



MALARIA IN AFRICA

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Malaria is a dangerous parasitic disease that occurs when an infected Anopheles mosquito bites a person and injects malaria parasites into the blood. Four species of malaria parasites can infect humans and cause illness; the most dangerous is *P. falciparum* malaria; it is life-threatening. Most of the malaria found in Africa is of the falciparum species. Symptoms may develop as soon as seven days after arrival in a malarious area, or as long as three months after leaving a malarious area: they are often beguilingly mild in the initial stages, resembling influenza.

Symptoms of malaria may be:

- a generalised body ache
- tiredness
- headache
- sore throat
- diarrhoea
- fever

Remember that these symptoms may not be dramatic, and can easily be mistaken for an attack of influenza or similar non-life threatening illness. Even old Africa hands who have had malaria before, often misinterpret new cases of malaria. Deterioration can be sudden and dramatic, with rapid multiplication of parasites in the victim's blood stream. Complications of a serious nature, such as involvement of the kidneys or brain (cerebral malaria) may then follow. Cerebral malaria is extremely serious, with the victim becoming delirious and entering a coma. Cerebral malaria is frequently fatal, and it is extremely important that all suspected cases of malaria should receive medical attention as soon as is possible. Malaria is not a disease to be taken lightly, being one of the biggest killers in history. More human beings have died of malaria than any other infection. Every twenty seconds sees another death from malaria in Africa.

Malaria parasites:

Malaria parasites are spread by the female Anopheles mosquito, a night feeding insect that feeds to provide itself with adequate nutrition before laying eggs. The parasite passes through the bloodstream after the mosquito bite, into the liver cell. The parasite then multiplies in the liver cell for a week to several months, then spills into the blood. These parasites are the disease causing entities, causing destruction of red blood cells and "stickiness" of the remaining red blood cells. Small vessels (especially those in the brain and the kidneys) become blocked by these clumps of blood cells and the serious complications of cerebral and malignant malaria ensue. The infection is spread by another mosquito biting the infected person, with the parasite being drawn up into the mosquito and evolving into the form of the parasite that can infect another human after being bitten.

Factors that encourage malaria include

- high Anopheles mosquito populations after wet, warm periods
- high density of infected people in the area and
- high minimum night time temperatures, speeding up the developmental phase of the malaria parasite inside the mosquito

PRECAUTIONS SURROUNDING MALARIA

Prevention relies upon three things:

1. personal protection measures
2. anti-malaria tablets
3. getting the right information.

Avoid being bitten:

- Bites can be reduced by applying DEET based insect repellent to exposed skin.
- Wear long-sleeved clothing and long pants if you are outdoors at night.
- Mosquito nets should be used if your bedroom is not sealed and air-conditioned.
- Spray insecticide or burn a coil in your bedroom or tent before going to bed.

Vitamin B, garlic, rum and ultrasound buzzer devices are pretty useless at preventing mosquito bites.

Malaria tablets should be taken by all travellers to malarious areas; local residents who have been raised in the area should not use medication. There is a great deal of confusion and ignorance regarding malaria tablets. A commonly held and potentially fatal belief is that anti-malaria pills are best avoided, as they merely mask the disease and make diagnosis difficult. Should malaria then develop, it is allegedly an easy matter to take a handful of tablets to cure it. Nothing could be further from the truth. Once malaria develops, it can be rapidly fatal, within twenty-four to forty-eight hours. Despite the best efforts of good medical staff, people still die of malaria. It is worth doing everything possible to avoid it.

Side effects of antimalarial drugs

All medicines, from vitamin supplements to aspirin, can have side effects. If a serious side effect occurs from malaria tablets, the traveller should seek competent medical help and discontinue taking the antimalarial drug. Mild nausea, occasional vomiting, or loose stools are really not good reasons for stopping the antimalarial drug. The potential threat of malaria warrants tolerating temporary mild side effects. ***Travellers are warned of the risk of abandoning prophylaxis on the basis of hear-say from quasi- or pseudo-experts, leaving themselves at risk of malaria in remote areas with poor medical facilities.***

SO YOU THINK YOU MIGHT BE GETTING MALARIA?

Anyone possibly exposed to malaria that develops an influenza like illness or fever within seven days of entering, or three months of departing a malarious area should seek medical attention, and have blood tests taken to check for possible malaria infection. It may be necessary to have a second, third or fourth blood test taken if a first test is negative for malaria, to be certain of excluding the disease. About 2% of non-immune patients infected with falciparum malaria die, usually because of delayed treatment. Immediate treatment of falciparum malaria is critical. Travellers journeying to remote areas, and people living in distant areas should consider carrying a malaria standby diagnosis and treatment pack, to allow prompt and accurate treatment of malaria in areas out of reach of medical care.

HIGH RISK TRAVELLERS

Pregnant women: Pregnant women should not expose themselves to the risk of acquiring malaria. If a pregnant woman gets malaria, not only does she stand more chance of losing the baby (up to three quarters of the time) but she stands a significantly higher chance of dying herself. Add to this the factor of taking malaria prophylaxis; the expectant mother would do well to ask herself if her trip really was necessary. For those mothers-to-be who find themselves having to enter a malarious area, they should speak to a travel clinic to ensure that they have been expertly advised as to what measures can safely be used in pregnancy.

Young children: Young children under 5 years old should likewise avoid malarious areas. The case fatality rate (number of victims who get the illness and then die) and the overall mortality rate (total number of deaths from the illness) are frighteningly high in this age group. It is also not at all easy to administer daily doses of medicine (which can be bitter) to a kicking, screaming three year old!

Strategies to Optimise The Tolerability of Anti-Malarials

- Take your dose at the same time as a decent-size meal and wash it down with a full glass of water.
- Avoid alcohol use for 24 hours before and after the dose

MALARIA PROPHYLAXIS

Malaria prophylaxis should always be tailored to individual's medical circumstances. What is OK for your friend/husband/hairdresser/boss may be inappropriate, or dangerous for you. This table is intended as a broad guide only - expert advice should always be sought before travelling to a high risk destination.

MALARIA PROPHYLACTIC AGENTS				
NAME OF DRUG	BRAND NAMES	ADVANTAGES	DISADVANTAGES	SIDE-EFFECTS
Chloroquine	Daramal, Avlochlor Nivaquine, Plasmoquine and others	Cheap Once weekly	Widespread resistance	Nausea Neuropsychiatric side effects Arrhythmias
Chloroquine plus Proguanil	Daramal/Paludrine combination pack	Relatively well tolerated OK for scuba divers/pilots	Increasing resistance – not suitable for sub- Saharan Africa	Nausea Neuropsychiatric side effects Arrhythmias Diarrhoea Mouth ulcers
Mefloquine Prescription only	Mefliam Mephaquin Lariam	Once weekly Most effective antimalarial in Africa Usually well tolerated	Inappropriate use in past has given mefloquine a bad name Not for pilots/ scuba divers	Nausea Neuropsychiatric side effects Arrhythmias
Doxycycline Prescription only	Many	Effective Easily accessible Ok for scuba divers/pilots	Side effects Daily use	Can cause sun sensitivity, yeast infections Dyspepsia, nausea.
Atovaquone/ Proguanil	Malanil	Well tolerated. Effective 7 days after travelling	Expensive	Mouth ulcers Well tolerated generally

What is personal protection exactly?

- Cover up - long sleeves and trousers at night
- Avoid night time braais and parties outdoors.
- DEET repellents e.g. Tabard are the most effective
- Citronella is poorly effective
- Treated bed nets should be used
- Sonic buzzers are useless

Who should exercise special caution when using anti-malarials?

- Epileptics or people with an increased epileptic potential (eg. previous major head injury, strong family history.)
- People with a previous or current psychiatric or psychological disorders (no matter how severe) such as depression, schizophrenia, panic and anxiety disorders,
- Those who have not tolerated mefloquine, doxycycline, proguanil or chloroquine in the past.
- Pregnant women
- Scuba divers, pilots and those for whom dizziness would be dangerous,
- People on certain cardiac medications.

How to die of malaria

- Be tough - don't cover up
- Take the pills irregularly or not at all
- Stop the pills as soon as you get back
- If you do take pills - use a friend's
- Ignore flu like symptoms
- Take advice from locals and other experts - hairdressers and fishing buddies

Common questions for expatriates/non-immunes:

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- **Don't the pills mask the symptoms?**
• Yes – its the symptoms that'll kill you...

 - **Why not rely on personal protection measures alone?**
• Malaria is simply too dangerous and nothing is 100% reliable

 - **What about homeopathic and herbal medications?**
• There is no evidence that they work, and our experience has shown they don't work....

 - **Doesn't taking medication prevent you getting immunity?**
• Expatriates will *never* develop immunity – you have to be raised in a malaria area to get it.

 - **Won't the pills damage eyes/ liver/ kidneys or any other vital organs?**
• Careful selection of medication for each individual makes this extremely unlikely. In more than 100 000 cases, we've never seen it.
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NETCARE TRAVEL CLINICS IN SOUTH AFRICA

Johannesburg - Linksfield Park Clinic

24 12th Avenue, Linksfield, 2192
(011) 647-3654

Johannesburg - Merchant Place Dental & Medical Centre

Sandton, 2 Merchant Place, 1 Fredman Drive/Cnr Rivonia Road, Sandton, 2196
(011) 883-3801

Johannesburg - Sunninghill Medical Suites

4th Floor, Sunninghill Hospital, Nanyuki Road, Sunninghill
(011) 807-3132

Johannesburg - Douglas Flight Optometrist Centre

650 Trichardt Street, Boksburg, Beyers Park, Boksburg
(011) 894-4632

Pretoria - Jakaranda Hospital

213 Middelburg Street, Muckleneuk, 0002
(012) 344-0110

Cape Town - Fountain Medical

3rd Floor, Fountain Medical Centre, Adderley Street, Cape Town, 8000
(021) 419-3172

Durban - Windermere Centre

Shop L27A, Windermere Centre, 163 Windermere Rd, Morningside, Durban, 4001
(031) 303-2423

Knysna - Marine Pharmacy

Cnr Main & Gray Streets, Knysna
(044) 382-6366

Port Elizabeth - Westbourne Road

19 Westborne Road, Central, Port Elizabeth, 6006
(041) 374-7471