Malaria in Southern Africa

Is there Malaria in South Africa?

Yes

Malaria is endemic in certain areas of South Africa (see map below)

Through good malaria control efforts, the disease are now restricted to three provinces in north-eastern KwaZulu-Natal, parts of Mpumulanga and Limpopo. These provinces have conditions that are suitable for malaria transmission. Malaria occurs mainly in low altitude areas but occasionally has been found in high altitude areas within these provinces. On rare occasions malaria is contracted near the Molopo River in the North-West Province and Orange River in the Northern Cape Province (Department of Health, 2009)

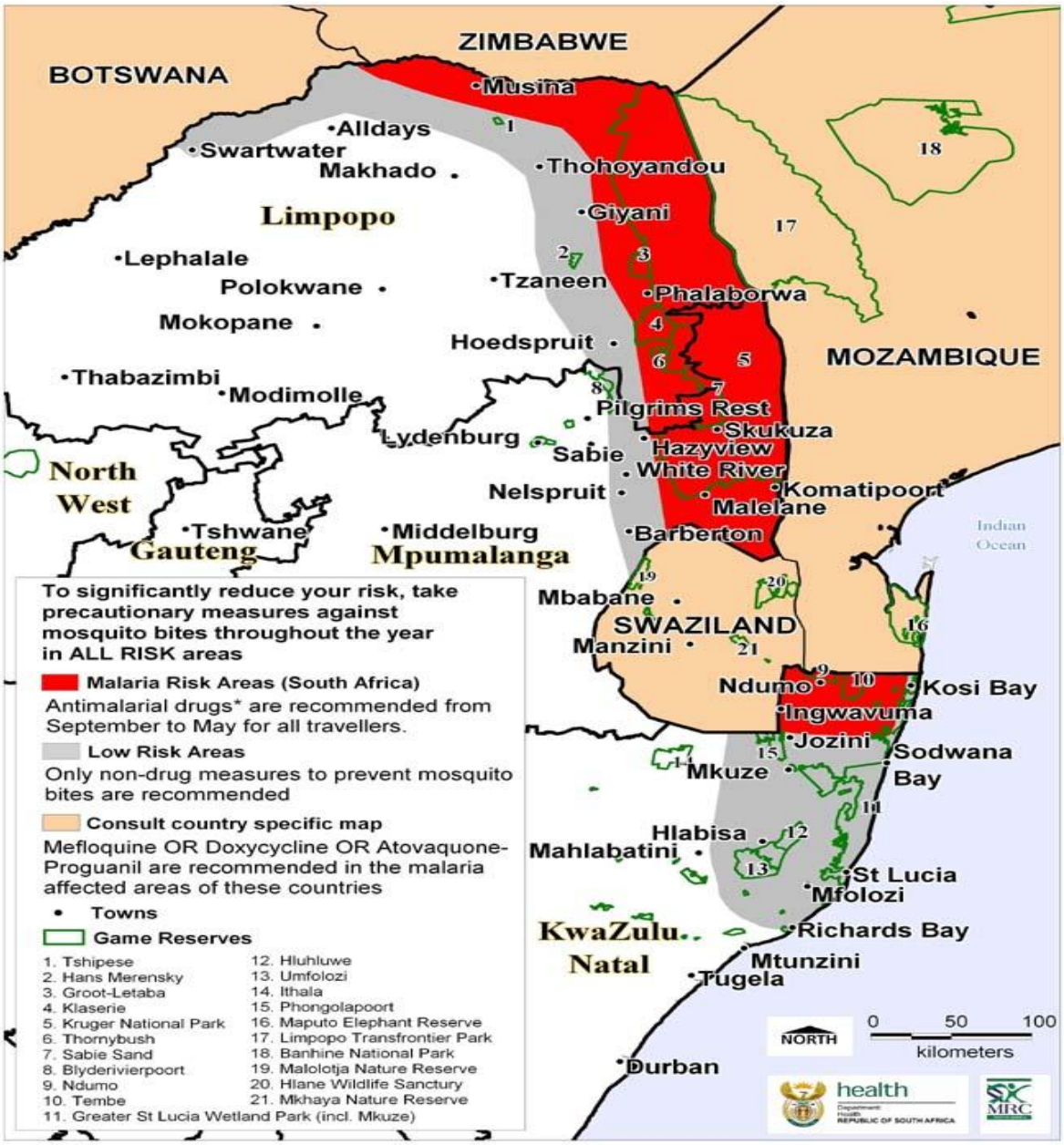
It is a seasonal disease. Low transmission periods are between May and September

Will I see mosquitoes while I'm in South Africa?

Yes

However, not all mosquitoes carry the malaria parasite

The mosquitoes which do carry the malaria parasite are part of the*Anopheles* group. The mosquitoes which carry the parasites in malaria endemic areas generally bite between dusk and dawn



This information was obtained through http://www.malaria.org.za/2010/Advice2010.html

Remember the "ABC" of Malaria prevention

Awareness: be aware of the risk
Bite prevention: avoid being bitten by mosquitoes, take the necessary precautions
Chemoprophylaxis: use prophylaxis to protect yourself against malaria
Diagnosis: insist on diagnostic tests if fever develops a week or more after exposure to malaria
Effective: malaria treatments are available and it is important to get the appropriate treatment specific to your circumstances

A: Awareness of malaria risk: what is my risk of getting malaria in South Africa?

Malaria risk is not evenly distributed within South Africa.
The risk of being bitten with an infected mosquito depends on the time of year you are travelling, where you are travelling to, if you will be in the area between dusk and dawn, and if you are in a high risk group (refer to Table 1).
Table 1 provides information on the malaria risk in South Africa and the recommended precautions (Department of Health Travel Health Information Booklet, 2007)

Table 1: Summary of malaria risk periods and recommended precautions

Type of Malaria Risk Area	Time of year	Recommendation (from Department of Health Travel Health Information Booklet, 2007)
Low risk when malaria transmission is low	End of May to end of September – cold dry months	No chemoprophylaxis recommended. Take precautions against mosquito bites.
High risk when malaria transmission is high	October to May – wet summer months. Throughout the year for high risk people	Chemoprophylaxis and precautionary measures against mosquito bites are recommended throughout the year. High risk people should avoid high risk malaria areas if at all possible. People at high risk are elderly people, babies and children under 5 years, pregnant women, splenectomised patients and immuno-compromised people

What is my risk of getting malaria in countries neighbouring South Africa?
According to the World Health Organisation, the malaria situation in countries neighbouring South Africa is listed below (WHO, 2010).

Table 2: Malaria risk in countries neighbouring South Africa

Country	Malaria Risk and Duration
Angola	Throughout the year in the whole country
Botswana	From November to May-June in the northern parts of the country: Boteti, Chobe, Ngamiland, Okavango, Tutume districts/ subdistricts
Malawi	Throughout the year in the whole country
Mozambique	Throughout the year in the whole country
Namibia	From November to June in the following regions: Ohangwena, Omaheke, Omusati, Oshana, Oshikoto and Otjozondjupa. Risk throughout the year exists along the Kunene river and in Caprivi and Kavango regions.
Swaziland	Throughout the year in all low veld areas (mainly Big Bend, Mhlume, Simunye and Tshaneni)
Zambia	Throughout the year in the whole country, including Lusaka

Zimbabwe	From November through June in areas below 1200 m and throughout the year in the Zambezi valley. In Bulawayo and Harare, the risk is negligible

B: Avoid mosquito bites: what precautions can I take when entering a malaria endemic area?

These are some of the precautionary measures you can take to avoid being bitten by mosquitoes:
Mosquitoes which carry malaria generally bite between dusk and dawn. Close windows and doors and remain indoors during this time
Use insect repellent on exposed skin. Lotions and spray options are available
Spray your accommodation with an aerosol insecticide
Wear long-sleeved, light-coloured clothing, long trousers and socks
Sleep under a bednet or in a netted tent or use screens to prevent mosquitoes from flying in

C: Compliance with Chemoprophylaxis, when indicated: what should I do about chemoprophylaxis?

Chemoprophlyaxis are medications which help to reduce the chances of getting ill with malaria. These medications must be taken according to the instructions given by your local medical practitioner/pharmacist
If a person travels to a malaria area, it is important to find out if they require chemoprophylaxis
Chemoprophylaxis should be used in conjunction with personal protection measures against mosquito bites
There are different types of chemoprophylaxis available which have different modes of action. The choice of drug to take should be tailored to the individual
You should always consult your local travel doctor or general practitioner for advice on chemoprophylaxis well in advance before travelling

D: Early Detection of malaria

Malaria symptoms may only develop 10 - 14 days after an infective mosquito bite
If a person has taken chemoprophylaxis, this period might be even longer. This can reduce suspicion of malaria to the detriment of the patient, especially as many people believe that prophylaxis is a guarantee against malaria
Non-specific flu-like symptoms are common presenting symptoms of malaria. Some of these include: fever, rigors, headache, sweating, fatigue, myalgia (back and limbs), abdominal pain, diarrhoea, appetite loss, nausea and vomiting, cough. In young children, malaria may present with fever, lethargy, poor feeding and vomiting
You should seek immediate medical attention if you have flu-like symptoms for up to six months after visiting a malaria area

E: Effective treatment

There are drugs to treat malaria and it must be treated as a medical emergency. A high index of suspicion must be practiced. High-level resistance precludes the use of chloroquine for falciparum malaria (Department of Health, 2009).
If you have flu-like symptoms, inform your doctor that you have visited a malaria area, so that prompt diagnosis can be made
Stand- by treatment: If you are planning on travelling to remote locations outside South Africa where there is limited access to proper medical care, the World Health Organisation advises carrying appropriate malaria treatment medication for self-administration (WHO, 2010).This is called stand-by emergency treatment. You should consult your medical doctor about this

Malaria treatment in South Africa

Malaria is a notifiable disease in South Africa. According to the South African Department of Health (2009), the current recommended treatment for uncomplicated malaria in South Africa (Department of Health, 2009):
For patients over one year of age and non-pregnant patients: fixed dose artemisinin-based combination, artemether + lumefantrine. If artemeter + lumefantine is not available, quinine + doxycycline is recommended while patients are under observation;
For children ≤ 1 year and all pregnant patients: quinine + clindamycin

Common Myths

"It is better not to take any prophylaxis, as it masks the symptoms and makes diagnosis difficult"
This is incorrect. Prophylactic drugs suppress parasite development, and therefore, even if not totally effective (due to partial drug resistance or non-compliance), symptoms tend to take longer to appear, may be less severe at first and

development of complications is retarded. In the complete absence of drugs, parasites are able to multiply at phenomenal rates, and malaria can quickly get out of hand, and lead to severe complications and death.

"There is this new deadly strain of malaria"
Cerebral malaria is not a new strain; it is a complication of untreated *P.falciparum*malaria. Early diagnosis and appropriate treatment should ensure that no one gets cerebral malaria

"Malaria cannot be cured"
Malaria can indeed be cured with the appropriate drugs. Due to drug resistance to certain drugs, it may take several attempts with different (combinations of) drugs to effect a complete cure

"Prophylaxis need only be taken while in a malaria area"
The drugs that we have to prevent malaria are known as blood schizontocides, which means that they work on the parasite once it enters the red blood cells. This does not occur until 10-14 days after being bitten by an infected mosquito. If the drug is stopped before the parasites reach the blood cells, there will not be enough in the blood to kill the parasites and the prophylaxis will fail. It is therefore extremely important to continue taking prophylaxis for 4 weeks after leaving a malaria area

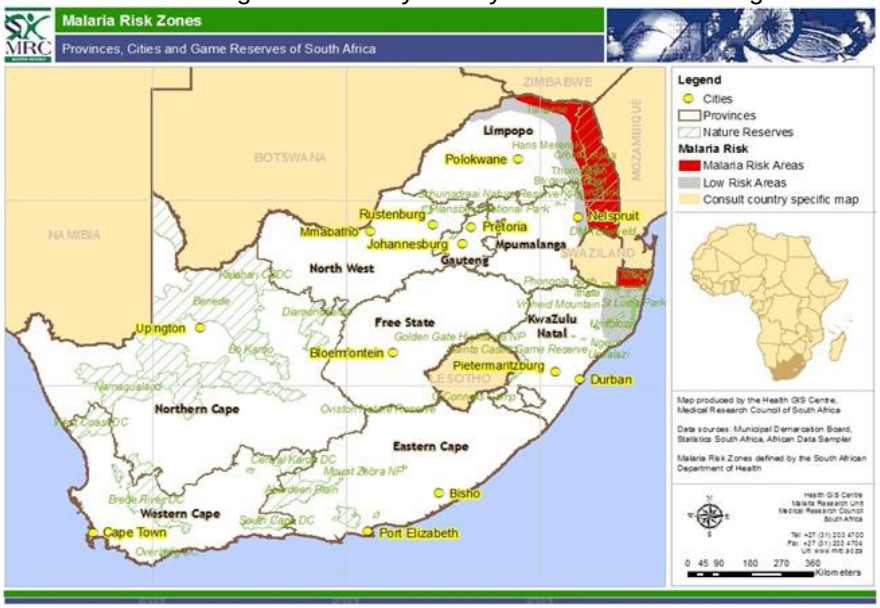
"The drugs are worse than the disease"
Antimalarials, like any other drug, do have side effects on some people, and in varying degrees. However only 15-20% of people experience side effects, and these are usually tolerable, with severe adverse reactions being rare. Malaria is potentially fatal and causes severe illness and discomfort which could land you in hospital and out of action for weeks

"If I take an antimalarial, there will be nothing left to treat me if I do get malaria"
There are numerous different drugs and drug regimes available for the fast and effective treatment of malaria. The use of one chemoprophylactic, does not exclude the future use of another antimalarial should the need arise

"I will be visiting the area outside of the malaria season, so I do not need prophylaxis"
Although transmission decreases during the “off” season, infective mosquitoes may still be active in the off season, just in lower concentrations. One still needs to take protective measures

"Drinking Gin and Tonic or Rum will prevent mosquitoes from biting me, and will safeguard me against contracting malaria"
There is no scientific evidence that either will protect you against mosquito bites. Malaria is a potentially fatal disease that requires proper preventative measures to be implemented

"I wasn't bitten, can I stop taking my prophylaxis?"
The female *Anopheles* mosquito is not known as 'the silent killer' for nothing. She does not buzz around your head at night, irritating you. You may not be aware of her presence at all. The reaction to her bite may also not be as pronounced as it is with other bloodsucking insects and you may be unaware of having been bitten



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