

## Did you know?

Insect repellents are supposed to stink. Sometimes the bugs don't like the smell, but another reason is the EPA. In 1975, the EPA stopped allowing pesticides with food-like fragrances because they were too attractive to children. Fragrances that don't smell like food, such as pine and floral, are still allowed to be used.

**How often should repellent be applied?** Follow the directions on the product to determine how often you need to reapply repellent. Getting wet or sweating may mean that you need to put repellent on more often, but be sure not to exceed the total number of applications listed on the label. **If you are not being bitten, you do not need to reapply repellent.**

**Concerns about DEET.** DEET is the active ingredient in many insect repellents. Products containing DEET are available as liquids, lotions, sprays, and impregnated materials (such as wrist bands) at concentrations ranging from 4 to 100% DEET.

DEET was developed by the US Army in 1946, and was allowed for public use in 1957. In rare cases, the use of DEET products has caused skin irritation, blisters, lip numbness, or more severe reactions.

Serious reactions to DEET are usually related to misusing the product, such as swallowing, using on broken skin, extended use of high concentrations, or using for several days without washing.

If you suspect a reaction to DEET or any other product, stop using it, wash the skin, and call the poison control center at 1-800-222-1222 or go to the doctor. Keep the product with you to give the doctor or poison control.

## Which repellents are recommended?

The Centers for Disease Control recommends using products that include one of these active ingredients: **DEET, picaridin, IR3535, or oil of lemon eucalyptus.** Products containing these ingredients usually provide longer lasting protection than other repellents.

## What about plants?

Many plants have also been reported to repel insects. These plants include: citronella, cedar, verbena, basil, geranium, lavender, cinnamon, garlic, and peppermint. When tested, most of these plant products usually give short-lasting protection ranging from a few seconds to less than two hours.

## For More Information

### Benton-Franklin Health District

#### Environmental Health Division

7102 West Okanogan Place  
Kennewick, WA 99336

[www.bfhd.wa.gov/wvn](http://www.bfhd.wa.gov/wvn)

509.460-4200

### Environmental Protection Agency

[www.epa.gov/](http://www.epa.gov/)

[www.epa.gov/pesticides](http://www.epa.gov/pesticides)

#### EPA Repellent Finder:

<http://cfpub.epa.gov/oppref/insect/>

### National Pesticide Information Center

1.800.858.7378

<http://npic.orst.edu>

### Centers for Disease Control

[www.cdc.gov/ncidod/dvbid/westnile/RepellentUpdates.htm](http://www.cdc.gov/ncidod/dvbid/westnile/RepellentUpdates.htm)

### The Pesticide Management Education Program at Cornell University

<http://pmep.cce.cornell.edu>

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## Outdoor Safety Series

# Using Insect Repellents Safely 2011



Itching for a repellent?

Please consider the following information to help make sure you use insect repellents safely.

[www.bfhd.wa.gov](http://www.bfhd.wa.gov)



Mosquitoes, fleas, and ticks can be annoying insects that may also spread illness when they bite. When properly used, insect repellents can keep insects from biting you. Unlike sunscreens that are designed for generous and frequent use, insect repellents are intended for limited, occasional use.



### Options to Using Repellents

Using repellents is not the only way to avoid insect bites. Other ways to fight the bite include:

- **Wear hats and clothing with long pants and long sleeves** while outdoors. Tuck pants into boots or socks.
- **Use mosquito netting** over infant carriers and outdoor eating and sleeping areas.
- **Keep doors and windows closed or properly screened.** Screens should not have rips or tears.
- Stay inside or **avoid likely habitats** (wooded areas or near water) and **mosquito times** (early evening and morning hours).
- Reduce the number of biters in the area by getting rid of **standing water** and high grass or weeds that provide breeding places and homes.

### How do repellents work?

Many insects bite animals to get blood to grow or to make eggs. Insects are attracted by movement, body odors, heat, and moisture. Many insect repellents contain chemicals that do not kill the bugs, but make us unattractive to them. Repellents are only effective at short distances: although you may have plenty on, you may still see mosquitoes flying nearby.

## Things to consider when choosing a repellent.

### 1. Read the directions carefully.

The improper use of repellents has been linked to serious illness. Read the directions each time, even if you've used the product before. Repellents that also list a sunscreen should be used like a repellent—apply only when needed and as little as possible to keep you from being bitten. If you need sun protection, use a separate sunscreen.

### 2. Know your pest.

For example, if you need a tick repellent, make sure that the product label includes ticks. If ticks are not listed, the repellent will probably not work for them.

### 3. Where are you going?

Some areas (such as wetlands, hiking trails, shaded woods) usually have a higher number of biting insects and a greater need for repellents than other areas (such as the mall).

### 4. Choose the lowest concentration.

When it comes to repellent, more is not usually better. It is safer to use the lowest concentration of repellent that keeps you from being bitten. For example, the recommended DEET concentration for adults is less than 30%.

### 5. How often are you bitten?

Many insects use chemical sensors to find a meal and some people are more 'attractive' than others. For example, mosquitoes seem to prefer blondes over brunettes, children over adults, and active people over inactive people.

### 6. EPA label.

Check the label to make sure the product is EPA-approved. The label will tell you the active ingredient (what's keeping the bugs away) as well as the directions for use.

## Insect repellent health tips...

1. **Follow the instructions.** Using more product won't give you extra protection, but may increase the irritation.
2. **Keep repellent out of your eyes, mouth, and broken skin.** These spots are pathways into your body. Also use sparingly around your ears and nose.
3. **Breathe clean air.** Repellents can irritate your lungs. Do not spray them while in a tent, confined space, or windy area. If using a spray, spray the product on your hands and then rub it on your face.
4. **Apply repellents away from food.** Wash your hands after applying repellent.
5. **Only apply repellent to exposed skin.** Applying repellent under clothing can speed its absorption into your body. If you spray your clothes, wash them before wearing again to reduce your exposure to the chemical.
6. **Wash the repellent off** your skin when you come inside or no longer need protection.

### Take Extra Care with Young Children

- Protect children under 2 years old by keeping them away from insects rather than using a repellent.
- Use no more than a 10% solution of DEET on children 2-12 years old.
- Children under 10 years old should not apply insect repellent to themselves or handle the product.
- Be careful not to apply repellent on a child's hands to keep the chemical out of the child's mouth and eyes.
- If using a spray, spray your own hands and then rub the repellent on the child.
- Wash the repellent off with soap and water when they come inside or no longer need protection.

