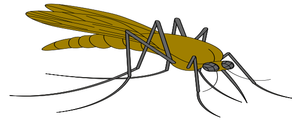
MALARIA



There is malaria in the country or countries to which you will be travelling. It is important, therefore, to understand how this disease is spread and how it is both prevented and treated.

There is no vaccine against malaria. When travelling to a malarial area **it is most important to prevent bites from the Anopheles mosquitoes that carry malaria.** We cannot hear this mosquito**.** It becomes active only in the cooler hours; i.e., after dusk, during the night and before dawn.. If you are out during these hours you should wear long sleeves and long pants, wear light coloured clothes, ***DO NOT*** **use perfume, cologne or after-shave** but **DO USE INSECT REPELLANT** on any exposed skin (such as the ankles, neck and wrists). (More information on the use of insect repellants can be found at http://www.phac-aspc.gc.ca/tmp-pmv/index-eng.php)

Remember especially to take these measures when you're having evening drinks or dinner out on the patio. At night you should sleep only in enclosed quarters (that have first been sprayed to kill any resting mosquitoes) or under a mosquito net that is tucked into the mattress all around. It is better still to soak mosquito nets and window curtains in a 1% solution of *permethrin* if possible. (Impregnated bed nets are available in Canada from Thai Occidental Ltd. 416/498-4277 or TRIPS 800/880-8747 and permethrin can be imported through www.Campmor.com in the USA). Insecticide sprays or coils that contain *pyrethrum* are effective and safe but should not be the sole means used. Insect repellants such as *OFF!*™ containing up to 30% DEET (diethyltoluamide) are recommended for all age groups, or products that contain 20% icaridin are also effective. The higher the percentage of DEET, the longer the duration of action. DEET should be washed off before going to bed. Repellants containing 90% DEET are no longer available in Canada. Carrying some tape (duct, adhesive) is also often useful to repair any openings in screens or bednets.

The Anopheles mosquito does not travel far and since their numbers are greater in rural areas than in urban areas (just like Canadian mosquitoes) there is generally a greater risk of getting malaria if you stay overnight in rural areas. This mosquito is found only at altitudes less than 1,500 meters.

There are several medications that are used as prophylaxis against malaria and the recommendations concerning these are constantly changing.

CHLOROQUINE (CQ) (Aralen®) has been used for years but there is now a significant amount of Chloroquine resistant malaria in the world. While Chloroquine still has some use throughout the world its use alone is recommended for malaria prophylaxis only in Central America north of the Panama Canal, Haiti, the Dominican Republic and parts of the Middle East and west/central China. Chloroquine cannot be taken by those with psoriasis but it is safe for pregnant women and for children. It usually comes in tablets of 250 mg (150 mg base) and should be taken as 2 tablets *weekly*. It is more easily remembered if taken on Sunday. It should be started 1 week before entering the malarial area, continued while there and for 4 weeks after leaving.

Malarial prophylaxis in chloroquine-resistant areas (most of Africa, Asia, the Amazon basin and the South Pacific) consists of several choices, all being equally effective. These are:
a) **MEFLOQUINE** (MQ) (Lariam®). Mefloquine can be taken by pregnant women (but it is preferred to wait until 12 weeks into the pregnancy. It is not advised for children under 5 Kg, those with a history of seizure disorder or psychiatric illness or those taking medication for

cardiac rhythm irregularities. The dosage is one 250 mg tablet *weekly* beginning 3 weeks before entering the malarial area, continuing while there and for 4 weeks after leaving the area. If you will arrive in the malaria area in less than a week then you should take the MQ once daily for 3 days and then continue taking it once weekly until 4 weeks after leaving the area. It is more easily remembered if taken on Sunday. Side-effects are generally mild and transient and are no more frequent than with chloroquine. The most frequent of these are nausea, vivid dreams, dizziness, headache and insomnia. These side-effects can be mitigated by taking half a pill 3-4 days apart. It should be noted that border areas of Thailand with Myanmar and with Cambodia and parts of western Cambodia have Mefloquine-resistant malaria and therefore another medication must be used here.
b) **MALARONE** (Atovaquone 250 mg plus Proguanil 100 mg) taken daily, starting 1 day before travel and continuing for 7 after leaving the malaria area. It is very well tolerated and has few, if any, side-effects. It is expensive, though, at about $4 a pill.
c) **DOXYCYCLINE** 100 mg daily, beginning 2 days before entering the malarial area and continuing for 4 weeks after leaving. Doxycycline should not be taken by pregnant or breast-feeding women or children under 8 years of age. Doxycycline may cause gastrointestinal upset and could cause a rash when skin is exposed to the sun. Women taking it could get yeast vaginal infections and should carry vaginal suppositories or cream with them.
An alternative to these, though rarely used, is **PRIMAQUINE** 30 mg taken as 2 tablets daily with the same schedule as Malarone, above. However a blood test for the enzyme G6PD must be done before taking this medication. The old combination of weekly **CHLOROQUINE** plus daily **PROGUANIL** is now not effective and is, therefore, no longer recommended.

Whatever prophylactic medication you use, or if you are not using any, it is often a good idea to have a **TREATMENT** course for malaria on hand should you develop symptoms of malaria (high FEVER, severe HEADACHE, and CHILLS) *and* medical attention is not available.

In a CQ-sensitive area: Those taking CQ as prophylaxis should treat suspected malaria with **MALARONE** 4 tablets once daily for 3 days. Those not taking CQ as prophylaxis should treat with CQ 4 tablets right away followed in 6 hours by 2 tablets, then 2 tablets daily for 2 more days.

In a CQ-resistant or in a CQ & MQ-resistant area: Those who are taking Malarone for prophylaxis should take **QUININE** capsules 250 mg base 2 three times a day for 7 days **plus DOXYCYCLINE** 100 mg twice a day for 7 days (or Clindamycin 300 mg base 4 times a day for 5 days for those who cannot take Doxycycline). Those not taking Malarone for prophylaxis should take **either Quinine & Doxycycline** as above **or Malarone** 4 tablets daily for 3 days.

After self treatment you should resume or intitiate prophylactic medication but you should still seek medical attention, in case your self diagnosis was incorrect since many illnesses can mimic malaria and malaria cannot be reliable diagnosed on symptoms alone.

Drugs to avoid for treatment include Halofantrine (Halfan), Fansidar alone, Fansimef, Mefloquine and Chloroquine plus Fansidar.

It is important to note that malaria is a fatal illness if treatment is delayed. It is fairly easily cured if treatment is started early. **If you develop a fever and headache and are or have been in a malarial area in the past 18 months (especially in the past 4 months), always think of malaria and remind the doctor of the possibility of this illness.**

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