

About Dengue



- Dengue fever is a mosquito-borne viral disease that **spreads rapidly around the world**.¹ The worldwide incidence has risen 8 fold in the past 20 years, and more countries are reporting their first outbreaks of the disease.¹
- Dengue is **caused by any of the four dengue virus serotypes**, each of which can cause dengue or severe dengue.²
- Most dengue infections are asymptomatic or lead to mild illness with flu-like symptoms, but occasionally severe dengue can lead to potentially deadly complications.¹
 - Most dengue cases are either asymptomatic or subclinical; approximately 25% lead to clinically apparent disease, and around 5% of these may be severe cases.^{2,3}
- 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 the disease.⁴

The Geographical Range of Dengue is Expanding

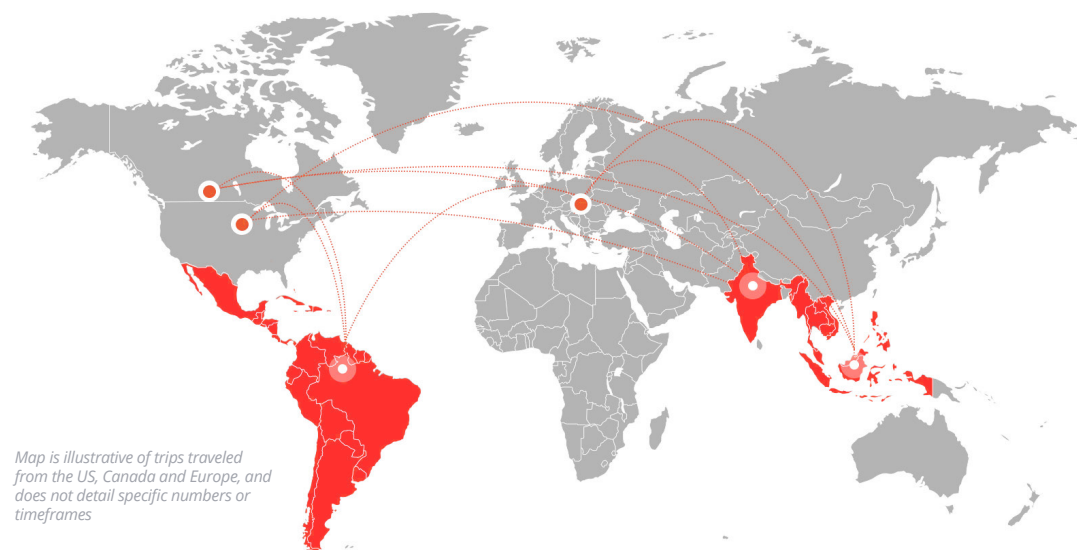
- The incidence of dengue has grown dramatically around the world in recent decades, causing an estimated **390 million infections**.^{1,5}
- Globalization, air travel, urbanization and climate change have contributed to the global transmission of the disease in new areas, including in the contiguous United States (U.S.), continental Europe and overseas territories.⁶
 - Climate change can affect transmission, as dengue mosquitoes reproduce more quickly and bite more frequently at higher temperatures.⁷ Increasing temperatures may enable greater spread and transmission in low-risk or currently dengue-free parts of Asia, Europe, North America, and Australia.⁸
 - Climate change may also affect the geographic range of dengue through its effects on human and natural systems, such as water storage, land use, and irrigation.⁸

Locally acquired cases of dengue are now observed on an almost annual basis in many European countries,¹ including reported cases in Spain in 2019 and France and Italy in 2020.⁹

In 2022 more than 1.2K cases of dengue were reported across U.S. states and territories.¹⁰

Risk to Travelers

- Dengue is a **leading cause of fever among travelers** returning from Latin America, the Caribbean and Southeast Asia and is the second-most diagnosed cause of fever in travelers returning to Europe from endemic countries.^{11,12}
- The threat of disease is present for the more than 26 million people from Europe who typically travel to endemic regions each year for holidays and visiting friends and family.¹³



Controlling Dengue

- Current efforts for dengue control are directed at reducing infection rate through vector control methods, such as personal protection, biological control, chemical control and environmental management of mosquitoes¹:

- **Preventing breeding:** Removing or applying insecticide to outdoor water storage containers;
- **Emergency control measures:** Space spraying of insecticide (i.e., fogging) during outbreaks;
- **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 for vector control;
- **Active mosquito and virus surveillance:** Build surveillance measures to monitor mosquito populations.



- An integrated dengue prevention and control strategy, including vaccination, is important to combating dengue, as recommended by the World Health Organization (WHO).

References

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