

Considerations

When thinking about using a repellent, consider where you are, how long you will be outside, how bad the bugs are, and if those bugs may carry disease. Every situation is different. Use the following four questions to make a “profile” that fits your situation - this may help you decide if you want to use a repellent, and if so, which kind.

What type of pest are you concerned about?

If you are seeking protection from tick bites, ticks may be more difficult to repel than mosquitoes. Some repellents provide protection from ticks. Look on the label and make sure it says that the product repels ticks, and reapply if outdoors for longer than the labeled hours of protection.

When will you be outside? Where will you be?

Some pests are more active at certain times. For example, many mosquitoes are most active between dusk and dawn. Ticks may be active at any time of day. There may also be more ticks and insects in or near tall grass, brush and trees.

How long will you be outside?

Are you doing some weeding in the garden for a half hour? Going on an all-day hike? Camping for a week?

The longer you are out, the more protection you may need. Some people exposed to high numbers of ticks and mosquitoes for long periods of time may choose to apply repellents to both skin and clothing. With this approach, apply a moderate concentration of repellent on exposed skin (for example, 30% DEET) in a controlled release or long-lasting formula and treat clothing with permethrin.

On the other hand, if you plan to do yard work or have a picnic during mid-day when mosquito activity is low, you may not need to use repellent. If you do, a lower concentration repellent product may provide sufficient protection from mosquito bites for up to several hours.

Do mosquitoes pick you out in a crowd?

Research has shown that mosquitoes are attracted mainly by chemical cues that the body emits, though other factors may also play a role. These involuntary factors vary from person to person and from day to day. If you find you are especially bothered by mosquitoes, then choosing to use a repellent may be right for you.

Find out more

Center for Environmental Health
518-402-7800 or toll-free 1-800-458-1158
www.health.ny.gov/environmental/pests/pesticid.htm



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Tick and Insect Repellents: Deciding on Their Use



Repellents can be effective at reducing bites from ticks and insects that can transmit disease. But their use is not without risk of health effects, especially if repellents are applied in large amounts or improperly. Information in this fact sheet will help decide when and if a repellent is right for you.

There are many tick and insect repellent products from which to choose. Each of these products contains one or more active ingredients, listed on the label. Some common active ingredients in repellent products include:

- DEET (the label may say N,N-diethyl-m-toluamide) products have been widely used for many years and come in many different concentrations, some as high as 100 percent.
- Picaridin (the label may say KBR 3023) is a colorless, nearly odorless active ingredient for use in repellent products. Products containing picaridin are about as effective in repelling mosquitoes as products containing similar concentrations of DEET.
- Oil of lemon eucalyptus (OLE) is an active ingredient found naturally in eucalyptus trees. It has a distinctive odor and products containing OLE are about as effective in repelling mosquitoes as lower concentration DEET products.
- P-menthane 3,8-diol is a man-made version of oil of lemon eucalyptus and has similar repellent properties.
- IR3535 is another active ingredient in insect repellent products; but in some cases these products also contain sunscreen and moisturizers. Avoid combination products. Sunscreen and moisturizers should be applied generously, whereas repellents should be applied sparingly.
- Permethrin is different from other repellent active ingredients in that it kills ticks and insects that come into contact with it. Permethrin-containing repellent products are only registered for use on clothing, not on skin. Permethrin on treated clothes remains effective through several washings.

Insect repellent products containing botanical oils, such as oil of geranium, cedar, lemongrass, soy or citronella, are also available. Because most botanical oils are not regulated the same as the active ingredients listed in the last section, they have not been tested for their potential to cause health effects or their effectiveness as a repellent. However, the information available on these products indicates that they generally have limited effectiveness in repelling ticks and insects.

Many repellents can cause eye and skin irritation, particularly if they are not used properly. To reduce the risk of such effects, follow these general guidelines:

- Use repellent products registered by the US Environmental Protection Agency (EPA) – the labels will have an EPA Registration Number because they have been tested for toxicity and effectiveness. To find out more about insect repellents and how long specific repellent products work against specific pests, visit the EPA website at: <http://cfpub.epa.gov/oppref/insect/>.
- Do not overuse repellent – only apply as much as you need to provide protection. If longer protection is needed, reapply. Avoid the use of DEET products containing more than 30-35% DEET.
- Read and follow label directions before you use any kind of repellent. On the labels, you will find important information about how much repellent to apply and how often, whether it can be applied to skin and/or clothing, special instructions for children, hazards to humans, physical or chemical hazards and first aid.

Remember: If you decide to use a repellent, use only what and how much you need for your situation!

CHILDREN, PREGNANT WOMEN AND REPELLENTS

- Children may be at greater risk for health effects from repellents, in part, because their exposure may be greater.
- Use netting over strollers, playpens, etc. to reduce the need for repellents.
- Keep repellents out of the reach of children.
- Do not allow children to apply repellents to themselves.
- Use only small amounts of repellent on children.
- Do not apply repellents to the hands of young children because it may wind up in their eyes or mouth.
- As with chemical exposures in general, pregnant women should take care to avoid exposures to repellents when practical, as the developing baby may be vulnerable. Pregnant women should speak to their health care provider if they have questions.

Reduce the need for repellents by dressing in long-sleeved shirts, and long pants with bottoms tucked into boots or socks.