

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.



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).



Areas with Active Zika Virus Transmission

Center for Disease Control and
Prevention (CDC) ³



Medical Treatment for Zika

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

CDC Recommendations ²



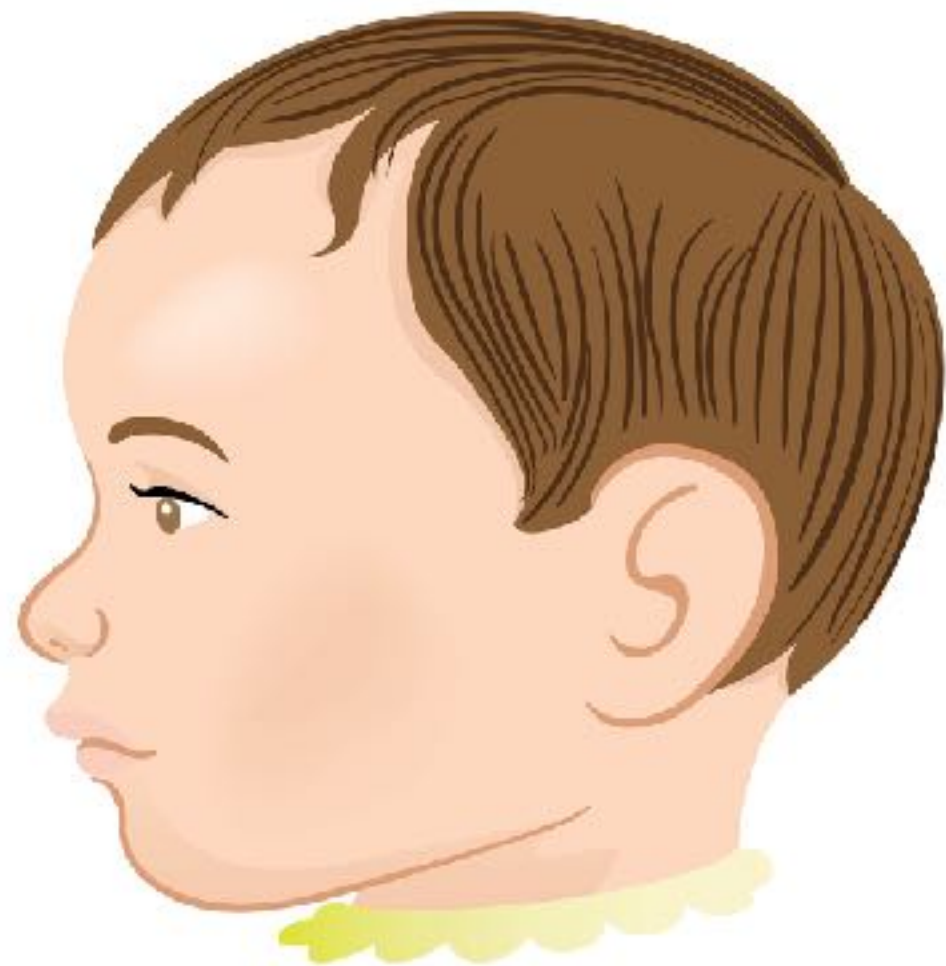
So Why is everyone freaking out about Zika

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.”

New York Times February 3, 2016 ⁴

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 ⁵



The World Health Organization

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.

Washington Post February 6⁶

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.

Center for Disease Control and Prevention (CDC)⁶

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.”

Argentine Physicians Organization 7



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.

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 ⁹



The World Health Organization

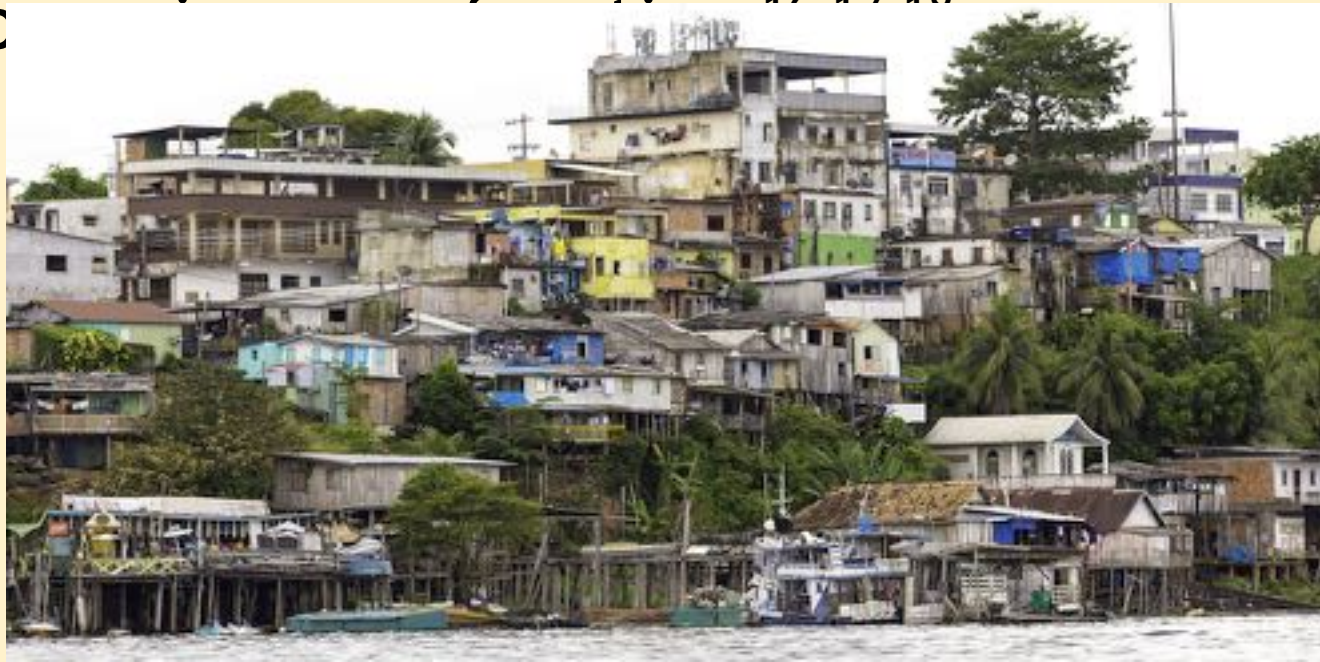
The Real Cause of Microcephaly

- 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^{10,11,12}
- Vitamin A and zinc deficiency is an endemic in Brazil^{13,14,15}
- known to deplete the immune system^{16,17,18}



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.**

Larvicide By Sumitomo (Partnered with Monsanto)

*"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."*

Argentine Physician's Organization "Physicians in the Crop-Sprayed Towns" ⁷

- 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

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.*

Journal of Environmental Health ^{27,28}

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 neonicotinoids³⁴

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.** ³⁵

Pertussis vaccine has previously been
linked to

**brain inflammation and
brain damage** in infants ³⁶



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

References

1. <http://www.cdc.gov/zika/about/index.html>
2. <http://www.cdc.gov/zika/symptoms/index.ht>
3. <http://www.cdc.gov/zika/geo/americas.html>
4. New York Times February 3, 2016 http://www.nytimes.com/2016/02/04/world/americas/birth-defects-in-brazil-may-be-over-reported-amid-zika-fears.html?_r=3
5. <https://www.washingtonpost.com/news/worldviews/wp/2016/01/29/brazil-may-have-fewer-zika-related-microcephaly-cases-than-previously-reported/>
6. <http://www.cdc.gov/zika/cdc-role.html>
7. http://www.reduas.com.ar/wp-content/uploads/downloads/2016/02/Informe-Zika-de-Reduas_TRAD.pdf
8. <https://www.washingtonpost.com/news/worldviews/wp/2016/01/29/brazil-may-have-fewer-zika-related-microcephaly-cases-than-previously-reported/>
9. <http://www.theguardian.com/world/2016/jan/27/venezuela-doctors-public-statistics-zika-virus-epidemic-fears>
10. Pan-UK.org Tomato Production in Brazil
11. Revista Brasileira em Promoção da Saúde . abr-jun2013: 26(2); 176-185
12. Vaccines by the Outliers January 27, 2016
13. Eur J Clin Nutr. 2004 Oct;58(10):1372-7
14. Am J Clin Nutr August 1972: 25(8); 800-804
15. Revista Paulista de Pediatria June 2015: 33(2); 2011-221

References

16. Nat Rev Immunol. 2008 Sep; 8(9): 685-698
17. Clin Infect Dis. 1994 Sep;19(3):489-99
18. Annual Review of Nutrition 1990;10:415-31
19. Obstetrics and Gynecology 1959 Mar;13(3):299-301
20. ResearchGate, Obstetrics and Gynecology 1959 Mar;13(3):299-301
21. Am J Clin Nutr. 1998 Aug; 68(2 Suppl): 464S-469S
22. Centers for Disease Control. Jan. 29, 2016
23. Worldfish.org, The São Francisco River
24. BBC News January 10, 2014
25. <http://www.greenmedinfo.com/blog/new-study-shows-why-roundup-herbicide-glyphosate-should-be-banned>
26. <http://www.techtimes.com/articles/133548/20160214/monsanto-larvicide-not-zika-virus-true-cause-of-brazils-microcephaly-outbreak-doctors.htm>
27. Environ Health Perspect. 2011 Jul;119(7):1034-41
28. *Sott.net February 1, 2016*
29. *Pan-UK.org Tomato Production in Brazil*
30. *Agrow October 5, 2012*

References

31. Agrichemical and Environmental News October 2001, Issue 186
32. Georgis' Parasitology for Veterinarians, Google Books
33. Daily Mail December 17, 2013
34. PLOS One July 29, 2013 DOI: 10.1371/journal.pone.0070112
35. The Vaccine Reaction February 1, 2016
36. Fisher BL. Vaccination During Pregnancy: Is It Safe?
37. J Pediatr Neurol 2014; 12(03): 167-170
38. <https://www.thieme-connect.com/products/ejournals/abstract/10.3233/JPN-140659>
39. <http://www.thevaccinereaction.org/2016/02/tdap-vaccinations-for-all-pregnant-women-in-brazil-mandated-in-late-2014/>
40. Trade and Agriculture Directorate Committee for Agriculture February 26, 2015 (PDF)
41. <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/CA/APM/WP%282014%2934/FINAL&docLanguage=En>
42. Biological Psychiatry 2006; 59: 546-554
43. Brain Behavior and Immunology 2006; 20: 378-388
44. Journal of Neuroscience 2007 Oct 3;27(40):10695-702
45. Journal of Neuroscience 2008; 28: 6904-6913
46. Medical Veritas 2008; 5: 1727-1741 (PDF)

