

# HEALTH EFFECTS OF PESTICIDES USED FOR MOSQUITO CONTROL



## WHAT ARE PESTICIDES?

Pesticides are chemical or biological substances designed to kill or repel targeted organisms. All pesticides are poisons. In many cases they are designed to impact the immune, reproductive or nervous systems of insects. Pesticides are used widely for controlling insect populations. Although the most long-lasting and deadly pesticides such as DDT are no longer used, serious concerns continue to exist over the safety of present day pesticides.

**Increasingly, research suggests that many pesticides, even when used as directed, pose threats to our health and the environment.**

Children can be particularly sensitive to exposure to chemicals due to their small body size, immature immune systems and rapid growth cycles. Although everyone is at risk from exposure, the most vulnerable groups include pregnant women, the elderly, patients undergoing chemotherapy and people with compromised immune systems.

## ARE PESTICIDES SAFE?

No. All pesticides are associated with some risk of harm to human health or the environment. Every pesticide on the market must be registered with the Environmental Protection Agency (EPA). This registration does not guarantee the safety of the product even when used as directed.

**In fact, EPA has officially stated that no pesticide can be considered safe and federal law prohibits manufacturers from making claims that EPA registration of their products means they are safe.**

## PESTICIDES USED FOR MOSQUITO CONTROL

The following pesticides are commonly used for controlling adult mosquitoes. They are Scourge, Anvil, Permethrin and Malathion.

**SCOURGE** (active ingredient: Resmethrin) is a synthetic pyrethroid insecticide. Pyrethroids affect the nervous system, have been linked with liver and thyroid problems and can also interfere with the immune and endocrine systems. Scourge contains the synergist, pipernyl butoxide, which is classified by the EPA as a possible human carcinogen.

**ANVIL** (active ingredient: Sumithrin) is a synthetic pyrethroid insecticide which may affect the central nervous system. Anvil contains 10% pipernyl butoxide. Sumithrin was shown to demonstrate significant estrogenicity in a 1999 study at the Mt. Sinai School of Medicine. This means it may promote tumor growth in cancers of the reproductive organs including breast cancer and prostate cancer.

**PERMETHRIN** is a synthetic pyrethroid and neurotoxin. It is more acutely toxic to children than to adults. The EPA has classified it as a human carcinogen, and it has caused immune system damage as well as birth defects.

Note: Pyrethroids are highly toxic to fish, crustaceans and bees. For that reason, EPA has established restrictions that prohibit their direct application to open water within 100 feet of lakes, streams, rivers or bays.

**MALATHION** is an organophosphate insecticide that can cause acute and long-term neurological health problems. Malathion is being reviewed for its potential as a low level carcinogen. It is toxic to fish and highly toxic to aquatic invertebrates and amphibians.

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**DEET** (N,N-diethyl-meta-toluamide) is used in mosquito repellents. DEET has been associated with dermal and neurological reactions in humans. According to 1998 findings by the EPA, concentrations of as little 15% or less have resulted in acute health problems.

Manufacturers of DEET may no longer claim that their products are “child safe”. New recommendations state that DEET products are intended only for spare and infrequent use. The potential for severe toxicity exists if DEET products are used over large skin surfaces.

**INERT** ingredients (manufacturers’ trade secrets), which can comprise up to 99% of the product, are associated with a wide range of adverse health effects. These may include cancer, neurological diseases, birth defects and liver and kidney damage.

## **WHAT CAN YOU DO TO PROTECT YOURSELF FROM PESTICIDE SPRAYING?**

- Stay indoors.
- Close windows and doors.
- Turn off air conditioners.
- Wash exposed skin surfaces with soap if you come in contact with pesticides.
- Cover outdoor tables and play equipment or rinse them with soap and water after they have been sprayed.
- Bring laundry, pet dishes and toys inside.
- Cover vegetable gardens.
- Cover ornamental fishponds.

***PLEASE KEEP YOUR PETS INSIDE TO AVOID EXPOSURE TO PESTICIDES!***

## **HEALTH EFFECTS OF PESTICIDES**

Pesticides can cause both acute and chronic health effects. Acute health effects appear shortly after exposure and can include:

- skin and eye irritations
- headaches
- dizziness and nausea
- weakness
- difficulty breathing
- mental confusion and disorientation
- seizures
- coma and death

Chronic health effects may not be apparent until months or years after exposure. Such health ailments include nervous and immune system disorders and cancer.

**Consult your physician if you are experiencing health effects from pesticides.**

# **Citizens Campaign for the Environment urges you to take precautions to minimize or eliminate your exposure to pesticides.**

**A Special Thanks to the Contribution of Port Washington Citizens for Alternatives to Pesticides, Great Neck Breast Cancer Coalition, and Members of the Alliance for Safe Alternatives to Pesticides (A.S.A.P.)**

## **NEED MORE INFORMATION?**

If you are concerned about pesticide use in controlling mosquito populations, please contact your local health department (DOH). Public comment is essential in guiding this important public policy.

NYC DOH 212-788-5261  
NYC WNV Hotline 1-877-968-4692  
Nassau DOH 516-571-2260  
Nassau Vector Control 516-571-8707  
Suffolk DOH 631-853-3055  
Suffolk Vector Control 631-852-4270  
Erie DOH 716-858-7677  
Monroe DOH 716-274-6050  
Niagara DOH 716-439-7430

Cattaraugus DOH 716-373-8050  
Chautauqua DOH 716-753-4481  
Wyoming DOH 716-786-8894  
Westchester DOH 914-637-4700  
Rockland DOH 845-364-2593  
Orange DOH 845-291-2331  
Putnam DOH 845-278-6130  
Dutchess DOH 845-486-3533

For more information on pesticides call or visit  
one of our offices, or visit our website:

***[www.citizenscampaign.org](http://www.citizenscampaign.org)***

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