Malaria is a serious and sometimes life-threatening infection spread through the bite of mosquitoes in many tropical and sub-tropical countries. Malaria can be prevented by avoiding mosquito bites and taking certain medications. People planning to visit malaria-affected countries should get advice from their GP or a travel clinic 4-6 weeks before they leave.

What is malaria?

Malaria is spread by mosquitoes infected with microscopic malaria parasites. Malaria is caused by 5 possible parasites, but infection with one particular parasite (the *Plasmodium falciparum* parasite) can be especially dangerous.

What are the symptoms of malaria?

Symptoms of malaria include:
- sudden fever
- chills
- headache
- sweating
- nausea
- vomiting
- pain in joints and muscles.

In severe cases symptoms can include:
- seizures
- confusion
- kidney failure
- breathing difficulty
- coma.

The infection is sometimes fatal.

Malaria symptoms usually develop 9-14 days after being bitten by an infected mosquito.
Occasionally symptoms develop weeks or months later. Some types of malaria can re-occur months or years after exposure.

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**How is malaria spread?**

Malaria is spread when people are bitten by an *Anopheles* mosquito that is infected with the malaria parasite.

The malaria parasites live inside the gut and salivary glands of an infected mosquito. When a person is bitten by an infected mosquito, the parasites are injected into the person's blood. The parasites then infect the liver and blood cells. When a mosquito bites a person with malaria, the mosquito may become infected and can then spread the disease to other humans.

In rare cases, malaria can also be spread from person to person through blood transfusion, sharing injecting equipment, and from mother to foetus.

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**Who is at risk of getting malaria?**

Malaria is present in the tropical and subtropical regions of Africa, Asia, the Americas and the Western Pacific. People who travel to these areas are at risk of getting malaria.

See the United States Centers for Disease Control and Prevention website for a map showing the risk of malaria transmission in different countries.

The risk is usually higher in rural areas than in cities. Those at increased risk include:

- **Pregnant women**: Malaria can be more severe in pregnant women. Malaria can also increase the risk of miscarriage, premature labour, and stillbirth.

- **Young children**: Children of any age can get malaria. When children get malaria, the disease can progress very rapidly. Malaria can be more severe in children, especially those aged under 5. Pregnant women and young children are sometimes advised not to travel to malaria-affected areas if the risk is especially high.

- **People visiting friends and relatives overseas**: People returning to malaria-affected areas to visit friends and relatives are often at high risk of getting malaria. This is because immunity against the malaria parasite wanes quickly, and people visiting friends and relatives in malaria-affected areas may not be aware that they need to avoid mosquitoes.

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**How is malaria prevented?**

People going overseas can avoid getting malaria by protecting against mosquito bites and taking preventive antimalarial medicines.

If you are travelling to an area that has malaria, visit a GP or travel clinic 4-6 weeks before you go for specific advice about avoiding malaria based on your itinerary and medical history.

Depending on the risk of malaria in the areas you are visiting, you may be advised to take medicines to prevent malaria:

- The choice of antimalarial depends on a range of factors including the drug resistance patterns of malaria in the areas you will visit.
• It is important to take antimalarials exactly as advised by your doctor. All antimalarials need to be taken before, during and after you travel. Some need to be started several weeks before you travel. It is also very important to continue taking antimalarials as directed after you leave the affected area.
• Sometimes this means taking antimalarials for up to 4 weeks after you leave.
• No antimalarial drug is 100% effective. Travellers taking antimalarial drugs still need to protect themselves from mosquito bites.

To protect against mosquito bites and reduce the risk of diseases they transmit:
• Cover up while outside (wear loose, long-sleeved, light-coloured clothing and covered footwear and socks). Mosquitoes can bite through tight clothing.
• Apply mosquito repellent evenly to all areas of exposed skin. The most effective repellents contain picaridin, DEET, or oil of lemon eucalyptus. Natural or homemade repellents provide limited protection. Read the instructions to find out how often you should reapply repellent. Always apply sunscreen first and then apply repellent.
• Take special care during peak mosquito biting hours. The mosquitoes that transmit malaria are most active during twilight hours (dawn and dusk) and into the evening.
• Remove potential mosquito breeding sites from around the home and screen windows and doors.
• Take extra precautions when travelling in areas with a higher risk of mosquito-borne diseases.

In addition to the general protection measures above, overseas travellers should also:
• Stay and sleep in screened or air-conditioned rooms
• Use a bed net if the area where you are sleeping is exposed to the outdoors. Nets are most effective when they are treated with a pyrethroid insecticide, such as permethrin. Pre-treated bed nets can be purchased before travelling, or nets can be treated after purchase
• Avoid known areas of high mosquito-borne disease transmission or outbreaks.

For more detailed information on reducing the risk of mosquito bites at home and while travelling see the Mosquitoes are a Health Hazard factsheet. This also includes more information on mosquito repellents.

See the Staying healthy when travelling overseas factsheet for further information on travel. The Smartraveller website also has health information for specific destinations.

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**How is malaria diagnosed?**

Your doctor can take a blood sample and have it tested for malaria parasites. It is important that your doctor knows about your travel history and symptoms so the right blood test can be ordered.

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**How is malaria treated?**

If you become ill with symptoms of malaria while overseas or after travelling, visit a GP or hospital emergency department as soon as possible.

Tell the doctor where you have travelled, as this will help to make the right diagnosis.

If you are travelling to a remote area where you know it will be difficult to access medical care, speak to your doctor before you travel. You may need to be prepared to treat yourself for malaria if you get symptoms (as well as taking drugs to prevent malaria).
What is the public health response to malaria?

When laboratories confirm that someone has malaria, they notify their local public health unit. Public health units follow up each case to determine where the person acquired the infection.

More information

For further information please call your local Public Health Unit on 1300 066 055.

If you have symptoms of malaria and you are concerned, speak to your doctor right away, or in an emergency call 000. For health advice you can call also health direct on 1800 022 222 for free 24-hour health advice or speak to your local pharmacist.