



## The Environmental Defence Guide to

# INSECT REPELLENT



If there's anything that will take away from the joy of a glorious summer, it's those buzzing, biting, and sometimes disease-spreading insects. What can you do to keep your skin from being an insect smorgasbord?

Unfortunately, there is no perfect, non-toxic solution to keep bugs at bay. You will need to adopt different strategies for different environments, and no matter what other precautions you take, in some situations you might have to reach for a bottle of repellent. Mosquitoes can carry West Nile virus and ticks can carry Lyme disease, both of which can have very serious effects.

### WHAT YOU CAN DO

Start by taking precautions that don't involve chemicals. Avoid going outdoors 30 minutes before and after dawn and dusk when mosquitoes are at their most active. Wear light-coloured clothing, as mosquitoes are more attracted to dark colours. Wear long sleeve shirts and long pants, and tuck your pants into your socks if you're walking through long grass to keep ticks out. And, if bugs really bug you, you might want to invest in a bug jacket, and mosquito netting for your bed.

### STRATEGIES TO AVOID

Some products marketed to keep away bugs do more harm than good, and some just don't work. Stay away from aerosol sprays in pressurized containers, which contain chemicals that you're likely to inhale, and could get in your eyes. Don't bother with bug zappers, treated wristbands, sound-emitting devices, and candles, which are not effective. Eating garlic might keep vampires at bay, but ingested compounds also do not hold up in lab tests for their ability to deter insects.

## INSECT REPELLENT INGREDIENTS

Before you reach for spray to keep the bugs away, ask yourself if the bugs in question are a nuisance or a threat. Unless you're in an area with prevalent mosquito-borne disease that could be transmitted through a single bite, you may be okay with a product that doesn't contain DEET. Make sure the product you're using is recommended for the pest in question (for example, not all chemicals that are effective at preventing mosquito-borne disease are recommended for preventing Lyme disease from ticks), and that you're reapplying as recommended on the product label, since different products have different protection times.

### HERE ARE SOME OF THE MOST EFFECTIVE INSECT REPELLENT INGREDIENTS:

**DEET** This chemical's got a bad rap, but it is also the only repellent that offers long-lasting protection from a single application. DEET is known to irritate the eyes and in intense doses may induce neurological damage. It gives off a distinct odor and can damage plastic, rubber and vinyl. Many symptoms associated with DEET, including rashes, dizziness, difficulty concentrating and headaches, are experienced with people who use it on a daily basis. So, try to save the DEET for times when you know you'll be in an area with a high insect population. DEET should not be used on children, and the general population should use products with a concentration of no more than 30 per cent DEET (especially since increased concentration does not increase efficacy).

**PICARIDIN** At a concentration of 20 per cent, Picaridin is effective against mosquitoes and ticks for 8 to 14 hours and for 3.5 to 8 hours at a concentration of 10 per cent. Picaridin does not carry the same neurotoxicity concerns as DEET but has not been tested as much over the long term.

**IR3535** Recommended at a concentration of 10 to 30 per cent to repel biting insects and ticks, IR3535 can irritate eyes. It has few other safety risks, and may dissolve plastic. These repellents need to be reapplied more frequently than DEET.

### SAFER ALTERNATIVES

**SOYBEAN OIL** Soybean Oil provides protection for 3.5 hours against mosquitoes and for up to 8 hours against blackflies. There are no age restrictions or limitations on frequency of use with these products.

**CITRIODIOL/P-MENTHANE-3,8-DIOL/OIL OF LEMON EUCALYPTUS** These provide up to two hours of protection against mosquitoes and up to five hours against blackflies, but should not be used on children under three. These products can be applied up to two times a day and are not recommended for use in areas where West Nile virus is a known risk, or for protection against sand flies.

### INSECTS IN YOUR HOME

Bugs can even get on your nerves when you're indoors. There are a few steps you can take to keep your home bug free, without harming your health and the environment at the same time.

**ANTS** If you spot ants in your home, first remove anything that could attract them such as crumbs on the counter, or a sticky jar of honey in the cupboard. If that doesn't do the trick, then place

cucumber slices at points of entry. Cucumbers are known to repel ants. If that doesn't work, "spice things up" by sprinkling cayenne pepper, chili pepper, black pepper, cinnamon, mint, cloves or garlic where you've seen ants and along your home's foundation.

**MOSQUITOES** To discourage mosquitoes from hanging around your yard, remove any standing water sources from your backyard and keep your eaves troughs clean. Consider adding mosquito repelling plants, such as lemon balm and marigolds, to your garden.

**COCKROACHES** Diatomaceous earth is a known safer alternative to eliminating cockroaches in your home. It can be sprinkled where cockroaches hangout – such as on counter tops and behind appliances. It won't harm humans, however, cockroaches that come into contact with diatomaceous earth normally die within 48 hours. When applying the material, avoid inhaling the dust; it's not toxic to people, but inhaling it can irritate. If you just want to repel the cockroaches, try leaving small sachets of catnip where you've seen cockroach activity, or simmer the catnip to create a tea that can be sprayed around the house.

**FLIES** A fly buzzing around a room can be hard to ignore sometimes. Flies don't like basil, so having a few basil plants in your home is a good deterrent (and you can use the basil for cooking!). You can also make your own natural fly paper to capture flies by using corn syrup, sugar and brown paper bags.



## FIND OUT MORE

Learn more about toxic chemicals, how to protect your family, and our work, at [environmentaldefence.ca](http://environmentaldefence.ca)



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