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## ***CDC's Third National Report on Human Exposure to Environmental Chemicals***

### **Spotlight on DEET**

DEET, which is short for N,N-diethyl-meta-toluamide, is a commonly used insect repellent effective in controlling several types of insects, including flies, ticks, and mosquitoes. The chemical was developed by the U.S. Army in 1946 and was registered for use by the general public in 1957. DEET products are available in a variety of forms, including liquids, lotions, and sprays.

#### **How People Are Exposed to DEET**

DEET is one of the few pesticides that can be applied to the skin or clothes. People may be exposed to DEET by

- Applying it to the skin. Only a limited amount of DEET is absorbed through the skin and depends on the concentration in the product and the presence of other chemicals in the product.
- Inhaling spray formulations of DEET.
- Eating food touched by hands that have been treated with DEET.

#### **How DEET Affects People's Health**

Even though DEET is absorbed through the skin and into the bloodstream, using insect repellents containing it should not cause a health concern if people follow label directions and take proper precautions. In rare cases, use of DEET products may cause skin rashes. Some people who have used products containing a high concentration (e.g., 50% or 75%) of DEET or who have been exposed to excessive amounts of DEET have experienced rashes, blisters, or skin irritation. Among children, a few cases of overdose and misuse of DEET have resulted in brain damage and seizures.

#### **Levels of DEET in the U.S. Population**

- For the *Third Report*, scientists tested urine samples of people aged 6-59 years who took part in CDC's national study known as the National Health and Nutrition Examination Survey.
- Five percent of the U.S. population had a measurable level of DEET; however, finding a measurable amount of DEET in urine does not mean the level will result in an adverse health effect.

- These data will help scientists plan and conduct research about the relation between exposure to DEET and health effects.

### **For More Information**

- **Agency for Toxic Substances and Disease Registry (ATSDR)**  
ToxFAQs for DEET:  
<http://www.atsdr.cdc.gov/tfacts185.html#bookmark05>
- **Centers for Disease Control and Prevention**  
What You Need to Know About Mosquito Repellent:  
<http://www.cdc.gov/ncidod/dvbid/westnile/resources/mosquitorepellent.pdf>
- **U.S. Environmental Protection Agency**  
DEET Fact Sheet:  
<http://www.epa.gov/pesticides/factsheets/chemicals/deet.htm>
- **National Pesticide Information Center**  
DEET General Fact Sheet:  
<http://npic.orst.edu/factsheets/DEETgen.pdf>

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