

Malaria

Frequently Asked Questions

What is malaria?

Malaria (MULL-air-EE-ah) is a serious illness caused by the *Plasmodium* parasite that affects the red blood cells. There are four species (types) of *Plasmodium* that can infect humans: *P. falciparum*, *P. malariae*, *P. vivax*, and *P. ovale*. Each species causes slightly different symptoms.

Who gets malaria?

People can get malaria if they are bitten by a mosquito in a region of the world where malaria occurs. Almost all cases of malaria in the United States are gotten during travel to other countries. There are genetic traits that provide protection from malaria. Most Africans show a natural resistance to infection with *P. vivax* because they lack a specific factor on the surface of their red blood cells. Persons with sickle cell trait have resistance to *P. falciparum* and are protected from severe illness.

Where is malaria found?

Malaria is common in most developing countries. People traveling to Central and South America, the Caribbean, sub-Saharan Africa, India, Southeast Asia, the Middle East and South Pacific are especially at risk.

How do people get malaria?

Infected people carry the malaria parasite in their blood. Malaria is spread when a mosquito swallows blood from an infected person and bites another person. Only certain species of mosquitoes pick up the malaria infection. New Jersey has one species of mosquito, *Anopheles quadrimaculatus*, which can carry malaria. Mosquito control efforts and timely treatment of human cases of malaria have rid malaria from the mosquito populations in the United States. People can also get malaria from blood transfusions from infected donors and from sharing infected syringes (needles). Rarely, the disease can be passed by infected mothers to their babies.

What are the symptoms of malaria?

Depending on the species of parasite, symptoms vary, but usually occur within 1 to 2 weeks after being bitten by an infected mosquito.

Symptoms of malaria include:

- High fever
- Chills
- Headache
- Nausea
- Vomiting
- Sweating

Depending on the species of parasite, symptoms may come and go. Relapses may occur for up to 5 years (*P. vivax* and *P. ovale*) or 50 years (*P. malariae*) if not treated properly. *P. falciparum* may cause more serious symptoms, including shock, kidney and liver failure, coma, and death.

How is malaria diagnosed?

If a health care provider suspects malaria, samples of the patient's blood will be examined.

What is the treatment for malaria?

Malaria can be successfully treated with antimalarial drugs if diagnosed early. In some parts of the world malaria has become resistant to the drug, chloroquine. Individuals who have become ill with malaria after travel to those countries should be treated initially with another drug. *P. vivax*, *P. ovale* and *P. malariae* require a second medication after the first treatment to prevent relapses. *P. falciparum* is the most serious and may be life-threatening if not treated quickly.

Should a person infected with malaria be excluded from work or school?

People with malaria do not need to be excluded from work or school. Malaria is not spread from person to person, except when sharing needles. People who have had malaria should not donate blood after being diagnosed with the disease.

How can malaria be prevented?

People traveling to areas of the world that have malaria should take precautions to decrease their risk of becoming infected with malaria:

- Contact your health care provider to discuss taking oral medication to prevent the disease. This medicine should be taken at least two weeks before leaving the United States to allow enough time for it to become effective. There is no vaccine against malaria.

Follow these steps to reduce your risk of being bitten by mosquitoes:

- Wear shoes and socks, long pants and a long-sleeved shirt when outdoors at dusk or dawn when mosquitoes are most active.
- Use an EPA-registered insect repellent such as those with DEET, picaridin, or oil of lemon eucalyptus. These products can be used on skin or clothing. Choose a product that provides protection for the amount of time spent outdoors. Permethrin is another type of insect repellent. It can only be used on clothing. ALWAYS follow the directions on the product label.
- Sleep in screened-in areas or under protective nets.

Mosquitoes begin to breed in any puddle or standing water that lasts for more than four days. Get rid of mosquito breeding sites around the home.

- Clean out gutters and drains
- Dispose of old tires
- Drain standing water from pool covers and ditches
- Remove all containers that hold water
- Maintain pools, spas and saunas properly
- Change birdbath water every several days
- Make sure all windows and doors have screens and that all screens are in good condition.

Where can I get more information on malaria?

- Your health care provider
- Your local health department
- NJ Department of Health www.nj.gov/health
- Centers for Disease Control and Prevention www.cdc.gov

This information is intended for educational purposes only and is not intended to replace consultation with a health care professional. Adapted from Centers for Disease Control and Prevention.