

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai

Approved by Pharmacy Council of India, New Delhi.

Coimbatore -641035

COURSE NAME: SOCIAL AND PREVENTIVE PHARMACY (BP 802 T)

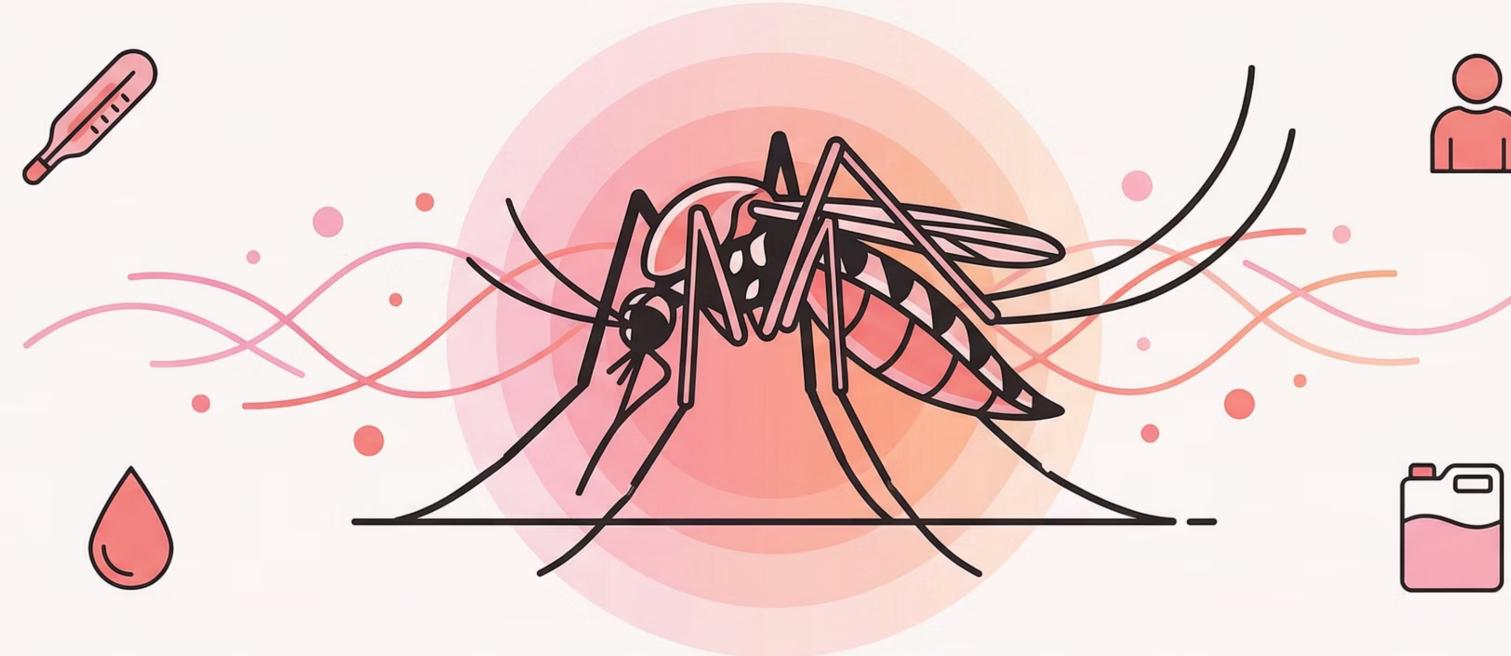
B.PHARM. VIII SEM / IV YEAR

UNIT II: TOPIC 3: GENERAL PRINCIPLES OF PREVENTION AND CONTROL OF DENGUE AND

CHIKUNGUNYA

Dengue

Epidemiology, Pathophysiology, Prevention & Control



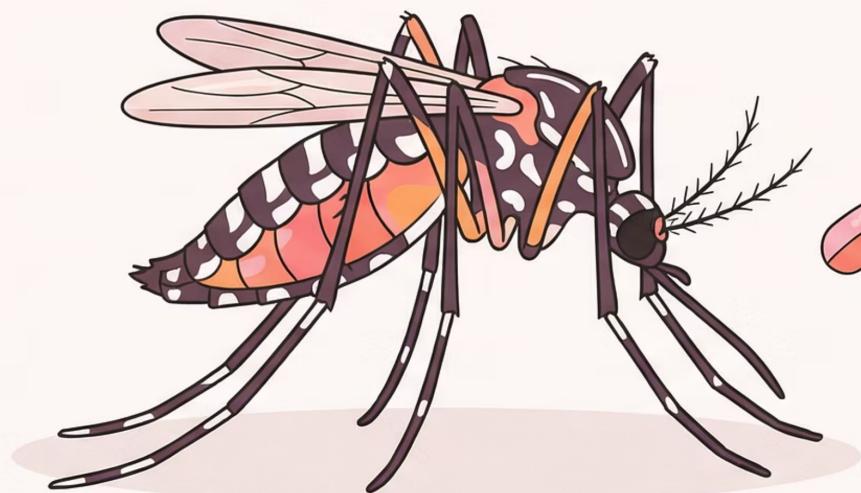
India's Dengue Burden

Annual infections worldwide

390M



Four Viruses, One Vector



DENV 1



DENV 2



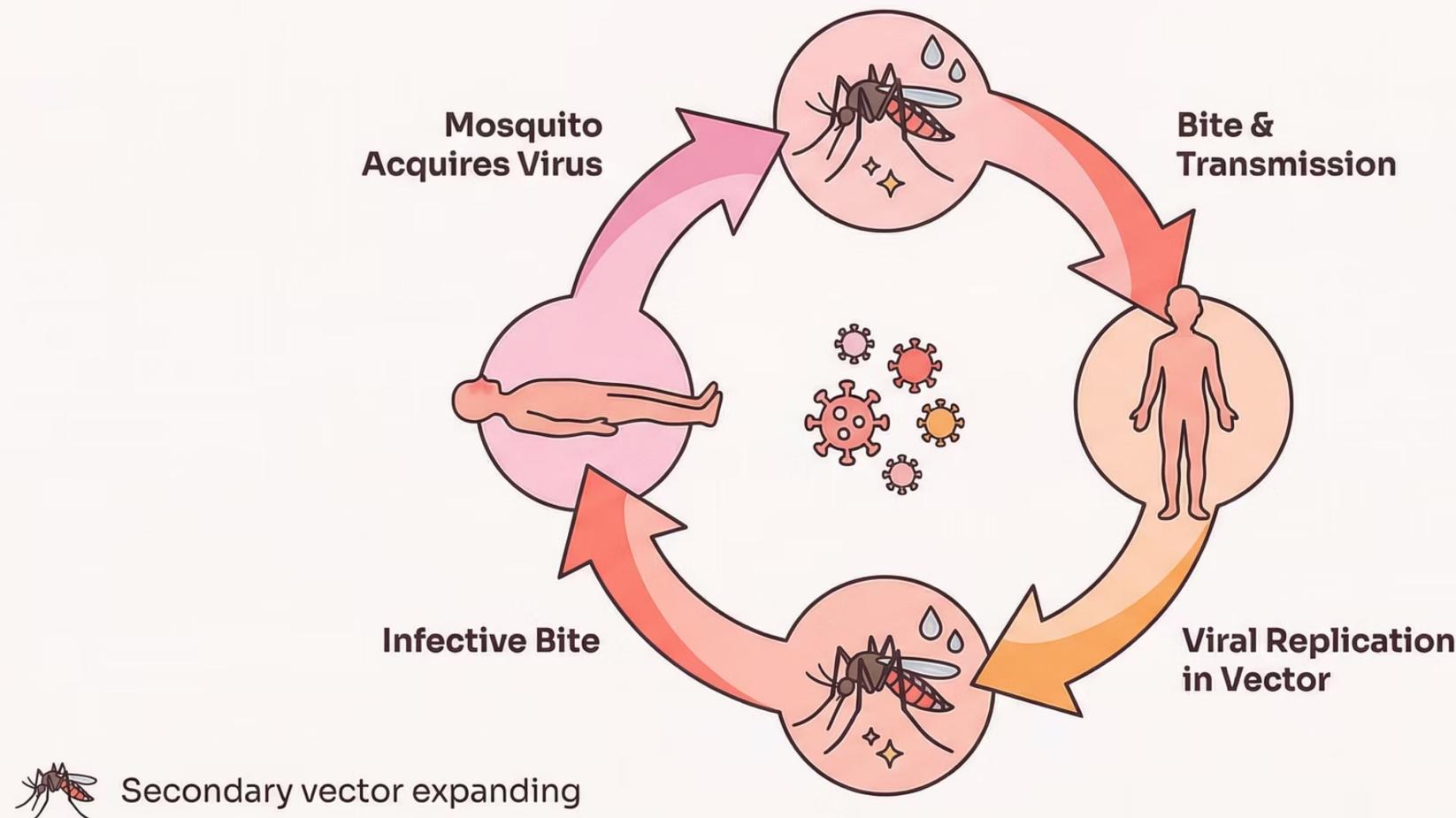
DENV 3



DENV 4

Aedes aegypti transmits DENV 1-4

Human-Mosquito-Human Cycle



Three Critical Phases



Know the Warning Signs



Mild fever



Abdominal pain,
bleeding



Shock, organ failure

Protect Yourself



Repellent, screens, protective clothing

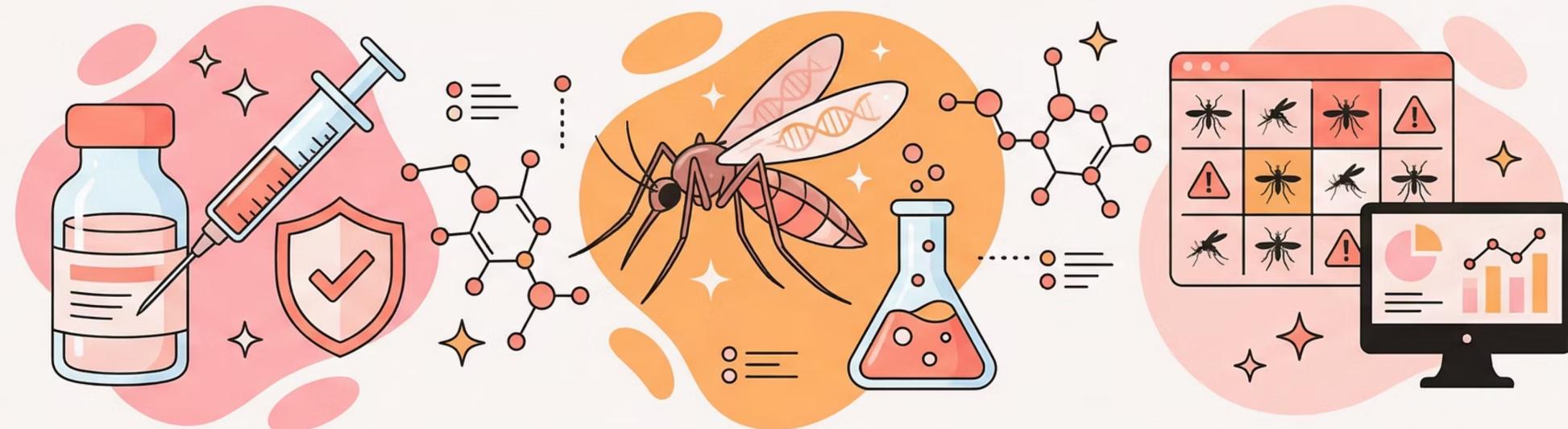


Eliminate Breeding Sites

Remove standing water, cover containers



Innovation in Control



Dengvaxia
vaccine

Sterile insect
technique

Integrated
surveillance

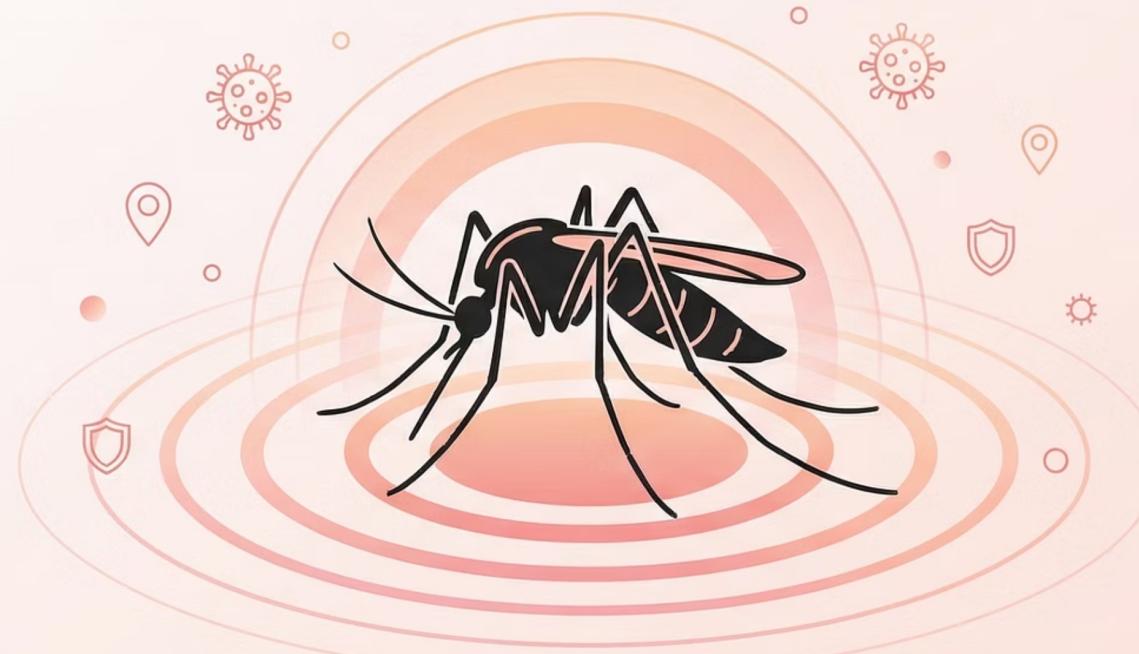
Fighting Dengue Together



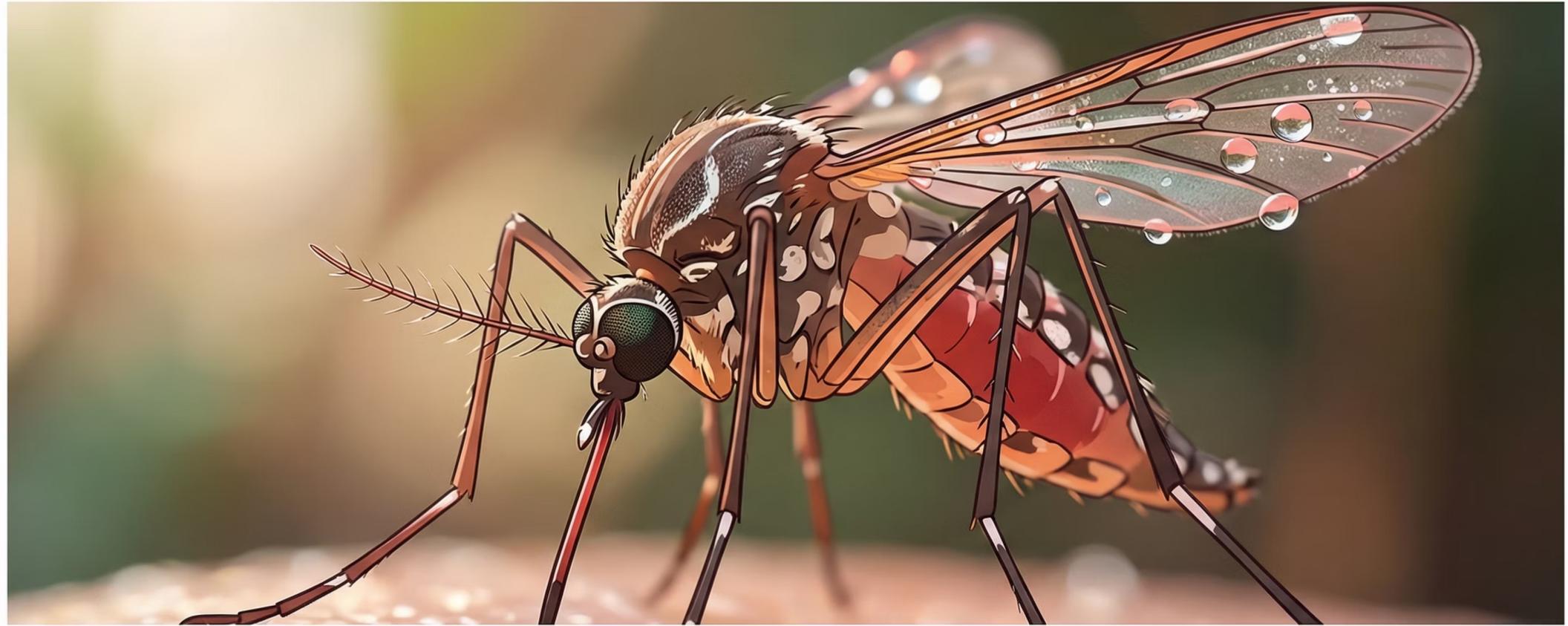
Prevention, early care, community action

Chikungunya: From Outbreak to Control

Epidemiology, Pathophysiology, Prevention

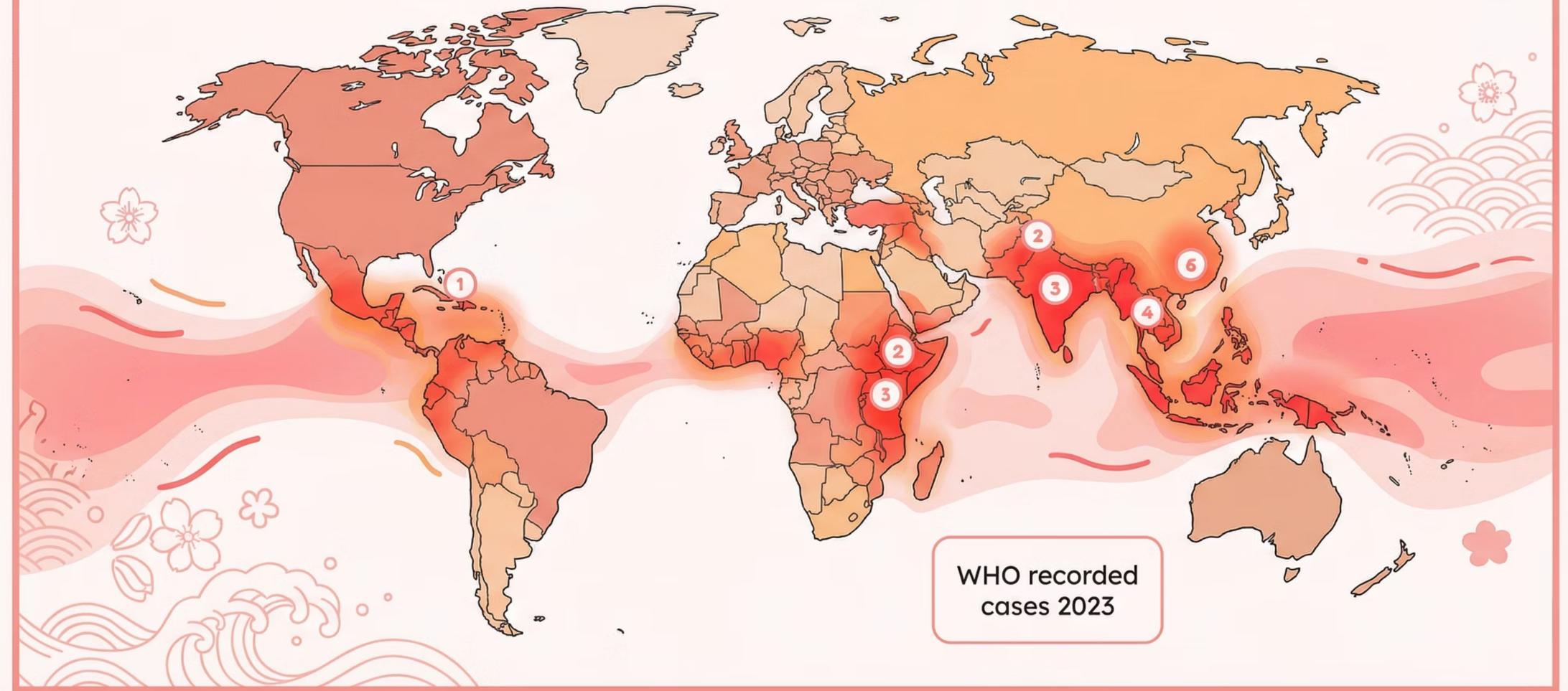


The Silent Spread

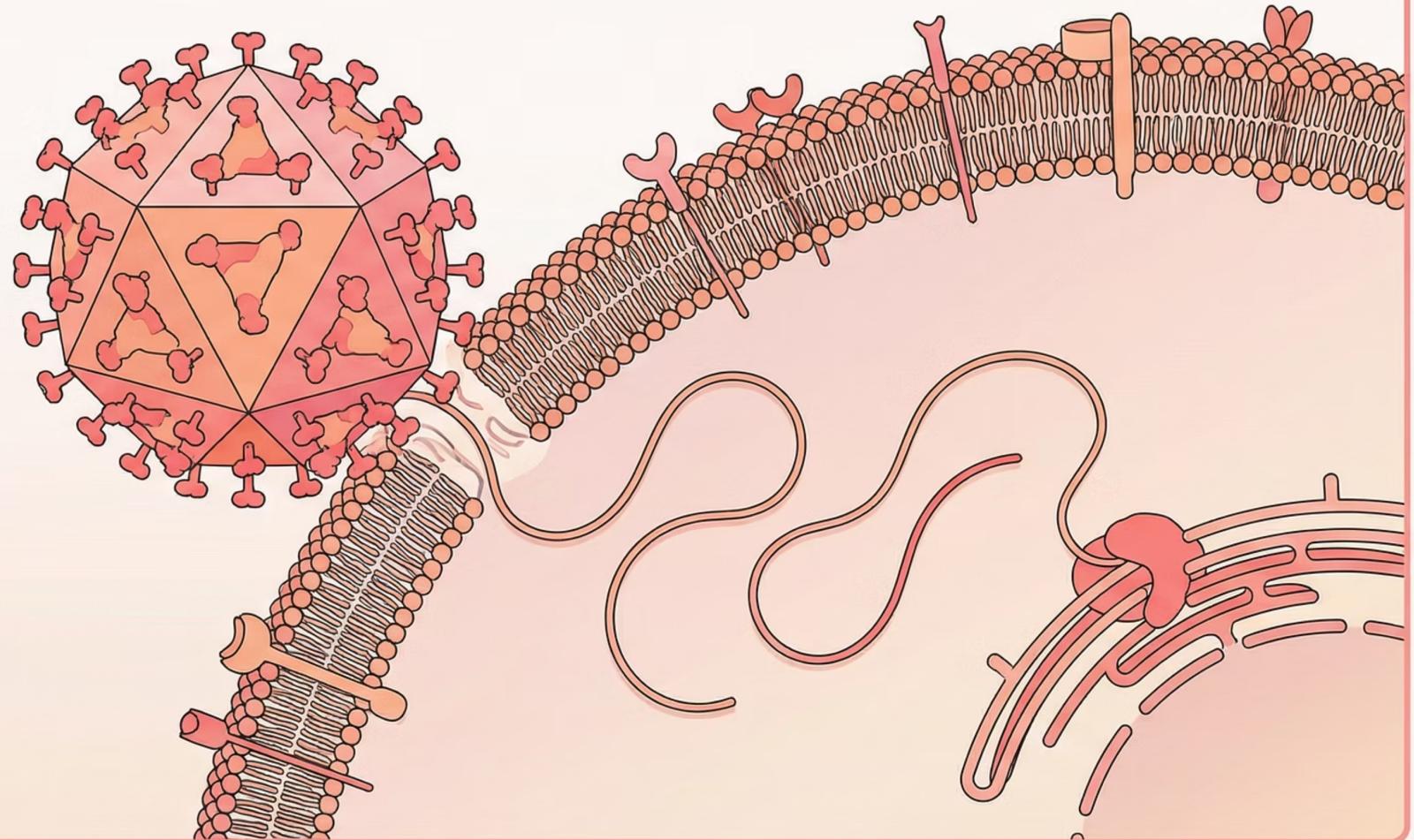


3-7 day incubation

‘Global Impact: 1.3 Million Cases’



The Viral Journey



RNA replication
begins

Joint Pain That Lasts

Chronic arthralgia
in 40% patients

Urban Breeding Grounds



Eliminate standing water

Vector Control in Action



Insecticide fogging
reduces transmission

Community Prevention



Every household
makes difference

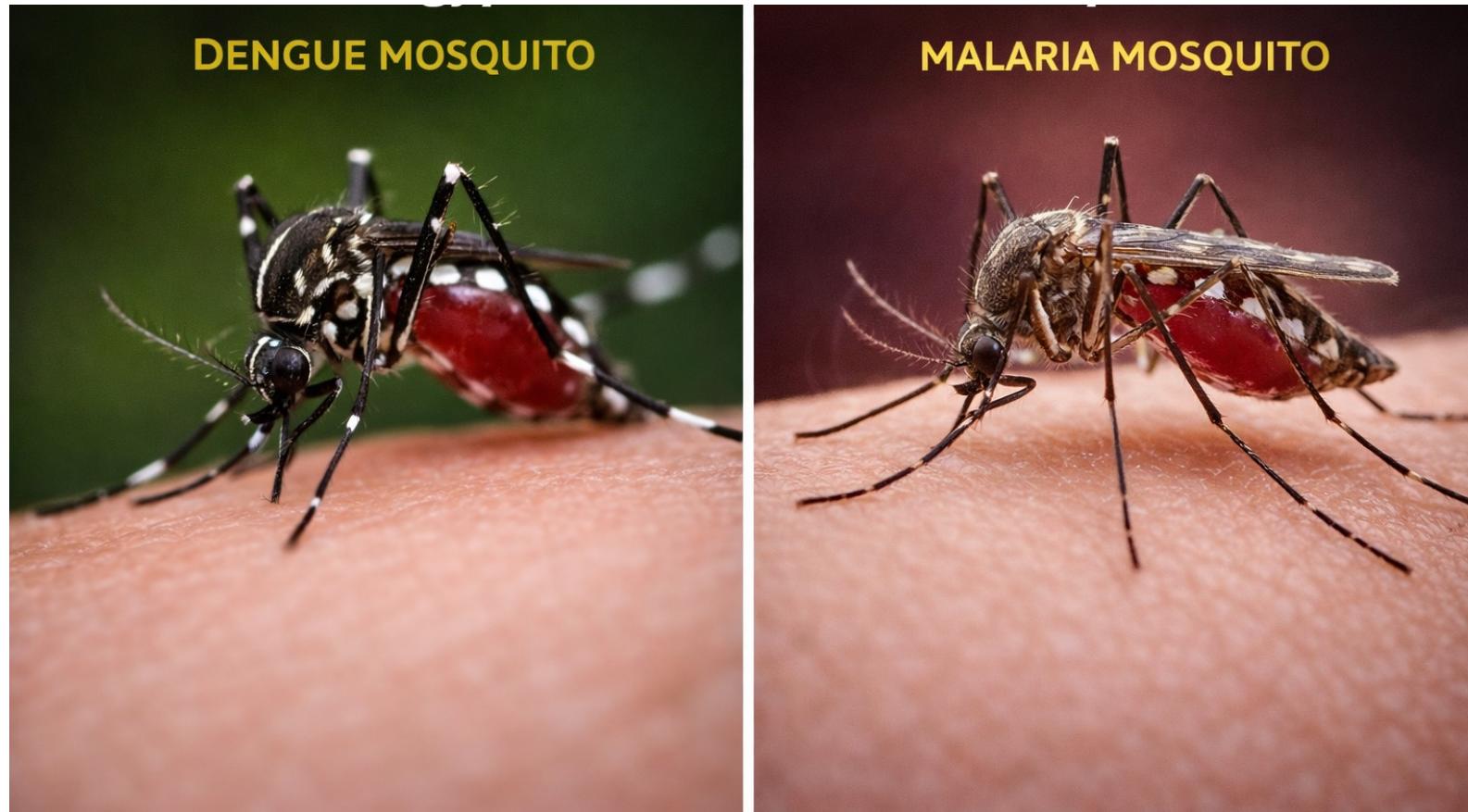
Early Detection Saves Lives



RT-PCR confirms diagnosis

Assessment 1

Which mosquito is the primary vector for both Dengue and Chikungunya?



Assessment 2



A key laboratory feature of Dengue fever is:

- A. Leukocytosis
- B. Thrombocytopenia
- C. Polycythemia
- D. Elevated calcium

Assessment 3

A 28-year-old male presents with high-grade fever (39.5°C), severe body pain, headache, and retro-orbital pain for 3 days. Platelet count is 90,000 cells/mm³.

Questions:

1. What is the most likely diagnosis?
2. Mention two investigations to confirm the diagnosis.
3. What are the warning signs that indicate progression to severe disease?
4. Outline the basic management plan.



Assessment 4

Compare **Dengue and Chikungunya** under the following headings:

- Clinical features
- Laboratory findings
- Complications
- Management



Assessment 5

Target cells for Dengue and Chikungunya?



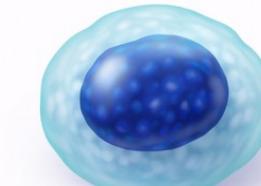
Red Blood Cell



White Blood Cell

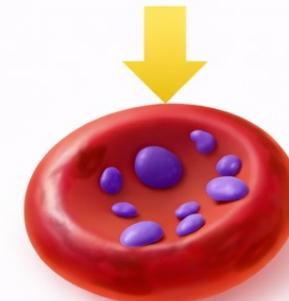


Platelet



Lymphocyte

INFECTED BY MALARIA



Red Blood Cell

REDUCED BY DENGUE



Platelets

REFERENCES

1. Short Textbook of Preventive and Social Medicine, Prabhakara GN, 2nd Edition, 2010, ISBN: 9789380704104, JAYPEE Publications
2. Textbook of Preventive and Social Medicine (Mahajan and Gupta), Edited by Roy Rabindra Nath, Saha Indranil, 4th Edition, 2013, ISBN: 9789350901878, JAYPEE Publications
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4. Essentials of Community Medicine—A Practical Approach, Hiremath Lalita D, Hiremath Dhananjaya A, 2nd Edition, 2012, ISBN: 9789350250440, JAYPEE Publications

Thank you