



## ***The Mosquito Life Cycle***

Mosquitoes transmit many diseases among humans, including malaria, dengue, West Nile fever, and Zika. To keep mosquitoes from spreading disease, we must first understand their life cycle. The life cycle of a mosquito (like that of many other insects) has four stages: egg, larva, pupa, and adult.

Female mosquitoes lay eggs on or near a body of still water. Some species prefer natural bodies of water like ponds. Others prefer water found in containers like buckets, flowerpots, or discarded tires. Each female mosquito may lay hundreds of eggs. As long as they have water, the eggs can take as little as two days to hatch; they may hatch faster in warmer temperatures.

Once a mosquito hatches from its egg, it enters the second stage of its life cycle: the larva. The larva lives underwater and eats algae, plankton, and other microorganisms. Larvae need air to breathe, and the larvae of many mosquito species have a breathing tube by their tail called a siphon. These larvae hang upside-down and stick their siphons above the water to get air.

A mosquito stays as a larva for 4 to 14 days, depending on temperature and species. After growing and shedding its skin several times, the larva enters the third stage of its life cycle: the pupa. The pupa stays near the water's surface and needs air to breathe, but does not eat. It puts most of its energy into developing into its fourth and final stage: the adult.

After 1 to 4 days, the mosquito splits out of the skin it had as a pupa and emerges as an adult. Shortly after, it mates. Both male and female mosquitoes feed on nectar from plants, but females also need to drink blood from animals (such as humans) in order to make eggs.

It's at this stage that a female mosquito can transmit diseases. First, the female mosquito bites and drinks blood from an individual infected with a pathogen, such as a virus or parasite. The pathogen travels with the blood to an organ in the mosquito called the midgut. After replicating in the midgut, the pathogen spreads to the mosquito's other organs, including its salivary glands. Whenever the mosquito bites another individual, it can then transmit the pathogen to that individual and infect them with the disease.