



# Dengue in Non-Endemic Countries

## About Dengue

Dengue fever is a mosquito-borne viral disease that **has spread rapidly around the world.**<sup>1</sup>

Most dengue infections are **asymptomatic or lead to mild illness** with flu-like symptoms, but occasionally severe dengue can lead to **potentially life-threatening complications.**<sup>1</sup>

Dengue is often found in **tropical and subtropical regions** where *Aedes aegypti* and *Aedes albopictus* mosquitoes are most common. Anyone traveling to an area with dengue is at risk of infection.<sup>3</sup>

**Dengue is caused by any of the four dengue virus serotypes, each of which can cause dengue or severe dengue.**<sup>2</sup>



Recovery from infection with one serotype is thought to provide long lasting protection against that serotype, but not against other serotypes. Individuals who are infected for a second time with a different serotype are at greater risk of severe dengue.<sup>1,4</sup>

## The Geographical Range of Dengue is Expanding



Global incidence rates have increased almost 30-fold from 2000 to 2024, with more countries reporting their first outbreaks of the disease and an **estimated 390 million infections per year.**<sup>1,4</sup>



Urbanization and climate change have contributed to the global transmission of the disease in new areas, including in parts of the contiguous United States (U.S.), continental Europe and overseas territories.<sup>1,3</sup> Modelling shows that presently non-endemic areas may experience regular dengue outbreaks by 2030.<sup>5</sup>

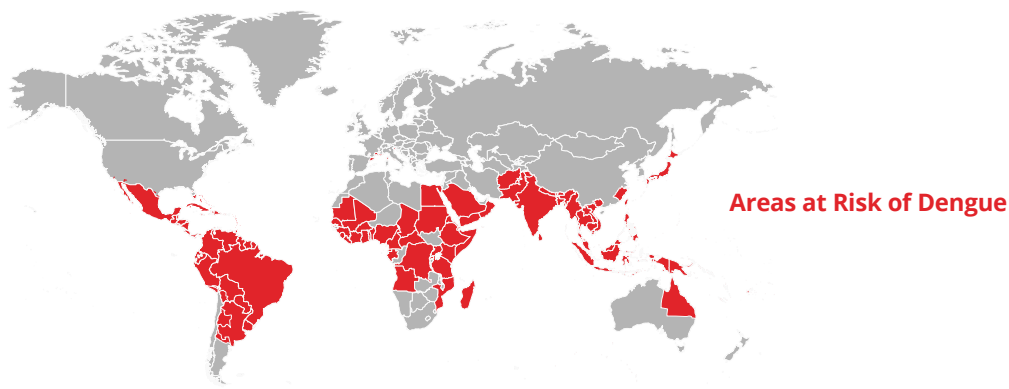
Rising global temperatures and shifting rainfall patterns are creating new, favorable environments for *Aedes aegypti* and *Aedes albopictus* mosquitoes to thrive. This is causing **geographical expansion of mosquito habitats, which increases the risk of contracting dengue.**<sup>6</sup>



Dengue is one of the **leading cause of fever in travelers** returning from Southeast Asia and the Americas, as well as in travelers returning to Europe from dengue-endemic regions.<sup>2,9,10</sup>

**According to the World Health Organization (WHO), dengue fever is spreading to new areas including over 300 reported cases in Spain, France and Italy in 2024.**<sup>1</sup>

**In 2024, more than 10K cases of dengue were reported across U.S. states and territories.**<sup>8</sup>



## Controlling Dengue

• Current efforts for dengue control are directed at reducing infection rate through<sup>1,11,12</sup>:

- **Preventing breeding:** Removing or applying insecticide to outdoor water storage containers;
- **Personal protection measures:** Use of window screens, repellents, or wearing clothing that minimizes skin exposure;
- **Community engagement:** Educate the community on mosquito-borne diseases and mobilize together with local governments for vector control;
- **Active mosquito and virus surveillance:** Build surveillance measures to monitor mosquito population;
- **Vaccination:** Personal protection measure designed to expose the vaccine recipient to a number of components of the virus that could help protect against future infection with the dengue virus.



*An integrated dengue prevention and control strategy is important to combating dengue, as recommended by international organizations such as the WHO and Pan American Health Organization (PAHO).*<sup>11,12</sup>

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