

Bug Repellent Basics

McKenzie Pediatrics 2010

Do Fair-Skinned People Really Get Bitten By Mosquitoes More Often?

No. And neither do women nor redheads nor any other specific group. Part of what attracts mosquitoes is the amount of carbon dioxide, heat, and moisture that a person emits. Unfortunately, these factors are determined by genetics, and they're hard to measure. The more you sweat, however, the more you attract mosquitoes – but scientists aren't sure whether this is has to do with the scent of sweat, or the moisture in perspiration.

It is true, however, that children are more likely to attract mosquitoes than adults. Again, no one quite knows why this is. It may be that some children have attractive scents to the insects. This, again, is decided by genetics. Even within a family group, there can children and adults who seem to get “eaten alive”, while others who barely get bitten.

How Can I Uninvite Bugs From An Outdoor Summer Party?

Avoid scheduling events at dusk, when mosquitoes are most active and plentiful. Consider a yard spray or outdoor fogger. Citronella candles can be effective when lit at the patio table, but will only deter mosquitoes that are hovering within three feet of the candle. Electronic bug zappers are fairly useless, because they trap only the insects that happen upon them.

What Exactly Is DEET?

DEET is a highly effective chemical that confuses the receptors on the antennae of many insects, so bugs are warded off but not killed.

The main concern about DEET is its potential toxicity. According to the EPA, in the fifty years that the chemical has been used in the U.S., there have been rare reports of reactions to DEET, which have ranged from skin irritation to death in those who used excessive amounts. But when used correctly, DEET does not pose a health risk for adults and most children.

Here are some common sense pointers for the use of DEET-containing topical insect repellent products:

- Don't apply it more frequently or leave it on the skin for longer than the package directions specify
- Avoid using DEET around food, in small enclosed spaces, or on open sores
- Products containing more than 50 percent DEET do not repel insects better than products containing less
- Use a product with no more than 30 percent DEET on children older than 2 years, and no more than 10 percent DEET on children ages 2 months to 2 years. It is best to avoid insect repellents altogether in infants younger than 2 months.
- Avoid putting DEET-containing products around the mouth or eyes of young children, or on their hands.
- Do not leave DEET-containing products where unsupervised young children might get into it and put it into their mouths or eyes.

If you are bothered by DEET's unpleasant smell, look for repellents that contain the chemical alternative **picaridin**, which is odorless.

Are There Any Natural Ingredients That Work To Repel Insects?

The CDC recommend two naturally derived active ingredients: **oil of lemon eucalyptus**, and the **amino acid IR3535**. These are called biopesticide repellents (the chemicals DEET and picaridin are conventional repellents). Both are described as offering “reasonably long-lasting protection” against bugs.

Where Can I Find More Information?

Check out <http://state.ceris.purdue.edu> to search the National pesticide Retrieval System. Here you'll find information that includes a list of insect repellents that are licensed in each state, broken down by active ingredient and the type of pest that it targets.

How Do I Layer Sunscreen and Insect Repellent?

Apply sunscreen, allow it to dry, then put bug spray on top. Sunscreen should be directly on the skin to increase its absorption, while bug spray should sit on the surface, since that's where the bugs want to land.

You can find two-in-one products, but if you'll be outside for an extended time, use separate products, since sunscreen needs to be reapplied more often than bug spray.

How Can I Reduce The Number Of Mosquitoes In My Yard?

Work with your neighbors to eliminate any free-standing, still puddles of water. Freshen bird baths often. Empty any containers that have captured rainwater. Hose down and stir up water gardens regularly. There's an old saying: **Water plus seven days equals mosquitoes!**