Aedes aegypti
(the yellow fever mosquito)
&
Aedes albopictus
(the Asian tiger mosquito)

Aedes biology and vector status

Aedes aegypti and *Ae. albopictus* are the main vectors of dengue, chikungunya, Zika and yellow fever viruses. These are referred to as 'arboviruses' (arthropod-borne viruses). More than half the world's population is at risk of contracting mosquito-borne diseases.

These mosquitoes are often found in rural and urban settings in tropical, subtropical, and temperate regions throughout the world. They bite during the day, with the most active feeding period 2 hours before and after dawn / dusk. Only the female mosquitoes bite, using the blood as an energy source to produce eggs. The males feed on nectar.

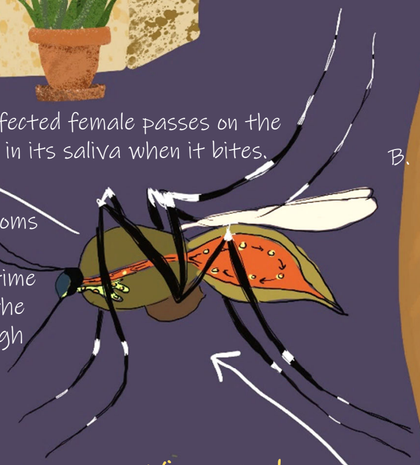
Both Aedes species have distinct white banding on their legs. However, they can be readily distinguished by the patterns on their thoraxes. *Aedes aegypti* has a lyre pattern on its thorax, while *Aedes albopictus* has a single stripe.

Aedes aegypti thorax

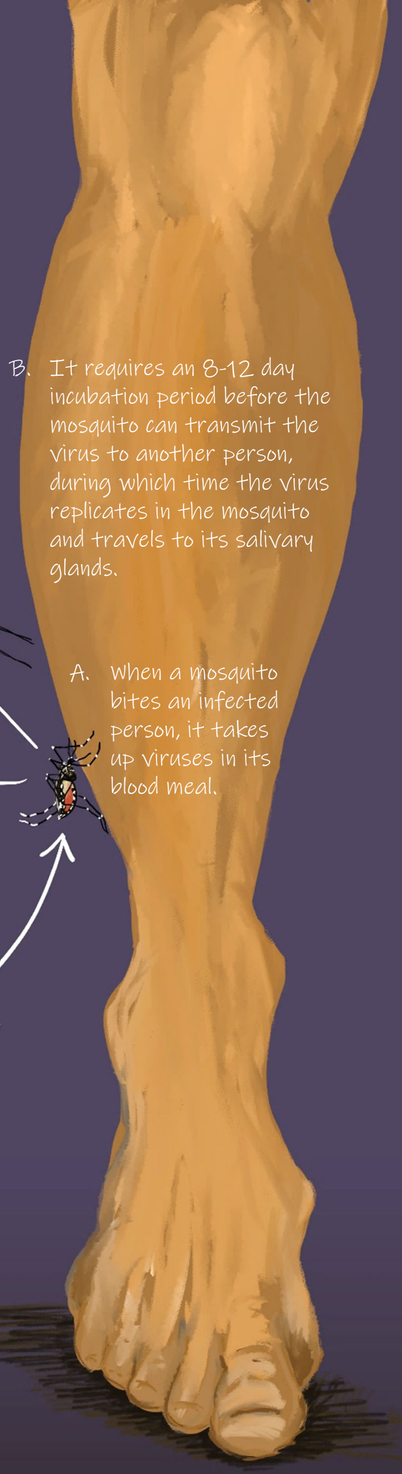
Aedes albopictus thorax

C. An infected female passes on the virus in its saliva when it bites.

D. The newly inoculated person may have symptoms after 2-7 days of infection, during which time the virus replicates in the host and spreads through the blood.



B. It requires an 8-12 day incubation period before the mosquito can transmit the virus to another person, during which time the virus replicates in the mosquito and travels to its salivary glands.



A. When a mosquito bites an infected person, it takes up viruses in its blood meal.

Virus cycle

Breeding sites

1. Roof guttering
2. Plants: vases, trays, leaf axles
3. Tires
4. Bottles / cans
5. Pet dishes
6. Laundry tanks / cisterns
7. Buckets / containers
8. Garden tools
9. Drums / barrels

Life cycle

a) Females lay up to 100 eggs (in several batches; skip oviposition) per cycle. They oviposit on moist walls of water-filled containers. Eggs look like black dirt and can survive drying out for up to 8 months.
b) Larvae emerge from the eggs after the water level rises to cover the eggs. The larvae feed on detritus and microorganisms in the water.
c) After molting 4 times, the larva pupate
d) Adult mosquitoes emerge from pupae after two days.
e) After blood feeding, mated females will look for water sources to lay their eggs.

How to prevent mosquito-borne diseases

No vaccines are available to prevent dengue, chikungunya or Zika. Therefore, avoiding infection by preventing mosquito bites is the best option thus far.

- Take steps to control mosquitoes inside and outside of your home:
  - Reduce breeding sites by removing objects that can accumulate water
  - Keep trash cans, water barrels, etc. sealed
  - Remove debris from gutters
  - To kill mosquito eggs, wash containers used to store water weekly (with brush and soap)
- Use insect repellent with proven active ingredients such as DEET, icaridin, or oil of lemon / eucalyptus to prevent mosquito bites.

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