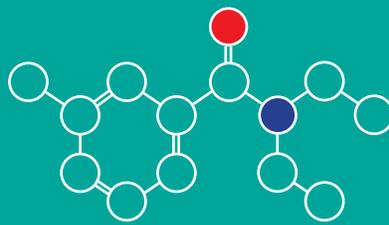


ACTIVE INGREDIENTS IN PERSONAL REPELLENTS: WHAT ARE THEY AND HOW DO THEY WORK?



ACTIVE INGREDIENTS IN PERSONAL REPELLENTS

When selecting a personal insect repellent, we should consider a number of factors, including insects we want to be protected against, desired duration of protection, our lifestyle or planned outdoor activities. Above all, we should always check the product label for active ingredients and use directions.

While there are a number of active ingredients in personal repellents, according to the [U.S. Centers for Disease Control and Prevention](#), DEET, Picaridin, oil of lemon eucalyptus, para-menthane-3,8-diol and IR3535 are active ingredients that have been registered with the U.S. Environmental Protection Agency.

- DEET, or N,N-diethyl-meta-toluamide, is a nearly colorless liquid with a faint characteristic odor.
- Picaridin is a colorless and non-greasy liquid.
- Personal repellents with active ingredients, such as DEET or Picaridin, can be applied directly to skin and some can be applied to clothing made of certain fabrics. DEET will not damage cotton, wool or nylon, but should not be applied to or near certain types of fabrics, including acetage, rayon, spandex or other synthetics (other than nylon).
- Adult female mosquitoes are attracted to us by the odor of the carbon dioxide (CO₂) gas that we exhale or lactic acid, a chemical found in our sweat. The repellent affects the scent receptors in biting insects, making it difficult for them to recognize us as a source of food, land on us and bite us.
- Generally, the different concentrations of an active ingredient in a personal repellent, like DEET or Picaridin, relate to different duration of the protection, not to repellency effect.
- Personal repellents with higher levels of active ingredient will generally last longer than those with lower levels of active ingredients. Higher concentrations of DEET may be recommended when you are planning to spend extended periods of time outdoors or for activities like hiking or camping. OFF! Active® (sweat-resistant), for example, contains 15 percent DEET and protects for up to five hours against mosquitoes. On the other hand, OFF! Deep Woods® contains 25 percent DEET and protects for up to eight hours against mosquitoes. So, when choosing which personal repellent to apply, consider the duration and the type of activity you are planning.



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