

## Advice on Malaria Prevention – Dr. Nesbitt Clinic

Malaria is a serious illness and any illness on returning from a malaria risk zone should be reported to a medical practitioner even when prophylaxis was used. Do not try to treat malaria at home without the advice of a medical practitioner. The incubation period can last from 10 days to 2 to 3 weeks. The advice we give regarding malaria prophylaxis is as follows:

### A. Prevention of mosquito bites

This is the most important aspect. There are various ways of doing this including:

- Avoiding outdoor exposure between dusk and dawn (when Anopheles mosquitoes feed)
- Wearing clothing that reduces the amount of exposed skin
- Wearing insect repellent
- Sleeping within bed nets treated with insecticide (e.g., permethrin)
- Staying in well-screened or air-conditioned rooms

#### a) *Mosquito repellants:*

We recommend the use of DEET containing repellants as the most effective way of avoiding mosquitoes. There is evidence that children **above the age of 2 months** can safely use repellants containing DEET concentrations of 10-30%.

Picaridin is a repellent that is also used in some parts of the world but has a shorter duration of action than DEET containing repellants. The concentration of picaridin in the repellent must be about 20% in order to be effective against Anopheles mosquitoes (the kind that carry Malaria).

#### b) *Mosquito bed nets:*

Permethrin impregnated bed nets are essential and are available from most shops. Long lasting insecticide impregnated nets offer longer term protection and last even up to three years.

### B. Drug prophylaxis

All children travelling to malaria risk areas should have drug prophylaxis. In Kenya, the CDC recommends that this should be done for areas of altitude less than 2500m above sea level. Nairobi is regarded as free from malaria risk. The following drugs are recommended for prophylaxis in chloroquine resistant countries such as Kenya:

- Malarone (Atovaquone-proguanil):*** This drug is effective for the prevention of malaria. It must be taken daily. It has fewer side effects, than other drugs but is expensive. Its most common side effects are abdominal pain (17%), nausea (12%), vomiting (10 to 13%) and changes in liver enzyme levels which normalize in about a month. About 1 to 10% of people also experience headache, dizziness, pruritus (itch), diarrhea, lack of appetite and muscular weakness. Drug prophylaxis should be taken for 2 days before, continued throughout the stay, and for 7 days after the trip to a malaria risk area. The drug should be given with food or a milk-based drink. The dose should be repeated if vomiting occurs within one hour of the administration.
- Larium (Mefloquine):*** This drug is given once weekly. Most people tolerate Larium well. One to 10% of people develop chills, dizziness, fatigue, fever, headache, rash, vomiting, abdominal pain, diarrhea and nausea. Less than 1% experience neuropsychiatric side effects (hallucination, disturbed dreams and depression) and cardiac effects (chest pain, cardiac arrest if used with propranolol). Drug prophylaxis should be taken for one week before, continued once a week throughout the stay and up to at least 3 weeks after the trip to a malarious area.
- Doxycycline:*** This drug is given once daily. It should not be given to children under 8yrs of age as it may cause teeth staining. Its side effects include diarrhea, dyspepsia, nausea, back pain and sinus headache. It may be given with food to avoid nausea and vomiting. The drug should be taken with at least 250mL of water and the person should sit up for at least 30 minutes after taking the drug to reduce the risk of irritation to the food pipe. Drug prophylaxis should be taken for one week before and up to at least 3 weeks after the trip to a malaria risk area.

## Paediatric malaria prophylaxis dosing schedule\*

Drug	Tablet size	Dose	Frequency*	Initiation (time before first exposure to malaria)	Discontinuation (time after last exposure)
Areas with chloroquine-resistant Plasmodium falciparum					
Atovaquone-proguanil (Malarone)	Pediatric tablet: 62.5 mg atovaquone and 25 mg proguanil  Adult tablet: 250 mg atovaquone and 100 mg proguanil	Body weight 5-8 kg, 1/2 pediatric tablet daily; Body weight 9-10 kg, 3/4 pediatric tablet daily; Body weight 11-20 kg, 1 pediatric tablet daily; Body weight 21-30 kg, 2 pediatric tablets daily; Body weight 31-40 kg, 3 pediatric tablets daily; Body weight $\geq$ 41 kg, 1 adult tablet daily	Once daily	1-2 days	7 days
Mefloquine hydrochloride (Lariam and generic agents)	250 mg salt (228 mg base)	Body weight $\leq$ 9 kg, one-eighth tablet or 5 mg salt per kg  Body weight 10-19 kg, one-quarter tablet  Body weight 20-30 kg, one-half tablet  Body weight 31-45 kg, three-quarters tablet  Body weight $\geq$ 46 kg, 1 tablet	Once weekly	3 weeks preferable; 1-2 weeks acceptable	4 weeks
Doxycycline hyclate (Vibramycin, Vibra-Tabs, other brands, and generic agents); doxycycline monohydrate (Monodox, Adoxa, and generic agents)	100 mg	$\geq$ 8 years old, 2 mg per kg of body weight orally once daily (maximum dosage, 100 mg/day)	Once daily	1-2 days	4 weeks

\* Drugs administered once daily should be taken at the same time each day; drugs administered once weekly should be taken on the same day each week.

\*source: [www.uptodate.com](http://www.uptodate.com) September 2011

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