevent pre- and post-emergence weeds and is the second most commonly used herbicide after Roundup.

- Small head circumference is listed as a side effect of prenatal Atrazine exposure.

"The most obvious cause of birth defects in this area is direct contact and absorption of pesticides. A study of pesticide use on tomatoes in the Northern State of Pernambuco, Brazil, indicates high exposure to pesticide workers and poor application methods which threaten the ecology of the area."
Atrazine and Microcephaly

Women washed the pesticide application equipment, generally in the work environment, without protective clothing ...

Of the women workers,

• 32% reported being pregnant more than five times
• 71% reported miscarriages
• 11% reported having mentally and/or physically impaired offspring.” 28
Aerial Spraying of Insecticides

**Imidacloprid**: a neonicotinoid (insecticide)

- In October 2012: Brazil lifted its ban on aerial spraying of neonicotinoids.  
  \(^{30}\)

- In 2001, it was reported that Imidacloprid fed to pregnant rats and rabbits in "maternally toxic" doses caused skeletal malformation \(^{31,32}\)

- In December 2013, neonicotinoids were suspected of causing developmental problems in babies and children. \(^{33}\)
- 2013 study showed adverse events with embryo development and neonicotinoids \(^{34}\)
Vaccines and Microcephaly

The Brazilian government has been vaccinating tens of thousands, if not hundreds of thousands, of pregnant women in its country during the past year.

A large portion of these pregnancies are occurring in Brazil’s northeastern region, notably in the state of Pernambuco—the country’s fastest growing population center. 39
Vaccines and Microcephaly

• October 2014 the Brazilian government mandated that all pregnant women must receive the pertussis-containing Tdap (tetanus, diphtheria, and pertussis) vaccine, effective as of 2015.  

Pertussis vaccine has previously been linked to

brain inflammation and brain damage in infants
Vaccines and Microcephaly

• “Atypical vanishing white matter disease with microcephaly and hepatosplenomegaly provoked after diphtheria pertussis tetanus vaccination”

   Journal of Pediatric Neurology 37,38
Vaccines are Neurotoxic

• Increased cytokine levels during pregnancy is a potential risk factor for **psychotic illness** in offspring. Journal of Brain Behavior and Immunity 2001 40,41

• Immune activation during pregnancy in mice leads to dopaminergic hyperfunction and **cognitive impairment** in the offspring, and may promote schizophrenia. Journal of Biological Psychiatry 2006 42

• Immune stimulation during pregnancy was found to promote **neurodevelopmental mental diseases**, including but not limited to schizophrenia in the offspring. Journal of Brain Behavior and Immunity 2006 43
Vaccines are Neurotoxic

• Maternal immune activation alters fetal brain development, and may predispose children to schizophrenia and autism
  
  Journal of Neuroscience 2007 44

• Inflammation during a critical postnatal period causes a long-lasting increase in seizure susceptibility
  
  Journal of Neuroscience 2008 45

• Excessive vaccination during brain development may promote autism spectrum disorders
  
  Medical Veritas 2008 46
The Solution

• Avoid all Vaccinations
• Avoid exposure to Pesticides
• Detox your Body
• Strengthen your Immune System
The 5 Keys to Health and Healing

- Proper nerve supply
- Regular Exercise
- Proper Nutrition
- Sufficient Rest
- Prayer and Meditation
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