

*Just the Facts...* It is important to control mosquitoes around the home because this area often provides ideal conditions for mosquitoes to develop. Human vaccines are not available for many of the diseases that mosquitoes transmit, such as West Nile virus and Dengue. The best way to prevent these diseases is to control mosquitoes and eliminate their breeding habitat. By following the guidance provided in this factsheet, homeowners can significantly reduce the risk of mosquito bites and the diseases they transmit in their community.

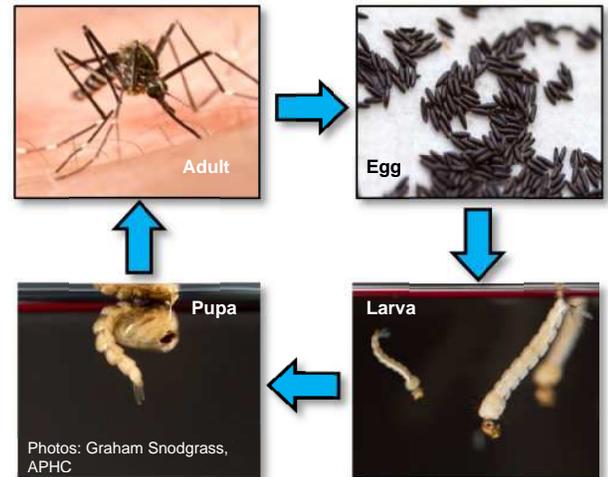
## What do mosquitoes look like and how do they develop?

All mosquitoes pass through four life-stages: egg, larva, pupa and adult. Eggs hatch into larvae after a few days of being in contact with water. The larvae feed on debris in the water, grow rapidly and will turn into pupae within one to two weeks. Pupae take only a few days before they hatch into adult mosquitoes. Only the adult female mosquitoes bite. Adult female mosquitoes require blood so that they can produce eggs and start the life-cycle again.

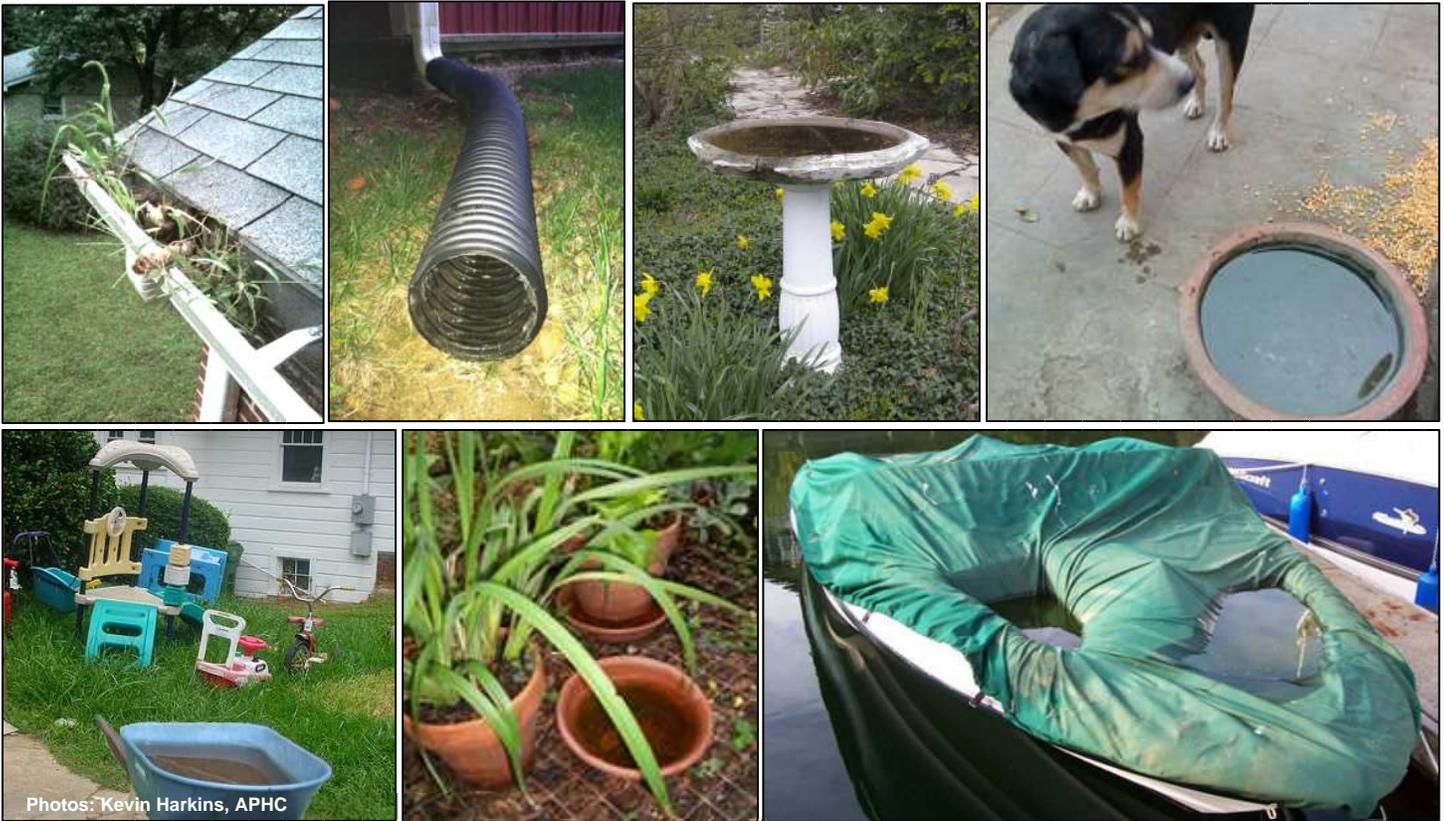
## What is the most effective way to control mosquitoes around my home?

The most effective way to control mosquitoes around the home is to eliminate or treat the water where mosquitoes lay their eggs and their larvae live and grow. Because mosquitoes are able to lay hundreds of eggs, in very small amounts of water, eliminating even the smallest areas where water collects around the home can dramatically reduce mosquito populations:

- Check rain gutters and make sure they are free of debris and working properly
- Ensure that garbage cans and other receptacles have tight fitting lids and do not collect water
- Drill holes in the bottom of recycling bins and outdoor storage containers for drainage
- Seek out and remove unneeded items that collect water such as plastic containers, flower pots, children's toys, old tires or any other items that can hold water
- Check holes and cavities in tree trunks for water, if present fill with sand or cement
- Drain or replace corrugated plastic pipe used for downspout drainage
- Empty and refresh pet water dishes, watering troughs and birdbaths at least once a week
- Check around faucets and air conditioner units and repair any leaks that result in puddles
- Keep swimming pools and spas chlorinated
- Aerate ornamental pools and ponds
- Empty children's wading pools after use
- Store small boats upside down
- Make sure that water does not collect on covers used for grills, spas, pools, boats, cars, or woodpiles
- Fill in any depressions and low-lying areas in the yard that accumulate water
- Keep drainage ditches and culverts free of debris to allow water to drain properly



**Life-cycle of a Mosquito.** All mosquitoes have four life-stages. The first three life-stages; egg, larva and pupa, must have water in order to develop into adults. Mosquitoes can complete their entire life-cycle, in as little as a teaspoon of water, as quickly as one week.



Photos: Kevin Harkins, APHC

**Locations around the home that frequently breed mosquitoes.** Mosquitoes will seek out any areas around the home where water collects to lay their eggs. Clogged roof gutters and corrugated drain pipe are important mosquito breeding sites that are often overlooked (top left). Water in birdbaths and outdoor pet dishes should be changed weekly (top right). Tarps and equipment covers will sag, accumulate water and breed mosquitoes if not properly secured (bottom right). Trays for potted plants, children's toys and any other outdoor items holding water should be drained or removed to prevent mosquito breeding (bottom center, left).

## What can I do to protect myself against mosquitoes that are actively flying around my home?

Homeowners should follow these recommendations to protect themselves from adult mosquitoes that are flying around their home:

- Use an Environmental Protection Agency (EPA) registered insect repellent on exposed skin when outdoors.
- Clothing can be an effective barrier against mosquito bites. Wearing clothing with long sleeves and long pants will reduce the amount of exposed skin and make it harder for adult mosquitoes to bite.
- EPA labeled products that contain permethrin can be used to treat clothing to prevent adult mosquitoes from biting through fabric. Permethrin treated garments are also commercially available. Be sure to read and follow all labeled instructions before use.
- Ensure that screens on doors and windows are properly installed and free of holes and tears.
- Bright lights attract mosquitoes; consider using lower wattage bulbs or turn off exterior lighting when not needed.
- Adult mosquitoes will rest on weeds and other vegetation around the home. Homeowners can reduce adult mosquito resting sites by keeping ornamental plants and lawns well maintained.
- EPA registered products for controlling adult mosquitoes, such as aerosol foggers, should only be used as a last resort; their effect is temporary and adult mosquitoes can quickly invade areas after treatment.

## What items are not recommended for use to control adult mosquitoes around my home?

Electromagnetic exclusion devices, ultrasonic repellent products, and outdoor devices for electrocuting flying insects are not recommended for use to control adult mosquitoes around the home. These devices often attract and kill more non-target and beneficial insects than adult mosquitoes.