# Be shy, don't get bitten!

## Travelling soon? Visiting exotic places? Are there mosquitoes at your destination? If so read on!

Using prophylaxis against malaria is very effective if used properly. But it does not prevent mosquito bites. It prevents disease but it certainly does not prevent the protozoa to be injected into our flesh by the blood seeking female anopheles! Between 300 and 600 million earthlings annually suffer some form of attack with more than a million succumbing to malaria. Yellow fever is another mosquito spread disease that can be very effectively prevented by vaccination. It again prevents disease but not mosquito bites. The malaria mosquito bites dusk to dawn, the yellow fever causing one bites aggressively during the day and some species bite anytime. Some are found exclusively outdoors, others prefer the darker recesses of our abodes but we can be sure that no matter where or what time in the tropics and beyond we find ourselves; mosquitoes are virtually everywhere.

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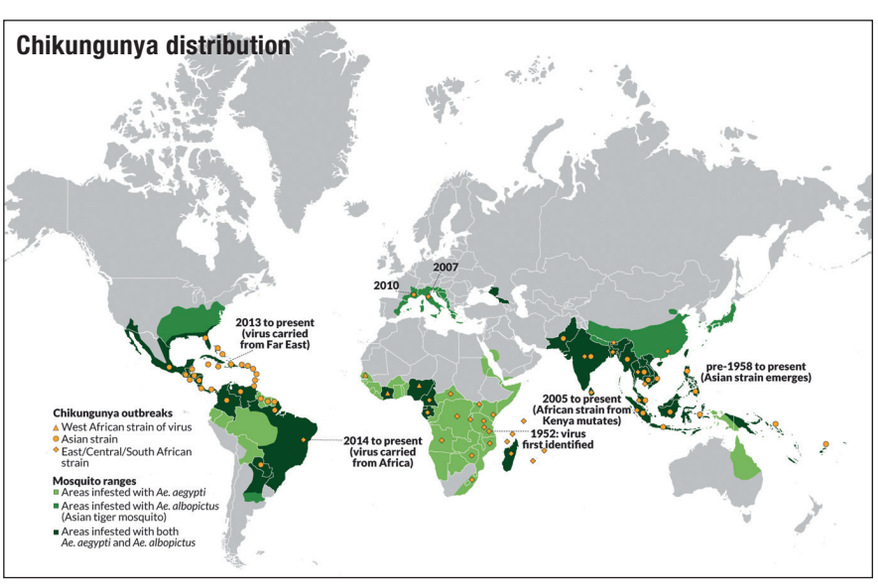
Aedesaegypti is the mosquito that spreads yellow fever. It also spreads dengue fever, which can cause a fatal haemorrhagic disease. In its saliva it can carry the chikungunya virus, which causes the infamous 'bending disease' due to the severe joint pains casing those afflicted to adopt abnormal postures. Lately it again has been prominent in the medical and social networks due to it spreading the zika virus which has been implicated in microcephaly and GuillaineBarre syndrome. If that is not concerning enough it has to be noted that

Aedes aegypti

sometimes one mosquito can carry more than one of these organisms. Unfortunately there is no vaccine or other medical prophylaxis to prevent infections caused by these viruses. Getting rid of all mosquitoes is really an unrealistic option presently, so there is only one practical solution: prevent being feasted upon by the tiny bloodsuckers!

Numerous strategies can be employed to prevent being bitten. They involve covering up and minimising the area of skin exposed, having an awareness of the prime biting time of the mosquitoes at particular destination, ensuring that the accommodation used is mosquito free or armed against invasion, the appropriate use of effective insect repellents on the skin as well as the pre-treatment of clothing with insect repelling chemicals. It is also important to be aware of what does NOT work despite being advertised extensively. Herbal and homeopathic remedies have no studies to prove efficacy and the producers of electronic buzzers have been prosecuted in the UK for claiming unproven benefits. Vitamin formulations of B1 and B12, garlic, tea tree oil and oil of citronella products also have no scientific literature to back their claims.

The tropics may be very hot and humid but long sleeved light coloured clothing can be comfortable and of course effective in preventing in the little critter being attracted to your sweat and CO2 emissions. Aedes




# TRAVEL MEDICINE

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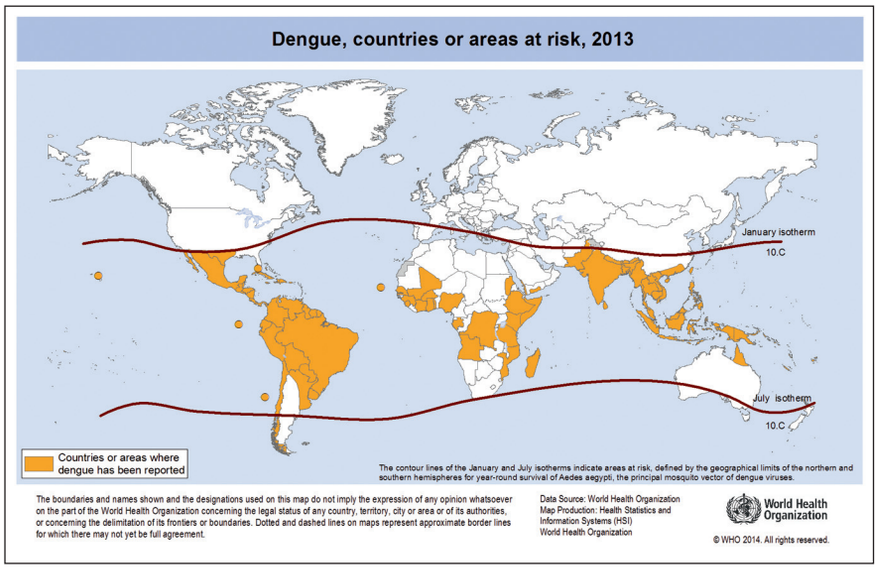
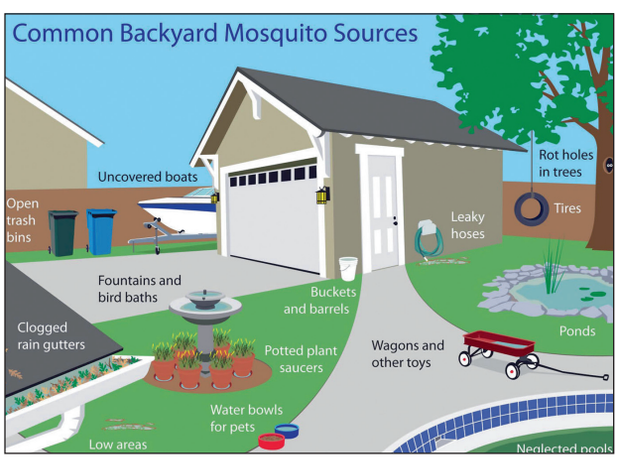



especially punches way below the belt and has a predilection for the ankle and feet, so wearing socks and shoes outdoors is advised. Mosquitoes breed in areas where there is stagnant water and avoiding such places is advised. Air conditioners in the room reduce the likelihood of being bitten and allow windows and doors to be closed at night and prevent the entry of insects in hot climates. Ceiling fans help somewhat in the absence of air conditioners and a knockdown spray at dawn should get rid of creatures that sneaked in during the day. Electric vapour mats are useful but have to be replaced each evening. Bed nets provide a physical barrier and should not have holes in them and should be long enough to tuck in under the mattress. Newer, longlasting insecticide impregnated mosquito nets remain effective for up to three years.

**Applying insect repellent to exposed skin is important in preventing getting bitten. It should not be applied under the clothing, over cuts, wounds or irritated skin.**




Permethrin is a useful repellent and insecticide. Products containing permethrin are now readily available and can be used on clothing, shoes, bed nets, tents and other camping gear. Permethrin-treated products repel and kill ticks, mosquitoes, and other arthropods. These products continue to repel and kill insects after several washings. Different formulations such as an easy spray bottle aid simplicity of use. The products remain effective even after clothes have been washed a few times and manufacturers' guidelines should be followed as when to reapply it.

Applying insect repellent to exposed skin is important in preventing getting bitten. It should not be applied under the clothing, over cuts, wounds or irritated skin. Generally speaking the higher the concentration of the active ingredient the longer the duration of protection but a ceiling of efficacy is reached. Diethyl-m-toluamide (DEET) - based insect repellents are recommended in South Africa and are considered to be the gold standard. Though side effects to DEET products have been reported, these have been associated with swallowing the product or spraying it directly into the eyes, and the product is considered very safe if used correctly. Children should not handle DEET products and it is advisable for adult to spray it onto their own hands and then apply it to the smaller ones. Kids have a tendency to put their hands into their mouths or to rub their eyes, so their hands should not be sprayed.

DEET should not be applied directly to the eyes or mouth. It should rather be sprayed on to the hands and then applied to the face. It should be used sparingly as heavy applications do not increase the duration or efficacy of protection. DEET 5% is effective for about two hours whilst the 30% formulation has six hour duration of protection. Concentrations over 50% do not add any additional benefit. Concentrations of 20-50% are recommended for adults and children over the age of two months. It can also safely be used by pregnant women. Once indoors in a mosquito free environment, the treated skin should be washed.

Preventing being bitten not only protects the individual; it also prevents that traveller from potentially exporting the disease to their own country and starting an epidemic there. Aedes is found in certain areas of South Africa and it is possible that a returning dengue infected traveller can be bitten by a local mosquito and spread the disease here. So let's enter the battle with the best shields available and shy away from being bitten!