MALARIA

Malaria is a disease caused by a parasite (Plasmodium), which is transmitted by the bite of a specific mosquito (Anopheles). There are different species of Plasmodium, of which Plasmodium falciparum is the most dangerous. Anopheles mosquitoes are found in many tropical and subtropical areas. They only bite in the evening and at night. They are small and make hardly any noise. From an altitude of 1,500 to 2,500 metres, Anopheles mosquitoes are much less numerous, if not non-existent. The incubation period (time between the bite and the onset of the disease) varies on average between 7 days and 4 weeks (rarely several months).
Classic symptoms such as excess temperature, muscle pain, headaches, diarrhoea can be mistaken for a flu-like condition. The diagnosis can only be made by a blood test. If not treated correctly, such an attack can have a fatal outcome within a few days.

HOW CAN WE PROTECT OURSELVES FROM IT?

1. Protection against mosquito bites

Outside the house, between sunset and sunrise:

- Wear light, loose-fitting clothing at night, covering arms and legs as much as possible.
- Apply a DEET-based repellent cream (Care-Plus® Anti Insect DEET, Moustimug®, ...) to the uncovered parts of the body at a concentration of 20 to 30% (for children and pregnant women) or 50% for others (the higher the concentration, the longer the duration of action will be, with no additional benefit for concentrations > 50%).
- **DEET** attacks synthetic materials (glasses, watches, ...). Insect repellents which are not based on DEET but on picaridine, IR 3535 and Citrodiol also work but are less well studied. (Pre-impregnated clothes are also available in the trade that continue to be effective even after several washes).
- Essential oils of plants (citronella, geranium, neem, ...) do not have the effectiveness and persistence of the insect repellent substances of synthesis. In addition, they present a risk of photosensitization.

If these precautions are followed correctly, the risk of malaria is reduced by at least 80-90%.

In the bedroom:

- Place (insecticide-treated) mosquito nets around beds at night, especially for infants and young children, making sure that the net is securely fastened under the mattress, that there are no holes in it and that no mosquitoes are trapped inside.
- The use of insecticide sprays is effective but should be avoided near infants.
- Insecticidal smoke coils are used in the evening (outdoors). They are moderately effective.
- Air conditioning reduces the activity of mosquitoes without eliminating them.
- Ultrasonic devices that would 'hold' mosquitoes at a distance are ineffective!

2. Drug prophylaxis

In areas at high risk of severe malaria, mechanical protective measures should be accompanied by continuous antimalarial tablets as a preventive measure. The choice of prophylaxis depends on the type, time of year and duration of stay in the tropics and must also be adapted to the individual traveller. This also explains why people in the same group sometimes take different medicines. There are several prophylaxis regimens (**Malarone®**, **Lariam®** or **Doxycycline**) of similar efficacy:

- **Malarone®** (Atavaquone/proguanil) is very well tolerated but is relatively expensive (21 euros for 12 generic tablets, i.e. around 65 euros for one month's stay for the full regimen). It is therefore mainly offered for short-term travel.

Adult dosage: Malarone® 1 tablet daily (with a meal or milk drink), at the same time every day.

To start 1 day before departure, to be taken during the whole stay and to continue until 7 days after return.

- **Doxycycline** is usually well tolerated but may induce phototoxicity (1%) and oral and genital mycoses. It is contraindicated in children under the age of 8 and during breast-feeding. This drug is cheap (about 18€/month for the full regimen) and is particularly indicated for long stays.

Adult dosage: Doxycycline 1 tablet 100 mg daily (to be taken with a large glass of water while sitting and eating).

Avoid taking before bedtime.
Start the day before departure, take during the whole stay and continue until 4 weeks after return.

- **Lariam® (Mefloquine)** can be proposed especially for long stays (about 35 €/month for the complete scheme). It is much better tolerated by children than by adults and taking it once a week is a definite advantage.

Adult dosage: Lariam® 1 tablet at 250 mg/week to be started 3 weeks before departure, to be taken during the whole stay and continued until 4 weeks after return.

Sometimes serious neurological side effects (behavioural problems, anxiety, etc.) can occur in 2 to 5% of cases, and are only slowly reversible. Mefloquine is therefore reserved for special cases (prior intake without side effects, long-term stay but with a prior tolerance test).

All of these measures greatly reduce the risk of acquiring malaria, but unfortunately not 100%. This is why, in the event of **ANY TEMPRATURE**, when returning from the tropics (and within 3 months afterwards), one must always consider the possibility of malaria. A malaria test will then be urgently requested and the result must be known within a few hours. Malaria that is recognised in time can be treated without problems, and the idea that malaria is incurable is completely false. More specific advice for children and pregnant women is given on a separate sheet.