

Malaria: Avoiding Mosquito Bites

To avoid getting malaria you will need to take every precaution to avoid being bitten by mosquitoes.

The Anopheles mosquito that spreads malaria starts biting about an hour before sunset and continues to feed through the night until about an hour after dawn.

You will probably also need to take malaria prevention tablets.

How can I avoid being bitten?

Mosquito nets

Sleep under a mosquito net that has been treated with the insecticide permethrin or another insecticide. Most nets sold in the UK and increasingly in other parts of the world are pre-soaked. Usually you will need to re-soak your net after 6 months as the effectiveness of permethrin gradually wears off. Permethrin kills mosquitoes that land on the net.

Insect repellents

Mosquitoes are attracted to your body's heat and odour. Using insect repellents on all exposed skin (avoiding the eyes and mouth area) is an important way of preventing insect bites.

There are a number of different repellents available, but the most effective ones are those that contain 50% DEET. Using a stronger concentration makes little difference. Those who are likely to be outside after sunset in malarious areas are strongly recommended to apply insect repellent thoroughly to all exposed areas of the skin, and reapply frequently, especially in hot or humid conditions. DEET should not be applied to the eyes and lips, or to deep skin folds. Wash your hands after applying DEET.

As well as applying DEET to the skin you can also apply it to cotton, linen or woollen clothing. However, DEET tends to destroy plastic, including spectacle frames, cameras, and nail varnish and synthetic fabrics.

DEET at a concentration of 50% is now recommended by most experts as a safe and effective way of preventing mosquito bites, both in adults and in children over the age of 2 months.

Cover your skin

Wear light coloured, long sleeved clothing and long trousers to cover your skin so that the mozzies have more difficulty finding a tasty part of you to feed on. This may not always be pleasant in the heat of the tropics, but do think about covering up, particularly if going out in the evening.

Mozzies particularly like the wrists, ankles and feet, so using impregnated bands on the wrists and ankles and wearing socks can help to keep them away. Remember that a determined mosquito can bite through socks, or even a pair of jeans, so covering up alone is not enough.

Soak or spray your clothes

You have two options:

- Use DEET based products - Expedition 100 Insect Repellent Spray is an effective brand. A sprayed garment (eg a T-shirt or socks) remains repellent for a few days. Respray when you wash the garment, and do not wear it when wet from the spray. ONLY use it on cotton, linen or wool. Alternatively you can soak appropriate clothes in a DEET solution
- Use Permethrin. You can spray clothes with permethrin, often marketed as Bug Proof. One treatment lasts about two weeks. It is better not to use this in children and in the UK it is only licensed for use in adults.

Remember that DEET repels mosquitoes but does not kill them; permethrin kills but does not necessarily repel them.

Suggestions for areas where there is a severe mosquito or insect nuisance:

- When outside in the evening wear appropriate clothing, sprayed with Bug Proof, thoroughly apply a 50% DEET-based insect repellent to your skin, and wear wrist and ankle-bands and thick socks.
- Inside the house use permethrin-impregnated bed nets (and curtains) and screen windows and doors.
- When walking outside in highly affected areas, including trekking in tick-and leech-infested country, use DEET insect repellent on the skin and permethrin-sprayed clothing.

Consider your accommodation

If you have the luxury of air conditioning or a fan, use it! Air-conditioning means that the room is largely sealed and too cold for mosquitoes to enter.

Also think about whether there are times when you are going to be at extra risk, e.g. camping by a lake or out in the evenings and make sure that you take extra care with the insect repellent precautions at these times.

Screen your room

In areas with many mosquitoes, fix fine metal screening to your windows and doors, and make sure they are kept closed from about an hour before sunset to well after sunrise. Check for any holes or gaps in the screening. The netting should have six or seven threads per centimetre width. Where dengue fever is common, keep your windows and doors closed throughout the day - especially during the morning and at least two hours before sunset when the Aedes mosquito does most of its mischief.

Deal with the source

- Try to eliminate breeding sites near the house. These include thick vegetation, ponds, areas of stagnant water including animal hoof prints, rainwater tanks with poorly fitting lids, the axils of leaves, old vehicle tyres, pots on the verandah and the tops of bamboo canes. Mosquitoes can fly at least a mile, but eliminating the breeding sites within the immediate area of the house reduces the number. These measures also help prevent dengue fever, commoner in some areas, than malaria, especially cities in Southeast Asia and South America.
- Make sure that open water tanks are screened, using the same mesh size as for house screening.

- Arrange for the government spraying team to visit your area. Consider stocking nearby ponds or paddyfields with larvicidal fish, e.g. guppy, or procuring polystyrene beads to put into wet pits and pit latrines.

Other precautions

Mosquito coils, electric mosquito killers (that release an insecticide) or a knockdown room spray all work in a similar way by killing mosquitoes and other insects that are in the room. Mosquito coils should only be used in a well-ventilated room. They are available cheaply in most countries, but beware of fake products. If using a knockdown spray, spray sleeping areas, being careful to include dark corners, hidden areas behind cupboards, under beds, and most important of all the bath or shower room. Note that these sprays do not necessarily kill mosquitoes that arrive after you have finished spraying.

If your limbs rest against your net as you sleep the mosquitoes can still bite you. Buy a roomy net and make sure that it is treated with permethrin for extra protection.

There is no evidence that electronic buzzers, Vitamin B or garlic deter mosquito bites.

Further Information

InterHealth's Travel health Advice Centre (THAC) is available to travelwellplan subscribers. Please visit our website to find out more.

<http://www.interhealth.org.uk/our-services-travelwell-plan-travel-health-advice-centre.html>

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