

Dengue fever

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The Disease

Dengue or "break-bone" fever is a viral disease found in most tropical and sub-tropical places in the world. The issue is growing as the number of places with the disease has increased. It is also spreading from urban to rural areas. Many urban areas in the tropics have multiple strains circulating at the same time, which raises the risk that people will develop severe illness.

Transmission

Dengue is transmitted to people via the bite of infected mosquitoes. Dengue mosquitoes, primarily *Aedes aegypti* but also *Aedes albopictus*, prefer to live in or near human habitations and bite during the day.

Symptoms

Dengue symptoms develop 4-10 days after an infected mosquito bites and include high fever, severe headaches, pain behind eyes, joint and muscle pain. A rash often follows. The acute illness generally lasts for 2-7 days. Sometimes it may worsen to a potentially fatal form of the disease called severe dengue (previously known as dengue haemorrhagic fever or DHF).

There are four strains of dengue, and infection with one kind does not provide immunity against other strains. Thus a person can contract the disease multiple times, and this makes a person more susceptible to severe dengue. Severe dengue patients can have bleeding and organ failure. If left untreated, fatality rate of severe dengue can be quite high and supportive medical treatment can lower it to <1%.

Diagnosis

Blood tests are required to make a diagnosis.

Treatment

Although there is no specific treatment for dengue, maintaining hydration is very important, more so in severe dengue. Symptoms such as fever and headache can be managed with paracetamol (acetaminophen). Aspirin and "non-steroidal anti-inflammatory" medication such as ibuprofen should be avoided as they can increase the risk of bleeding. Hospitalisation may be required in some cases.

Prevention

The best way to prevent dengue infection is to prevent mosquito bites. Wear long sleeves and long pants, and use insect repellents. (For more information see the article "[preventing mosquito bites](#)" in the "Travel Advice" dropdown on International SOS Country Guides

Keeping the environment free mosquito breeding areas reduces the mosquito population. Authorities encourage people living in dengue risk areas to guard against standing water around homes by covering any water containers, and ensuring unnecessary items that can collect water are eliminated.

A dengue vaccine, Dengvaxia is available in several countries, however it is not recommended for people who have never had dengue infection, as it may increase the risk of severe dengue. It is generally not recommended for travellers. It should only be used in people who have previously been infected with dengue. [World Health Organisation Questions and Answers with regards to Dengvaxia](#)

Risk to Travellers

Dengue is present in most tropical countries of the South Pacific, Asia, the Caribbean, the Americas and Africa. Epidemics are becoming increasingly common due to the urbanization of previously rural areas.

Cases of dengue fever are confirmed every year in international travellers visiting infected areas. The risk of acquiring dengue is highest after sunrise and before sunset.

Dengue as a growing health concern

Dengue is an important emerging disease among international travellers. There has been a 30-fold increase in incidence over the past 50 years worldwide.

Outbreaks of dengue and severe dengue have greatly increased in Southeast Asia, the American tropics and the South Pacific. Major epidemics occur every three to five years in many areas, especially in the Americas. Dengue cases have also appeared in non-tropical places.

Experts predict that the disease's impact will continue to grow, especially in the Americas. Wet spells are becoming longer, possibly due to climate change, and mosquitoes breed and thrive in wet conditions. Eradication efforts have lagged due to economic and governmental shifts.

Increased tourism and migration also contributes to the rise in severe dengue cases. There are four dengue strains, and as people travel they can spread these strains to different areas. When different dengue strains circulate in a single area, it increases the risk of severe dengue among its population. Once exposed to dengue, a person may become immune to the strain they encountered. Paradoxically, this can jeopardize their health: if that person is exposed to a *different* dengue strain after developing immunity to one type, they have a higher chance of developing severe dengue.

Reference

International SOS - Country Guides
<http://www.internationalsos.com>

Further Information

International SOS article on preventing mosquito, tick and other insect bites
<http://www.internationalsos.com>

World Health Organization Dengue Information
<http://www.who.int/mediacentre/factsheets/fs117/en/>

CDC Dengue Information
<http://www.cdc.gov/dengue/>

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