

What is malaria?

Malaria is a serious, sometimes fatal, disease caused by a parasite. There are four kinds of malaria that can infect humans: *Plasmodium falciparum* (plaz-MO-dee-um fal-SIP-a-rum), *P. vivax* (VI-vacks), *P. ovale* (o-VOL-ley), and *P. malariae* (ma-LER-ee-aa).

Where does malaria occur?

Malaria occurs in over 100 countries and territories. More than 40% of the people in the world are at risk. Large areas of Central and South America, Hispaniola (Haiti and the Dominican Republic), Africa, the Indian subcontinent, Southeast Asia, the Middle East, and Oceania are considered malaria-risk areas (an area of the world that has malaria).

How common is malaria?

The World Health Organization estimates that yearly 300-500 million cases of malaria occur and more than 1 million people die of malaria. About 1,200 cases of malaria are diagnosed in the United States each year. Most cases in the United States are in immigrants and travelers returning from malaria-risk areas, mostly from sub-Saharan Africa and the Indian subcontinent.

How do you get malaria?

Humans get malaria from the bite of a malaria-infected mosquito. When a mosquito bites an infected person, it ingests microscopic malaria parasites found in the person's blood. The malaria parasite must grow in the mosquito for a week or more before infection can be passed to another person. If, after a week, the mosquito then bites another person, the parasites go from the mosquito's mouth into the person's blood. The parasites then travel to the person's liver, enter the liver's cells, grow and multiply. During this time when the parasites are in the liver, the person has not yet felt sick. The parasites leave the liver and enter red blood cells; this may take as little as 8 days or as many as several months. Once inside the red blood cells, the parasites grow and multiply. The red blood cells burst, freeing the parasites to attack other red blood cells. Toxins from the parasite are also released into the blood, making the person feel sick. If a mosquito bites this person while the parasites are in his or her blood, it will ingest the tiny parasites. After a week or more, the mosquito can infect another person.

Each year in the United States, a few cases of malaria result from blood transfusions, are passed from mother to fetus during pregnancy, or are transmitted by locally infected mosquitoes.

What are the signs and symptoms of malaria?

Symptoms of malaria include fever and flu-like illness, including shaking chills, headache, muscle aches, and tiredness. Nausea, vomiting, and diarrhea may also occur. Malaria may cause anemia and jaundice (yellow coloring of the skin and eyes) because of

the loss of red blood cells. Infection with one type of malaria, *Plasmodium falciparum*, if not promptly treated, may cause kidney failure, seizures, mental confusion, coma, and death.

How soon will a person feel sick after being bitten by an infected mosquito?

For most people, symptoms begin 10 days to 4 weeks after infection, although a person may feel ill as early as 8 days or up to 1 year later. Two kinds of malaria, *P. vivax* and *P. ovale*, can relapse; some parasites can rest in the liver for several months up to 4 years after a person is bitten by an infected mosquito. When these parasites come out of hibernation and begin invading red blood cells, the person will become sick.

How is malaria diagnosed?

Malaria is diagnosed by looking for the parasites in a drop of blood. Blood will be put onto a microscope slide and stained so that the parasites will be visible under a microscope.

Any traveler who becomes ill with a fever or flu-like illness while traveling and up to 1 year after returning home should immediately seek professional medical care. You should tell your health care provider that you have been traveling in a malaria-risk area.

Who is at risk for malaria?

Persons living in, and travelers to, any area of the world where malaria is transmitted may become infected.

What is the treatment for malaria?

Malaria can be cured with prescription drugs. The type of drugs and length of treatment depend on which kind of malaria is diagnosed, where the patient was infected, the age of the patient, and how severely ill the patient was at start of treatment.

How can malaria and other travel-related illnesses be prevented?

- Visit your health care provider 4-6 weeks before foreign travel for any necessary vaccinations and a prescription for an antimalarial drug.
- Take your antimalarial drug exactly on schedule without missing doses.
- Prevent mosquito and other insect bites. Use DEET insect repellent on exposed skin and flying insect spray in the room where you sleep.
- Wear long pants and long-sleeved shirts, especially from dusk to dawn. This is the time when mosquitoes that spread malaria bite.
- Sleep under a mosquito bednet that has been dipped in permethrin insecticide if you are not living in screened or air-conditioned housing.

Malaria-risk information is available from CDC’s Fax Information Service or at CDC’s Internet Website:

- To request fax information, call 1-888-232-3299 and listen to the instructions. For the directory of all available traveler’s health faxes, arranged by regions of the world, request document number 000005.

For more information on malaria, see the [Diseases](#) section and read [Prescription Drugs for Preventing Malaria \(Information for the Public\)](#), [Preventing Malaria in Pregnant Women \(Information for the Public\)](#), and [Preventing Malaria in Infants and Children \(Information for the Public\)](#).

Identical malaria prevention information is provided at the CDC Internet website and the toll free fax information service.

This fact sheet is for information only and is not meant to be used for self-diagnosis or as a substitute for consultation with a health care provider. If you have any questions about the disease described above or think that you might have malaria, consult a health care provider.