

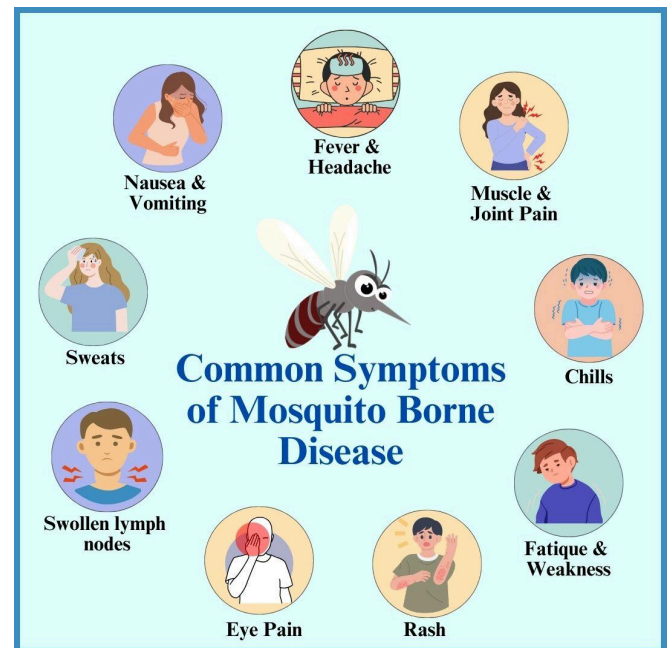
# Mosquito-borne diseases: Causes, Treatment and Prevention

## What is it:

[Malaria](#), [Dengue Fever](#), [Chikungunya](#) and [Zika virus](#) are among the most prevalent diseases transmitted by mosquito bites. Each disease presents unique challenges in terms of prevention, diagnosis and treatment. In India, these are most prevalent across the country given the weather conditions and large bread areas even in residential areas and in homes.

## Symptoms of Mosquito-borne diseases:

Mosquito-borne diseases present a range of symptoms. Common signs and symptoms include fever, headache, muscle and joint pain, fatigue and weakness, nausea and vomiting, rash, chills and sweats, eye pain, swollen lymph nodes, and sometimes external and internal bleeding (haemorrhaging). Symptoms can vary in intensity and combination depending on the specific virus or parasite involved and the individual's immune response.



## How to Diagnose:

Diagnosing mosquito-borne diseases generally requires a combination of clinical evaluation and laboratory tests to confirm the presence of the specific pathogen and assess the severity of the illness.

- **Doctors will conduct a clinical evaluation** of the patient's symptoms with a physical examination, and review medical history and recent travel history.
- **Laboratory tests** are used to identify specific pathogens or antibodies indicative of mosquito-borne diseases, confirmed through blood tests, serological tests and RT-PCR

Since the symptoms of mosquito-borne diseases can overlap with other illnesses, healthcare providers may also consider differential diagnoses to rule out other possible causes of disease.

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## Treatment of Mosquito-borne diseases:

Many mosquito-borne diseases are caused by viruses, if specific antiviral drugs may not be available. In such cases, treatment mainly focuses on

- Managing symptoms to alleviate discomfort/pain the medication
- Preventive measures to reduce the risk of infection
- Medication to eliminate the parasite from the bloodstream
- Hospitalisation for close monitoring of those with severe symptoms
- Intensive care in extreme cases

## Risk Factors:

- The primary risk factor is exposure to mosquitoes breeding in stagnant water in uncovered water storage containers, flower pots, open spaces like parks, roadsides, drains or discarded items that collect rainwater.
- Regions with tropical and subtropical climates often experience higher transmission rates due to favourable conditions for mosquito breeding
- Lack of effective mosquito bite prevention measures such as bed nets or insect repellents.
- Failure to take appropriate medication such as antimalarial drugs when travelling to disease-prone areas.
- Outdoor activities during peak mosquito-biting times.
- Compromised immune system due to HIV/AIDS or other conditions.
- Travel to and residence in high-density areas.

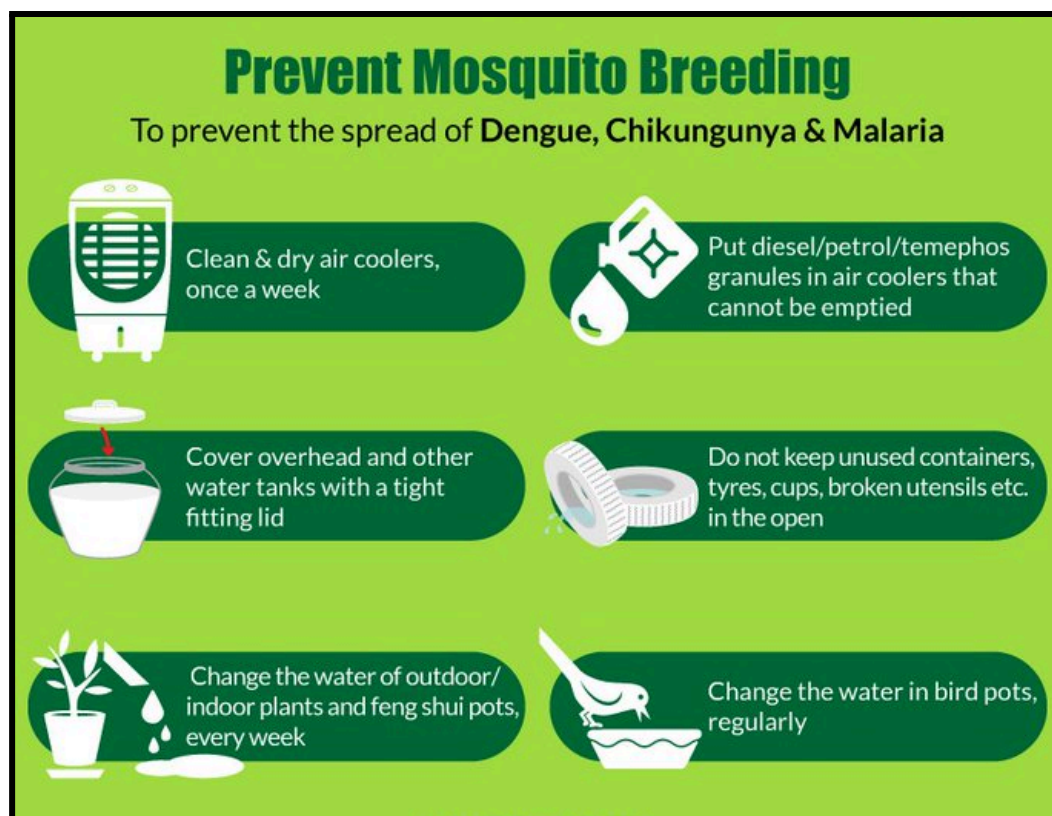
## Prevention:

Preventing mosquito-borne disease requires reducing or eradicating mosquito breeding sites and implementing personal protective measures to avoid mosquito bites with the following steps:

- **Remove stagnant water from your home and surroundings** as mosquitoes breed in still water. Keep drains closed.
- **Sleep under a mosquito net** treated with a long-lasting insecticide. Ensure the net is properly tucked in without any holes.
- **Use insect repellent** on exposed skin and clothes, especially in the evening and night when mosquitoes are active.
- **Wear long-sleeved shirts, pants, socks, and shoes** outdoors to reduce mosquito bites.

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- Use **indoor insecticide sprays or coils** to kill mosquitoes inside your home, following instructions carefully and avoiding inhaling fumes.
- **Install screens on doors and windows** to prevent mosquitoes from entering your home.
- **Take preventive medication such as antimalarial drugs** if travelling to prone areas.
- **Minimise outdoor activities during peak mosquito-biting times.** Anopheles mosquitoes (which cause malaria) are active at dusk and dawn, while Aedes mosquitoes (which cause chikungunya and dengue) are active shortly after sunrise and before sunset.
- **Community-based mosquito control efforts** such as fogging and spraying insecticides in areas with high mosquito activity.
- **Seek medical help for symptoms** if experiencing fever, chills, headache, muscle aches or fatigue.



Source: [Ministry of Health and Family Welfare, Government of India](#)

Prevention through mosquito control and personal protective measures are key to reducing the impact of these diseases.

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## To know more:

- [Combating Dengue: Understanding, Prevention and Treatment](#)
- [Understanding Malaria: Symptoms, Complications and Prevention](#)
- [Chikungunya: Symptoms, Causes, Complications, Treatment and Prevention](#)

## My Health, My Responsibility