

Newsletter

Update on Malaria Part 2

Compiled by Dr Trisha Moodley

What CHEMOPROPHYLAXIS is available in South Africa for Malaria?*

The choice of prophylaxis should be tailored to the individual.

	Mefloquine	Doxycycline	Atovaquone-Proguanil`
Trade name	Mefliam tabs [®] Lariam tabs (Schedule 4) Supply may be erratic; discuss with your local pharmacist	Doxycycline Biotech [®] Cyclidox caps [®] Doxycyl caps (Schedule 2) Supply may be erratic; discuss with your local pharmacist	Malanil tabs [®] NuMal tabs [®] Malateq [®] Mozitec tabs (Schedule 2)
Adult dosage	<ul style="list-style-type: none"> One tablet = 250 mg Mefloquine Take 250 mg weekly. Starting one week before entering the malaria area. Take one tablet once weekly while in the malaria area. Then, one tablet once weekly for four weeks after leaving the malaria area 	<ul style="list-style-type: none"> One tablet = 100 mg Doxycycline One capsule = 50 mg or 100 mg Doxycycline Start with 100 mg the day before entering the malaria area. Then take 100 mg daily while in the malaria area. After leaving the malaria, take 100 mg daily 	<ul style="list-style-type: none"> One adult tablet = 250 mg Atovaquone PLUS 100 mg Proguanil Take one tablet the day before entering the malaria area. Continue taking one tablet daily during exposure in the malaria area. After leaving the malaria area, continue with one tablet daily for seven days.
Paediatric dosage (at the same intervals as adult dosage)	<p>NOT RECOMMENDED for children who are less than three months old or who weigh less than 5 kg.</p> <p>Weight (kg) / Weekly dosage 5 – 20kg = ¼ tablet 21 – 30kg = ½ tablet 31 – 45kg = ¾ tablet > 45 kg = Adult dose</p>	<p>CONTRA-INDICATED in children less than eight years of age.</p> <p>Age (years) / Weight (kg) / Dosage 8-15 yrs / 31-45 kg = 2mg/kg >15 yrs / > 45 kg = Adult dose</p>	<p>One paediatric tablet = 62.5 mg Atovaquone PLUS 25 mg Progaunil.</p> <p>Weight (kg) / Dosage 11-20 kg = 1 paediatric tablet daily 21-30 kg = 2 paediatric tablets daily 31-40 kg = 3 paediatric tablets daily > 40 kg = 1 adult tablet daily</p>
Prophylactic efficacy	<ul style="list-style-type: none"> Highly effective against <i>P. falciparum</i>. Effective against acute infections caused by <i>P. vivax</i>. Limited data on efficacy against other species. Relapses may occur. 	<ul style="list-style-type: none"> Highly effective against <i>P. falciparum</i>. Limited protection against acute <i>P. vivax</i> infections. Relapses may occur. 	<ul style="list-style-type: none"> Highly effective against <i>P. falciparum</i>. Also effective against acute infections caused by <i>P. vivax</i>, <i>P. ovale</i> and <i>P. malariae</i>. Relapses may occur

	Mefloquine	Doxycycline	Atovaquone-Proguanil
Side effects	<ul style="list-style-type: none"> • Nausea • Strange dreams • Dizziness • Mood changes • Insomnia • Headache • Diarrhoea 	<ul style="list-style-type: none"> • Skin photosensitivity • Oesophageal ulceration • Gastrointestinal symptoms • Candida superinfection of the gut & vagina 	<ul style="list-style-type: none"> • Well tolerated • Headache and abdominal pain most frequent adverse effects described
Contraindications	<ul style="list-style-type: none"> • Epilepsy/psychiatric illness (depression) • Past severe reactions to mefloquine • Underlying cardiac conduction disturbance/arrhythmia • Concurrent use of halofantrine • Infants weighing less than 5 kg 	<ul style="list-style-type: none"> • Pregnancy • Children under eight years of age • Caution in travellers with myasthenia gravis 	<ul style="list-style-type: none"> • Severe renal impairment (creatinine clearance < 30 mL/min) • Avoid in pregnancy due to lack of data
Special precautions	<ul style="list-style-type: none"> • AVOID in travellers requiring fine coordination e.g., scuba diving and pilots. 	<ul style="list-style-type: none"> • Avoid excessive UV exposure by applying a high SPF sunscreen. • Take after a meal with a full glass of water. • Do not lie down for at least one hour after swallowing the tablet. 	<ul style="list-style-type: none"> • Take with milk or food for better absorption.
Resistance	Resistance has been reported in South East Asia	Resistance appears to be rare.	No known resistance reported.

Prophylaxis Drug Of Choice According to Patient Condition*

Pregnancy (Avoid travelling to a malaria area as far as possible)	<ul style="list-style-type: none"> • Drug of choice if a pregnant woman is at risk of malaria. 	<ul style="list-style-type: none"> • Contra-indicated. 	<ul style="list-style-type: none"> • Not recommended due to lack of information.
Breastfeeding women (Infant must be given their own prophylaxis)	<ul style="list-style-type: none"> • Insufficient data, but WHO states that it is safe to use. 	<ul style="list-style-type: none"> • Avoid use unless no other option. • American Academy of Paediatrics says it is safe to use. 	<ul style="list-style-type: none"> • Avoid use if infant weighs < 11 kg.

**Adapted from: South African Guidelines for the Prevention of Malaria - updated January 2019.*

Young children (Avoid taking children under the age of five years to a high-risk area)	<ul style="list-style-type: none"> • Can be used in children over 3 months of age, OR more than 5 kg. • Generally, well tolerated by children. 	<ul style="list-style-type: none"> • Use only in children older than eight years of age. 	<ul style="list-style-type: none"> • Paediatric tablets can be given to children weighing 11 kg or more.
Drug interactions	<ul style="list-style-type: none"> • Amiodarone • Antipsychotics • Antiretrovirals (efavirenz, nevirapine) • Beta blockers (e.g. atenolol, propranolol) • Calcium channel blockers (e.g. nifedipine, verapamil, diltiazem) • Digoxin • Halofantrine • Direct Oral Anticoagulants (DOACs) • Oral cholera and typhoid vaccines • Primaquine • Quinine or Quinidine • Rifampicin • Valproic acid 	<ul style="list-style-type: none"> • Alcohol • Antacids containing calcium, bismuth, aluminium, magnesium • Calcium supplements • Antiretrovirals • Carbamazepine, barbiturates, and phenytoin • Iron • Methotrexate • Isotretinoin • Milk and other dairy products • Oral contraceptives • Rifampicin • Warfarin 	<ul style="list-style-type: none"> • Antiretrovirals (protease inhibitors, zidovudine) • Magnesium trisilicate • Metoclopramide • Rifampicin • Rifabutin • Tetracyclines • Warfarin

Changing from one chemo-prophylactic drug to another

From	To	Comment
Doxycycline	Atovaquone-Proguanil	If already in a malaria area, take for four weeks after leaving the malaria area
Doxycycline	Mefloquine	NOT ADVISED!! - mefloquine must be taken a week before entering a malaria area.
Atovaquone-Proguanil	Doxycycline	No special precautions required
Atovaquone-Proguanil	Mefloquine	NOT ADVISED!! - mefloquine must be taken a week before entering a malaria area.
Mefloquine	Doxycycline	No special precautions required
Mefloquine	Atovaquone-Proguanil	If already in a malaria area, take for four weeks after leaving the malaria area

References

1. National Department of Health. South African Guidelines for the Prevention of Malaria. - Updated January 2019.
2. National Department of Health. National Guidelines for the Treatment of Malaria in South Africa, 2019.
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8. National Department of Health. Malaria elimination strategic plan for South Africa 2019-2023.
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