

01 May 2024

## Global dengue risk reminder

**Dengue is a virus spread by mosquitoes found in tropical and sub-tropical regions worldwide, including parts of Europe**

[Dengue](#) is a growing public health concern, with the World Health Organization (WHO) advising that approximately four billion people in 130 countries are at risk of infection. Since the beginning of 2023, the world has faced an unexpected rise in dengue cases and deaths in countries with an established risk of dengue (endemic) and dengue has spread into regions previously thought to be dengue free [1, 2].

As of April 2024, over five million dengue cases and over 2000 dengue-related deaths have been reported worldwide since the beginning of 2024 [3]. An increase in dengue cases has been reported in several regions, including Asia, Central and South America and across the Caribbean [2-6].

Dengue is not endemic in Europe. However, if environmental conditions are favourable in areas of Europe where mosquitoes that can carry dengue are found, travel-related cases may cause local dengue spread. Several European countries have previously reported locally acquired cases of dengue. In 2023, locally acquired cases have been reported in France, Italy and Spain [7, 8].

Dengue is caused by a virus (Flaviviridae virus family) and is spread by the bite of an infected mosquito (Aedes) which mainly feed during daytime hours. There are four different types of dengue virus: DENV- 1, DENV- 2, DENV- 3 and DENV- 4.

Most people infected with dengue remain symptom-free. If illness develops, it usually begins suddenly with a high fever, severe headache, muscle and joint pain, nausea, vomiting and a rash. Most infections are self-limiting, with a rapid recovery three to four days after the rash appears.

A small number of infected people develop a severe illness called severe dengue (previously sometimes known as dengue haemorrhagic fever). Symptoms include dangerously low blood pressure (shock), fluid build-up in the lungs and severe bleeding (haemorrhage). All four types of dengue virus infection can cause either dengue or severe dengue.

There is no specific drug treatment for severe dengue illness, but supportive treatment for shock and bleeding improves survival. Without this, severe dengue illness can be fatal.

## Advice for travellers

### Before you travel

All travellers (including [cruise](#) passengers) visiting areas reporting dengue cases or anywhere dengue is thought to be present are at risk of infection.

- See our [Country Information](#) pages 'Other Risks' section to check the dengue risk at your destination and for specific advice about other health risks.
- Check [Foreign, Commonwealth and Development Office \(FCDO\) country advice](#) for safety and security information for your destination.
- See your GP, practice nurse, pharmacist or travel clinic to make sure all your recommended

travel vaccines and UK routine vaccines, including MMR, are in date.

- There is a live, attenuated (weakened) dengue vaccine called Qdenga® licensed in the United Kingdom (UK), but it is not suitable for all travellers. Please see our news item: [Qdenga® dengue vaccine guidance](#) for more information.

### **While you are away**

Reduce your risk of all insect spread illnesses, including dengue, by wearing long sleeved tops and long trousers and applying insect repellent regularly.

Follow [insect and tick bite avoidance advice](#) carefully at all times.

- As dengue is spread by day-biting mosquitoes, take particular care during the day, especially around dawn and dusk.
- Remember dengue is a risk all year round in tropical countries.
- Insect repellent should be applied after sunscreen and regularly reapplied after any activities, including swimming.
- 50% DEET (N, N-diethyl-m-toluamide) based insect repellents are the most effective repellents currently available and can be used if you are pregnant or breastfeeding and for children from two months of age.
- If DEET is unsuitable, alternative insect repellents containing Icaridin (Picaridin); Eucalyptus citriodora oil, hydrated, cyclized; or 3-ethylaminopropionate should be used.

If you are staying with friends or family, reduce mosquito breeding sites around the home by removing any pools of stagnant water in plant pots, gutters, drains and rubbish [9]. Insecticide treated bed and cot nets offer good protection against mosquito bites when sleeping during the day [2].

See [Mosquito bite avoidance for travellers](#) for more advice.

### **When you return**

If you have symptoms such as high fever and severe headache or a rash within two weeks of your return from a country with a risk of dengue, get urgent medical help and remember to tell your GP or nurse about every country you visited.

## **Advice for health professionals**

There is a live, attenuated (weakened) dengue vaccine called Qdenga® licensed in the United Kingdom (UK), but it is not suitable for all travellers. Please see our news item: [Qdenga® dengue vaccine guidance](#) for more information.

Health professionals should consider the possibility of dengue in all returned UK travellers with a fever or flu-like illness who have recently visited dengue risk regions.

Health professionals who suspect a case of dengue in a returned traveller, should discuss this urgently with their local microbiology, virology or infectious diseases consultant, giving a full travel/clinical history. They may advise that appropriate samples are sent for testing to [specialist laboratory facilities](#) at the [Rare and imported pathogens laboratory \(RIPL\)](#) in the UK.

## **Resources**

- [Dengue factsheet](#)

- [NHS: Dengue](#)
- [Travelling to visit friends and relatives](#)
- [World Health Organization: Dengue and severe dengue](#)
- [UK Health Security Agency: Travel associated infections](#)

## References

1. [World Health Organization. Dengue: WHO Health Emergency Appeal 2024. 15 January 2024. \[Accessed 1 May 2024\]](#)
2. [World Health Organization. Disease Outbreak News. Dengue - Global situation. 21 December 2023. \[Accessed 1 May 2024\]](#)
3. [European Centre for Disease Prevention and Control. Dengue worldwide overview. Situation update April 2024. \[Accessed 1 May 2024\]](#)
4. [Pan American Health Organization. Situation Report No 13 - Dengue Epidemiological Situation in the Region of the Americas - Epidemiological Week 12, 2024. Last updated 18 April 2024. \[Accessed 1 May 2024\]](#)
5. [World Health Organization Western Pacific Region. Update on the Dengue situation in the Western Pacific Region. 14 March 2024. \[Accessed 1 May 2024\]](#)
6. [World Health Organization Regional Office for South-East Asia. Epidemiological Bulletin 8<sup>th</sup> Edition \(2024\). Reporting period: 25 March - 17 April. WHO Health Emergencies Programme. 17 April 2024. \[Accessed 1 May 2024\]](#)
7. [European Centre for Disease Prevention and Control. Autochthonous vectorial transmission of dengue virus in mainland EU/EEA, 2010-present. Last updated 4 March 2024. \[Accessed 1 May 2024\]](#)
8. [UK Health Security Agency on behalf of the joint Human Animal Infections and Risk Surveillance \(HAIRS\) group. HAIRS risk assessment: Dengue. 6 February 2024. \[Accessed 1 May 2024\]](#)
9. [Caribbean Public Health Agency. CARPHA encourages member states to reinforce measures to reduce the spread of dengue and other mosquito borne diseases. 23 November 2023. \[Accessed 1 May 2024\]](#)