New research shows that the insect-repelling chemical deet actually functions in the same way as deadly nerve gases and dangerous pesticides, by attacking the nervous systems of both insects and mammals.
"These findings question the safety of deet, particularly in combination with other chemicals," said researcher Vincent Corbel of Institut de Recherche pour le Developpement in Montpellier.
The chemical known as deet (for N,N-diethyl-meta-toluamide) is found in nearly every commonly used mosquito repellent in the world, and eight billion doses have been applied since its introduction to the consumer market in 1957. The chemical was originally developed as an insect repellent by the U.S. Army in 1946, following experience with jungle warfare in World War II.

In experiments performed in cockroaches and rats, the researchers found that deet blocked the action of the neurological enzyme acetylcholinesterase. This is the same mechanism that causes the toxic effects of popular carbamate and organophosphate pesticides, as well as chemical weapons such as sarin and VX nerve gas. This may mean that deet repellants are actually insecticides and could damage the human nervous system.

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