

# Mosquito protection

**Biting insects** exist worldwide. In colder climatic regions there are mainly problems with the experience of mosquito bite pains and possible allergic reactions. In tropical and subtropical regions, mosquitoes can also be vectors of numerous pathogenic germs.

There are many different types of disease-carrying mosquitoes. The main types are the following:

<b>Anopheles mosquito</b> (crepuscular and nocturnal)	e. g. Malaria
<b>Aedes mosquito</b> (diurnal)	e. g. dengue fever or yellow fever
<b>Culex mosquito</b> (crepuscular and nocturnal)	e. g. Chikungunya-Virus oder japanische Enzephalitis

## Sleeping area

The room can be kept mosquito-free with air-conditioning. After **cooling it down** to 16 degrees (e.g. during dinner), the remaining mosquitoes can be killed mechanically. Open windows and light on the other hand attract them. If there is no air-conditioning, you should sleep under an impregnated mosquito net (e.g. with permethrin).



## Clothes

Long, light coloured and mosquito-dense clothes (e.g. linen) and socks are recommended. Additional impregnation of clothes (e.g. with permethrin spray or permethrin flushing solvent) increases the protection considerably.

## Repellents

The synthetic repellents (DEET and Icaridin) are far superior to the biological repellents (bergamot, coconut, citrus and lavender oils). The duration of action highly fluctuates due to sweating or outdoor temperatures and depends on the product and contact with water. The product should be reapplied every 4–8 h. Ideally, you should always apply sunscreen first and then the repellent.

DEET (Diethylmethylbenzamide) is recommended by the WHO due to its very good results of risk-benefit experiences and should be applied in concentrations of at least 30–50%. The repellent should not be applied on damaged (e.g. sunburn) or sensitive skin or in close proximity to mucous membranes (such as mouth or eyes). Furthermore, DEET can cause skin irritations and allergic reactions. It should also be noted that DEET damages plastics as e.g. in sunglasses, mobile phones or bracelets by causing discolouration. The application during pregnancy and on newborns should be avoided since there is not enough data on the subject. DEET is generally deemed safe for children aged 3 months and over (according to the WHO), but should still be used sparingly. In Germany, DEET is only authorised for use from the age of 2.

The mosquito protection Icaridin (at least 30%) is nearly as effective as DEET and considered well-tolerated in comparison. Due to lack of experiences, Icaridin is still not recommended by the WHO. It is assumed to be harmless during pregnancy and whilst breastfeeding, but there are still not enough research results available.

**Trade names** (selection):

DEET: Care plus® DEET, Nobite® Skin Spray, Autan® Tropical, ANTI BRUMM® Forte, ANTI BRUMM® Ultra Tropical

Icaridin: NOBITE Sensitive

Permethrin: NOBITE Clothing (spray or flushing solvent)