

Adelphi University Travel Abroad

Protection against insect bites

Insects transmit many tropical and non-tropical diseases including malaria, dengue, yellow fever, Japanese encephalitis, tick borne encephalitis, West Nile virus and Lyme disease. For some diseases, avoiding bites is the only way to reduce the risk of infection.

Insect repellents

- Repellents containing DEET (N,N-diethyl-m-toluamide) are considered the “gold standard” as the most effective means to reduce the risk of getting bitten by insects. They are available in several different strengths and formulations. There is no need to use anything stronger than 50% DEET. Lower concentrations (< 20%) may require more frequent application. DEET should not be used over cuts, wounds or irritated skin.
- Products containing picaridin (at least 19% concentration of KBR 3023) or natural substances such as oil of lemon eucalyptus (chemical name: para-menthane 3, 8-diol-PMD) are also available and effective, though they may need to be applied more frequently than DEET. NOTE products labelled as “pure” oil of lemon eucalyptus, have not been registered by the EPA as a repellent.
- Repellents should be applied carefully to exposed skin, avoiding the eyes and mouth.
- Always follow manufacturer’s instructions, and reapply regularly especially after swimming. All products, including those purchased in a spray form, should be spread over the entire surface by hand.
- Repellents should be applied 20 – 30 minutes after applying sun protection lotion.
- Particular care should be taken when applying repellents to infants and children to ensure that they do not ingest them. Do not allow children to apply insect repellent themselves.
- As soon as the repellent is no longer needed, it should be washed off the skin with soap and water.
- There is no evidence that vitamin B or garlic protect against mosquito bites.

Mosquito nets

- In basic accommodation without screening or air conditioning, consider sleeping under a mosquito net. Bed nets should be tucked under mattresses.
- Nets should be impregnated with the insecticide permethrin.
- A small sewing kit is useful for making repairs to the net if necessary.

Clothing

- Tucking trousers into socks can help protect against ticks. Shirts should be tucked into pants.
- Clothing can also be purchased or treated with the insecticide permethrin.
- Wearing long pants and long sleeved shirts minimizes areas to exposed skin, and therefore the amount of skin repellent needs to be applied to.
- Wearing shoes and socks (not sandals) will minimize exposure.

Knock down sprays (canned aerosol sprays)

- Knock down sprays containing pyrethrum can be used to rid sleeping areas of insects.
- Plug in devices which release an insecticide vapour are also available, as are coils which can be burned in a well ventilated area. Insecticides should always be used with caution, avoiding direct inhalation of spray or smoke.
- Some products available internationally may contain pesticides that are not registered in the US.

What to do if you’ve been bitten

- Try not to scratch insect bites as they may become infected.
- Apply a mild, over the counter, hydrocortisone cream to reduce swelling.
- Antihistamine tablets can be taken to reduce itching.
- Ticks should be removed from the skin carefully with tweezers.
- The Centers for Disease Control and Prevention website has an illustration of the correct method of tick removal at <http://www.cdc.gov/ncidod/dvrd/rmsf/prevention.htm>

Travelers who develop a fever more than one week after being in a malaria risk area, or who develop any symptoms suggestive of malaria within a year of return should seek immediate medical care.

Reference:

CDC Yellow Book, Chapter 2 @ <http://wwwnc.cdc.gov/travel/yellowbook/2010/chapter-2/protection-against-mosquitoes-ticks-insects-arthropods.aspx>

CDC West Nile Virus-Questions and Answers @ http://www.cdc.gov/ncidod/dvbid/westnile/qa/insect_repellent.htm

Fradin MS, Day JF. Comparative efficacy of insect repellents against mosquito bites. N Engl J Med. 2002; 347(1):13–8.

