

World Malaria day, 2022

April 26, 2022

In news— The World Malaria Day is marked annually on 25 April to focus global attention on malaria, and its devastating impact on communities and societal development. **The theme for 2022 is “Harness innovation to reduce the malaria disease burden and save lives”.**

What is Malaria?

- **Malaria is a tropical disease caused by Plasmodium parasites that are transmitted to humans by insect bites** from infected female Anopheles mosquitoes, which mainly bite at dusk and at night.
- **Symptoms include** a high temperature of 38C or above, feeling hot and shivery, headaches, vomiting, muscle pains, diarrhoea.
- Malaria can **also be spread through blood transfusions and the sharing of needles.**
- **The 5 different types of plasmodium parasite that cause malaria in humans are:**
 - **Plasmodium falciparum** – **mainly found in Africa**, it's the most common type of malaria parasite and is responsible for most malaria deaths worldwide.
 - **Plasmodium vivax** – **mainly found in Asia and South America**, this parasite causes milder symptoms than Plasmodium falciparum, but it can stay in the liver for up to 3 year.
 - **Plasmodium ovale** – fairly uncommon and usually **found in West Africa**, can remain in the liver for several years without producing symptoms.
 - **Plasmodium malariae** – this is quite rare and usually **only found in Africa.**
 - **Plasmodium knowlesi** – this is very rare and found in parts of **Southeast Asia.**

- Malaria can be treated and its symptoms can be sublimed through correct medication. A few of the most **common medications for malaria are:**
 - Quinine.
 - Doxycycline.
 - Chloroquine.
 - Artemisinin.
 - Mefloquine.
 - Atovaquone.
- According to the WHO, in 2020 alone, there were an estimated 241 million cases of malaria and 627,000 malaria-related fatalities in 85 nations.

Genetically modified mosquitoes for controlling vector-borne diseases-

- Preliminary results of an open-air study of genetically engineered mosquitoes – with an aim to suppress a wild population of virus-carrying mosquitoes – in the United States have shown promising results.
- The aim of the experiment by Oxitec, a United Kingdom-based biotechnology firm, is to reduce the population of wild *Aedes aegypti* mosquitoes that is a vector for viruses such as chikungunya, dengue, zika and yellow fever.
- The scientists engineered a gene that will kill the female offspring.
- When released into the environment, the engineered males should mate with wild females, and their female offspring will die before they can reproduce.
- Male offsprings will carry the gene and pass it on to half of their progeny.
- As each generation mates, more females die, and the *A. aegypti* population should dwindle.
- These mosquitoes had already been field-tested in Brazil, Panama, the Cayman Islands and Malaysia.

Further

reading:

<https://journalsofindia.com/new-crispr-based-technology-to-genetically-control-disease-spreading-mosquitoes/>