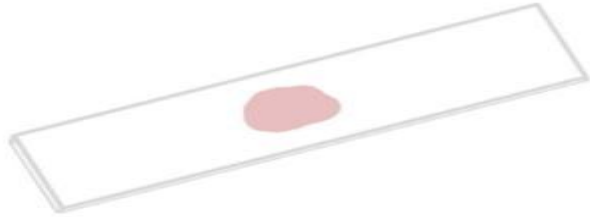
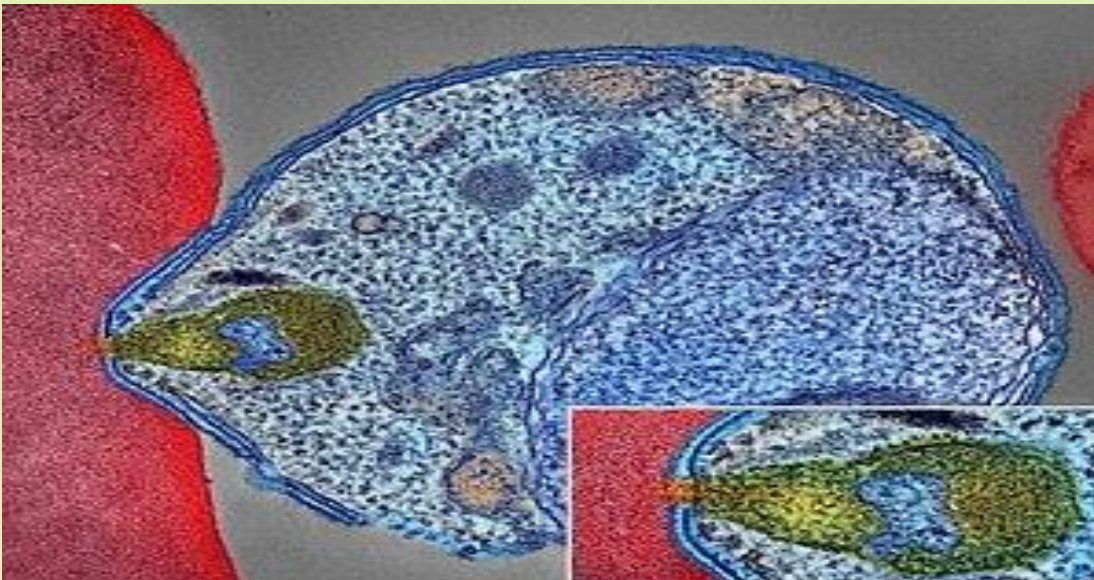


MALARIA



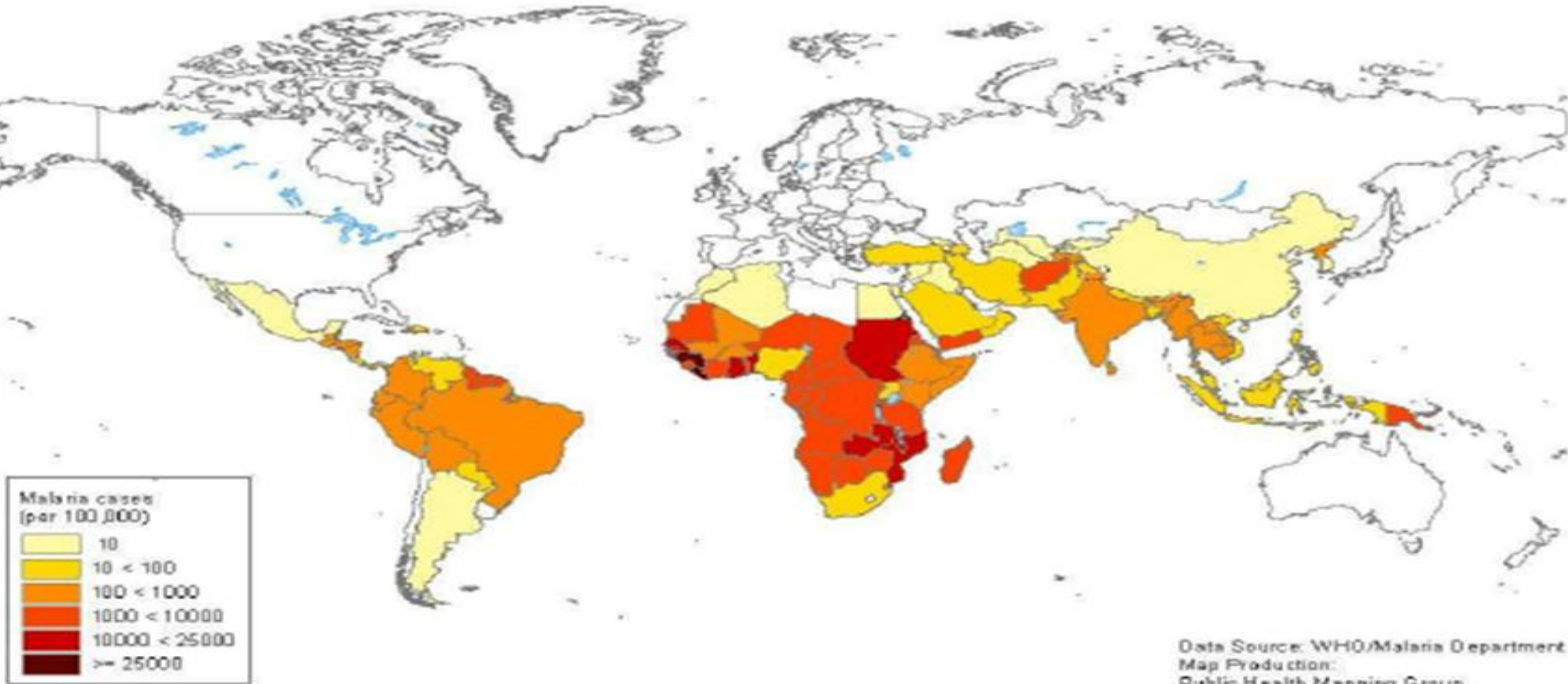
Introduction

- ▶ Malaria is a life-threatening mosquito-borne disease caused by **Plasmodium** parasites .
- ▶ It is transmitted to people through the bites of infected **female Anopheles** mosquitoes and is called as “**malaria vectors**”.
- ▶ It is preventable and curable.



Distribution of Malaria Worldwide

Malaria cases (per 100,000) by country, latest available data



Risks of More-severe Disease:

People at increased risk of serious disease include:

- ▶ Young children and infants
- ▶ Older adults
- ▶ Travelers coming from areas with no malaria
- ▶ Pregnant women and their unborn children

Life Cycle of the Malarial Parasite



Sporozoite release

Blood Vessel

Mosquito bite and Sporozoite release into a capillary.



Human Liver Stage

Liver infected and Hepatic cells rupture to release large number of merozoites.

Merozoites

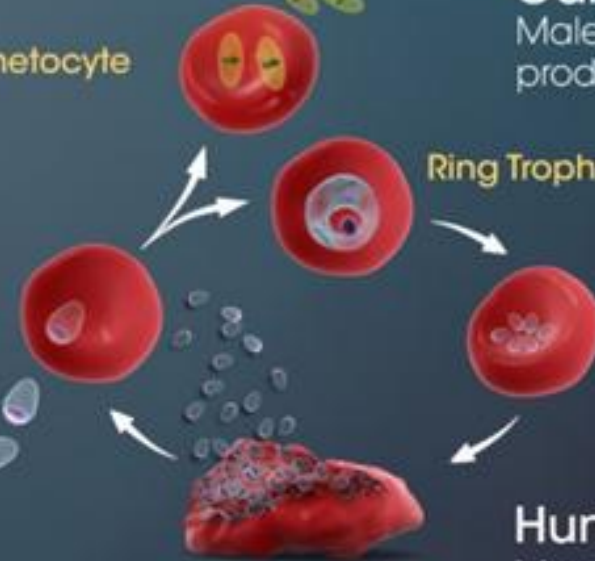


Mosquito Gut Stage

Mosquito sucks blood, ingesting gametocytes. Final development leads to formation of Sporozoites.

Gametocyte

Ring Trophozoite

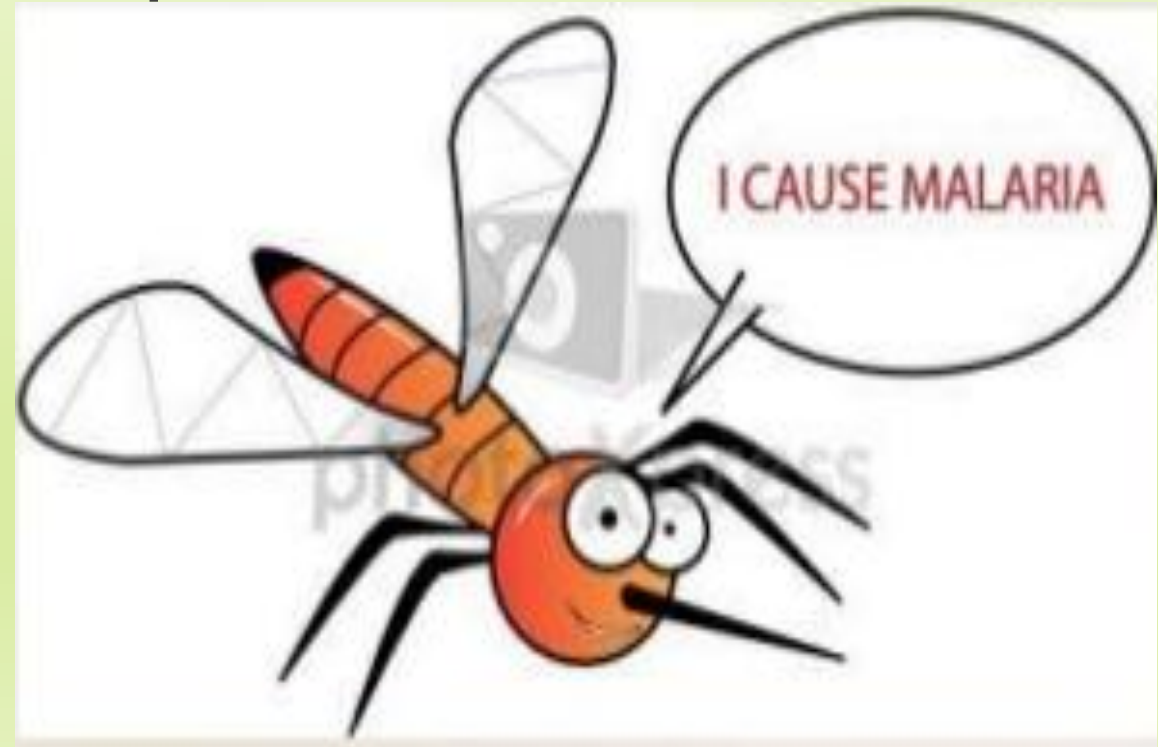


Human Blood Stage

Merozoites infect and destroys RBCs producing more number of merozoites.

Causes

- ▶ Malaria can occur if a mosquito infected with the *Plasmodium* parasite bites you.
- ▶ There are four kinds of malaria parasites that can infect humans:
 - *Plasmodium vivax*,
 - *P. ovale*
 - *P. malariae*
 - *P. falciparum*



MALARIA SYMPTOMS



Joint pain



Fever



Hemolytic anemia



Hemoglobin in urine



Headaches



Jaundice



Vomiting



Shivering



Retinal damage



Convulsions

SAY NO TO MOSQUITOES

COMPLICATIONS BY MALARIA

1

Organ Failure



2

Severe Anaemia

3

Low Blood Sugar

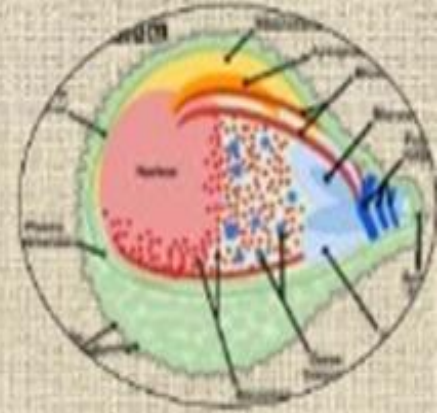
4

Breathing Problems

Transmission

Malaria is transmitted by blood, so it can also be transmitted through:

- ▶ **An organ transplant**
- ▶ **A Transfusion**
- ▶ **Use of shared needles or syringes**



Malaria Transmission Cycle



Plasmodium gamelocytes



First infected mosquito



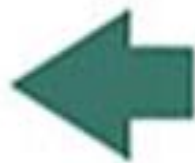
First infected person



Liver infection



Second infected person



Second infected mosquito

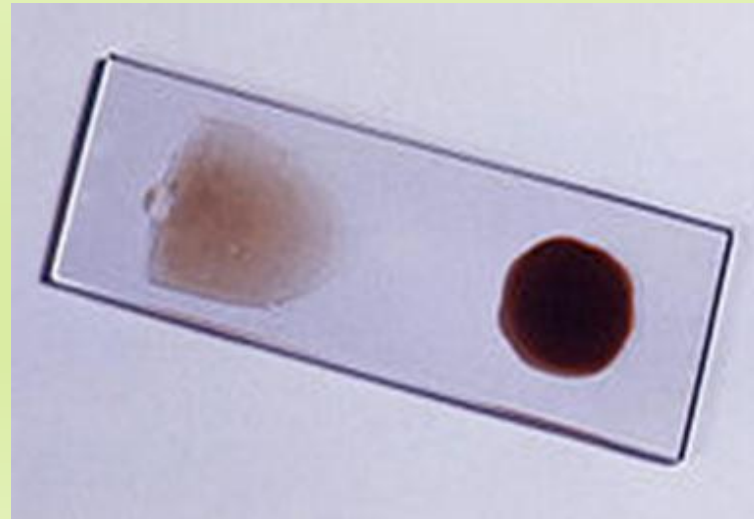


Infected red blood cells



Diagnosis

- Microscopic laboratory testing of blood films
- Antigen based rapid diagnostic test (RDT)
- Parasitological test



Treatment

- **Artemisinin-based combination therapy (ACT)**
- **Vaccines**



Prevention

