

Types of Malaria

SPECIES OF PARASITE

Malaria in man is caused by 4 distinct species of malaria parasite -

1. Plasmodium vivax
2. Plasmodium falciparum
3. Plasmodium malariae
4. Plasmodium ovale

Plasmodium vivax

It has the widest geographic distribution throughout the world and causes much debilitating disease. In India, about 60% of the infections are due to P. vivax.

Plasmodium falciparum

It is also wide spread, results in the most severe infections and is responsible for nearly all malaria-related deaths.

40% of infection is due to P. falciparum.

Plasmodium malariae

It has restricted distribution and is said to be responsible for less than 1% of infections in India

Plasmodium ovale

It is very rare parasite of man, mostly confined to tropical Africa.

In highly endemic areas, the patient may become infected with one, two or even more species of the malarial parasite.

In India, 4-8% is due to mixed infection.

Differentiating features of P.vivax and P.falciparum malaria

Sr.No.	P. vivax	P. falciparum
1.	P. vivax is relatively benign and rarely produces serious complications or death	P. falciparum on the other hand, is associated with serious complications e.g. cerebral malaria, jaundice, renal failure etc. including high mortality
2.	In P. vivax, relapse occurs due to persistence of inactive forms (hypnozoites) in liver tissues which periodically invade blood stream producing clinical malaria.	P. falciparum does not have any dormant form in liver and once infection is cured, there is no relapse .
3.	In P. vivax malaria, less than 1% of RBCs are parasitised	In P. falciparum, the number of RBCs involved may go upto 35% .
4.	The gametocytes (sexual stage) – male and female mature in peripheral blood and are sucked up by female anopheles mosquito for completion of their life cycle	For maturation of gametocyte P. falciparum must invade deeper circulation . The blood capillaries of internal organs get clogged with infected RBC thus obstructing flow of blood. Also some biochemical changes take place which damage the organ

Other Modes of Transmission of Malaria

Malaria can be transmitted by

- Blood transfusion
- Needle- stick injury
- Sharing of needle by infected drug addicts

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