

Your Health

by Dr. Paul Roumeliotis

Mosquito Bite Prevention and DEET

One effective way to prevent bites is by using insect repellents like DEET. There are many questions about DEET so I decided to write a column about it.

DEET (N,N-diethyl-m-toluamide or, N,N-diethyl-3-methylbenamide) was approved as a repellent for public use in 1957. Studies have shown that a product containing 23.8% DEET provides about 5 hours of protection from mosquito bites. A product containing 20% DEET provides almost 4 hours of protection. A product with 6.65% DEET provides almost 2 hours of protection. A product with 4.75% DEET provides about 1.5 hours of protection.

DEET safety concerns

DEET is generally used without any problems. There have been rare reports of side effects, usually as a result over-use. The American Academy of Pediatrics has recommended a concentration of 10% or less for children aged 2 to 12. Most experts agree that DEET can be safely used in children over 2 years of age, but if there is a risk of West Nile virus then DEET can be used in children 6 months or older.

Alternatives to DEET?

According to Health Canada, the following non-DEET products are recognized as repellents:

- **P-menthane 3.8-diol:**

A product containing this active ingredient was recently registered in Canada and thus meets all the modern safety standards. It provides up to 2 hours of protection against mosquitoes. This product cannot be used on children under 3 years of age. It can be applied 2 times per day.

- **Soybean oil:**

Registered products containing soybean oil provide between 1 to 3.5 hours of protection against mosquitoes, depending on the product. Products containing soybean oil were recently registered and thus meet all the modern safety standards.

- **Citronella and lavender:**

Registered products containing citronella protect people against mosquito bites from 30 minutes to 2 hours. The registered lavender product repels mosquitoes for approximately 30 minutes. These products cannot be used on infants and toddlers under 2 years of age.

Summary of DEET use based on age:

Children under 6 months of age

Do not use repellents containing DEET on infants.

Children aged 6 months to 2 years

In situations where a high risk of complications from insect bites exist, the use of one application per day of DEET may be considered for this age group. The least concentrated product (10% DEET or less) should be used. As with all insect repellents, the product should be applied sparingly and not be applied to the face and hands. Prolonged use should be avoided.

Children between 2-12 years of age

The least concentrated product (10% DEET or less) should be used. Do not apply more than 3 times per day. Prolonged use should be avoided.

Adults and Individuals 12 Years of Age or Older

Studies show that products with lower than 30% concentrations of DEET are as effective as the high concentration products, but they remain so for shorter periods of time. Products containing no more than a 30% concentration of DEET will provide adults with sufficient protection. Re-apply after these protection times have elapsed if necessary. Bottom line: use as low a concentration as possible.

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