

MALARIA

What's malaria ?

Malaria is a potentially fatal blood disease caused by a parasite that is transmitted to human and animal hosts by the *Anopheles* mosquito.

The human parasite, *Plasmodium falciparum*, is dangerous not only because it digests the red blood cell's hemoglobin, but also because it changes the adhesive properties of the cell it inhabits.

This change in turn causes the cell to stick to the walls of blood vessels.



The life cycle of the malaria

The life cycle of the malaria parasite in a human or animal begins when an infected mosquito transmits malaria sporozoites to a new host.

The sporozoites travel to the liver, where they invade hepatocytes (liver cells) and multiply thousands of times over the following two weeks before rupturing out of the liver into the blood stream.

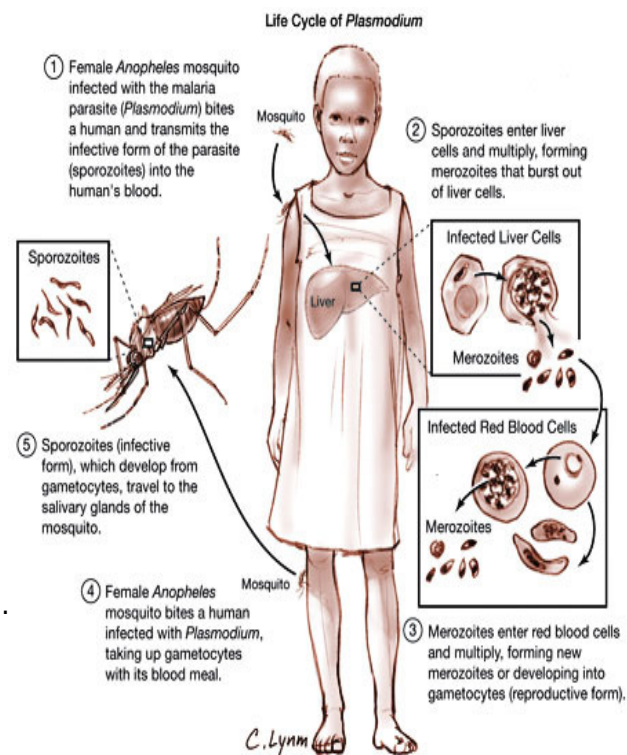
During the first 48 hours after infecting a red blood cell, a parasite goes through several phases of development.

The first phase is the ring stage, in which the parasite begins to metabolize hemoglobin.

The next phase is the trophozoite stage, during which the parasite metabolizes most of the hemoglobin, gets larger, and prepares to reproduce more parasites.

Finally, the parasite divides asexually to form a multinucleated schizont.

At the end of the cycle, the red blood cell bursts open and the parasites are dispersed to infect more red blood cells.



Symptoms of Malaria include:

- ✓ High fever
- ✓ Chills
- ✓ Shaking
- ✓ Extreme sweating
- ✓ Fatigue
- ✓ Discomfort and body aches
- ✓ Headache
- ✓ Nausea
- ✓ Vomiting



How to protect to getting Malaria:

- ✓ Sleep in a room with screens on the windows and doors
- ✓ Use mosquito net on your bed
- ✓ During the evening use wear light colored pants and shirts with long sleeves
- ✓ Use bug repellent spray called DEET to skin and clothes
- ✓ Avoid go outdoors without protection in the evening when mosquitos are typically more active



Prevention requires A B C and D:

- ✓ **A**wareness of risk
- ✓ **B**ite avoidance
- ✓ **C**hemoprophylaxis (taking preventive medicines if you live in malaria region)
- ✓ **D**iagnostics made promptly with early treatment of an infected case

