

## Mosquitoes: Avoid The Bites And Get Rid Of Breeding Sites

By Jane Morse, University of Florida, Pinellas County Extension Agent



**The bite.** Mosquito bites can be annoying, itchy, painful and in Florida even disease-causing. The most important mosquito-borne diseases in Florida are St. Louis encephalitis, West Nile virus encephalitis and eastern equine encephalitis. To avoid bites and the possibility of getting a disease from a mosquito it is important to protect yourself.

**Protecting yourself.** To avoid getting bitten use a mosquito repellent, avoid infested areas, wear light-colored, loose-fitting protective clothing, and stay inside during dawn and dusk. Repellents work by confusing the mosquito. The Center for Disease Control (CDC) recommends only three repellents: DEET (diethyl toluamide); Picaridin; and Oil of Lemon-Eucalyptus (do NOT use on children under 3 years). There is no scientific evidence that sound emitting devices, or that eating garlic, vitamins, onions, or any other food will repel mosquitoes. See <http://edis.ifas.ufl.edu/IN171> for more information.

Screening keeps mosquitoes from getting indoors. Install screens with 16-18 mesh and repair broken or torn screens to help keep mosquitoes out. Keep un-screened doors closed. Calk cracks and crevices to keep bugs out.

Before applying any repellent, read the label and do NOT over apply. Make sure the label lists the insect that you need to repel. Use the lowest concentration that works for you. Apply only to exposed body parts. Products with 10% to 35% DEET will provide adequate protection under most conditions. OFF! Deep Woods with 23.8% DEET provides an average protection time of 5 hours while Skin-So-Soft Bath Oil provides only 10 minutes protection time. For a complete listing of protection times of tested mosquito repellents, see the University of Florida publication “Mosquito Repellents.” This publication can be found at this site: <http://edis.ifas.ufl.edu/IN419>

Activities that may decrease the effectiveness of a repellent include activities that cause perspiration, high humidity, high temperature, rainfall and swimming.

**Relief.** To relieve the itch and redness of mosquito bites a topical corticosteroid can be used. Oral antihistamines can also be effective in reducing the symptoms of mosquito bites. More information can be found here: <http://www.annals.org/cgi/content/full/128/11/931>

**Mosquito control.** To reduce the number of mosquitoes it is important to get rid of mosquito breeding sites. Some things you can do to reduce breeding sites include: clean debris from rain gutters; get rid of water on and around structures like flat roofs, and air-conditioning units; change the water in birdbaths and wading pools weekly; change the water in pet bowls daily; stock ornamental ponds with *Gambusia* fish; and encourage other insects like dragonflies and aquatic beetles that feed on mosquitoes. Search out any area that holds water (a half-cup of water can breed enough mosquitoes to cause a problem) and get rid of the water or change it frequently. See this site for more mosquito breeding locations and solutions: <http://eis.ifas.ufl.edu/breeding.htm>

Products can be used to control either the larvae or adult stages of mosquitoes. Larvae can be controlled with *Bacillus thuringiensis* var. *israelensis* (B.t.). These are often sold as “mosquito dunks”. *Bacillus thuringiensis* var. *israelensis* (B.t.) is considered a “biological” method of control and is the least harmful to non-target organisms. Insect growth regulators are other products that can be used, as well as temephos and pyrethrins.

Remember to protect yourself from mosquito-borne disease by preventing bites, and practice mosquito control by getting rid of their breeding sites.

Photo by Jim Newman

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## **Mosquito Myths - Excerpt from Jorge R. Rey's publication “The Mosquito”.**

There are many misconceptions about mosquitoes, some of the more common ones include:

- Bug zappers are effective against mosquitoes - bug zappers do not control mosquitoes and can reduce the populations of beneficial insects.
- Electronic repellents keep mosquitoes away - No they don't; save your money.
- Residential vegetation can produce mosquitoes - They may be resting in the vegetation, but standing water is required to "produce" mosquitoes.
- Bats, owls, and other birds can control mosquitoes - Although they may include mosquitoes in their diet, they do not consume enough mosquitoes to make an appreciable difference in their populations.
- Some mosquitoes can be 2 inches long. - They don't get that big, it was probably a crane fly.
- Mosquitoes nest in vegetation - Mosquitoes do not nest.
- Spraying for adults is the best method of mosquito control - Adulticiding is the least efficient method. Eliminating mosquitoes before they become adults is preferable.
- Mosquitoes can transmit AIDS – False.

- The Citrosa plant repels mosquitoes - Although citrosa oil (citronella) has been used widely as a mosquito repellent, the undisturbed plant itself does not release these oils and is thus not effective as a repellent.
- The full document can be see at: <http://edis.ifas.ufl.edu/IN652>

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