

## How is malaria diagnosed?

Malaria parasites can be observed under a microscope when a blood smear of a patient is examined in the laboratory or clinic. Evidence of the parasites may be rapidly detected in blood by means of an antigen detection kit. Travelers to remote areas may carry these kits for self-testing purposes. In difficult to diagnose cases, malaria parasites may be detected in a patient's blood by means of specialised laboratory tests.



## How is malaria treated?

The treatment of malaria depends upon the geographic area where a person has been infected. Different areas of the world have malaria types that are resistant to certain medications. A doctor must prescribe the correct drugs for each type of malaria; it is thus critical that you share information about your travels with your doctor.

Suspected malaria is a medical emergency and requires urgent treatment.



## Can I become immune to malaria?

No, you cannot. Although people living in malaria areas may develop partial immunity, no complete immunity against malaria exists.

## How do I avoid getting malaria?

If you are travelling to an area known to have malaria, find out which medications you need to take, and take them as prescribed. Your doctor or travel clinic can advise you as to what medicines to take to help prevent you from getting malaria. These medications WILL save your life, no matter what you may have heard from ill-informed sources.

### What other precautions should I take to avoid malaria?

The following recommendations will decrease your chance of contracting malaria:

- Avoid exposure to mosquito bites during the early morning and early evening hours (the hours of greatest mosquito activity).
- Wear appropriate clothing (long-sleeved shirts and long pants, for examples) especially when you are outdoors.
- Apply insect repellent to exposed skin. The recommended insect repellent contains 20% - 35% DEET (N,N-diethyl-m-toluamide).
- Spray mosquito repellents on clothing to prevent mosquitoes from biting through thin clothing.
- Use a residual insecticide impregnated mosquito net over your bed.
- Sleep in rooms with screens over windows and doors.
- Spray permethrin or a similar insecticide in the bedroom before going to bed.

### Some common misconceptions about malaria prophylaxis:

- It is better not to take any malaria prophylaxis as it masks the symptoms. **WRONG.**
- You can stop taking malaria prophylaxis when you leave a malaria area. **DON'T.** It is essential that you take the medication for the entire prescribed period even after you have left the malaria area.
- Don't believe that a shot of rum or a gin & tonic will prevent mosquito bites. **IT WON'T.**

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# MALARIA

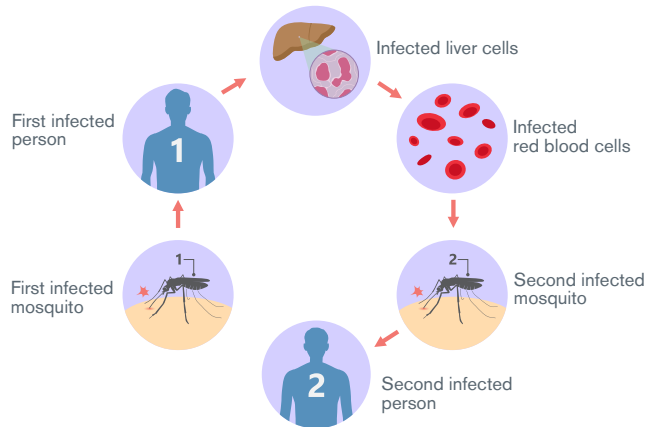


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## What is malaria?

Malaria is a serious, and sometimes fatal, disease caused by a parasite that infects red blood cells. Five species of the malaria parasite infect humans. *Plasmodium falciparum*, the parasite that causes cerebral malaria, is the most dangerous; the other 3 types of parasite (vivax, malariae, and ovale) generally cause less serious disease. The fifth parasite, *Plasmodium knowlesi*, is presently a rare cause of malaria.

## Malaria transmission cycle



## Malaria in children and during pregnancy

All children, including young infants, living in or traveling to malaria-risk areas should take malaria chemoprophylaxis (anti-malaria drugs taken to prevent a malaria infection). Although the recommendations for most antimalarial agents are the same as for adults, it is crucial to use the correct dosage, which depends on the age and weight of the child. Since an overdose of an antimalarial drug can be fatal, all antimalarial (and all other) medication should be stored in childproof containers well out of the reach of children. Malaria is more severe in young children, and possibly fatal, thus it is advisable to refrain from traveling with small children under the age of 5 years to malaria risk areas.

Pregnant women are advised to avoid travel to a malaria area. Malaria may pose a serious threat to a pregnant woman and her unborn child. Pregnant women are at higher risk of developing severe malaria. Malaria may also increase the risk of miscarriage, premature delivery, maternal death, and risk of death for the baby. Pregnant women who are living in or travelling to a malaria-risk area should consult an expert clinician regarding the risks which malaria presents, and the benefits and risks of malaria chemoprophylaxis.

## Where is malaria a particular problem?

After successful programmes to eradicate malaria, it is only found in three provinces in South Africa: north-east KwaZulu Natal, parts of Mpumalanga and Limpopo. The risk of contracting malaria is particularly high during the wet months (September to May) as these foster the ideal conditions for transmission.

In certain African countries such as Angola, Malawi, Mozambique and Zambia, parts of Swaziland, Namibia as well as the Zambezi valley in Zimbabwe, malaria is prevalent throughout the year. The most travel-related cases of malaria which are diagnosed in South Africa are from people returning from the northern parts of Mozambique.

In certain areas such as the north of Botswana and Namibia, and areas lower than 1200 m in Zimbabwe, the high-risk months are from November to June.

## The symptoms of malaria

Malaria symptoms occur at least 7-9 days after being bitten by a mosquito. Fever in the first week of travel is unlikely to be malaria. However, the incubation period may be longer when a person has taken an inadequate course of malaria prevention medications. Certain types of malaria parasites can also take as long as 8 to 10 months to cause symptoms.

Malaria can neither be confirmed nor excluded by clinical symptoms alone. The initial symptoms of malaria are non-specific and can include fever, chills, muscle aches and headache. Recurrent cycles of chills, fever and sweating are typical. There can sometimes be vomiting, diarrhoea, coughing and yellowing (jaundice) of the skin and whites of the eyes. Untreated malaria can cause mental confusion, seizures, coma, kidney failure and death.

The most common mistake is that patients often think that they have flu. Should you start experiencing flu-like symptoms even six months after your return from a malaria area, seek immediate medical attention. Inform the medical personal that you have been to a malaria area.

## Malaria symptoms

