

## MALARIA GLOSSARY

**Anopheles:** The genus of mosquito that transmits malaria.

\***Antibody:** Molecules in the body that identify and destroy foreign substances such as bacteria and viruses.

**Antigen:** Any substance that provides an immune response when it is introduced into the body.

**Artemisinin-Based Combination Therapies (ACTs):** A group of malaria medications that produces a very fast response in people with malaria and are active against multi-drug resistant *Plasmodium falciparum* malaria, the deadliest strain of malaria caused by a parasite and transmitted to humans by a mosquito. ACTs are well tolerated by people who have malaria and have the potential to reduce malaria transmission by decreasing the presence of the parasite in the bloodstream.

**Attenuated:** Treated in such a way as to decrease the ability of the parasite to cause infection or disease.

**Bed Nets:** Bed nets are used to prevent malaria transmission by forming a protective barrier around persons using them and therefore limiting their exposure to mosquito bites. Bed nets have repeatedly been shown to reduce severe disease and mortality due to malaria in endemic regions.

**Chloroquine:** The mainstay of malaria treatment since 1945, but no longer effective against a growing number of strains of *P. falciparum* malaria.

**DDT:** DDT (dichlorodiphenyltrichloroethane) was the main insecticide used during the 1950s and 1960s in the World Health Organization's (WHO) global campaign to eradicate the mosquitoes that carry malaria. DDT has a history of being a highly controversial insecticide. It has been banned from agricultural use in almost all countries. Currently, the WHO recommends use of DDT for malaria control through indoor spraying.

\***Endemic:** The constant presence of a disease or infectious agent within a given geographic area or population group; can also refer to the usual prevalence of a given disease within such area or group.

\***Epidemic:** The occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time.

**Gametocytes:** Precursors of the sexual forms of the malaria parasite, which release either male or female gametes within the stomach of the mosquito.

**Genus:** A category of organisms.

**G6PD Deficiency:** An inherited abnormality that causes loss of a red blood cell enzyme. It may give a person some protection against malaria, but it also means that person cannot take the antimalarial drug primaquine. G6PD deficiency is found most commonly in people of African, Mediterranean, and Asian descent.

**Hemoglobin:** The oxygen-carrying part of the red blood cell.

**Hypnozoite:** A form of the parasite that remains inactive within the liver and can produce relapses.

\***Immune System:** The body's system of defense against foreign organisms such as bacteria, viruses or fungi.

**Immunity:** The protection generated by the body's immune system in response to invasion by "foreign" invaders, including bacteria and viruses as well as parasites.

**Indoor Residual Spraying (IRS):** The application of long-acting chemical insecticides on the walls and roofs of all houses and domestic animal shelters in a given area, in order to kill the *Anopheles* mosquitoes—the vector that can transmit the malaria parasite to humans. The primary goal of IRS in reducing malaria transmission is to reduce the life span of the *Anopheles* mosquitoes so that they can no longer transmit malaria parasites from one person to another, and to reduce the density of the mosquitoes in the area.

**Larvae:** Immature wingless forms of insects such as mosquitoes.

**\*Malaria:** A disease caused by parasites that are transmitted to humans via mosquito bites. Symptoms of infection may include fever, chills, headache, muscle pain, fatigue, nausea and vomiting. These symptoms usually appear between 9 and 14 days after a person is bitten by an infected mosquito. In severe cases, the disease can be life-threatening.

**Merozoite:** The form of the malaria parasite that invades human red blood cells.

**Mucous Membrane:** The lining of certain cavities, such as the nose and mouth and intestinal tract, that produces a protective layer of mucus.

**Oocyst:** A parasite stage within the mosquito, produced by the union of male and female gametes.

**Parasite:** An animal (or plant) that must live on or in an organism of another species, from which it draws its nourishment.

**Paroxysm:** An attack of a disease that is likely to recur at periodic intervals.

**Plasmodium:** The genus of the parasite that causes malaria. The genus includes four species that infect humans: *Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium malariae*, and *Plasmodium ovale*.

**President's Malaria Initiative (PMI):** The U.S. government's initiative, launched in 2005, to fight malaria in the region most affected by the disease—Africa. The PMI is an interagency initiative led by USAID and implemented together with CDC. The initiative's goal is to reduce malaria-related deaths by 50 percent in 15 focus countries.

**Primaquine:** A drug that kills malaria parasites that lodge in the liver.

**Quinine:** A drug, originally extracted from tree bark, which was the only available antimalarial treatment for nearly 300 years.

**Relapse:** The recurrence of disease some time after it has been apparently cured.

**\*Resistance:** The ability of a pathogen to reproduce despite the presence of drugs designed to inhibit its reproduction or survival. The malaria parasite has developed strains that are resistant to drugs such as chloroquine. The *Anopheles* mosquito has developed strains that are resistant to DDT and other insecticides.

**Roll Back Malaria:** Launched in 1998 by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP) and the World Bank, it aims to ensure that the Millennium Development Goal related to malaria—to halt and begin to reverse the incidence of malaria by 2015—is achieved.

**Schizont:** A developmental form of the parasite that contains many merozoites.

**Species:** Organisms in the same genus that have similar characteristics.

**Sporozoite:** The infectious form of the parasite, which is injected into people by a feeding mosquito.

**Strain:** A genetic variant within a species.

**Vector:** An organism such as a tick, a mosquito, or a person that carries a disease-causing microbe from one host to another. For example, the Anopheles mosquito is a vector for the malaria virus.

**Virulent:** Characterized by rapid course or severity.

#### REFERENCE

U.S. National Institutes of Health (NIH), National Institute of Allergy and Infectious Disease. *Malaria Glossary*, <http://www.niaid.nih.gov/publications/malaria/glossary.htm>

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