

Dengue

Dengue is a viral disease transmitted by mosquitos of the genus **Aedes** (*Aedes aegypti* and *Aedes albopictus*), which are widely distributed in subtropical and tropical areas of the world including Pakistan.

Cases

- Bangladesh: Nearly 1,000 people die of dengue in severe outbreak. 28 September. News. Asia
- Dengue fever crisis forces Peru minister to resign 16 June. News. Latin America & Caribbean
- Argentina dengue: Record fever outbreak kills over 40 22 April. News. Latin America & Caribbean.
- About 3,830 cases of dengue fever have been reported by health officials in southern Sindh province, with at least 9 deaths. 15 September 2022 News Asia
- 2000 cases have been recorded and at least 20 die in Burkina Faso. 23 November 2016. News. Africa

Causes:

Dengue caused by any one of four subtypes of dengue viruses (DENV-1, DENV-2, DENV-3, DENV-4).

Infection with one serotype and a ~~type~~ very brief period of partial heterotypic immunity to other serotypes, but a person can eventually be infected by multiple serotypes. The incubation period ranges from 3 to 14 days (commonly 4-7 days).

Symptoms

Most people with dengue have no symptoms and will get better in 7-2 weeks.

If symptoms occur, they usually begin 4-10 days after infection and last for 2-7 days.

Symptoms may include:

- high fever (40°C / 104°F)
- Severe headache
- pain behind the eyes
- muscle and joint pains
- nausea
- vomiting
- Swollen glands
- rash.

Diagnosics and treatment

Most cases of dengue fever can be treated at home with pain medicine. Preventing mosquito bites is the best way to avoid getting dengue.

Acetaminophen (paracetamol) is often used to control pain. Non-steroidal anti-inflammatory drugs like ibuprofen or aspirin are avoided as they can increase the risk of bleeding.

There is a vaccine called Dengvaxia for those who had at least once and live in a place where the disease is common.

For severe dengue patients, hospitalization is often needed.

Malaria

malaria, serious relapsing infection in humans, characterized by periodic attacks of chills and fever, anemia, splenomegaly (enlargement of the spleen), and often fatal complications.

Disease burden

- According to the latest world malaria report, there were 247 million cases of malaria in 2021 compared to 245 million cases in 2020. The estimate number of malaria deaths stood at 619000 in 2021, compared to 625000 in 2020.
- The WHO African Region continues to carry a disproportionately high share of the global malaria burden.
- In 2021 the region was home to about 95% of all malaria burden.
- In 2021 the region was home to about 95% of all malaria cases and 96% of deaths. Children under 5 years of age accounted for about 80% of all malaria deaths in the region.
- Four African countries accounted for just over half of all malaria deaths worldwide
 - Nigeria (31.3%)
 - The Democratic Republic of the Congo (12.6%)
 - United Republic of Tanzania (4.1%)
 - Niger (3.9%)

Causes:

It is caused by one celled parasites of the genus Plasmodium that are transmitted to humans by the bite of Anopheles mosquitos.

It is mostly found in tropical countries.

Symptoms:

The most common early symptoms of malaria are fever, headache and chills.

Symptoms usually start within 10-15 days of getting bitten by an infected mosquito.

Some types of malaria can cause severe illness and death. Infants, children under 5 years, pregnant women, travellers and people with HIV or AIDS are at higher risk.

Severe include:

- extreme tiredness and fatigue
- impaired consciousness
- multiple convulsions
- difficulty breathing
- dark or ~~body~~ bloody urine
- jaundice (yellowing of the eyes and skin)
- abnormal bleeding.

Prevention:

Malaria can be prevented by avoiding mosquito bites and by taking medicines. Talk to a doctor about taking medicines such as chemoprophylaxis before travelling to areas where malaria is common.

Treatment:

Early diagnosis and treatment of malaria reduce disease, prevents deaths and contributes to reducing transmission. WHO recommends that all suspected cases of malaria be confirmed using parasite based diagnostic testing (through either microscopy or a rapid diagnostic test).

Malaria is a serious infection and always requires treatment with medicine.

Typhoid

- Typhoid fever is a life threatening caused by the bacterium *Salmonella Typhi*. It is usually spread through contaminated food or water. Once *Salmonella Typhi* bacteria are ingested, they multiply and spread into the bloodstream.
- Urbanization and climate change have the potential to increase the global burden of typhoid. In addition, increasing resistance to antibiotic treatment is making it easier for typhoid to spread in communities that lack access to safe drinking water or adequate sanitation.

Epidemiology, risk factors and disease burden:

Improved living conditions and the introduction of antibiotics resulted in a drastic reduction of typhoid fever morbidity and mortality in industrialized countries.

However, the disease continues to be a public health problem in many developing areas of the WHO African, Eastern Mediterranean, South-East Asia and western Pacific Regions.

As of 2019 estimates, there are 9 millions cases of typhoid fever annually, resulting in about 110,000 deaths per year.

Typhoid risk is higher in populations that lack access to safe water and adequate sanitation, and children are at highest risk.

Symptoms:

Salmonella Typhi lives only in humans. Persons with typhoid fever carry the bacteria in their bloodstream and intestinal tract. Symptoms include prolonged

high fever, fatigue, headache, nausea, abdominal pain, and constipation or diarrhoea. Some patients may have a rash. Severe cases may lead to serious complications or even death. Typhoid fever can be confirmed through blood testing.

Treatment:

- Typhoid fever can be treated with antibiotics
- Antimicrobial resistance is common with likelihood of more complicated and expensive treatment options required in the most affected regions.
- Even when the symptoms go away, people may still be carrying typhoid bacteria, meaning they can spread it to others through shedding of bacteria in their faeces.

Prevention:

Typhoid fever certainly have five key points for typhoid prevention

1. Vaccination
2. Safe food Handling
3. Safe drinking water
4. Hand Hygiene
5. Travel Precautions