

I NEED TO KNOW ABOUT MALARIA

Transfusion Fact Sheet Volume 4, Number 6
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What is malaria?

Malaria is a serious infection of the blood, liver and other parts of the body, which may be fatal.

What causes malaria?

Malaria is caused by a parasite called *Plasmodium*, which lives inside the red cells and other parts of the body.

How is it spread?

A certain type of mosquito – *Anopheles* – can transmit malaria. The mozzie can suck in malaria parasites during a feed on an infected person. The malaria then multiplies inside the mozzie and can be injected into another person during another meal. The mosquitoes mostly feed around dusk and dawn.

Because the malaria parasite lives in the red blood cells of an infected person, malaria can also spread through blood transfusion, organ transplant, or the shared use of needles and syringes.

Do we have malaria in Australia?

Yes and no. **No:** The World Health Organization (WHO) certified Australia as being malaria free in 1981. **Yes:** Between 500 and 1,000 cases of imported malaria are diagnosed each year. However, there are no cases of locally acquired malaria.

Individuals who reside in malaria areas are at increased risk of acquiring malaria. For example, people who have lived continuously in malaria areas for six months have a greater risk of malaria infection than someone who only stayed in the region for two weeks.

How is malaria diagnosed?

There are lots of different tests. The most common test for someone suspected of having malaria is to look at their blood under a microscope (see the blue smudges in the red cells in the picture, some of which are indicated by the arrows). The number of parasites gives an idea of the severity of infection. Malaria parasites have unique proteins (known as antigens) which can be found by testing. The malaria genetic code can also be detected by DNA tests. These tests are positive only during an infection. A malaria infection also causes our body to make antibodies – immune attack molecules. These can be used to screen donors for current and past infection but must be used in conjunction with other tests to diagnose malaria.



This image was originally published in ASH Image Bank. Authors: Colette Spaccavento; Elena Ivan; Afshan Malik. An overwhelming case of malaria in New York City. ASH Image Bank. 2009. Image number 4211. © The American Society of Hematology.

Can malaria be detected in donor blood?

The Blood Service tests donors who have been to countries where there is an identified malaria risk. We test for malaria antibodies first. Donors who test negative for malaria antibodies can donate for full clinical use.

If malarial antibodies are detected, antigen and DNA tests are performed to identify current infection. If these two tests are negative, the donor can donate but only plasma can be utilised.

What is the treatment for malaria?

Malaria should be treated as soon as possible with prescription (anti-malaria) drugs.

Can a malaria infection be prevented?

Control of the *Anopheles* mosquito is key: mosquito repellent, mosquito screens and eradication programs. Preventative medication is often recommended. Vaccination for malaria is not yet available but is an area of active research.

BLOOD FACT

The WHO estimates 216 million cases of malaria worldwide in 2010 and that almost a million people die from malaria each year.