



Pediatric Associates OF DALLAS

USE OF INSECT REPELLENT IN CHILDREN

With the arrival of Spring and Summer comes the arrival of mosquitoes and other stinging insects. Several steps can be taken to lessen chances of becoming a victim:

1) AVOIDANCE

- a. Refrain from going outdoors when bugs are most plentiful: dawn and dusk.
- b. When your child does go out, cover as much skin as you can comfortably. That is, employ lightweight, long-sleeved clothing, hats, and socks.
- c. Use mosquito netting, if possible.
- d. Keep away from areas where insects nest or congregate: garbage cans, stagnant pools of water, uncovered foods/sweets, orchards/gardens with flowers in bloom.

2) OUTSMART THEM

- a. Do not dress your child in bright colors or flowery clothing.
- b. Do not use perfume, hair spray, or scented body lotions or soaps.
- c. Do not wear jewelry or other shiny articles.

3) INSECT REPELLENT

The available insect repellents effectively repel mosquitoes (which rarely carry West Nile virus), ticks, chiggers, mites, biting flies, and fleas. They have little effect on wasps, hornets, or stinging bees. Most insect repellent products contain DEET (N, N-diethyl-meta-toluamide), the gold standard for insect repellents. No other substance has been found to be more effective or as active against a variety of insects. "Natural" substances (citronella, soybean oils, or those from plants) are not as effective as DEET. Products containing DEET range in concentration from 4%-100%.

Concerns have been raised about the potential for serious toxicity with DEET, including skin irritation, behavioral changes, seizures, and death. An analysis of more than 9,000 calls to poison control centers related to DEET exposure concluded that the risk of serious toxicity is minimal. It has been estimated that there are over 200 million users of DEET-containing products worldwide annually. As a result, recommendations regarding the appropriate use of DEET products have been proposed to minimize risk. These will follow.

Permethrin, an active ingredient in treating head lice, is an insecticide and repellent. It can be effectively used (Permanone, Duranon) to repel mosquitoes and other insects when sprayed on clothes, sleeping bags, or tents. IT SHOULD NOT BE DIRECTLY APPLIED TO SKIN! Use of DEET-containing products in conjunction with a permethrin-product may be the most effective means of repelling insects, along with the aforementioned steps.

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The U.S. Environmental Protection Agency (EPA) and the American Academy of Pediatrics (AAP) provides the following guidelines when using DEET products:

- a. Do not apply to infants under 2 months of age.
- b. Apply only to exposed skin and/or clothing, NOT under clothing. Applying to clothing offers added protection with less potential for exposure, though DEET may damage certain materials: synthetics, leather, plastics, or vinyl car seats.
- c. Never use over cuts, wounds, or irritated skin.
- d. Do not apply to eyes, mouth, or hands, and use sparingly around eyes. When using sprays, spray on your hands first, then apply to child. Wash your hands. Do not allow children to handle the products.
- e. Do not spray in enclosed areas or near food. Avoid breathing repellent spray.
- f. Use just enough repellent to cover exposed skin and/or clothing: 2-4 tablespoons for an adult; significantly less for children. Heavy application is unnecessary.
- g. Once indoors, wash treated skin with soap and water! This is especially important when repellents are used repeatedly in a day, or on consecutive days. Also, wash treated clothing before wearing again.
- h. It is believed that DEET may decrease the effectiveness of sunscreens. For this reason, coupled with the fact that sunscreen should be reapplied every couple hours, after swimming, or after heavy perspiring, the use of combination products (DEET + sunscreen) is generally discouraged for prolonged use. If used, use a product with no more than 10% DEET.
- i. If you suspect a reaction to a repellent, discontinue use, wash skin, and call your local poison control center. If referred to a doctor, take the repellent with you.

Insect repellent with DEET concentration of 30% are more protective than lower concentrations, but concentrations greater than 30% do not provide better protection; they simply last longer. A 24% concentration product lasts approximately 5 hours; 10% DEET will protect about 2 hours. The AAP recommends a concentration of 30% as safe for adults and children. Concentrations of 10-15% can be used if parents are concerned about the potential risks of higher amounts for children and/or if the threat of disease-carrying mosquitoes is small.

SELECT INSECT REPELLENT PRODUCTS

Product	Active Ingredient	Comments
Cutter Stick	DEET 30%	Highly rated by Consumers Union
Cutter Backwood's	DEET 25%	Somewhat lower DEET concentration
Off!	DEET 15%	Lower DEET % for children
Repel Camp Lotion	DEET 10%	Lower DEET % for children
Banana Boat Bite Block Sunblock for Children	DEET 9%	Lower DEET % for children plus sunscreen (SPF 15)
Skedaddle for Children with sunscreen	DEET 6.5%	Lower DEET % for children plus sunscreen (SPF 15)
Off! Skintastic (various)	DEET 5%-10%	Lower DEET % for children
Natrapel	Citronella	"Natural"; non-DEET ingredient Not as effective as DEET product
Off! Botanicals	Eucalyptus-based	"Natural"; not as effective as DEET
Cutter Outdoorsman Gear Guard	Permethrin 0.5%	Apply to clothing, deck, tent, other gear Not for use on skin