# Help Control Mosquitoes that Spread Dengue, Chikungunya, and Zika Viruses

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Aside from being itchy and annoying, the bite of an infected female mosquito (*Aedes aegypti or Aedes albopictus*) can spread dengue, chikungunya, or Zika viruses. People become infected with dengue, chikungunya, or Zika after being bitten by an infected mosquito.

- Female mosquitoes lay several hundred eggs on the walls of water-filled containers. Eggs stick to containers like glue and remain attached until they are scrubbed off. When water covers the eggs, they hatch and become adults in about a week.
- Adult mosquitoes live inside and outside.
- They prefer to bite during the day.
- A few infected mosquitoes can produce large outbreaks in a community and put your family at risk of becoming sick.

## Protect Yourself, Your Family, and Community from Mosquitoes

### 1. Eliminate standing water in and around your home:

- **Once a week**, empty and scrub, turn over, cover, or throw out items that hold water, such as tires, buckets, planters, toys, pools, birdbaths, flowerpots, or trash containers. Check inside and outside your home.
- Tightly cover water storage containers (buckets, cisterns, rain barrels) so that mosquitoes cannot get inside to lay eggs.
- For containers without lids, use wire mesh with holes smaller than an adult mosquito.

### 2. If you have a septic tank, follow these steps:

- Repair cracks or gaps.
- Cover open vent or plumbing pipes. Use wire mesh with holes smaller than an adult mosquito.

### 3. Keep mosquitoes out of your home:

- Use screens on windows and doors.
- Repair holes in screens.
- Use air conditioning when available.

Put plants in soil, not in water.

Drain water from pools when not in use.

Recycle used tires or keep them protected from rain.

Drain & dump any standing water.

Weekly, scrub vases & containers to remove mosquito eggs.

National Center for Emerging and Zoonotic Infectious Diseases
Division of Vector-Borne Diseases

CS258303

## 4. Prevent mosquito bites:

- Use an Environmental Protection Agency (EPA)-registered insect repellent with one of the following active ingredients. All EPA-registered insect repellents are evaluated to make sure they are safe and effective.

| **Active ingredient** Higher percentages of active ingredient provide longer protection | **Some brand name examples*** |
|---|---|
| **DEET** | Off!, Cutter, Sawyer, Ultrathon |
| **Picaridin**, also known as **KBR 3023, Bayrepel**, and **icaridin** | Cutter Advanced, Skin So Soft Bug Guard Plus, Autan (outside the United States) |
| **IR3535** | Skin So Soft Bug Guard Plus Expedition, SkinSmart |
| **Oil of lemon eucalyptus** (OLE) or **para-menthane-diol** (PMD) | Repel |
| * Insect repellent brand names are provided for your information only. The Centers for Disease Control and Prevention and the U.S. Department of Health and Human Services cannot recommend or endorse any name brand products. | |

  - Always follow the product label instructions.
  - Reapply insect repellent every few hours, depending on which product and strength you choose.
  - Do not spray repellent on the skin under clothing.
  - If you are also using sunscreen, apply sunscreen first and insect repellent second.
- Treat clothing and gear (such as boots, pants, socks, and tents) with permethrin or purchase permethrin-treated clothing and gear.
  - Treated clothing remains protective after multiple washings. See product information to find out how long the protection will last.
  - If treating items yourself, follow the product instructions carefully.
  - Do **not** use permethrin products, intended to treat clothing, directly on skin.
- Wear long-sleeved shirts and long pants.

Keep rain barrels covered tightly.

Weekly, empty standing water from fountains and bird baths.

Keep septic tanks sealed.

Install or repair window & door screens.

For more information, visit:
www.cdc.gov/dengue, www.cdc.gov/chikungunya, www.cdc.gov/zika

*August 2015*