



## BY UNDERSTANDING MALARIA, you'll stand a better chance of avoiding it altogether. And if you do contract the disease, you'll be prepared to respond.

Every year thousands of travelers return from the tropics with a souvenir they didn't bargain for, malaria, which is a disease that can nearly always be prevented. The best approach is to avoid it in the first place, of course, but should you contract the disease the following tips will give you some ideas as to the best approach. Here's what you need to know:

- **Understand malaria:** The disease is caused by a microscopic parasite that is transmitted to humans by the bite of infected anopheles mosquitoes. Four species of parasites cause disease in humans. The parasite makes its way through the skin and into the blood stream, enters red blood cells, multiplies, and destroys the blood cells. Mosquitoes acquire the parasite by biting humans already infected, and ingesting blood containing parasites.
- **Know where malaria exists:** If you are going to a tropical country, check if malaria is present. Lists of such countries can be found on the CDC Web site (see sidebar) and in books on travel medicine.
- **If you intend to visit a country where malaria exists, speak to your physician:** The disease is rarely present in an entire country. While malaria exists in Mexico and the Dominican Republic, it does so only in remote parts rarely visited by travelers. In other countries, it is found only in rainforests, below certain altitudes, in the rainy season, or in rural areas, not in cities.
- **Preventing insect bites is your primary defense:** Keep mosquitoes from biting you, especially at night. Spray insecticides on your home's walls to kill adult mosquitoes that come inside, and sleeping under bed nets, which are especially effective if they have been treated with insecticide. Also use insect repellent and wear long-sleeved clothing if you're outside at night.
- **Medications are your secondary defense:** You need expert opinion to make medication decisions. Medications commonly used include chloroquine, mefloquine, atavaqone/proguanil, and doxycycline. No single medication is universally effective. Choice

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depends on the species of parasite present, and to which medications those parasites are susceptible, for example.

- **Don’t worry about contact transmission:** Malaria is not spread from person to person like a cold or the flu, and it cannot be sexually transmitted. You cannot get malaria from casual contact with malaria-infected people, such as sitting next to someone who has malaria.
- **Understand how medication is given:** Some anti-malarials are taken daily, others weekly. Some must be started several weeks before exposure, others just a day or two before. And medication must be continued after exposure ends, some for a week, others for four weeks.

## Online Info


**Centers for Disease Control and Prevention**  
[www.cdc.gov/malaria](http://www.cdc.gov/malaria)

**World Health Organization (WHO)**  
[www.who.int/topics/malaria/en](http://www.who.int/topics/malaria/en)

**Malaria Foundation International**  
[www.malaria.org](http://www.malaria.org)

**Bill & Melinda Gates Foundation**  
[www.gatesfoundation.org](http://www.gatesfoundation.org)

**Medline Plus**  
[medlineplus.gov](http://medlineplus.gov)

- **Understand dosing:** In the U.S., no liquid formulation exists; only pills. (Liquid preparations available overseas vary in concentration and are best avoided.) Ask your pharmacist for assistance.
- **Think malaria if you have a fever while in malarial areas or in the months afterwards:** Very rarely, malaria occurs even when you observe protective measures and use medication as prescribed. If you’re running a fever with no obvious cause, seek medical care immediately. A simple blood test at a reliable medical facility makes the diagnosis. Tell doctors your recent travel history if a family member becomes ill in the months after returning home. Malaria can surface months later. Malaria is a treatable disease if diagnosed promptly. 

## What is Malaria?

Malaria is a serious and sometimes fatal disease caused by a parasite that commonly infects a certain type of mosquito which feeds on humans. People who get malaria are typically very sick with high fevers, shaking chills, and flu-like illness. Four kinds of malaria parasites can infect humans: *Plasmodium falciparum*, *P. vivax*, *P. ovale*, and *P. malariae*. Infection with *P. falciparum*, if not promptly treated, may lead to death.

*Plasmodium falciparum* causes severe and life-threatening malaria; this parasite is very common in many countries in Africa south of the Sahara desert. People who are heavily exposed to the bites of mosquitoes infected with *P. falciparum* are most at risk of dying from malaria. People who have little or no immunity to malaria, such as young children and pregnant women; or travelers coming from areas with no malaria, are more likely to become very sick and die. Poor people living in rural areas who lack knowledge, money, or access to health care are at greater risk for this disease. As a result of all these factors, an estimated 90 percent of deaths due to malaria occur in Africa south of the Sahara; most of these deaths occur in children under five years of age.

Although malaria can be a deadly disease, illness and death from malaria can usually be prevented. About 1,300 cases of malaria are diagnosed in the United States each year, with the vast majority in travelers and immigrants returning from malaria-risk areas such as sub-Saharan Africa and South Asia. The World Health Organization estimates that each year 300-500 million cases of malaria occur and more than one million people die of malaria, especially in developing countries.

Source: The Centers for Disease Control and Prevention