

What You Don't Know CAN Hurt You

Submitted by the Natural Resources Commission's Pesticide Committee

June is here, mosquitoes are buzzing, and advertisements for residential mosquito control services are swarming your mailbox. Should homeowners bite? Before you sign on the dotted line with a service, consider the following: spraying for mosquitoes has been linked to both short-term and long-term effects on human health.

Although 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, the agency's website notes: "No pesticide should be regarded as 100 percent risk-free." Federal law prohibits manufacturers from making false claims that EPA registration of their products means they are safe.

Residential mosquito control services typically use insecticides such as pyrethrins (derived from chrysanthemum flowers) and pyrethroids, which are synthetic chemicals that mimic pyrethrins. These chemicals are neurotoxins that cause almost instant paralysis and death to mosquitoes (and other insects).

Some mosquito control companies have been known to state that their applications "are as safe as chrysanthemum flowers." However, these sprays pose dangers for humans and to our furry friends as well. You may have noticed small lawn signs posted by mosquito control companies recommending that children and pets be kept inside during spraying, and for 30 minutes to an hour afterward - and there is a reason for that. Health effects of pesticides used to kill mosquitoes can cause both acute (short-term) and chronic (long-term) problems in humans (and pets). Acute health effects appear shortly after exposure to these pesticides and can include: skin and eye irritations, headaches, dizziness and nausea, weakness, difficulty breathing, mental confusion and disorientation, and seizures. Chronic health effects may not be apparent until months or years after exposure. Such health ailments include nervous, reproductive, and immune system disorders, and cancer. Many pyrethroids have been linked to disruption of the human endocrine system, which can adversely affect reproduction and sexual development, interfere with the immune system, and increase chances of breast cancer.

What about mosquito control companies that claim they don't use harsh chemicals or use plant extracts and natural oils? Unfortunately, plant-based repellents do not have a rigorously tested safety record, with most being deemed safe because they have simply been used for a long time. The EPA has established that certain ingredients that pose minimum risk to users no longer require EPA approval to be marketed as insecticides. A number of these ingredients are essential oils, including the oils of cedar, cinnamon, citronella, citrus, clove, garlic, mints, rosemary, and several others. As insecticides, these work most commonly as contact killing agents (the insecticide has to contact the mosquito to be effective) only, so frequent re-treatment may be needed, and many plant-based repellents contain compounds that should be used with caution. Most essential oils used as pesticides work by disrupting an insect neurotransmitter that is not present in people, pets, or other vertebrates. They may, however, adversely affect nontarget insects, such as native bees, dragonflies, butterflies, and fireflies.

If you are still compelled to treat your yard, be sure to ask lots of questions of the mosquito control company. Find out exactly what ingredients are in the solution they are using in the treatment, then do some research about how the ingredients might affect the health of your family and your pets.

Above all, be mindful that eliminating mosquito breeding areas near the house is more effective (and cheaper) than spraying for adult mosquitoes. Instead of spraying, use physical methods to reduce mosquitoes, such as removing standing water and managing vegetation around your home. The March issue of the North Oaks News featured an article about ways to reduce mosquito bites this summer. The article is available on the City website - simply search for "Tips for Reducing Mosquito Bites."