


**TABLE 1 Recommended insect repellents**

The products listed below are recommended by the experts contacted for this report, augmented by those products rated by *Consumer Reports* for repelling insects, especially mosquitoes and ticks, and those recommended by the CDC at <http://www.cdc.gov/zika/prevention>.

Brand and product	Active ingredients
Avon Skin-So-Soft Bug Guard Plus Picaridin	Picaridin, 10%
Avon Skin-So-Soft Original Bath Oil	None listed
Coleman SkinSmart	IR3535, 20%
Cutter Skinsations	DEET, 7%
HOMS Bite Blocker BioUD Mini Trigger	2-undecanone (CAS #112-12-9), 7.75%
OFF! Deep Woods VII	DEET, 25%
OFF! FamilyCare Insect Repellent I (Smooth and Dry)	DEET, 15%
OFF! FamilyCare Insect Repellent II (Clean Feel)	Picaridin, 5%
Sawyer Picaridin	Picaridin, 20%

Abbreviations: CAS, Chemical Abstract Service; DEET, N,N-diethyl-meta-toluamide; IR3535, 3-(N-acetyl-N-butyl)-aminopropionic acid ethyl ester.

Adapted from: *Consumer Reports*. Insect repellent ratings. Available at:

<http://www.consumerreports.org/cro/health/beauty-personal-care/insect-repellent/insect-repellent-ratings/ratings-overview.htm>. Accessed May 16, 2016.

completely effective and, for that reason, it is imperative to put other roadblocks between the mosquito and you," Schlessinger says. "If any of your patients are considering going to an infested area, they can purchase hats with netting on them and clothing that is long sleeved in advance. During the night, they should sleep in beds that have netting around them. One particularly effective tool is to spray clothing with DEET-containing repellent. This allows for better control of bugs and potential Zika vectors."

Sandy Tsao, MD, assistant profes-

sor, Harvard Medical School, Boston, Massachusetts, and a dermatologist at the Dermatology Laser and Cosmetic Center at Massachusetts General Hospital, Boston, says DEET is her go-to recommendation for repelling mosquitoes. Tsao says she uses OFF! Deep Woods, but there are other OFF! products, such as Off! FamilyCare Smooth and Dry and Off! Skintastic FamilyCare Insect Repellent, that are less concentrated.

"DEET is seen as one of the most effective products for repelling insects, but the concern is that it can be neu-

rotoxic," Tsao says. She also recommends permethrin clothing treatment that lasts for 6 washes. Using these products, which impregnate clothing with insect repellent, could lead to less need for DEET and other insecticides, she says.

"Biting insects, including mosquitoes, are most attracted to where carbon dioxide is being emitted, so your face and ears are prime targets for a bite," Tsao says. "As well, insects tend to gravitate to areas of heavy sweat." She recommends that patients apply the insecticide to any areas of exposed skin—making sure to not forget the ankles, feet, hands, and scalp.

Medina, Ohio, dermatologist Helen M Torok, MD, says she has trepidation about recommending DEET, but will talk to patients about DEET if asked about mosquito repellents. "[If] those [patients] are also uncomfortable with DEET, then I recommend the lemon-eucalyptus products," she says. Dr Torok adds that although patients may be reluctant to use it, the FDA has approved DEET for pregnant and lactating women. Other prevention strategies she recommends are to avoid wearing bright clothing and shiny jewelry and being near standing water.

### Is there a Zika vaccine on the horizon?

The U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response (ASPR) plans to help bring a vaccine for the Zika virus to market immediately via Emergent BioSolutions Inc., which also developed the anthrax vaccine.

Emergent BioSolutions said that it obtained a contract with ASPR's Biomedical Advanced Research and De-