



INSECT PROTECTION and INSECT BORNE DISEASES

Mosquitoes and other insects such as sandflies can spread disease. For the majority of these illnesses, there are no preventative vaccines or tablets available, and often no specific treatment. Therefore the essence of prevention is to avoid being bitten in the first place. Important factors are seasonal variations and location - the combination of rainy seasons and rural areas usually results in a marked increase of most insect-borne illnesses.

FOUR STEPS TO MOSQUITO PROTECTION



PROTECTIVE CLOTHING

Wear long sleeved shirts and long trousers in light colours such as beige or yellow. Dark clothing attracts mosquitoes, as does the scent of perfume and aftershave. Clothing should be loose fitting and of a tightly woven fabric to provide a further barrier against mosquitoes. Malaria is spread by mosquitoes that bite at night but remember that other mosquito species bite during daylight hours and can cause infections such as dengue fever.

MOSQUITO REPELLENT

Apply mosquito repellent to all exposed areas of skin, as well as thin clothes. Avoid the eyes, mouth, wounds and irritated skin. DEET (diethyltoluamide) is the active constituent of most insect repellents that prevent mosquito bites. The active ingredient DEET keeps mosquitoes away but does not kill them. You should not apply more than 35% DEET to the skin. Since repellent gradually evaporates and some will be lost through perspiration, swimming and active exercise, re-apply it every two to three hours. When using sunscreen, apply that before your repellent; allow sunscreen to dry for 2-3 minutes and then apply the repellent. Take care when applying repellent on children by avoiding their hands, in case they touch their eyes or mouth.

PERMETHRIN

Permethrin is an insecticide that kills mosquitoes instantly. Impregnated onto fabric, it can last for up to 3 or 4 months or ten washes in cold water. We recommend that mosquito nets be treated with permethrin for added protection. Nets should be reimpregnated yearly. Permethrin can also kill bed bugs, flies and headlice. There are other insecticides that can be used to spray your room and inside the net before dusk and during the evening and night. The use of mosquito coils is also recommended.

MOSQUITO NETS

Mosquito nets are extremely important to prevent you being bitten while asleep if you are not in a secure environment. Netting should be stiff cotton or synthetic to allow the movement of air. The net must be white to allow the mosquito be seen against the background, and it should have a wide section left to be tucked under the mattress. Not one single tear should be permitted, since mosquitoes will spend hours searching for an opening. Mend any holes or tears with adhesive tape or thread. Nets impregnated with Permethrin will greatly enhance the effectiveness of the net.



SOME INSECT BORNE DISEASES

• DENGUE FEVER

This is the most common mosquito spread infection amongst travellers. Dengue is caused by a mosquito-borne virus, found in tropical, urban and rural areas worldwide between the latitudes at 30 N and 40 S. The offending mosquito is active day and night. There are no tablets or vaccines for prevention, and no specific treatment. Symptoms occur 5-8 days after being bitten, and include headache, fever, joint and muscle pains that can be severe. Commonly a rash develops after 3-4 days of fever. Generally dengue is an unpleasant flu-like illness which resolves without treatment in 1-2 weeks. Panadol and rest are useful for the fever and aches and pains. Dengue rarely becomes complicated by a tendency to easy bleeding especially in children - this requires urgent medical attention as fatalities may occur. Aspirin can worsen this condition and should be avoided. Dengue fever may be impossible to differentiate from malaria without a blood test - you should seek medical attention to exclude malaria infection.

• CHIKUNGUNYA FEVER

Since 2005, Chikungunya fever has been spreading rapidly around the tropics, with millions of people being infected. Areas at risk include Africa, Indian Ocean islands, India, and Southeast Asia. There is no vaccination available for this virus. Symptoms include fever, rash, painful swollen joints, headache, sore eyes, tiredness, and muscle aches and pains. If you develop these symptoms after travelling to risk areas, please see your doctor as soon as possible.

• JAPANESE B ENCEPHALITIS

This is also transmitted by mosquitoes and is predominantly found in rural rice-growing areas and areas of pig farming in Asia. Although this disease can be severe, the risk of contracting it is low, particularly for short-term travellers. The mosquito is most active in the rainy season, especially in the late afternoon or early evening. If you are a long-term traveller to these areas or staying in a high-risk area for more than 1 month, you may be advised to have the vaccine. Symptoms include nausea, vomiting and headaches.

(see separate fact sheet on Japanese B Encephalitis)

• ROSS RIVER VIRUS

Ross River virus is a mosquito-borne virus, occurring in Australia, PNG, Indonesia and some South Pacific Islands. The incubation period is 8-10 days. Symptoms include fever, rash, joint and muscle pains and headache. There is no specific treatment and it may take several months for tiredness and pains to resolve.

• LEISHMANIASIS

This is a curable disease transmitted by sandflies in Africa, the Caribbean, South America and West Asia. The incubation period is 2 weeks - 2 months. There are two types of disease -

1. Skin a bite that turns into an ulcer.
2. Visceral fever, sweats, tiredness and weight loss.



There are many other insect-borne diseases. If you feel unwell and have been bitten by insects we recommend you seek medical attention.

With commonsense and simple insect avoidance measures these diseases should not be a major problem. Unfortunately most of these illnesses closely resemble malaria in the early stages and we urge you to seek medical attention immediately should you develop a **FEVER** following travel in a malaria area, as this is potentially the most dangerous of the common insect borne infections. A blood test is the only accurate way to confirm or exclude malaria. Insect repellents and permethrin impregnated bed nets are invaluable travel companions!