



FAQs: Bug Repellents

Keeping Bug Bites at Bay

With warm weather and blooming flowers also comes those pesky bugs! It is important to take precaution to protect our little ones from bites and stings. Before you purchase or apply insect repellents to yourself or the children within your care, review the following helpful tips .

Non-chemical tips for reducing bug bites

- Use mosquito netting over infant carriers. Choose mosquito netting made of cotton (first choice) or nylon.
- Avoid areas where insects nest or congregate, such as garbage cans, stagnant pools of water, uncovered foods and sweets, and orchards and gardens where flowers are in bloom.
- Dress children in light weight clothing that covers their skin, such as long pants and long sleeves while outdoors.
- Avoid clothing with bright colors or flowery prints, because they seem to attract insects.
- Don't use scented/fragranced soaps, perfumes, or hair sprays on your child, because they are inviting to insects (in addition to being unhealthy when inhaled).

If the use of bug repellent is necessary, see below for options and precautions before applying bug repellent on children.

What is DEET?

N,N-diethyl-m-toluamide, commonly referred to as DEET, is the active ingredient in most bug repellents found on the shelves at big box stores, such as Target or Walmart. DEET is a multi-purpose insect repellent that can be applied directly to the skin. It works in repelling any insects that may be potentially carrying disease. DEET was registered for use by the general public in the U.S. in 1957.

Is DEET Safe?

According to the EPA, insect repellents containing DEET do not present a health concern to the general public. However, DEET is meant to only be applied onto the skin. Caution must be taken to avoid breathing, swallowing or getting the multi-purpose insect repellent into eyes because DEET is toxic if inhaled, or ingested. As always, consumers should carefully follow all label instructions to avoid any possible exposure side effects.

Tips for Safe Bug Repellent Application and Exposure

Because developing children are particularly sensitive to synthetic (manmade) chemicals, there are several precautions that can be taken if using DEET bug repellents on children:

- Bug repellents should not be used on children younger than six months of age.
- DEET-containing repellents should not be applied more than once a day on children (6 months and older).
- DEET concentrations higher than 30% should not be used, as higher concentrations are NOT more effective.
- Do not allow children to handle repellents; apply the product to your own hands and then put it on the child.
- Avoid applying DEET on children's hands or anywhere near the mouth to avoid possible ingestion.
- After returning indoors, wash your child's treated skin and clothes with soap and water or bathe them.
- Read and follow all the instructions on the label!
- Opt for bug repellents that are in the form of sticks, lotions or direct sprays.
- Avoid all types of aerosol sprays in pressurized containers, as aerosols increase the amount of repellent inhaled.



- Do not use combination products, i.e. bug spray + sunscreen. Sunscreen should be applied every two hours, and thus one would be over exposed to the bug repellent.

Are there alternatives to DEET?

There are both natural and synthetic alternatives to DEET that are currently on the market.

Some alternative chemical methods include:

- Picaridin (KBR 3023), which is available in concentrations of 5% to 10%. Picaridin generally has a duration of action similar to DEET.
- Oil of lemon eucalyptus products can also repel insects and have been tested by the EPA for effectiveness; however, these products should not be used on children under the age of three, pregnant women and nursing mothers.

Picaridin has not raised as many concerns about neurotoxicity (harm to the brain) as DEET, but it also has not had as much safety testing. Oil of lemon eucalyptus has not been adequately tested for its effects on children under 3 years old. Thus, it is NOT recommended for use on babies, toddlers, and pregnant and nursing women. It is also less effective than DEET and picaridin in defending against Aedes mosquitoes that transmit the Zika virus.

Choose products that utilize a repellent chemical that has been tested for effectiveness such as DEET, picaridin or oil of lemon eucalyptus. This is especially important if children will be outside in an area known for bug-borne diseases. Some of the Avon Skin-So-Soft products contain picaridin such as, Avon Skin-Soft Bug Guard Plus Picaridin.

Products that use botanical extracts such as: lemon grass, citronella, peppermint, geraniol, and rosemary, may contain allergens in highly concentrated forms and their effectiveness varies greatly. The EPA does not require that products containing botanicals be tested for safety or effectiveness. Thus, there is not a lot of available data to confirm the effectiveness of botanicals products in keeping bugs away.

Integrated Pest Management (IPM)

IPM strategies can help reduce the amount of unwanted bugs in and around your home or child care facility. To learn effective IPM tools read EHCC's IPM FAQ and Factsheet.

References:

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3. <https://kidshealth.org/en/parents/repellent.html>
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