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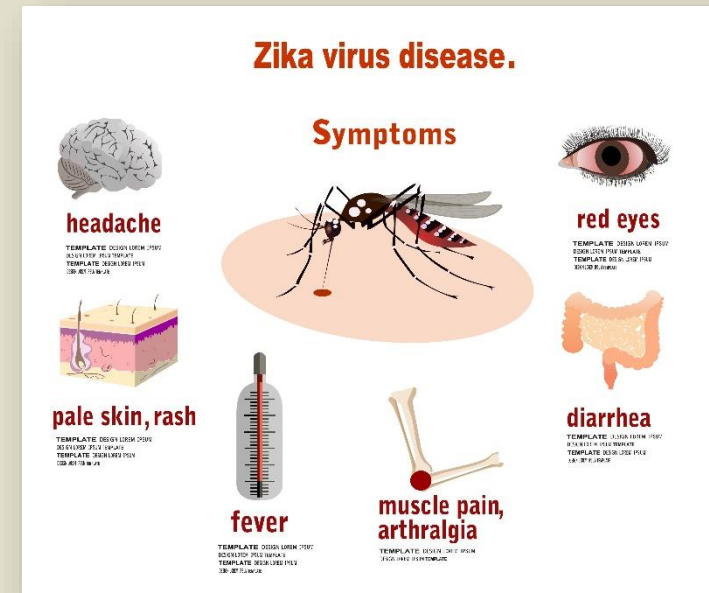
Research Project : Diseases
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Zika Virus

Origin: Zika comes from mosquitos carrying the Zika virus, in which the name “Zika” comes from the Zika forest in Uganda. Zika virus was first discovered in 1947. In 2007 there were about 14 cases reported and since then, May 2015 the first case was discovered in Brazil and has been declared as a Public Health Emergency of International Concern.



Symptoms: the most common symptoms of Zika are fever, rash, joint pain, and conjunctivitis (red eyes); these symptoms last for 2-7 days. However, Zika virus infection during pregnancy can cause a serious birth defect called microcephaly as well as other severe fetal brain defects.



Significance in Peru:

Anyone who is bit by a Zika virus carrying mosquitos can get the virus (male or female). This virus also affects individuls who have un protected sex with a person carrying Zika virus. Women who are pregnant or plan to get pregnant should are the most affected by the virus because if they came in contact with the virus their baby is at risk for severe birth defects.



Target areas : Africa, Southeast Asia, and the Pacific Islands. Commonwealth of Puerto Rico, the US Virgin Islands, American Samoa and the United States of America.

Vaccines ?

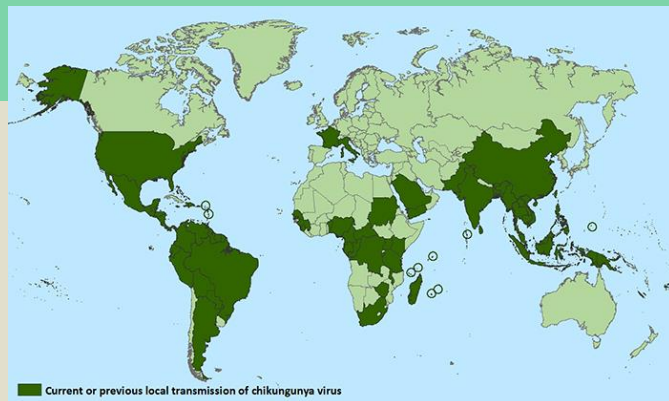
There are no current vaccines or cures for Zika viruse however, once a person has been infected, he or she is likely to be protected from future infections.

This virus does not result in death.



Chikungunya

Chikungunya virus is transmitted to people through mosquito bites. Mosquitoes become infected when they feed on a person already infected with the virus. Infected mosquitoes can then spread the virus to other people through bites. These particular mosquitoes (*Aedes aegypti* and *Aedes albopictus*) bite during the day time.



Symptoms: The most common symptoms are fever and joint pain. Other symptoms may include headache, muscle pain, joint swelling, or rash. Even though this virus does not result in death it can be very disabling but patients should feel better in about a week.

Areas of distribution: Africa, Asia, Europe, Americas and the Indian and Pacific Oceans.



Significance in Peru/ who is at risk ? People at risk for more severe disease include newborns infected around the time of birth, older adults (more than 65 years), and people with medical conditions such as high blood pressure, diabetes, or heart disease

However once a person has been infected he/she is likely to be protected from future infections.



There is no vaccine for this virus but there are methods to treat the symptoms such as getting plenty of rest, drink fluids to prevent dehydration and take medicine such as acetaminophen (Tylenol®) or paracetamol to reduce fever and pain.

Guillain-Barré Syndrome (GBS)

Guillain-Barré syndrome (GBS) is a rare disorder in which a person's own immune system damages their nerve cells, causing muscle weakness and sometimes paralysis.

The cause of this syndrome can be several factors:

- Infection with the bacterium [Campylobacter jejuni](#) is one of the most common risk factors for GBS
- about two-thirds of people who develop GBS symptoms do so several days or weeks after they have been sick with diarrhea or a respiratory illness.
- GBS can also develop after having the flu or other infections (such as cytomegalovirus and Epstein Barr virus).



Symptoms begins with tingling and weakness starting in your feet and legs and spreading to your upper body and arms. Difficulty with bladder control and breathing.

People normally recover from GBS after a few weeks but immediate hospitalization is important to do once syndrome has been discovered.

Who is at risk ? Anyone can develop GBS but it is more common among older adults. The incidence of GBS increases with age, and people older than 50 years are at greatest risk for developing GBS.



Three main types of GBS:

- **Acute inflammatory demyelinating polyradiculoneuropathy (AIDP)**, the most common form in the U.S. The most common sign of AIDP is muscle weakness that starts in the lower part of your body and spreads upward.
- **Miller Fisher syndrome (MFS)**, in which paralysis starts in the eyes. MFS is also associated with unsteady gait. MFS occurs in about 5 percent of people with Guillain-Barre syndrome in the U.S. but is more common in Asia.
- **Acute motor axonal neuropathy (AMAN) and acute motor-sensory axonal neuropathy (AMSAN)**, which are less common in the U.S. but more frequent in China, Japan and Mexico.

What is Chaga ?

It is caused by the parasite *Trypanosoma cruzi*, which is transmitted to animals and people by insect vectors. Chagas disease (*T. cruzi* infection) is also referred to as American trypanosomiasis.



Treatment:

To kill the parasite, Chagas disease can be treated with benznidazole and also nifurtimox. However this treatment should not be taken by pregnant women or by people with kidney or liver failure. Nifurtimox is also contraindicated for people with a background of neurological or psychiatric disorders. Additionally, specific treatment for cardiac or digestive manifestations may be required.

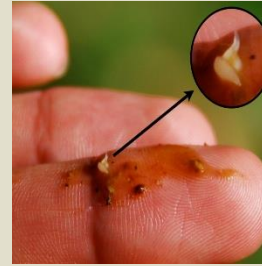
Chaga

Chagas disease has an acute and a chronic phase. If untreated, infection is lifelong.

Acute Chagas disease occurs immediately after infection, may last up to a few weeks or months, and parasites may be found in the circulating blood. Infection may be mild or asymptomatic. There may be fever or swelling around the site of inoculation (where the parasite entered into the skin or mucous membrane). Following the acute phase, most infected people enter into a prolonged asymptomatic form of disease (called "chronic indeterminate") during which few or no parasites are found in the blood. During this time, most people are unaware of their infection and may remain asymptomatic for life. But can have lifelong threatening illnesses.



Where is Chaga found? Only found in the Americas (mainly, in rural areas of Latin America where poverty is widespread). Anyone can become infected by Chaga if exposed to the parasite male or female of any age.



Lifelong Complications of chronic Chagas disease may include:

- heart rhythm abnormalities that can cause sudden death;
- a dilated heart that doesn't pump blood well;
- a dilated esophagus or colon, leading to difficulties with eating or passing stool.

Prevention:

In endemic areas of Mexico, Central America, and South America improved housing and spraying insecticide inside housing to eliminate triatomine bugs has significantly decreased the spread of Chagas disease. Further, screening of blood donations for Chagas is another important public health tool in helping to prevent transfusion-acquired disease. Early detection and treatment of new cases, including mother-to-baby (congenital) cases, will also help reduce the burden of disease.



Reference Page

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