

## How can you help reduce your risk of infection?



**Talk to your healthcare professional** about a full travel health risk assessment before travelling<sup>8</sup>



**Avoid mosquito bites**, especially from dusk to dawn (when mosquitoes are most active)<sup>3,8</sup>



Use a recommended **insect repellent** containing either DEET (50%), picaridin (20%), or highest strength formulation of eucalyptus oil<sup>8</sup>



**Wear appropriate clothing** (e.g. long-sleeved shirt, long trousers) to minimise exposed skin and **use mosquito nets** for additional protection<sup>8</sup>

Scan QR code



Talk to your healthcare professional today or visit **bewareofthebugs.com** to start your online consultation now.

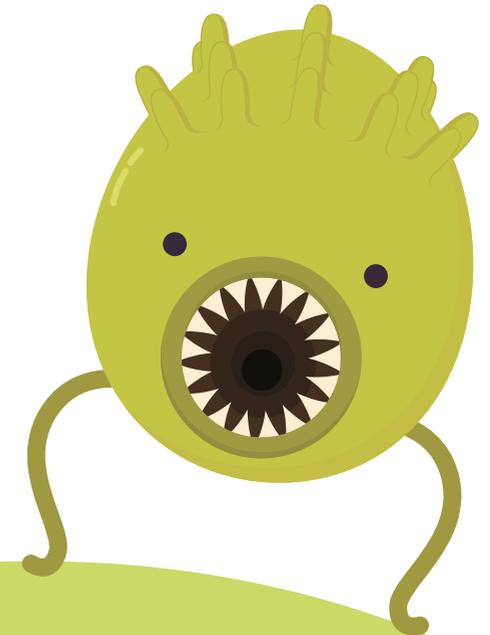


## Japanese Encephalitis

# Just one bite is all it takes

### Are you willing to take the chance?

People travelling to Asia, the Western Pacific or Australia may be at risk from Japanese encephalitis, a virus passed on through mosquito bites<sup>1,2</sup>



**References:** 1. World Health Organization. Fact sheet: Japanese encephalitis. May 2019. Available online: <https://www.who.int/news-room/fact-sheets/detail/japanese-encephalitis>. (Last accessed October 2023). 2. Centers for Disease Control and Prevention. Yellow Book 2024. Section 5 - Travel-Associated Infections & Diseases. Japanese encephalitis. May 2023. Available online: <https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/japanese-encephalitis>. (Last accessed October 2023). 3. Pavli A, Maltezos HC. Travel-acquired Japanese encephalitis and vaccination considerations. *J Infect Dev Ctries*. 2015;9(9):917-924. 4. Murty US, et al. The effects of climatic factors on the distribution and abundance of Japanese encephalitis vectors in Kurnool district of Andhra Pradesh, India. *J Vector Borne Dis*. 2010;47(1):26-32. 5. Tian HY, et al. How environmental conditions impact mosquito ecology and Japanese encephalitis: an eco-epidemiological approach. *Environ Int*. 2015;79:17-24. 6. Centers for Disease Control and Prevention. Japanese Encephalitis Virus. Geographic Distribution of Japanese Encephalitis Virus. April 2023. Available online: <https://www.cdc.gov/japaneseencephalitis/maps/index.html> (Last accessed October 2023). 7. Turtle L, et al. 'More than devastating'-patient experiences and neurological sequelae of Japanese encephalitis. *J Travel Med*. 2019;26(7). 8. Public Health England. Mosquito bite avoidance: advice for travellers. January 2023. Available online: <https://www.gov.uk/government/publications/mosquito-bite-avoidance-for-travellers>. (Last accessed October 2023).

- ▶ Up to **1/3** of people who develop encephalitis **die**<sup>1</sup>
- ▶ Up to **1/2** of survivors suffer **permanent, life-changing neurological or psychiatric problems** such as paralysis, seizures, or the inability to speak<sup>1,2</sup>
- ▶ **Most** infections are **mild** or show **no symptoms**<sup>1</sup>

Japanese encephalitis can include severe symptoms such as sudden onset of high fever, headache, disorientation, seizures, spastic paralysis, and coma.<sup>1</sup>

## Are you at risk of getting Japanese encephalitis?

### ► Mosquitoes may bite as soon as travellers arrive:<sup>3</sup>

39 cases of Japanese encephalitis sorted by duration of travel\* (1992-2012)<sup>3</sup>

**51.2%** of cases during trips of <4 weeks

**43.5%** of cases during trips of >4 weeks

*\*unreported duration of travel for 5.3% of travellers*

### ► People are at risk in both urban and rural areas:<sup>2,4</sup>

Density of a *Culex* species mosquito in the region of Andhra Pradesh, India<sup>4</sup>

**36** mosquitoes PMH\* in rural regions

**83** mosquitoes PMH\* in urban regions

*\*per man hours. This is a measure of the density of mosquitoes calculated by dividing the number of mosquitoes collected by the number of man-hours spent in the collection.*

### ► Global warming is increasing the risk of mosquito-borne diseases as it creates favourable breeding conditions for mosquitoes<sup>5</sup>



## Where do travellers get Japanese encephalitis?

Japanese encephalitis has spread. You can now get it in **25 countries in Asia and the Western Pacific**.<sup>1,6</sup>

### ► In 2014/2015, three British travellers became infected with Japanese encephalitis:<sup>7</sup>



**21 year old female travelling in Thailand:** Heart stopped beating in hospital; recovered but persistent fatigue even 2.5 years later



**31 year old female travelling in China:** Now significantly paralysed and requires a ventilator to help with breathing



**24 year old male travelling in Thailand, Laos, Cambodia and Vietnam:** Significantly paralysed (all four limbs) and requires a ventilator to help with breathing