

# 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**

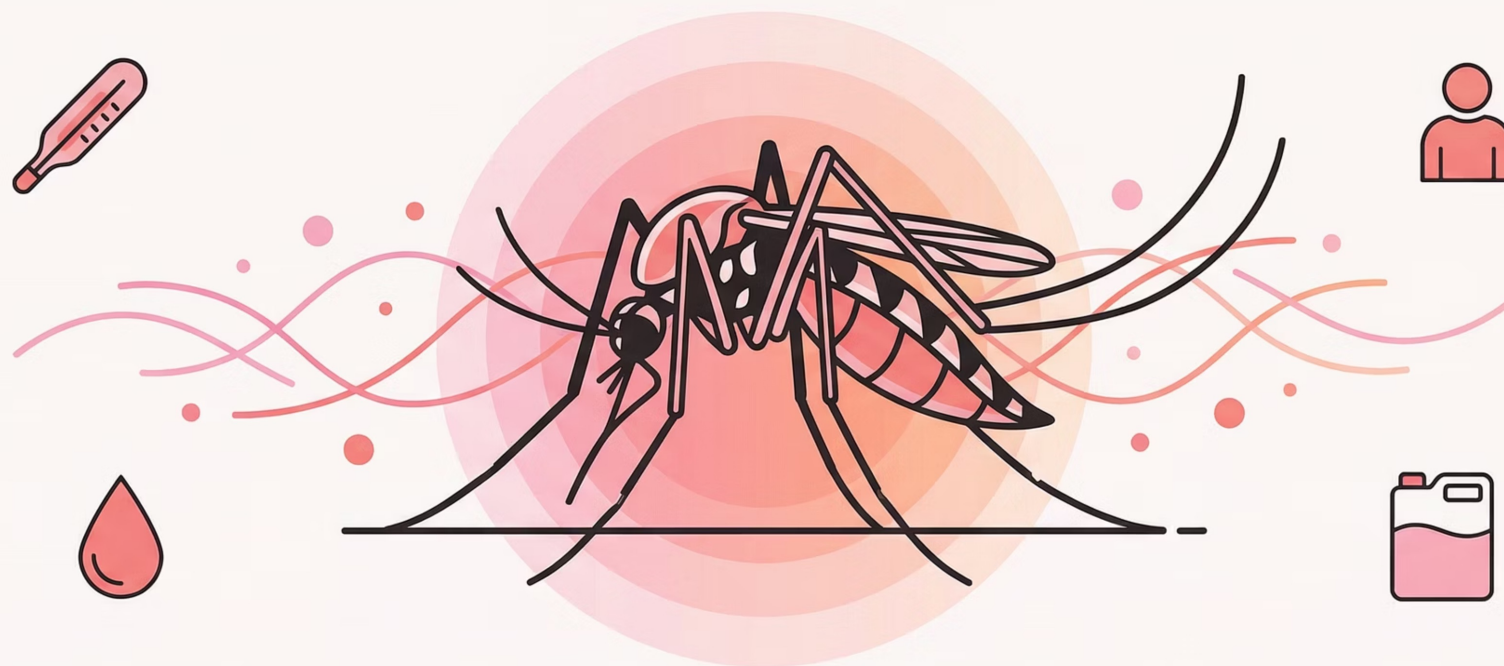
COURSE NAME: SOCIAL AND PREVENTIVE PHARMACY (BP 802 T)

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



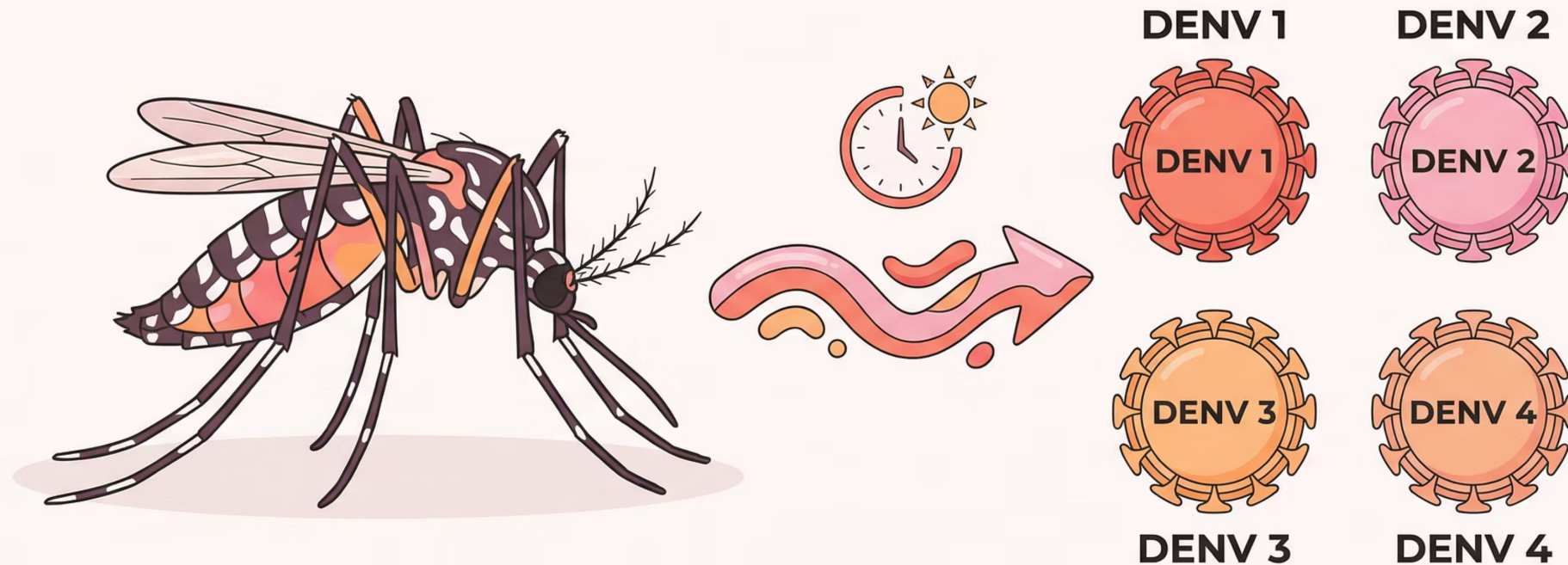
# India's Dengue Burden

Annual infections worldwide

# 390M



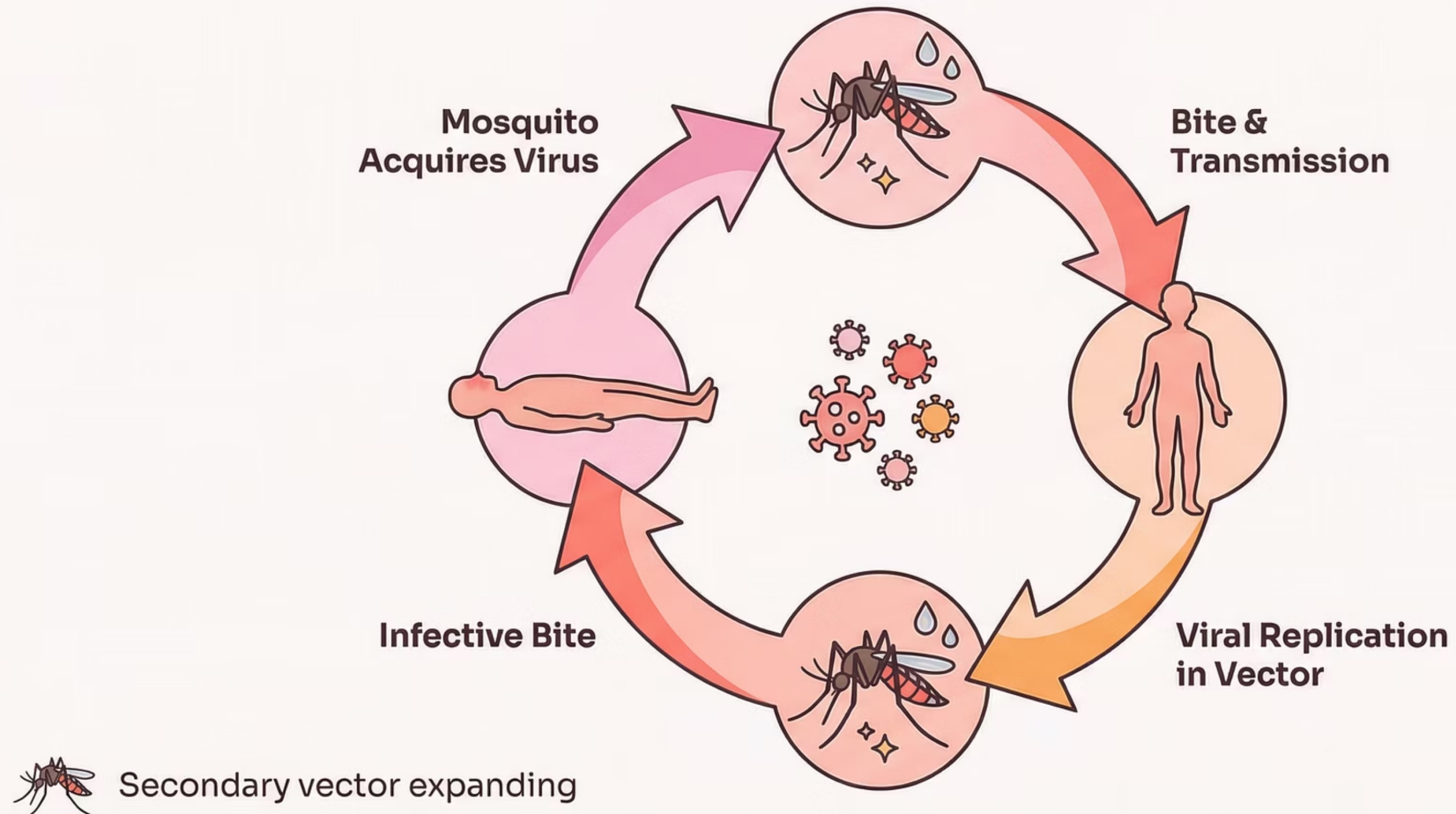
# Four Viruses, One Vector



*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

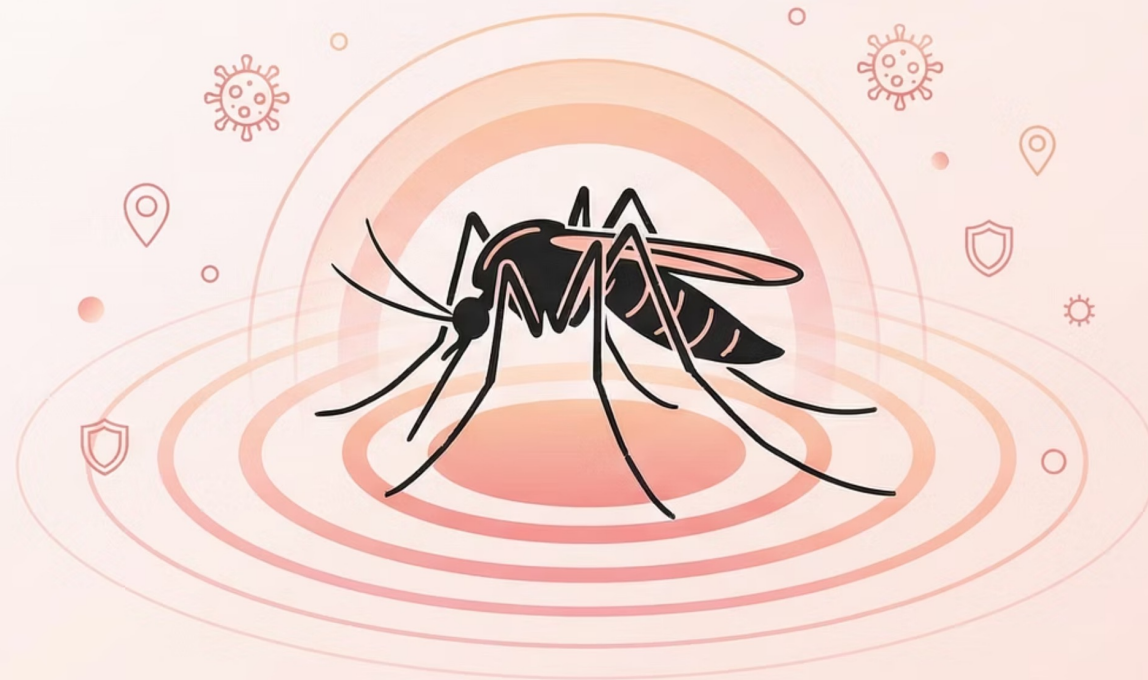
# Fighting Dengue Together



Prevention, early care, community action

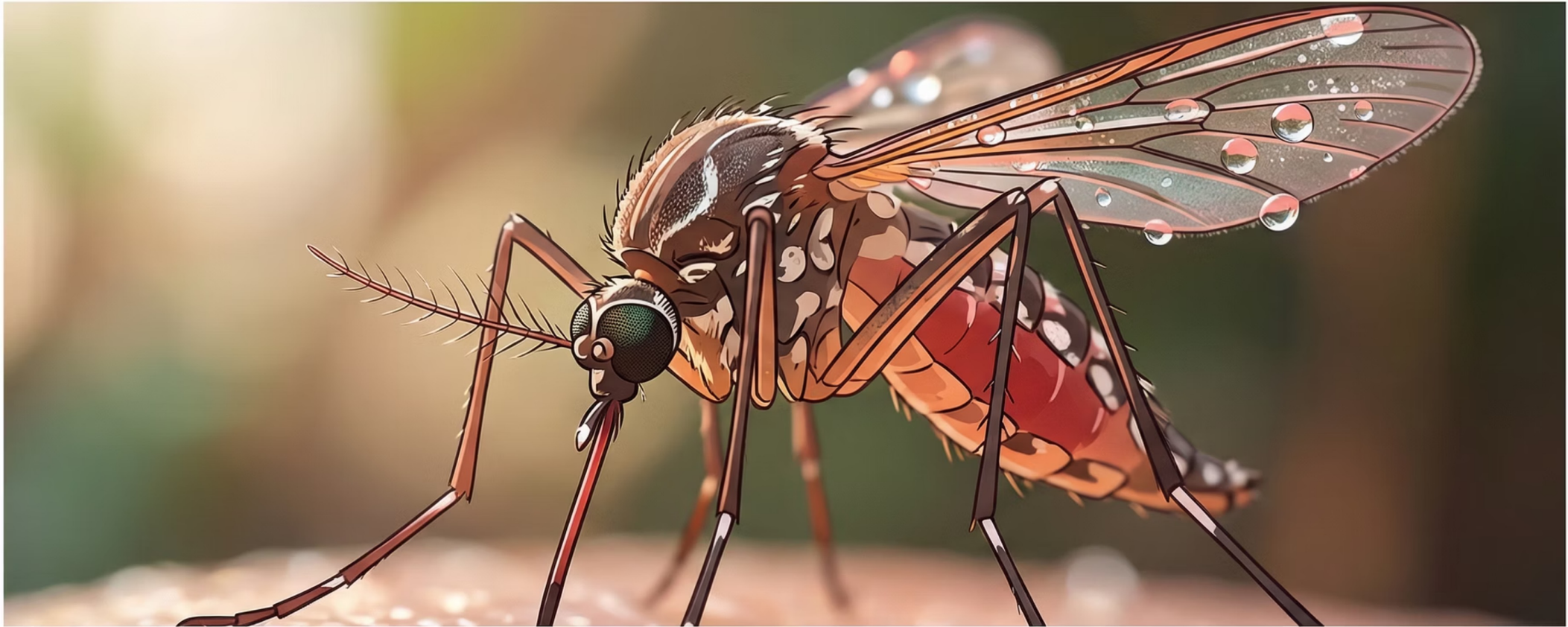
# Chikungunya: From Outbreak to Control

Epidemiology, Pathophysiology, Prevention



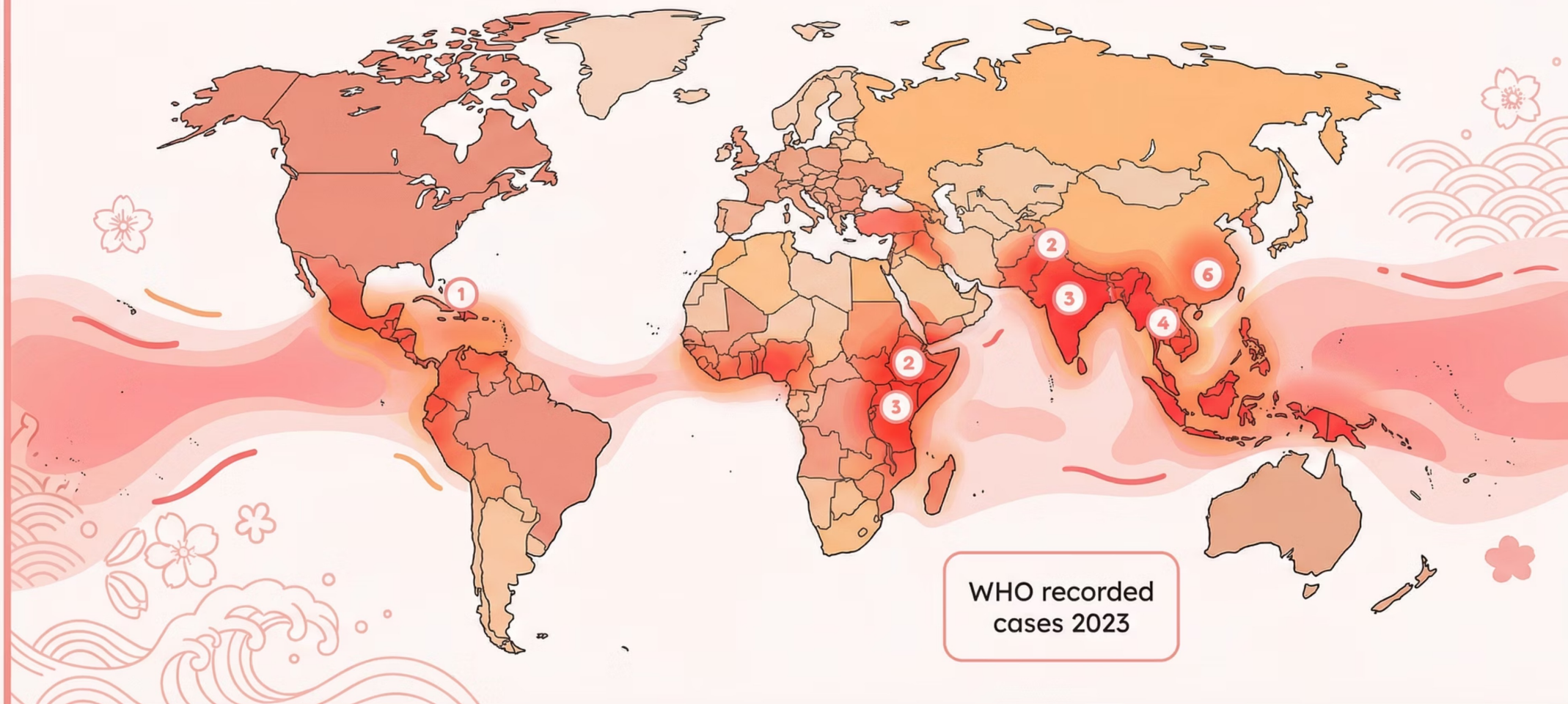


# The Silent Spread



3-7 day incubation

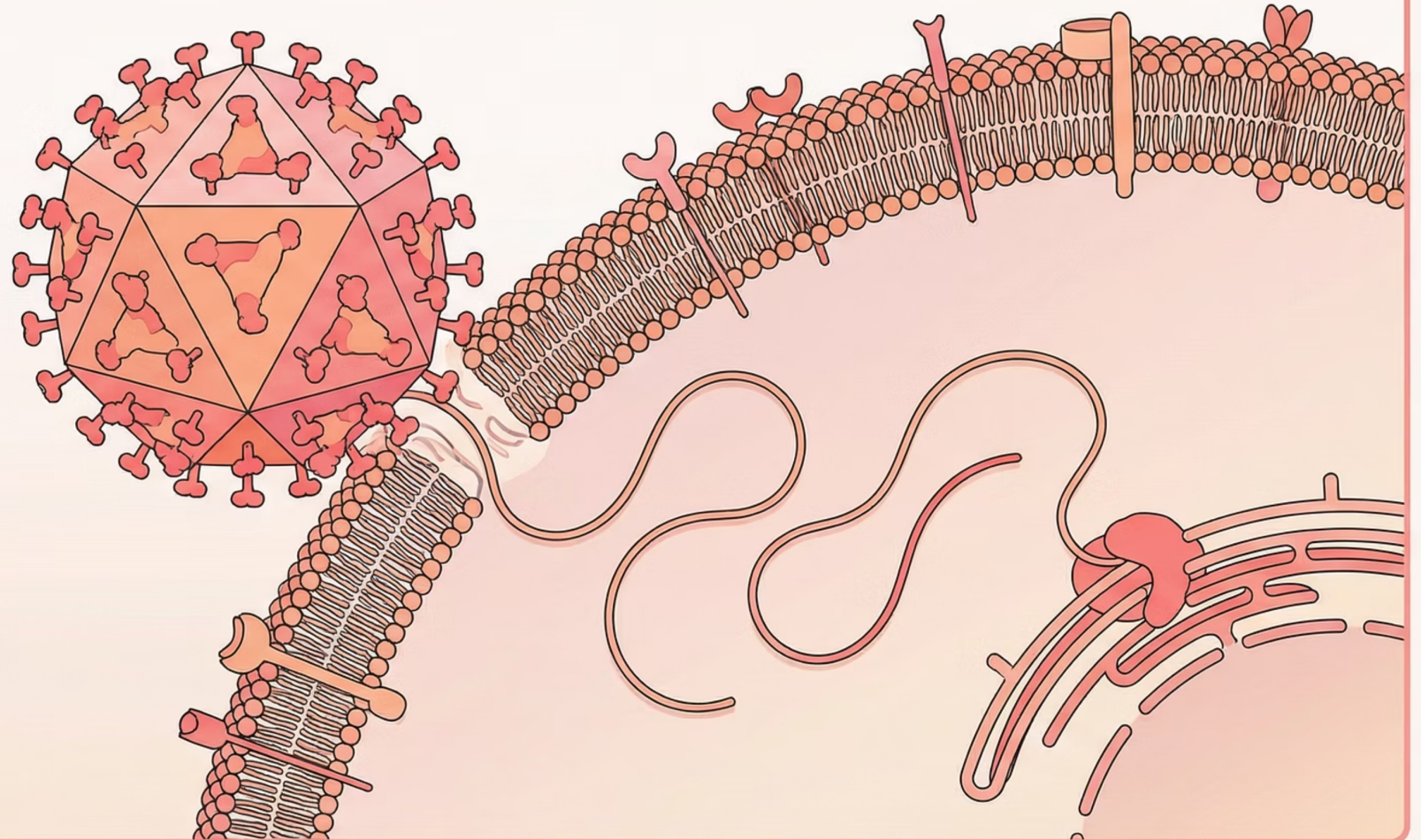
# 'Global Impact: 1.3 Million Cases'





# 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



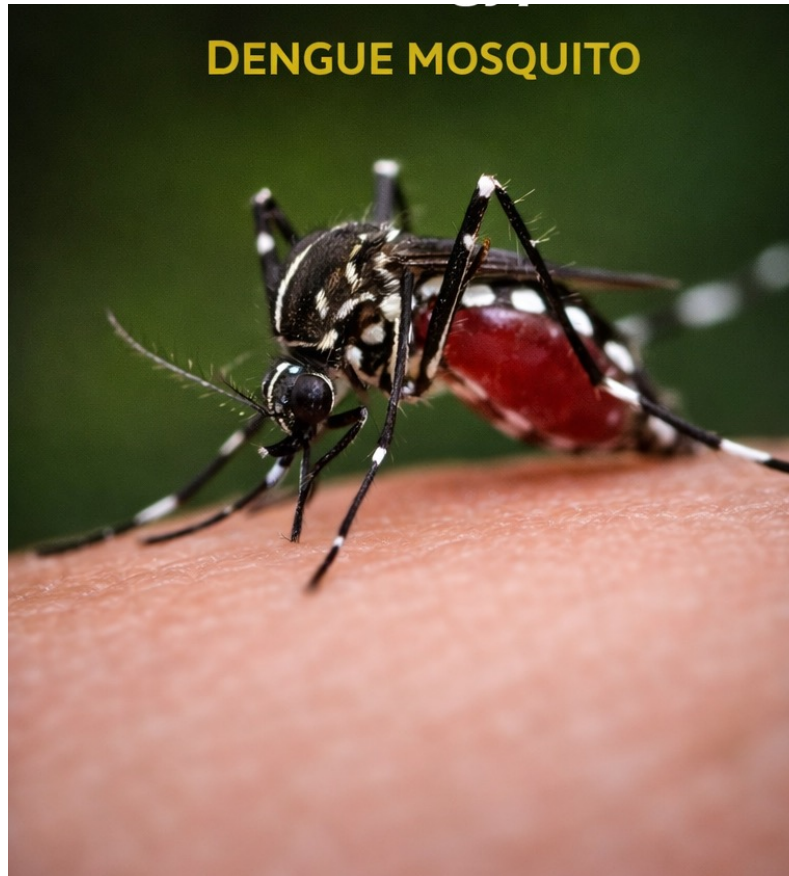
# Early Detection Saves Lives



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 ( $39.5^{\circ}\text{C}$ ), severe body pain, headache, and retro-orbital pain for 3 days. Platelet count is  $90,000$  cells/ $\text{mm}^3$ .

## 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?



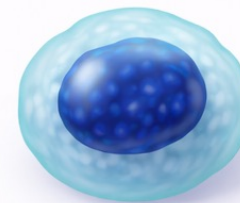
Red Blood Cell



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