

MALARIA, Prevention of relapses: *P. vivax* and *P. ovale*¹

Drug	Adult dosage	Pediatric dosage
Drug of choice: Primaquine phosphate ²	30 mg base/d PO x 14d	0.6 mg base/kg/d PO x 14d

1. Primaquine is given for prevention of relapse after infection with *P. vivax* or *P. ovale*. Some experts also prescribe primaquine phosphate 30 mg base/d (0.6 mg base/kg/d for children) for 14d after departure from areas where these species are endemic (Presumptive Anti-Relapse Therapy [PART], "terminal prophylaxis"). Since this is not always effective as prophylaxis (E Schwartz et al, N Engl J Med 2003; 349:1510), others prefer to rely on surveillance to detect cases when they occur, particularly when exposure was limited or doubtful. See also footnote 2.
2. Primaquine phosphate can cause hemolytic anemia, especially in patients whose red cells are deficient in G-6-PD. This deficiency is most common in African, Asian and Mediterranean peoples. Patients should be screened for G-6-PD deficiency before treatment. Primaquine should not be used during pregnancy. It should be taken with food to minimize nausea and abdominal pain. Primaquine-tolerant *P. vivax* can be found globally. Relapses of primaquine-resistant strains may be retreated with 30 mg (base) x 28d.

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MANUFACTURERS OF DRUGS USED TO TREAT PARASITIC INFECTIONS

albendazole – <i>Albenza</i> (GlaxoSmithKline)	lumefantrine/artemether – <i>Coartem</i> , <i>Riamet</i> (Novartis)
<i>Albenza</i> (GlaxoSmithKline) – albendazole	<i>Malarone</i> (GlaxoSmithKline) – atovaquone/proguanil
<i>Alinia</i> (Romark) – nitazoxanide	malathion – <i>Ovide</i> (Medicis)
<i>AmBisome</i> (Gilead) – amphotericin B, liposomal	mebendazole – <i>Vermox</i> (McNeil), others
amphotericin B – <i>Fungizone</i> (Apothecon), others	mefloquine – <i>Lariam</i> (Roche)
amphotericin B, liposomal – <i>AmBisome</i> (Gilead)	
<i>Ancobon</i> (Valeant) – flucytosine	§ meglumine antimonate – <i>Glucantime</i> (Aventis, France)
§ <i>Antiminth</i> (Pfizer) – pyrantel pamoate	† melarsoprol – <i>Mel-B</i>
• <i>Aralen</i> (Sanofi) – chloroquine HCl and chloroquine phosphate	† <i>Mel-B</i> – melarsoprol
§ artemether – <i>Artemam</i> (Arenco, Belgium)	<i>Mepron</i> (GlaxoSmithKline) – atovaquone
§ artemether/lumefantrine – <i>Coartem</i> , <i>Riamet</i> (Novartis)	metronidazole – <i>Flagyl</i> (Pfizer), others
§ <i>Arteman</i> (Arenco, Belgium) – artemether	§ miconazole – <i>Monistat i.v.</i>
§ artesunate – (Guilin No. 1 Factory, People's Republic of China)	§ miltefosine – <i>Impavido</i> (Zentaris, Germany)
atovaquone – <i>Mepron</i> (GlaxoSmithKline)	§ <i>Monistat i.v.</i> – miconazole
atovaquone/proguanil – <i>Malarone</i> (GlaxoSmithKline)	<i>NebuPent</i> (Fujisawa) – pentamidine isethionate
azithromycin – <i>Zithromax</i> (Pfizer), others	§ niclosamide – <i>Yomesan</i> (Bayer, Germany)
• <i>Bactrim</i> (Roche) – TMP/Sulfa	† nifurtimox – <i>Lampit</i> (Bayer, Germany)
§ benznidazole – <i>Rochagan</i> (Brazil)	nitazoxanide – <i>Alinia</i> (Romark)
• <i>Biaxin</i> (Abbott) – clarithromycin	<i>Nix</i> (GlaxoSmithKline) – permethrin
§ <i>Biltricide</i> (Bayer) – praziquantel	• <i>Nizoral</i> (Janssen) – ketoconazole
† bithionol – <i>Bitin</i> (Tanabe, Japan)	§ ornidazole – <i>Tiberal</i> (Roche, France)
† <i>Bitin</i> (Tanabe, Japan) – bithionol	<i>Ornidyl</i> (Aventis) – eflornithine (Difluoromethylornithine, DFMO)
§ <i>Brolene</i> (Aventis, Canada) – propamidine isethionate	<i>Ovide</i> (Medicis) – malathion
chloroquine HCl and chloroquine phosphate – <i>Aralen</i> (Sanofi), others	§ oxamniquine – <i>Vansil</i> (Pfizer)
clarithromycin – <i>Biaxin</i> (Abbott), others	§ <i>Paludrine</i> (AstraZeneca, United Kingdom) – proguanil
• <i>Cleocin</i> (Pfizer) – clindamycin	paromomycin – <i>Humatin</i> (Monarch); <i>Leshcutan</i> (Teva, Israel; topical formulation not available in US)
clindamycin – <i>Cleocin</i> (Pfizer), others	<i>Pentam 300</i> (Fujisawa) – pentamidine isethionate
<i>Coartem</i> (Novartis) – artemether/lumefantrine	pentamidine isethionate – <i>Pentam 300</i> (Fujisawa), <i>NebuPent</i> (Fujisawa)
crotamiton – <i>Eurax</i> (Westwood-Squibb)	† <i>Pentostam</i> (GlaxoSmithKline, United Kingdom) – sodium stibogluconate
dapsone – (Jacobs)	permethrin – <i>Nix</i> (GlaxoSmithKline), <i>Elimate</i> (Allergan)
§ <i>Daraprim</i> (GlaxoSmithKline) – pyrimethamine USP	§ praziquantel – <i>Biltricide</i> (Bayer)
† diethylcarbamazine citrate (DEC) – <i>Hetrazan</i>	primaquine phosphate USP
• <i>Diflucan</i> (Pfizer) – fluconazole	§ proguanil – <i>Paludrine</i> (AstraZeneca, United Kingdom)
§ diloxanide furoate – <i>Furamide</i> (Boots, United Kingdom)	proguanil/atovaquone – <i>Malarone</i> (GlaxoSmithKline)
doxycycline – <i>Vibramycin</i> (Pfizer), others	§ propamidine isethionate – <i>Brolene</i> (Aventis, Canada)
eflornithine (Difluoromethylornithine, DFMO) – <i>Ornidyl</i> (Aventis)	§ pyrantel pamoate – <i>Antiminth</i> (Pfizer)
§ <i>Egaten</i> (Novartis) – triclabendazole	pyrethrins and piperonyl butoxide – <i>RID</i> (Pfizer), others
<i>Elimate</i> (Allergan) – permethrin	§ pyrimethamine USP – <i>Daraprim</i> (GlaxoSmithKline)
<i>Ergamisol</i> (Janssen) – levamisole	<i>Qualaquin</i> – quinine sulfate (Mutual Pharmaceutical Co/AR Scientific)
<i>Eurax</i> (Westwood-Squibb) – crotamiton	quinacrine
• <i>Flagyl</i> (Pfizer) – metronidazole	* quinidine gluconate (Eli Lilly)
§ <i>Flisint</i> (Sanofi-Aventis, France) – fumagillin	§ quinine dihydrochloride
fluconazole – <i>Diflucan</i> (Pfizer), others	quinine sulfate – <i>Qualaquin</i> (Mutual Pharmaceutical Co/AR Scientific)
flucytosine – <i>Ancobon</i> (Valeant)	* Rovamycin (Novartis) – artemether/lumefantrine
§ fumagillin – <i>Flisint</i> (Sanofi-Aventis, France)	• <i>RID</i> (Pfizer) – pyrethrins and piperonyl butoxide
• <i>Fungizone</i> (Apothecon) – amphotericin	• <i>Rifadin</i> (Aventis) – rifampin
§ <i>Furamide</i> (Boots, United Kingdom) – diloxanide furoate	rifampin – <i>Rifadin</i> (Aventis), others
§ furazolidone – <i>Furozone</i> (Roberts)	§ <i>Rochagan</i> (Brazil) – benznidazole
§ <i>Furozone</i> (Roberts) – furazolidone	* <i>Rovamycin</i> (Aventis) – spiramycin
† <i>Germanin</i> (Bayer, Germany) – suramin sodium	† sodium stibogluconate – <i>Pentostam</i> (GlaxoSmithKline, United Kingdom)
§ <i>Glucantime</i> (Aventis, France) – meglumine antimonate	* spiramycin – <i>Rovamycin</i> (Aventis)
† <i>Hetrazan</i> – diethylcarbamazine citrate (DEC)	• <i>Sporanox</i> (Janssen-Ortho) – itraconazole
<i>Humatin</i> (Monarch) – paromomycin	<i>Stromectol</i> (Merck) – ivermectin
§ <i>Impavido</i> (Zentaris, Germany) – miltefosine	sulfadiazine – (Eon)
iodoquinol – <i>Yodoxin</i> (Glenwood), others	† suramin sodium – <i>Germanin</i> (Bayer, Germany)
itraconazole – <i>Sporanox</i> (Janssen-Ortho), others	§ <i>Tiberal</i> (Roche, France) – ornidazole
ivermectin – <i>Stromectol</i> (Merck)	<i>Tindamax</i> (Mission) – tinidazole
ketoconazole – <i>Nizoral</i> (Janssen), others	tinidazole – <i>Tindamax</i> (Mission)
† <i>Lampit</i> (Bayer, Germany) – nifurtimox	
<i>Lariam</i> (Roche) – mefloquine	
§ <i>Leshcutan</i> (Teva, Israel) – topical paromomycin	
levamisole – <i>Ergamisol</i> (Janssen)	

(continued)

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| <p>TMP/Sulfa – <i>Bactrim</i> (Roche), others
§ triclabendazole – <i>Egaten</i> (Novartis)
§ <i>Vansil</i> (Pfizer) – oxamniquine
• <i>Vermox</i> (McNeil) – mebendazole</p> | <ul style="list-style-type: none">• <i>Vibramycin</i> (Pfizer) – doxycycline• <i>Yodoxin</i> (Glenwood) – iodoquinol§ <i>Yomesan</i> (Bayer, Germany) – niclosamide• <i>Zithromax</i> (Pfizer) – azithromycin |
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* Available in the US only from the manufacturer.

§ Not available commercially. It may be obtained through compounding pharmacies such as Panorama Compounding Pharmacy, 6744 Balboa Blvd, Van Nuys, CA 91406 (800-247-9767) or Medical Center Pharmacy, New Haven, CT (203-688-6816). Other compounding pharmacies may be found through the National Association of Compounding Pharmacies (800-687-7850) or the Professional Compounding Centers of America (800-331-2498, www.pccarx.com).

† Available from the CDC Drug Service, Centers for Disease Control and Prevention, Atlanta, Georgia 30333; 404-639-3670 (evenings, weekends, or holidays: 770-488-7100).

• Also available generically.

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