

## AGAINST BITES



*A unique combination of natural vegetable oils to nourish the skin.*

*A secret blend of eight essential oils that bugs hate but your skin will love.*

### **BENEFITS:**

The Natural Medicines Comprehensive database recognizes these essential oils as being used for repelling mosquitoes and insects. Essential oils also have a multitude of other benefits you will enjoy.

People who are interested in protecting their health, and who don't want to suffer the harmful effects of products containing toxic chemicals like DEET should use a natural substitute that contains essential oils.

### **DEET – NO THANKS:**

Approximately half of the applied dose of DEET is totally absorbed within six hours. DEET is known to cause neurological damage, and once it enters the bloodstream, it makes its way to the nervous system, where it is known to cause seizures and even deaths. It can be especially harmful to children, which is why its use should be strictly limited with children. (Refer to study 1)

The Duke University Medical Center has concluded through laboratory rat studies that long-term use of DEET kills brain neurons that control muscle movement, learning, memory and concentration. (Refer to Study 2)

The choice is yours. Make the right one for you and your family.

### **KEY SCIENTIFIC STUDIES :**

1. Several cases of young children developing toxic encephalopathy (severe brain involvement) have been associated with the use of DEET, including one death, following repeated exposure to 10% DEET. The toxic encephalopathy was characterized by agitation, weakness, disorientation, ataxia, seizures, coma and death. (NYDOH, 1991)
2. Generalized seizures have also been temporally associated with the use of DEET containing insect repellent on skin. Signs and symptoms of more subtle neurotoxicity have been associated with extensive dermal application of DEET on adults, including insomnia, mood disturbances and impaired cognitive function. (NYDOH, 1991)
3. Duke Medical University pharmacologist Mohamed Abou-Donia, Ph.D. conducted numerous studies in rats, two of them published in 2001, which clearly demonstrate that frequent and prolonged applications of DEET cause neurons to die in regions of the brain that control muscle movement, learning, memory and concentration. Rats treated with an average human dose of DEET (40 mg/kg body weight) performed far worse than control rats when challenged with physical tasks requiring muscle control, strength and coordination - effects consistent with physical symptoms in humans reported in the medical literature. With heavy exposure to DEET and other insecticides, humans may experience memory loss, headache, weakness, fatigue, muscle and joint pain, tremors and shortness of breath. (Duke, 2002)
4. Animals topically exposed to DEET have developed ocular and dermal reactions, (NYDOH, 1991)

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5. Animal experiments indicate that DEET crosses the placenta, and that it is found in the placenta and fetus and in rats three months after birth.  
(NIH, 1990)
6. Studies have shown that DEET causes adverse effects in lab animals at high doses, including reduced body weights of pups and increased mortality rates of unborn and baby rats.  
(NPTN, 2000)
7. DEET is absorbed quickly through intact skin; 48% of the applied dose is totally absorbed within six hours. Accumulation on skin has been demonstrated.  
(NIH, 1990)

**KEY REFERENCES:**

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National Institute of Health (NIH). 2002. DEET. Hazardous Substance Database. <<http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?./temp/~BAAVhaiSW:1>>.

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