

Safer Bug Spray: Natural Bug Repellents

A Look at Safe Options To Keep Mosquitoes at Bay This Summer



Photo

• (AP Photo)

(WebMD) With summer come the mosquito bites. And with the bug bites come the bug-borne diseases. But while the threat of West Nile virus or Lyme disease might make you uneasy, so might slathering your kids with a chemical bug repellent every day.

So how do you weigh the risks of the insects with the risks of the chemicals engineered to keep them away? Is there a natural bug repellent that works?

This is a hard issue, says Sonya Lunder, MPH, a senior analyst at the Environmental Working Group in Washington D.C. It's one that I've gone through many times before, both as an expert in toxics and as a parent.

The good news is that there are some all-natural bug killers that can keep insects off you, your kids, your pets, and your garden.

Natural Bug Repellents: What Are the Options?

The bug sprays on the market - including ones with DEET - have been deemed safe by the Environmental Protection Agency, at least when used as directed. Still, many parents want to limit their kids' exposure to potentially toxic chemicals. So what are some natural bug repellent alternatives?

- **Soy-based products.** A 2002 study of mosquito repellents found that the soy-based Bite Blocker for Kids was the most effective natural alternative to DEET. This natural bug repellent offered more than 90 minutes of protection, better than some low-concentration DEET products.

- **Oil of lemon eucalyptus (PMD).** This natural oil, which comes from the lemon eucalyptus tree, is recommended by the CDC as an alternative to DEET. It seems to work really well, but hasn't got a lot of attention, says Lunder. Several studies have found this natural bug repellent as effective as DEET in repelling mosquitoes. It may also work well against ticks. Oil of lemon eucalyptus may be poisonous if ingested in high quantities. According to the CDC it should not be used on kids under 3.
- **Other products.** Researchers have tested many other so-called natural bug repellents like **citronella**, **peppermint oil**, and other plant-based oils. Unfortunately, studies have not found them particularly effective.

For instance, while **catnip** seemed promising, a 2005 study showed it significantly less effective than DEET in preventing mosquito bites. The 2002 study showed that various formulations of citronella could keep mosquitoes at bay, but only for up to an hour.

Avon's Skin-So-Soft Bath Oil - long rumored to be an effective bug repellent - only kept mosquitoes away for 30 minutes or less.

Should I Use DEET?

Given that natural bug repellents like oil of lemon eucalyptus work, should you swear off products with DEET? Lunder says it depends on your situation.

If you're just dealing with mosquitoes that are a nuisance, natural repellents may be fine, although you may have to apply them more often, says Lunder. But if you're in an area where mosquitoes are known to be carrying disease, you may want to go with something really strong like DEET.

If you do decide to use a DEET insect repellent, do it wisely. Lunder reminds people that DEET is an insecticide and it can affect the nervous system. The American Academy of Pediatrics recommends using repellents with no more than a 30 percent concentration of DEET for kids over 2 months. Don't apply insect repellent to kids younger than 2 months. If you're not going to be outdoors as long, you may want to choose a repellent with a lower concentration of DEET. A 10 percent concentration of DEET protects for about two hours.

If possible, Lunder recommends putting repellents with DEET on your clothing instead of your skin. Look for a pump spray instead of aerosol, so your child doesn't breathe in as much of the chemical. Don't apply DEET to your child's hands, and always wash your own hands after touching a DEET insect repellent - especially before handling food. Wash your child's skin to remove any repellent when they come back indoors.

Natural Insect Control: Other Ways to Beat the Bugs

Natural bug sprays aren't the only nontoxic ways that you can fight back against mosquito bites and other bugs. Here are some other approaches to natural insect control - see which ones work and which don't.

- **Long sleeves and pants.** Yes, it's probably obvious. But one good form of natural insect control is to cover your arms and legs. While a mosquito might be able to get through very thin clothing, moderately thick fabric will stop them. No mosquito is going to bite you through a canvass shirt, says Lunder.
- **Fans.** Here's a natural insect control tip. Mosquitoes have trouble maneuvering in wind. So when you're sitting out on our porch, think about using a window fan or overhead fan. The mosquitoes will have trouble getting near you.
- **Environmental control.** Eliminate standing water in your yard, which will prevent mosquitoes from breeding. Empty bird baths weekly and fill puddles with dirt.
- **Citronella candles.** Despite the lore, citronella candles - or other natural bug repellent candles - don't seem to work very well. They could even have risks. I'd caution people about burning bug-repellent products, like citronella candles, says Lunder. Inhalation is a very direct form of exposure, so you're breathing in whatever chemicals are in the product.
- **Bug zappers.** Don't bother. Sure, they may electrocute loads of bugs, but they usually kill beneficial insects that eat pests or serve as food for birds. One study showed that of all the insects slaughtered by bug zappers, a mere 0.13 percent were biting mosquitoes.
- **Ultrasonic devices.** Again, don't bother. They don't work.
- **Traps.** Relatively new on the scene, these devices use various methods to attract and then trap mosquitoes. Many give off carbon dioxide, mimicking a breathing animal or person. While they certainly do trap mosquitoes, experts aren't sure how well they control mosquito populations in a given area. You'll also have to decide whether the device itself - which might run on a gas-powered engine - is preferable to the bugs.
- **Permethrin-treated products.** Permethrin is a kind of chemical repellent that's added to some clothing, shoes, and camping gear. While the idea of wearing a shirt treated with an insecticide might make you uneasy, Lunder points out that it has an advantage.

It's not being applied directly on your skin, so it could be a really good option, she tells WebMD. However, Lunder cautions that you should probably wash permethrin-treated clothing separately from other laundry. Like DEET, permethrin is a neurotoxin that can affect the nervous system. You may want to weigh using either chemical against the risk of disease-carrying insects.