CIVIL AVIATION AUTHORITY

# UNITED KINGDOM

# AERONAUTICAL INFORMATION CIRCULAR

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## MALARIA

**1** Malaria continues to be a significant hazard for travellers from United Kingdom visiting tropical countries. In 1996 2,500 cases of malaria and 11 deaths were reported in the United KIngdom. As resistance to prophylactic drugs increases and becomes more widespread, appropriate advice becomes more important. Such advice should be sought from medical professionals who are specialists in the area and are familiar with the aviation environment.

1.1 The purpose of this Circular is to raise awareness amongst aircrew of the importance of malaria and to reinforce 'anti-bite' precautions.

1.2 Three components of protection are essential:

(a) **Awareness of risk**

In all countries where malaria is transmitted, there is a risk of contracting malaria and this possibility must be borne in mind in all cases of fever in those who have travelled abroad recently even if malaria precautions have been taken. There is no medication which is 100% effective in preventing malaria. Malaria in its early stages can be treated but requires prompt action. Late, severe or complicated malaria is life threatening and requires immediate specialist management.

(b) **Avoiding being bitten** by the mosquito which carries the malaria parasite which is called the 'anopheline' mosquito.

This basic strategy is often forgotten if there is over reliance on drug prevention. All travellers to malarial areas should therefore protect themselves from being bitten by:

(i) Sleeping in properly screened rooms and using a 'knock down' fly spray to kill any mosquitoes that may nave entered the room during the day;

(ii) using a mosquito net around the bed at night checking that there are no defects in the net and tucking the edges under the mattress before night fall. This form of protection may be augmented by impregnating the netting with permethin (0.2 grams per $m^2$ of material 6 monthly);

(iii) using an electric mat overnight to vaporise a pad impregnated with synthetic pyrethroids or burning mosquito coils. The commercially available electronic buzzers are ineffective;

(iv) wearing long-sleeved clothing and long trousers when out after dusk;

(v) using a repellent such as diethyl toluamide (DEET) on exposed skin or appropriate garments. A mixture of 30 mls of diethyl toluamide in 250 mls of water used to impregnate a garment makes it repellent.

Compliance with protective measures is the main determinant of their efficacy. The main stimulus to comply with treatment is increased awareness of the risks of the disease by all those travelling to malarial areas.

(c) **Anti-malarial drugs**

Under most circumstances, those travelling to malarial areas should start taking anti-malarial prophylaxis a week before departure and continue for 4 weeks after returning to the United Kingdom as well as taking them throughout the time they are abroad.

Specific advice on the appropriate drugs for particular regions of the world is inappropriate in an AIC, as resistance patterns change and up-to-date information must be sought. The Company Occupational Health Department or Medical Adviser is an important contact for such information. The World Health Organisation in Geneva continually updates its database (www.who.int/) and is a useful source, as is the UK National Malaria Reference Laboratory (Tel: 0900-160 0383).

There are numerous prophylactic regimes which have been utilised for many years without problems. Increasing resistance to drugs has led to the development of newer treatment regimes which are more effective, but may have more significant side effects. The choice of prophylactic drugs should be a matter for physicians with competency in infectious diseases and a knowledge of the aviation environment. A risk assessment based on drug resistance and potential side effects should always be made.

## 2 Standby Treatment

2.1 In the past emergency packs were used containing specific treatment should malaria be suspected. This approach is no longer used since the drug regime which was utilised had unacceptable side effects.

## 3 Summary

- Malaria remains a serious risk to international travellers.
- All aircrew should take sensible precautions to avoid being bitten by mosquitoes.
- Up-to-date advice on preventative drugs should be sought from medical professionals who have expertise in infectious diseases and have a knowledge of the aviation environment.
- Aircrew developing a fever on return from a malarial area should seek urgent medical advice and inform the doctor of their recent return from a malarial area.

This Circular is issued for information, guidance and necessary action.

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