



## INSECT BITES (7/19)

### Insect Bite Prevention

Insect repellents containing DEET with a concentration of 10% appear to be as safe as products with a concentration of 30% when used according to the directions on the product labels. DEET is not recommended for use on children under 2 months of age.

DEET-containing products are the most effective mosquito repellents available. DEET also is effective as a repellent against a variety of other insects, including ticks. It should be used when there is a need to prevent insect-borne disease. The concentration of DEET in products may range from less than 10% to over 30%. The efficacy of DEET plateaus at a concentration of 30%, the maximum concentration currently recommended for infants and children. The major difference in the efficacy of products relates to their duration of action. Products with concentrations around 10% are effective for periods of approximately two hours. As the concentration of DEET increases, the duration of activity increases; for example, a concentration of about 24% has been shown to provide an average of 5 hours of protection.

The safety of DEET does not appear to relate to differences in these concentrations. A prudent approach would be to select the lowest concentration effective for the amount of time spent outdoors. It is generally agreed that DEET should not be applied more than once a day.

There are no specific data on the skin absorption of DEET as a function of age. However, data on skin absorption of similar substances suggest that absorption through the skin would not differ after an infant has reached a month or two of age.

DEET should not be used in a product that combines the repellent with a sunscreen. Sunscreens often are applied repeatedly because they can be washed off. DEET is not water-soluble and will last up to 8 hours. Repeated application may increase the potential toxic effects of DEET.

#### Other precautions

- \* Apply DEET sparingly on exposed skin; do not use under clothing.
- \* Do not use DEET on the hands of young children; avoid applying to areas around the eyes and mouth.
- \* Do not use DEET over cuts, wounds or irritated skin. Wash treated skin with soap and water after returning indoors; wash treated clothing.
- \* Avoid spraying in enclosed areas; do not use DEET near food.

*The information above is reprinted from recommendations made by the American Academy of Pediatrics in 2003.*

In addition to using an insect repellent on the skin, there is also a clothing spray available to prevent mosquito bites. It is also very effective in preventing tick bites. The main ingredient of the clothing spray is called Permethrin. It is sold as the brand name "Permanone" or "Duranon". Use of both a DEET containing insect repellent and Permethrin clothing spray should greatly decrease mosquito and tick bites.

#### **Treatment of Insect Bites**

To keep children from scratching bites (which may lead to infections), use a lotion such as calamine, or a mild hydrocortisone cream. An anti-itch cream called PRAX can also be used. Stinging insects such as bees and wasps cause a severe (but not dangerous) local swelling. As long as the reaction to the sting remains closed to the site of the bite, it is not dangerous. This type of reaction is treated with Benadryl which can be bought without a prescription. The dose is 1 teaspoon for every 25 lbs. of body weight. This dose can be repeated every six hours as needed. If the Benadryl makes the child drowsy, the dose can be cut back a little. Keep fingernails cut short and clean to prevent secondary infection from scratching. If the bites are open and bleeding use a topical antibiotic ointment such as Neosporin or Bacitracin.

A severe, life-threatening reaction may, on rare occasions, occur within 20 minutes of a sting. The symptoms include swollen tongue, fainting, difficulty breathing, and generalized hives and swelling. If these symptoms do occur, the person should be taken to the nearest hospital immediately.