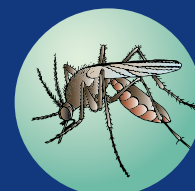


Mosquito bite avoidance for travellers

In many tropical countries, mosquitoes can spread diseases such as dengue, chikungunya, West Nile, malaria, yellow fever and Zika. Here are five simple rules you should follow to reduce your risk of infections spread by mosquitoes.



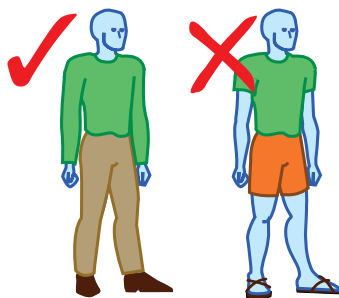
1 Know the disease risks and the best ways to avoid them



A variety of diseases across the world are transmitted by the bites of mosquitoes. Many diseases result in mild symptoms but others, such as malaria and dengue, have more serious consequences. Currently many countries in the Caribbean, South and Central America, Oceania and some parts of Asia and Africa have high or moderate transmission of Zika virus. This generally causes no or mild symptoms but has been established as a cause of birth defects – in particular microcephaly (this means an abnormally small head and can be associated with abnormal brain development).

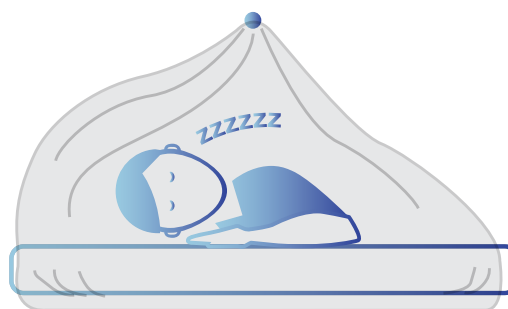
Therefore it is important that before travelling, you seek advice from your local GP, practice nurse or a travel clinic, ideally four to six weeks in advance of your trip to get the best tailored health advice. This is especially important if you have an underlying health condition, are pregnant or are trying to get pregnant. You may need specific vaccines or anti-malarial tablets for certain countries. Detailed travel health advice for your destination, including disease risks associated with each country and how best to avoid them, is available from the [National Travel Health Network and Centre \(NaTHNaC\)](#) website or the Scottish travel health service [fitfortravel](#) and [TRAVAX](#) (for health professionals).

2 Cover up



Mosquitoes can bite throughout the day and night, indoors and outdoors. The mosquitoes which transmit dengue, chikungunya and Zika bite predominantly during the daytime and at dusk. When possible, wear loose fitting clothing with long sleeves and long trousers, socks and shoes. Permethrin treated clothing provides significant protection against biting mosquitoes.

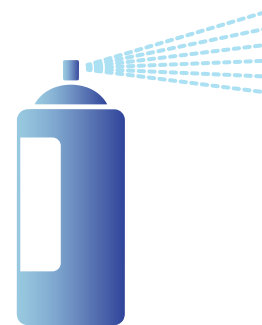
3 Nets



If sleeping or resting in unscreened accommodation day or night, or sleeping outdoors, **insecticide-treated mosquito nets** should be used. Nets are more effective if treated with insecticide. The nets should be free of tears and should be tucked under the mattress.

4 Repellent

It is important to use an insect repellent day and night, indoors and outdoors, on any exposed areas of skin. Only insect repellents which contain one of the three active ingredients: DEET, Picaridin (20%) and lemon eucalyptus extract or PMD are recommended. 50% DEET is most effective, has the longest duration of action and needs fewer applications per day. DEET is recommended for pregnant women as there is evidence that it has no adverse effects on mother or unborn child.



Remember to

- apply insect repellent according to instructions on the label – rub the repellent into the skin ensuring all skin is covered
- **reapply** repellent frequently, especially in hot countries and after swimming
- apply repellent after sunscreen when using both together (30 to 50 SPF sunscreen should be used to compensate for DEET-induced reduction in SPF)
- don't use DEET for babies younger than two months
- use DEET in concentrations up to 50% in pregnant or breast-feeding women, and in infants and children older than two months
- **take supplies with you** – in case there is a shortage in countries where outbreaks are occurring

5 Feel unwell, seek medical attention



Those with a fever (38°C or more) or other symptoms during or after travel should seek prompt medical help. Malaria, dengue and other serious diseases need to be excluded or treated. If you become unwell on your return, make sure to tell your doctor about any trips abroad you have taken in the past year.

If you are pregnant and have a history of travel to an area with high or moderate Zika virus transmission, see your GP or midwife and mention your travel history even if you have not been unwell.

Key facts for mosquito bite avoidance

- bite avoidance **at all times** including during the day, is important
 - cover up
 - use repellents
 - use nets
- mosquitoes which transmit Zika, dengue and chikungunya infections bite predominantly during the daytime and at dusk
- mosquitoes which transmit malaria bite predominantly in the evening and at night

Websites for specific disease information:

Zika

<http://www.nhs.uk/Conditions/zika-virus/Pages/Introduction.aspx>

Dengue

www.nhs.uk/Conditions/dengue/Pages/Introduction.aspx

Malaria

www.nhs.uk/Conditions/Malaria/Pages/Introduction.aspx

Chikungunya

<https://www.gov.uk/guidance/chikungunya>

For more information, please go to:

NaTHNaC <http://travelhealthpro.org.uk>

Fit for travel www.fitfortravel.nhs.uk/home.aspx

TRAVAX www.travax.nhs.uk

Health Protection Scotland www.hps.scot.nhs.uk

Public Health England www.gov.uk/phe