

Malaria is a protozoal infection carried by mosquitoes

Malaria is a threat to those who travel abroad. As many as 30,000 visitors to tropical countries are infected every year.

Malaria is caused by an infection of the red blood cells with a tiny organism or parasite, called a protozoa. There are four important species of the malaria protozoa (*Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium ovale*, or *Plasmodium malariae*), and each causes a slightly different picture of illness.

These organisms are carried from person to person by the *Anopheles* mosquito. When it bites an infected person, the mosquito sucks up blood containing the parasite, which may then be passed on to the mosquito's next victim. So malaria occurs where the *Anopheles* mosquito breeds - predominantly in rural tropical areas.

What are the symptoms?

The main symptom of malaria is a fever that occurs in regular episodes, with sweating and shivers (known as rigors), exhaustion (because of anaemia) - and in some cases, cerebral involvement or kidney failure.

How dangerous is it?

Malaria is a major killer in many tropical countries where the resources for prevention, proper diagnosis and drug treatments are often lacking. But it can easily be treated if diagnosed promptly. The problem is, the symptoms can be vague and, UK doctors may not be thinking about tropical infections.

Nearly 3 million die, mostly children under five. About 90 per cent of travellers who contract malaria do not become ill until after they return home. Only about 12 per cent of these will become seriously ill. The most severe form of the disease is cerebral malaria, which is fatal in up to six per cent of adults, mainly because it's not diagnosed until it is too late.

Prevention is critical - there are four main steps to take:

1. Before you go, check whether there is a problem in your holiday destination. Find your destination on the Scottish Centre for Infection & Environmental Health: www.fitfortravel.scot.nhs.uk.
2. Take the recommended anti-malarial drugs - for maximum protection, you'll need to take these one week before travelling until one month after your return, but even then, these drugs are not 100 per cent effective. One of the major problems is the steady increase in resistance of the infection to the drugs used in both prevention and treatment. There's also been some controversy about possible side effects. Always talk to your doctor if you are worried - don't just stop taking anti-malarials without getting medical advice.
3. Take steps to avoid being bitten by mosquitoes - this is the MOST IMPORTANT thing you can do!
4. Get help quickly if you develop symptoms and don't forget to tell the doctor you've travelled to a malarial area.

And don't think you are safe if you have lived in a malarial region - you may build up some immunity to the disease but, this can be lost quickly. And, if you have children born in the UK, they'll have no immunity at all. If you're going to visit, travel through, or even just stopover in a malarial country you'll be at risk, even if you have lived there before.

In the past decade, considerable progress has been made in the search for a malaria vaccine, and it's hoped one will be available within the next seven to 15 years. Meanwhile, many global initiatives are working hard to beat malaria.