Epidemiology Unit
Ministry of Health & Mass Media
231, De Saram Place, Colombo 10
Tel: (011) 2695112, 4740490 Fax: (011) 2696583 e-mail: epidunit@sltnet.lk
Last update June 2025

Dengue Fever Fact Sheet

Dengue Infection

Dengue is an acute febrile illness caused by any one of four related flaviviruses known as dengue virus serotypes 1, 2, 3, and 4. Infection with one serotype is generally believed to confer long-term immunity to that serotype (homologous protection) and short-term cross-immunity to the other serotypes. After this cross-protection wanes, a second infection with a different serotype can lead to more severe illness, especially if the gap between infections is longer.

Many patients infected with the dengue virus remain asymptomatic (approximately 90%). Others, after an incubation period of approximately 6 (3-14) days, develop a febrile illness which could turn out to be one of the following:

1. Undifferentiated febrile illness

2. Dengue Fever (DF)

3. Dengue Haemorrhagic Fever (DHF)

4. Expanded Dengue Syndrome

1. Undifferentiated fever

Those who have been infected with the dengue virus, especially for the first time (i.e., primary dengue infection), may develop a simple fever indistinguishable from other viral infections. Undifferentiated/asymptomatic individuals will still be transmitting the disease.

2. Dengue Fever (DF)

This is the most commonly diagnosed form. DF is characterised by the sudden onset of fever lasting between two to seven days, accompanied by severe headache, retro-orbital pain, gastrointestinal symptoms such as nausea and vomiting, with muscle, joint and bone pain and a rash. DF is self-limited and usually results in complete recovery.

3. Dengue Haemorrhagic Fever (DHF)

Dengue Haemorrhagic Fever (DHF) is a more severe form of dengue, occurring in a small proportion of cases (typically less than 5%). It initially presents like classic dengue fever but may progress to more serious symptoms such as bleeding from the nose or gums, bruising under the skin, and severe abdominal pain, often due to liver enlargement. A key feature of DHF is increased vascular permeability, which leads to fluid leakage and, in severe cases, can result in Dengue Shock Syndrome (DSS); a life-threatening condition if not properly managed. DHF is more commonly seen in children and during secondary infections with a different dengue virus serotype.

4. Expanded Dengue Syndrome

There have been reports of 'unusual dengue' cases where patients develop clinical manifestations atypical of classic DF or DHF. These include neurological complications such as encephalopathy and organ failures involving the liver, kidneys, heart, or other isolated organs. Such manifestations may result from profound shock, underlying comorbidities, or co-infections. This is very uncommon and needs careful medical evaluation.

Transmission

Dengue is transmitted through the bite of an infected female *Aedes aegypti* or *Aedes albopictus* mosquito. These mosquitoes:

- Bite during the daytime, especially early morning and late afternoon
- Breed in stagnant clean water in artificial containers
- It becomes more prevalent during the rainy season.

Dengue cannot be transmitted directly from person to person, but mosquitoes biting an infected person during the first few days of illness can spread the virus to others.

Clinical features

We may all confuse dengue fever with flu or a cold. Clinical features of dengue fever vary according to the age of the patient. Infants and young children may have a non-specific febrile illness with rash. Older children/adults may have a mild febrile illness or classical incapacitating disease with abrupt onset and high fever, severe headache, pain behind the

eyes, muscle and joint pains, and rash.

1. Dengue Fever is a self-limiting disease. For those who develop DHF, hospital treatment is required.
2. The patient may feel ill, and the fever may last up to a week. They could feel weak and in low spirits for up to two weeks or so.

Suspecting dengue infection in a patient with an acute onset of fever

Dengue should be suspected in children with sudden fever and features such as headache, retro-orbital pain, nausea, vomiting, myalgia, arthralgia, flushed skin, or a diffuse erythematous rash. Supportive findings include a positive tourniquet test (≥10 petechiae/inch² - negative test does not exclude the possibility of dengue), leucopenia (WBC $<5\times10^9$/L), and platelet count $<150\times10^9$/L. Some may also present with respiratory symptoms (e.g., cough, rhinitis, injected pharynx) or gastrointestinal symptoms (e.g., abdominal pain, vomiting, diarrhoea), even without classical signs.

The Dengue NS1 Antigen test is useful for the early diagnosis of dengue infection and is most effective during the first three days of fever. It is more likely to yield positive results in primary dengue infections compared to secondary infections. However, a negative NS1 test result does not exclude the diagnosis of dengue, and clinical judgment should guide further management and investigation.

Treatment

There is no specific treatment for dengue fever. Treatment is symptomatic –

When there is a fever,

- Use paracetamol (acetaminophen) only.
- Avoid medications such as Mefenamic acid, Ibuprofen, and Diclofenac, which belong to the NSAIDs group. These can increase the risk of bleeding and lead to serious complications.
- NSAIDs should not be used in any form - whether as tablets, syrups, suppositories, or injections.

However, careful early clinical management frequently saves the lives of DHF patients.
It would be advisable to see a qualified doctor if you/your child has a high fever without any underlying reason for more than a few days. However, even if dengue fever is suspected, you may not be expected to be admitted to a hospital.

Prevention and Control

Prevention depends entirely on controlling mosquito breeding and avoiding mosquito bites.

Eliminating mosquito breeding sites is essential; this includes destroying stagnant water collections in items like used tyres, plastic containers, coconut shells, and blocked gutters. Particular attention should be paid to construction sites, schools, and public areas where breeding is more likely.

Protection from mosquito bites is also crucial. Wearing long-sleeved shirts and trousers during the day, using mosquito repellents (avoiding chemical repellents for infants and children under two), and sleeping under mosquito nets, even during daytime, are key strategies. It is advisable to limit exposure during peak mosquito activity hours, especially in the early morning and late afternoon. If a person is infected with dengue, preventing mosquito exposure during the first week of illness is important to stop further transmission. Especially children should stay at home during the illness, ideally under a mosquito net when resting.