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# Dengue

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## Dengue

### What is Dengue?

Dengue or dengue fever is a virus that comes from the environment, specifically from mosquitos that carry the disease. It cannot be transmitted from person to person. Any area with mosquitos has the possibility of a dengue outbreak, but tropical areas with higher levels of mosquitoes, such as Brazil or the Philippines, are much more prone to such an event taking place. According to the CDC(n.d.), roughly one-third of the world is at risk for infection of the dengue virus.

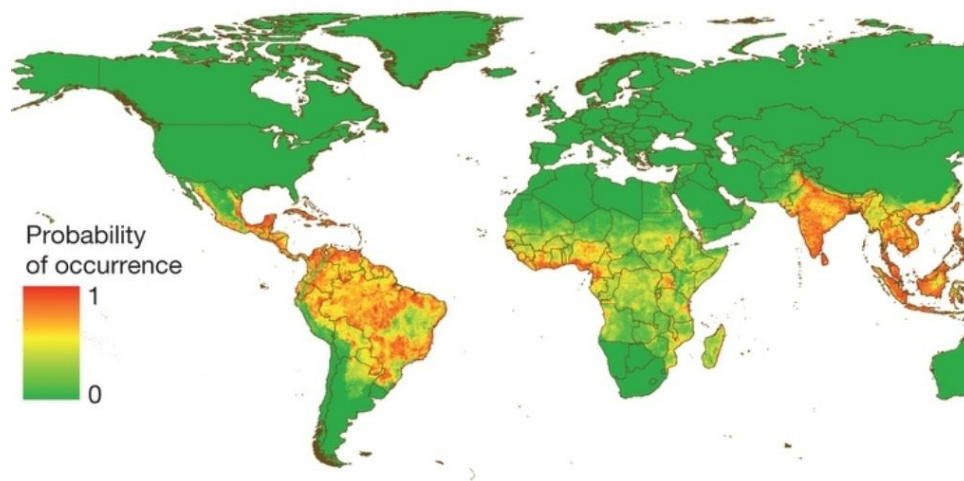


Figure 1: Showing a map of where risk of dengue fever is the highest(highest being the darker regions)(Bhatt et al. 2013)

### Understanding Dengue

A mosquito can bite a carrier of the virus and become a carrier itself, giving the virus to anyone else it bites. The virus can cause its carrier to have these symptoms: high fever, headaches, fatigue, nausea, vomiting, eye pains, muscle and joint pain, and a skin rash that typically appears after these symptoms have taken place(WebMD, n.d.). Testing for dengue should take place within 5 days of these symptoms appearing. Diagnosis comes through a blood test done by a doctor(World Health Organization, 2009). While there is no treatment for dengue, the best measure to take is to use painkillers, but must avoid those that contain aspirin and seek out those that have acetaminophen, also stay hydrated, rest, and keep in contact with your doctor. It is estimated that there are 50 - 100 million infections every year, with 500,000 developing into the fever and 22,000 deaths, primarily from children(CDC, n.d.). The mix of tropical environments and high levels of poverty/lack of access to basic medical care has made dengue quite common. The people living in these regions are not properly equipped to prevent themselves from the mosquitos that carry the virus. The most influential social determinant of dengue would be place. The correlation between dengue cases and areas with high levels of mosquitos is indisputable. The spread of dengue is entirely based on the location where mosquitos are in relation to humans.

## Solutions and Prevention

Since mosquitoes are known to carry other viruses like malaria, there has been a widespread effort to prevent any and all mosquitoes from biting humans. Most often seen is the use of netting and the spraying of insecticide. The use of mosquito nets, fumigating inside the home, and also having piped water in the home have helped reduce dengue infections in Machala, Ecuador (Kenneson et al., 2017). For a solution, I would really like to see larger steps being taken in the development of both a vaccine and treatments. The current vaccine option “CYD-TDV” has less than 60% chance of working and is rejected by the Government of India due to its low efficiency(Sharma & Jain, 2017). During the time those solutions are found, action must be taken on teaching the people at risk how to use netting and to keep the areas they live in dry to prevent mosquitoes from loitering in that same spot.



Figure 2: Kenyan mother with her child demonstrating the use of mosquito netting(Ratemo, 2011)

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