

Malaria factsheet

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 doctor 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?

Malaria symptoms usually develop 9-14 days after being bitten by an infected mosquito. They 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.

Occasionally symptoms develop weeks or months later. Some types of malaria can re-occur months or years after exposure.

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. Parasites are injected into a person's blood when bitten by an infected mosquito. The parasites then infect the liver and blood cells. When a mosquito bites a person infected with malaria, the mosquito may then 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 or some types of organ transplant, sharing injecting equipment, and from mother to foetus.

Who is at risk of 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.

How is it prevented?

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

Preventing mosquito bites

To prevent mosquito bites, take these steps:

- Wear light-coloured, long-sleeved shirts, long trousers and enclosed shoes. Mosquitoes can bite through tight clothing.
- Apply mosquito repellent containing picaridin, DEET or oil of lemon eucalyptus, evenly to all areas of exposed skin. 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.
- Remove stagnant water around the home as they can become mosquito breeding sites.
- Use mosquito nets, 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, when travelling overseas you should also:

- Stay and sleep in screened or air-conditioned rooms.
- Use a mosquito bed net if the sleeping area is exposed to the outdoors. Effective nets 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.
- Be aware of and take special care during peak mosquito biting hours. Some species of mosquitoes will bite all throughout the day.
- Avoid known areas of high mosquito-borne disease transmission or outbreaks.

Antimalarial prophylaxis

If you are travelling to an area that has malaria, speak to a doctor 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 your 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.

For mosquito bite prevention information, see the [Mosquitoes are a Health Hazard factsheet](#). The [Smartraveller website](#) also has health information for specific destinations.

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.

How is malaria treated?

If you become ill with symptoms of malaria while overseas or after travelling, visit a doctor 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?

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.

Additional resources

If you have symptoms of malaria and you are concerned, speak to your doctor right away, or in an emergency call Triple Zero (000).

For further advice:

- See [Mosquitoes are a health hazard Factsheet](#) and [Staying safe and healthy overseas](#)
- call your local public health unit on 1300 066 055
- call Healthdirect on 1800 022 222 for free 24-hour health advice
- speak to your local pharmacist.