

# NIPAH VIRUS

## Community Medicine University Exam Oriented Handout for MBBS Students

### Definition

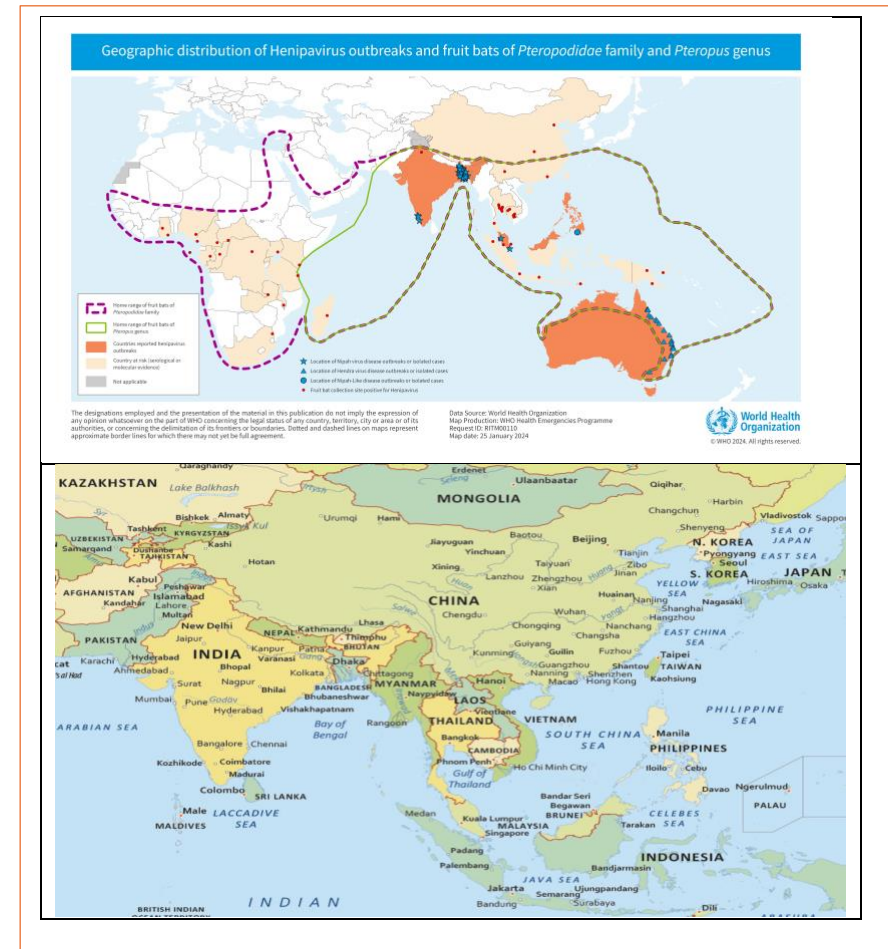
**Nipah virus infection** is a **zoonotic viral disease** caused by an **RNA virus of the genus Henipavirus (family Paramyxoviridae)** characterized by **acute febrile illness with encephalitis** and **high case fatality rate (40–75%)**.

### Etiological Agent

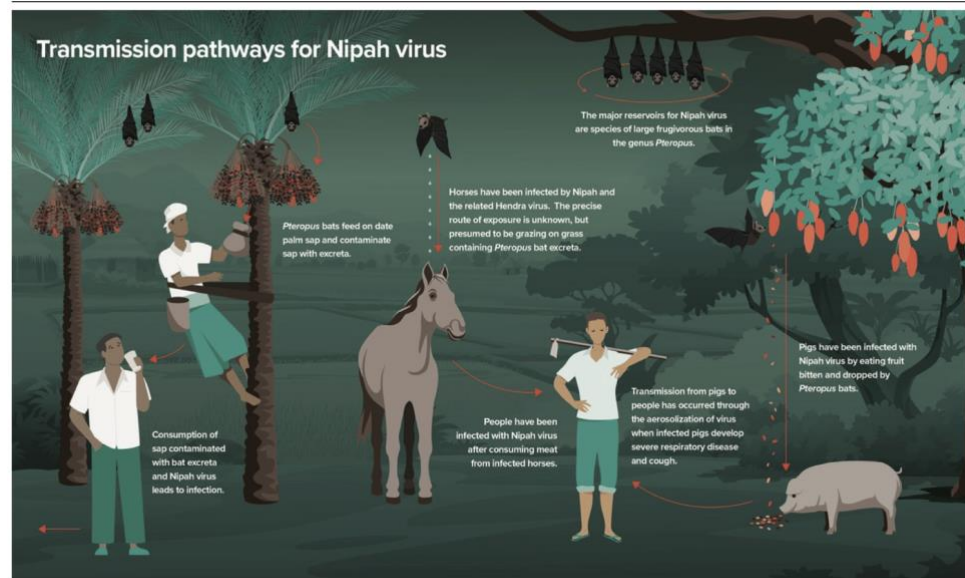
Feature	Description
Virus Type	RNA virus
Family	Paramyxoviridae
Genus	Henipavirus
Reservoir	Fruit bats ( <i>Pteropus</i> )

### Epidemiology

- First outbreak: **Malaysia, 1998**
- Indian outbreaks: **West Bengal, Kerala**
- Reservoir: **Fruit bats (Pteropus species)**
- Incubation period: **4–14 days** (can extend)
- Case Fatality Rate: **40–75%**



Transmission Cycle (Draw This in Exam)	Modes of Transmission:
<p>Fruit Bats (Reservoir)</p> <p>↓</p> <p>Contaminated Fruit / Date Palm Sap</p> <p>↓</p> <p>Human Infection (Index Case)</p> <p>↓</p> <p>Human-to-Human Transmission</p> <p>↓</p> <p>Outbreak</p>	<ul style="list-style-type: none"> <li>• Animal → Human</li> <li>• Foodborne (raw date palm sap)</li> <li>• Human → Human (close contact, hospital spread)</li> </ul>



Courtesy: EcoHealth Alliance, USA, 2023

### Clinical Features

Early	Severe
<ul style="list-style-type: none"> <li>• Fever</li> <li>• Headache</li> <li>• Myalgia</li> <li>• Vomiting</li> </ul>	<ul style="list-style-type: none"> <li>• Encephalitis</li> <li>• Altered sensorium</li> <li>• Seizures</li> <li>• Respiratory distress</li> <li>• Coma</li> </ul>

### Prevention & Control

Primary Prevention	Secondary Prevention	Tertiary Prevention
<ul style="list-style-type: none"> <li>• Avoid raw date palm sap</li> <li>• Wash fruits properly</li> <li>• Avoid bat exposure</li> </ul>	<p><b>Early Diagnosis*</b></p> <ul style="list-style-type: none"> <li>• Early case detection</li> <li>• Isolation</li> <li>• Contact tracing</li> </ul> <p><b>Treatment</b></p> <ul style="list-style-type: none"> <li>• Symptomatic</li> <li>• Infection Control Protocols in Hospital</li> </ul> <p><b>Specific Protection</b></p> <ul style="list-style-type: none"> <li>• PPE</li> <li>• Hand hygiene</li> <li>• Barrier nursing</li> </ul>	ICU Support

#### \*Diagnosis

- **RT-PCR – Gold standard**
- IgM ELISA
- Viral isolation

### Comparison with Japanese Encephalitis (Frequently Asked)

Feature	Nipah	Japanese Encephalitis
Reservoir	Fruit bat	Pig & birds
Vector	No vector	Mosquito
CFR	40–75%	Lower
Vaccine	Not routine	Available

### Last minute tips for University Exams

Rapid Revision (Last-Minute)	How to Structure 5-Mark Answer	Golden Exam Tip
<ol style="list-style-type: none"> <li>1. Zoonotic RNA virus</li> <li>2. Family: Paramyxoviridae</li> <li>3. Reservoir: Fruit bat</li> <li>4. Incubation: 4–14 days</li> <li>5. CFR: 40–75%</li> <li>6. Clinical: Encephalitis</li> <li>7. Diagnosis: RT-PCR</li> <li>8. Prevention: Isolation + contact tracing</li> <li>9. WHO priority pathogen</li> </ol>	<ol style="list-style-type: none"> <li>1. Definition</li> <li>2. Etiology</li> <li>3. Reservoir</li> <li>4. Transmission</li> <li>5. Prevention</li> </ol>	<p>In Community Medicine paper, focus more on:</p> <ul style="list-style-type: none"> <li>• Epidemiology</li> <li>• Transmission cycle</li> <li>• Prevention &amp; outbreak control</li> </ul> <p>Not on detailed treatment.</p>