



Experts' Opinions about DEET

"DEET has been shown to be an extremely safe and effective repellent and remains a very important option for consumers."

Lyle R. Petersen, M.D., M.P.H., director, U.S. Centers for Disease Control and Prevention (www.cdc.gov), Division of Vector-borne Infectious Diseases, April 28, 2005 teleconference

"Repellents containing DEET are very safe when used according to directions. In 2014, we completed an interim review of DEET under the Registration Review Program to ensure that it continues to meet safety standards based on current scientific knowledge. The Agency has not identified any risks of concern to human health, non-target species or the environment. No serious illness has been linked to use of DEET in children when used according to manufacturer's recommendations."

"Insect Repellent Use & Safety," U.S. Environmental Protection Agency
<https://www.epa.gov/insect-repellents/deet>

"The current AAP and CDC recommendation for children older than 2 months of age is to use 10% to 30% DEET. DEET should not be used on children younger than 2 months of age. The effectiveness is similar for 10% to 30% DEET but the duration of effect varies. Ten percent DEET provides protection for about 2 hours, and 30% protects for about 5 hours. Choose the lowest concentration that will provide the required length of protection."

American Academy of Pediatrics, "Summer Safety Tips," June 19, 2017 (www.aap.org)
<https://www.aap.org/en-us/about-the-aap/aap-press-room/news-features-and-safety-tips/Pages/Summer-Safety-Tips.aspx>

"DEET has a remarkable safety profile after 40 years of use and nearly 8 billion human applications. When applied with common sense, DEET-based repellents can be expected to provide a safe as well as long-lasting repellent effect. Despite the substantial attention paid by the lay press every year to the safety of DEET, this repellent has been subjected to more scientific and toxicological scrutiny than any other repellent substance."

Mark S. Fradin, M.D., and Jonathan F. Day, Ph.D., *New England Journal of Medicine*, 2002
<http://www.nejm.org/doi/pdf/10.1056/NEJMoa011699>

"Reports of adverse effects in humans associated with the dermal application of DEET are rare in the context of their widespread use by the general population."

Daniel L. Sudakin, M.D., M.P.H., and Wade R. Trevathan, *Journal of Toxicology*, 2003

"Part of our confidence in the safety of DEET is...on the extreme rarity of negative effects from its application."

Daniel Strickman Ph.D., Stephen P. Frances, Ph.D., and Mustapha Debboun, Ph.D., BCE, *Prevention of Bug Bites, Stings and Disease*, Oxford Press, 2009.

"DEET is far less toxic than many people believe. Adverse effects, though documented, are infrequent and are generally associated with gross overuse of the product. The risk of DEET-related adverse effects pales in comparison with the risk of acquiring vector-borne infection in places where such diseases are endemic. ... Alternative 'natural' products generally fail to live up to their reputations for greater safety and effectiveness and offer their users a false sense of security. As Fradin and Day nicely demonstrate, we currently have access to effective insect repellents that are safe when used judiciously."

Richard J. Pollack, Ph.D., et al, Harvard School of Public Health, *New England Journal of Medicine*, 2002 www.nejm.org/doi/full/10.1056/NEJM200207043470102

"...DEET has been used for 50 years with a tiny number of reported adverse events, many of which had a history of excessive or inappropriate use of repellent. ...Its toxicology has been more closely scrutinized than any other repellent, but it has been deemed safe for human use, including use on children and pregnant women."

Mustapha Debboun, Ph.D., BCE; Stephen P. Frances, Ph.D., and Daniel Strickman Ph.D., *Insect Repellents—Principles, Methods and Uses*, CRC Press, 2007

“The preferred insect repellent is DEET because of its long history of safety and efficacy and wide range of concentrations and formulations. All other non-CDC-recommended insect repellents should be avoided because they may not adequately protect against aggressive, biting mosquitoes encountered around the world.”

Mirzaian, et al Mosquito-borne Illnesses in Travelers: A Review of Risk and Prevention, *Journal of Pharmacotherapy*. 2010;30(10):1031-1043

“The surprising news: among the four repellent chemicals Environmental Working Group found to be top picks is DEET, which is widely used but much maligned. DEET’s safety profile is better than many people assume. Its effectiveness at preventing bites is approached by only a few other repellent ingredients. DEET isn’t a perfect choice nor the only choice. But weighed against the consequences of Lyme disease and West Nile virus, we believe it is a reasonable one.”

Environmental Working Group 2013

<https://www.ewg.org/research/ewgs-guide-bug-repellents#.WqWVA02Wy74>

“Based on testing data, EWG’s top choices for repellents include those that contain the active ingredients picaridin, DEET and IR3535 for protection from a variety of biting insects and ticks. And all three have good safety profiles. Many people are concerned about the possible drawbacks of common active ingredients like DEET. EWG researchers have analyzed the science in depth and found that, with proper application and precaution, our recommended active ingredients effectively reduce risk from life-altering diseases and have very low toxicity concerns.”

Environmental Working Group EWG.org EWG’s 2018 Guide to Bug Repellents Can Help Fend off Disease-Carrying Ticks, Mosquitoes July 17, 2018 <https://www.ewg.org/release/ewg-s-2018-guide-bug-repellents-can-help-fend-disease-carrying-ticks-mosquitoes#.W094INVkiUk>

“The inconvenient yet undisputable fact is that no botanical repellent has been proven to be as safe as DEET, and the majority never had any safety testing whatsoever. The automatic assumption that botanical repellents are safer than DEET is the ‘appeal to nature fallacy,’ which also drives most of the market for “natural” repellents, yet natural repellents have side effects and even a body count.”

Shelomi, M. Who’s afraid of DEET? Fearmongering in papers on botanical repellents. *Malaria Journal* 2020 <https://malariajournal.biomedcentral.com/articles/10.1186/s12936-020-03217-5>

“Despite various efforts to improve upon DEET, it remains the gold standard for personal protection.”

Dennis, E.J., Goldman, O.V. and Vosshall, L.B., *Aedes aegypti* Mosquitoes Use Their Legs to Sense DEET on Contact. *Current Biology* 2019 [https://www.cell.com/current-biology/fulltext/S0960-9822\(19\)30402-6](https://www.cell.com/current-biology/fulltext/S0960-9822(19)30402-6)

“N,N-diethyl- m-toluamide (DEET) 20% to 50% is the most studied and widely recommended insect repellent.”

Herness J, Snyder MJ, Newman RS., Arthropod Bites and Stings. *American Family Physician*. 2022 <https://www.aafp.org/pubs/afp/issues/2022/0800/arthropod-bites-stings.html>

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