

# Mosquito-borne Illness

There are several illnesses that can be transmitted to humans by mosquitoes. The most common in our area is West Nile Virus. In 2016, Zika Virus showed up locally in people who returned from parts of the world where the virus is common. You can reduce your risk of being infected with mosquito-borne illness by using insect repellent and wearing protective clothing to prevent mosquito bites.

## West Nile Virus (WNV)

Most people (about 4 out of 5) who are infected with West Nile virus will not develop any type of illness (an **asymptomatic** infection). However, WNV can also lead to **West Nile Fever** or **Severe West Nile Disease**. The incubation period is usually 2 to 15 days.

### West Nile Symptoms:

- Fever
- Headache
- Tiredness
- Body aches

## Zika Virus

Zika virus can be transmitted from mosquitoes to humans, from a pregnant woman to her unborn baby, and from an infected man to his sex partners. Most people (about 4 out of 5) who are infected with Zika virus will not develop any type of illness (**asymptomatic**). However, about 1 in 5 people infected with Zika virus become ill (i.e., develop Zika). The incubation period (the time from exposure to symptoms) for Zika virus disease is not known, but is likely to be a few days to a week.

### Zika Virus Symptoms:

- Fever
- Rash
- Joint Pain
- Conjunctivitis (red eyes)

## PROTECT >>>

### Why Mosquitoes Bite

Mosquitoes are attracted to an individual based on a complex interaction of the many chemicals you exhale, perspire or wear. Only females have piercing and bloodsucking organs. Hosts include humans and domestic animals, and vary with the species.

### Avoid Mosquito Bites

- Be aware of peak biting periods.
  - Evening and early morning hours.
- Avoid infested areas.
  - Shaded, humid areas with little or no breeze
  - Tall grasses/weeds
- Wear light-colored, loose-fitting clothing.
  - Long sleeved shirt, long pants, jacket
  - Tuck pant legs into boots/socks
- Use appropriate chemical repellents for your skin. **Follow directions on product.**
  - Aerosol/pump sprays, sticks, soaps, lotions, creams & towelettes
  - Most effective repellents contain DEET (N-diethyl-metatoluamide), Picaridin (KBR 3023) or Oil of lemon eucalyptus [*p*-menthane 3.8-diol (PMD)], which should be listed in the ingredients
- Equip/repair all doors/windows with 16-mesh screen.



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Hamilton County Public Health

# Guide to Mosquito Control & Mosquito-borne Illnesses



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# DRAIN >>>

## Drain Standing Water

By draining standing or stagnant water on your property you eliminate mosquito breeding sites and help reduce the mosquito population around your home. The chart below identifies items typically found around the home that can collect water and provides solutions for keeping them free of stagnant water.



Potential Breeding Sites	Examples	Solution
<b>Swimming Pools</b>	abandoned	Properly fill or tear down.
	active	Maintain sanitizers and filters.
	wading/children	Empty after each use.
<b>Containers</b>	old tires, pet bowls, buckets, flower pot saucers, bottles, cans, tire swings, garbage cans/lids, rain barrels/basins	Keep empty, remove, or cover.
<b>Any area where water can collect in a stagnant situation</b>	ditches	Clear debris and keep drained.
	low areas/ruts	Fill with dirt and reseed.
	bird baths	Empty frequently.
	fountains	Maintain water circulation.
	ornamental water garden	Stock with mosquito-eating fish.
	ponds, creeks, lakes	Minimize plant growth and maintain water circulation.
	boats	Store covered or upside down.
	leaking water spigots	Repair leaks, maintain spigots.
	clogged gutters (Even those with gutter guards)	Clean and maintain regularly.
	tree rot holes, hollow stumps	Fill hole or remove tree/stump.
	pooled sewage	Contact your local public health agency.

# DUNK >>>

## Larvicides

Larvicides are chemicals or natural bacteria that can be used to kill mosquito larvae in standing water that cannot be drained. They are the most effective form of mosquito control because they kill mosquitoes before they become adults and disperse by flying. Larvicides are more commonly referred to as Mosquito "dunks."

## Applying Larvicide

Larvicides can be applied to standing water as a liquid, granules, or briquets. The briquets, or dunks, are the most common form used.

### Mosquito dunks:

- Are environmentally safe and can be applied by hand, by dropping them in standing water
- Slowly release a long-term larvicide at the water's surface
- Can kill mosquito larvae for 30 days or longer
- Are especially effective for areas where it is difficult to drain standing water, such as puddles, ditches, ponds, or tree stumps
- Should not be applied to drinking water reservoirs or drinking water receptacles
- Can be purchased at most gardening, hardware, or home improvement stores

Please follow the directions on the package.