

Dengue Fever

Dengue fever is a mosquito-borne viral infection that occurs in tropical and subtropical areas of the world. The virus is transmitted by female mosquitoes mainly of the species *Aedes aegypti*. The disease causes flu-like symptoms and can develop into severe dengue, also known as dengue hemorrhagic fever, which can cause bleeding, low platelet levels, and even death.

Causes:

Dengue is caused by any one of four related viruses transmitted by mosquitoes. These viruses are known as DENV-1, DENV-2, DENV-3, and DENV-4. When a mosquito bites a person infected with a dengue virus, the virus enters the mosquito. When the infected mosquito then bites another person, the virus enters that person's bloodstream.

Symptoms:

Symptoms typically begin three to fourteen days after infection and include high fever, headache, vomiting, muscle and joint pains, and a characteristic skin rash. Severe cases can cause dengue hemorrhagic fever, which leads to bleeding, blood plasma leakage, and potentially death.

Prevention:

Prevention includes protecting against mosquito bites by using insect repellent, wearing long-sleeved clothing, and eliminating standing water where mosquitoes breed. There is a vaccine available in some countries for people who have previously been infected.

Treatment:

There is no specific treatment for dengue. Supportive care includes rest, fluids, and medications to reduce fever and pain. Hospital care may be needed for severe cases to manage symptoms and monitor the patient's condition.

Tuberculosis (TB)

Tuberculosis (TB) is a potentially serious infectious disease that mainly affects the lungs. The bacteria that cause TB are spread from one person to another through tiny droplets released into the air via coughs and sneezes.

Causes:

TB is caused by a bacterium called *Mycobacterium tuberculosis*. It spreads through airborne particles from someone who has an active TB infection. Latent TB infection occurs when the bacteria are in the body but inactive, causing no symptoms.

Symptoms:

Common symptoms include a persistent cough lasting more than three weeks, coughing up blood, chest pain, fatigue, weight loss, night sweats, chills, and fever. TB can also affect other parts of the body, including kidneys, spine, and brain.

Prevention:

TB can be prevented through vaccination with the *Bacillus Calmette-Guérin* (BCG) vaccine, especially in children. Early detection and proper medical treatment of infected individuals are critical to preventing the spread of TB.

Treatment:

Treatment typically involves taking several antibiotics for a minimum of six to nine months. Drug-resistant TB requires longer treatment with second-line medications. Completing the entire course of therapy is essential to avoid resistance and relapse.