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MALARIA 2000 AND SUGGESTED PROPHYLAXIS

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In 2000, 205 cases of malaria were notified by laboratories in Denmark, [Table 1](#), remaining at the same level as in 1999, EPI-NEWS 33/00.

Pharmacological prophylaxis

The aim of chemoprophylaxis is to prevent illness caused by *Plasmodium falciparum*. In travellers diagnosed after returning to Denmark the mortality is about 0.5%, as in the rest of Europe.

Three types of chemoprophylaxis are still being suggested:

I. Chloroquine; II. Chloroquine + proguanil; and III. Mefloquine, Malarone (atovaquone/proguanil) or doxycycline.

Chloroquine alone is only used for regions where chloroquine resistance has not been reported, i.e. limited to the Middle East and Central America.

Chloroquine + proguanil are used for regions where there are only few reports of prophylactic failure with this combination, or of chloroquine resistance.

Mefloquine, Malarone or doxycycline are used for regions with a major risk of falciparum malaria resistant to chloroquine i.e. principally tropical Africa. The three agents are about equally effective, although the documentation for doxycycline is somewhat limited. The choice between Mefloquine, Malarone or doxycycline is therefore made in consultation with the traveller, based on the length of stay and the possible side effects of the different agents, as well as their price.

Malarone

Malarone came into use in 1998. A questionnaire survey of Danish malaria patients in 1999 showed that four had used Malarone, two of whom had not followed the directions. Atovaquone is fat-soluble, and one of the reasons for prophylactic failure with Malarone is inadequate absorption. It is therefore important to inform users that it must be taken at the same time every day together with a meal containing fats. A prospective Danish study of side effects from Malarone and chloroquine + proguanil carried out in 1999 showed that the only significant difference was that the group who had taken Malarone showed a lower frequency

Table 1. Laboratory-reported cases of malaria, 2000

	Africa	Asia	Central/South America	Oceania	Not stated *)	Total 2000	Total 1999
<i>P. falciparum</i>	122	2		2	13	139	144
<i>P. vivax</i>	7	20	2	9	6	44	39
<i>P. ovale</i>	14				1	15	12
<i>P. malariae</i>	3					3	2
Mixed	1					1	3
Not stated	3					3	7
Total	150	22	2	11	20	205	207

*) Includes travellers to more than one continent

of stopping their medical prophylaxis and fewer gastrointestinal side effects. Malarone is registered for use for up to 28 days' stay in a malaria region.

Pregnancy

According to the WHO, mefloquine can be used by pregnant women after the 16th week, but doxycycline is absolutely contraindicated. As experience is lacking for Malarone in pregnancy, it cannot be recommended for the time being. There is thus no effective malaria prophylaxis for pregnant women travelling to tropical Africa during the first trimester.

Children

According to the WHO, mefloquine can be given to children weighing as little as 5 kg, for whom a ¼ tablet is recommended, but this is a relative overdose in comparison with the adult dose and will probably increase the risk of side effects. Mefloquine should only be used in children under 15 kg after careful consideration and with informed parental consent. Malarone can be given to children down to 11 kg, but is only available as tablets of ¼ adult dose, EPI-NEWS 20/99. Doxycycline is contraindicated for children under 12 years of age.

Asia

There are maps on the back of EPI-NEWS 33/00 and 19-20/99 showing regions where pharmacological prophylaxis is suggested for the Philippines, Thailand, Laos, Cambodia and Vietnam. As before, in Indonesia prophylaxis is not suggested for Jakarta or Bali. In China the risk of falciparum malaria is confined to the Yunnan and Hainan provinces, with a very limited risk of *P. vivax* infection in other parts of southern China.

Pharmacological prophylaxis is therefore only suggested for the Yunnan and Hainan provinces of China. The map overleaf shows the occurrence of falciparum malaria in India; prophylaxis can be reserved for areas of high risk.

South Africa

Travellers to the Kruger National Park will encounter recommendations to take prophylaxis. There is probably some resistance to chloroquine as the park borders on Mozambique. Danish travellers often stay for only a few days in the park, and Malarone would therefore seem to be the obvious choice.

Primary prevention

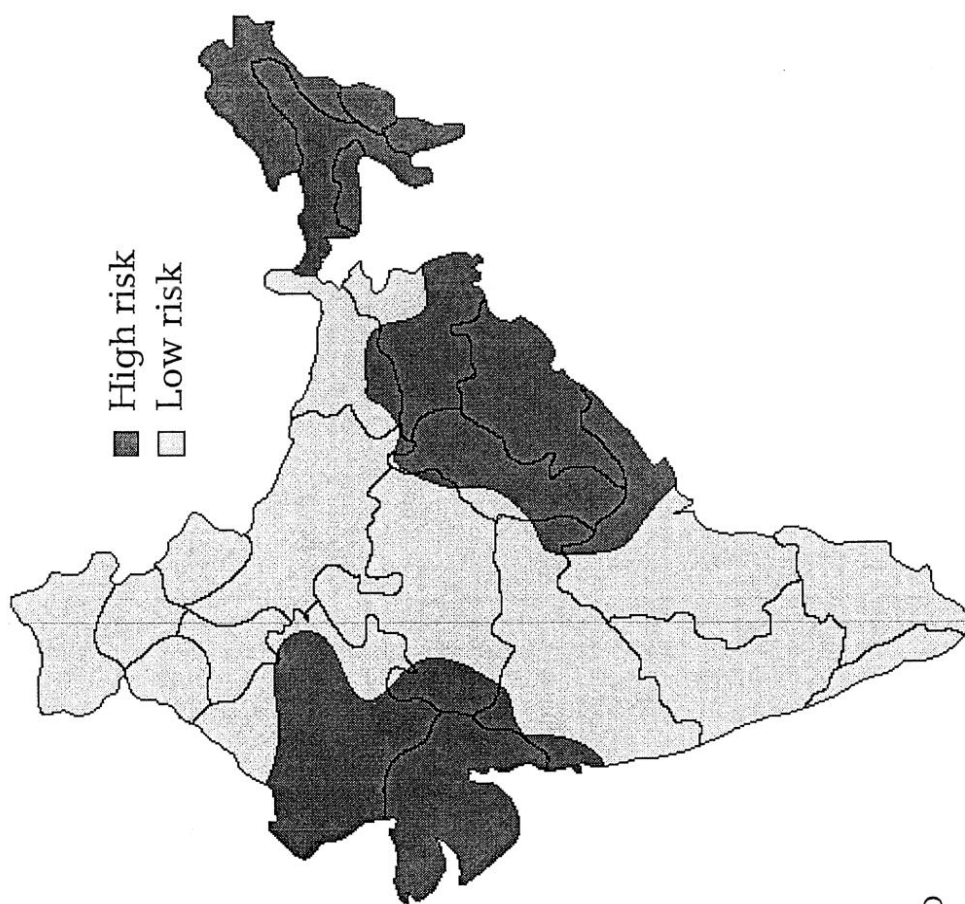
Prevention of mosquito bites is important. Mosquito repellents applied to the skin may have some action for a few hours, but do not provide adequate protection throughout the night. The preparations may give rise to local irritation and should not be used on children under 3 years. Several different mosquito repellents are now commercially available. A mosquito net impregnated with a synthetic pyrethroid placed around the bed yields up to 50% protection. The net must be big enough to ensure that body does not come into contact with it during the night and must be rolled up during the day to prolong the action of the impregnation.

Diagnosis

Statens Serum Institut has prepared simple instructions on how to make good blood smears for malaria diagnosis. The instructions can be obtained free from the Department. (E. Petersen, Dept. of TB and Parasitology)

30 May 2001

Malaria regions in India



Source: WHO