Maryland Pesticide Education Network
Managing Mosquitoes Without Pesticides

As the impact of climate change worsens – longer warm and wet seasons – we must prepare to deal with an increase in mosquito-borne diseases that affect people, wildlife and our waterways. While pesticides applied from trucks or airplanes can reduce flying adult mosquito populations that transmit viruses, they present health and environmental risks:

➢ Truck-sprayed pesticides are potential endocrine disruptors, according to the U.S. EPA, and are highly toxic to bees and other pollinators. They are mixed with another chemical that is considered a possible carcinogen by EPA.

➢ Aerial spraying of mosquito-targeted pesticides is toxic to the nervous system and is also linked to cancer.

Pesticide drift can also impact non-target organisms such as pollinators, birds, fish and amphibians.

The Good News: There indeed are ways to minimize the chance of mosquito bites while also eliminating exposure to toxic pesticides. Think of it as a four-part plan:

1. Around your home, prevent mosquito breeding and repel mosquitoes that fly into your yard.
2. Use a wide range of beautiful plants in your backyard that repel mosquitoes.
3. Get to know and use a variety of organic repellants on your body.
4. Employ simple strategies away from home – what you wear, where you go, and what time of day you are outdoors.

Step #1: Protect decks, backyards & outdoor areas around your home

✓ "Standing water left alone keeps mosquitoes close to home:" Eliminate pooled or stagnant waters from containers, gutters, drains, and anywhere that pools water. Even a bottle cap can become a breeding site. Fix leaky faucets.

✓ Use fans and screens over outdoor eating areas. Place nets over strollers and baby carriers.

✓ Traps. Give off carbon dioxide, which mimic a breathing person or animal. That do indeed trap mosquitoes, but it is unclear how well they work in a given area, such as an entire backyard.

✓ Stop mosquito breeding by scattering your own dry granulated garlic or garlic-pepper tea in problem areas such as garbage cans, tall grass & turf; or consider Mosquito Barrier (http://www.mosquitobarrier.com/)
Step #2: Use a Wide Range of Plants & Natural Repellents

Plant combinations of these plants in and around your home...

✓ Basil  ✓ Lavender
✓ Catnip  ✓ Lemongrass
✓ Cedar  ✓ Marigolds
✓ Cinnamon  ✓ Pennyroyal
✓ Clove  ✓ Rosemary
✓ Eucalyptus  ✓ Thyme
✓ Granulated garlic  ✓ Vinegar
✓ Horse mint  ✓ Witch hazel

Step #3: Organic Mosquito repellents work with varying effectiveness, especially in terms of how long their repellent properties remain effective. Here are products to try...

✓ Oil of Lemon Eucalyptus (OLE)
✓ PMD (p-menthane-3,8-diol), which is the extract from OLE that shows superior repellent activity. Here is a detailed fact sheet on OLE and PMD: [http://bit.ly/2pjFEpy](http://bit.ly/2pjFEpy)
✓ Badger Anti-Bug Balm
✓ Bubble & Bee Organic Insect Repellent
✓ Britannie’s Thyme Organic Bug Spray
✓ Zoe Organic Insect Repellent
✓ Sofia BugSafe
✓ Burt’s Bees Herbal Insect Repellent
✓ Homemade natural sprays can contain rosemary, clove, lavender, cinnamon and eucalyptus.

Step #4: Other Ways to Protect Your Body Against Mosquitoes

✓ Be aware of peak exposure times and places, especially dawn and dusk.
✓ Wear appropriate clothing. Minimize areas of exposed skin by wearing long-sleeved shirts, long pants, boots and hats. Tuck in shirts. Wear closed shoes instead of sandals.
✓ When camping, use netting when possible.

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For more information:
Maryland Pesticide Education Network:
✓ [http://www.mdpestnet.org/?s=mosquitoes](http://www.mdpestnet.org/?s=mosquitoes)

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