

**For 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.

**For adults and individuals 12 years of age or older:**

Do not apply more than 3 times per day. Prolonged use should be avoided.

It should be noted that, under normal conditions:

- 30% DEET gives 6.5 hours of protection
- 15% DEET gives 5 hours of protection
- 10% DEET gives 3 hours of protection
- 5% DEET gives 2 hours of protection

DEET can damage plastics, synthetic fabrics, leather and painted or varnished materials. So be careful not to get it on eyeglass frames, watch crystals, walls or furniture. DEET does not damage natural fibres, such as cotton or wool, and has no effect on nylon.

**Other Repellents and Devices**

\* The evaluation of personal insect repellents containing citronella and lavender oil has not yet been completed. Registered lavender oil repellent protects people against mosquito for half an hour or less. As a precaution, it is not recommended for children under two years old. Allergic reactions may occur in some individuals using citronella-based products. In September 2004,

Health Canada announced it is phasing out all citronella-based personal insect repellents unless additional data can address uncertainties regarding the product.

\* "Mosquito plants" (Garden Lily or Citrosa plants) are not effective for mosquito control. These plants do contain citronella oil, but the leaves must be crushed before the oil can be extracted.

\* Mosquitoes are attracted to electronic systems that use propane gas to emit carbon dioxide. The mosquitoes are then captured by a fan system and destroyed. These units are effective, but limited by wind dispersion. The amount of carbon dioxide emitted must also be greater than human emissions in order to be effective.

\* Ultra-sonic devices that emit high frequency sound may mimic the sound of a dragonfly or other insects. Studies have shown these devices do not reduce mosquito population.

\* Ultraviolet bug-zappers will destroy many more beneficial insects than mosquitoes and are generally not effective for mosquito control.

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Public Health Division  
Environmental Public Health Services

## Use of DEET and Other Mosquito Repellents



# Using DEET Properly

## When Buying A Product:

- \* Check to make sure the product is approved for use in Canada. Look for a registration number granted under the Pest Control Products Act and make sure the product is labeled as an insect repellent for use on humans. A product labeled as an insecticide should never be used on your body.
- \* Some repellent products contain a sun screen or skin lotion. It is recommended that such combination products be used solely as insect repellents, and be applied according to the safe practices listed under '*Use of DEET and Other Repellents*', i.e., not spread liberally as one might a sun screen or skin lotion.
- \* Read the entire label before using and follow the directions carefully. Use only the amount directed and for the purpose listed.
- \* Store insect repellents away from children's reach, in a locked utility cabinet or garden shed.



**Never use a product labeled as an insecticide on your body.**

## Use of DEET And Other Repellents

- \* Apply repellent sparingly and only to exposed skin and/or clothing. Do not apply DEET under clothing.
- \* Never use repellents on cuts, wounds, inflamed, irritated or sunburned skin, or skin affected by eczema.
- \* Apply repellent to clothing as mosquitoes easily bite through thin clothing such as a cotton T-shirt.
- \* Always supervise the application on children.
- \* Do not apply to eyes and mouth, and apply sparingly around ears. When using sprays, do not spray directly onto face. Spray on hands first and then apply to face. If you do get repellent in your eyes, rinse immediately with water.
- \* Do not apply to children's hands because they are likely to put them in their mouths.
- \* Do not spray in enclosed areas such as a tent. Avoid breathing in a repellent spray. Do not spray it near food.
- \* Avoid over application of the product. Use just enough repellent to lightly cover the skin. Do not saturate the skin. Heavy application and saturation are unnecessary for effectiveness. Repeat applications only as necessary.
- \* After applying, wipe or wash the repellent from the palms to prevent inadvertent contact with eyes, mouth or genitals.
- \* After returning indoors, bathe or wash treated skin with soap and water. This is

particularly important when repellents are used repeatedly in a day or on consecutive days.

- \* If a reaction to insect repellent is suspected, wash treated skin and seek medical attention. Severe reactions are uncommon, although, worldwide there have been 14 reported cases of seizures over 30 years in individuals that used DEET improperly (over application).

## Restrictions

### ***For children under 6 months of age:***

Use of personal insect repellents containing DEET is not recommended.

### ***For children aged 6 months to 2 years of age:***

In areas where diseases such as West Nile Virus and Malaria may be spread by mosquitoes, 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. Prolonged use should be avoided.



***Prolonged use of insect repellents should be avoided.***