



DOD Insect Repellent System

FACT SHEET 18-009-1218

Whether deployed in combat operations, engaged in humanitarian relief, or conducting training at home base, military personnel are subject to tick and insect-borne diseases and nuisance pest threats that can adversely affect their health and compromise the mission. Malaria, dengue, Zika virus, yellow fever, West Nile fever, leishmaniosis, plague, scrub typhus, Lyme disease and a number of other tick and insect-borne diseases continue to pose a significant health threat to our forces worldwide. Using the Department of Defense (DOD) Insect Repellent System is an effective way to protect military personnel from insect-borne, tick-borne diseases and nuisance pests.

What is the DOD Insect Repellent System?

The DOD Insect Repellent System is a safe and proven method to reduce disease risks and annoyance associated with insects. Using all elements of this system will provide maximum protection and is the safest way to prevent attack from disease-carrying vectors and pests.

The system incorporates:

- Permethrin insect repellent on the uniform (factory or field-treatment methods)
- A properly-worn uniform
- DEET, picaridin, or IR3535 insect repellent on exposed skin
- Sleeping in a permethrin-treated bed net

How do I know if my uniform is treated with permethrin repellent?

Uniforms factory-treated with permethrin are available to Soldiers and Marines, to include the Marine Corps Combat Utility Uniform (MCCUU), Marine Flame Retardant Combat Ensemble (FRCE), Army Combat Uniform (ACU) and Operational Camouflage Pattern (OCP) uniform. The ACU and OCP uniforms provide 99-100% bite protection up to 25 launderings (the expected lifetime of the uniform). The trouser and coat have a sewn-in label indicating the uniform is factory-treated with permethrin. If the uniform is not factory-treated, military personnel can field-treat their uniform using either the IDA Kit (NSN 6840-01-345-0237), which can last up to 50 washings, or the 0.5% aerosol spray can (NSN 6840-01-278-1336), which should be reapplied after 6 weeks and the sixth washing. Always read and follow the label directions when applying permethrin. Permanently mark the uniform label with the permethrin treatment date.

Aerosol products containing 0.5% permethrin and clothing factory-treated with permethrin are also commercially available for civilian use.

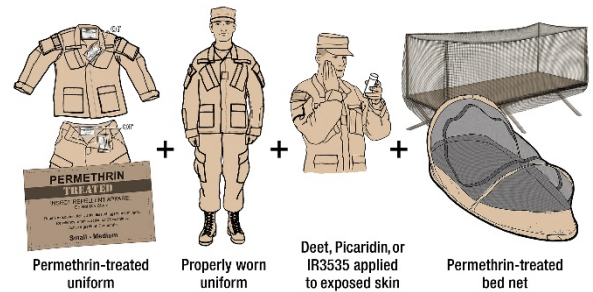
Never apply permethrin to the skin and DO NOT apply permethrin to a uniform while wearing it.

Dry-cleaning a permethrin-treated uniform will remove the permethrin from the fabric and the uniform will no longer repel insects. Dry-cleaning permethrin-treated uniforms is not recommended.

What is considered a “properly worn” uniform?

Military combat uniforms act as a physical barrier against insects, ticks and other biting and nuisance pests when worn properly. Wear uniforms with the sleeves rolled down and tuck pants into boots and undershirt into pants. Wear uniform loosely since mosquitoes can bite through fabric pulled tight against the skin. A permethrin-treated uniform does not provide protection to exposed skin. Protect exposed skin with an approved insect repellent.

DOD INSECT REPELLENT SYSTEM



Use ALL elements for maximum protection



Left: Components of the IDA kit. **Right:** 0.5% permethrin spray can. Both are available through the DOD's supply system. Photos: VID, APHC

Physical fitness uniforms are not permethrin-treated and do not repel insects. Personnel should avoid/minimize outdoor activities while wearing physical fitness uniforms in areas with potential disease-carrying insects. Always treat exposed skin with approved insect repellents while wearing shorts and t-shirts outdoors in these areas.

What standard bed nets are available to help protect military personnel from biting insects?

Treated bed nets provide a barrier between sleeping military personnel and pests (e.g., mosquitoes, sand flies, ticks). Lightweight, self-supporting, pop-up bed nets factory-treated with permethrin are available in coyote brown (NSN 3740-01-518-7310) or green camouflage (NSN 3740-01-516-4415), or the larger Egret bed net (NSN 3740-01-644-4953). Untreated mosquito bed nets (NSN 7210-00-266-9736) should be treated with 0.5% permethrin aerosol spray and assembled properly on a cot. Check for holes in the netting and keep loose edges off the ground by tucking them under the sleeping bag.

Should I use any medications or vaccines in addition to the DOD Insect Repellent System?

Only a few insect-borne diseases have approved vaccines and preventive medications. Talk to your health care provider about appropriate medications or vaccines. Military personnel deployed or stationed in malaria-transmission areas may be prescribed anti-malarial medication by their health care provider. Even if you feel well, you need to take all your anti-malarial medication as prescribed. Missing a single day puts you at risk for contracting malaria.

What standard military insect repellent products are available for exposed skin?

Approved military insect repellents for use on exposed skin come in a variety of formulations. Always refer to the label to determine frequency of repellent application based on activity. **Do not apply repellent to eyes, lips, or to sensitive or damaged skin.** Available military insect repellents are:

- Cutter® pump spray (NSN 6840-01-584-8598) contains 25% DEET; one application protects for up to 10 hours.
- Ultra 30™ Insect Repellent Lotion (NSN 6840-01-584-8393) contains 30% Lipo DEET; one application protects up to 12 hours.
- Bullseye™ Bug Repellent pump spray (NSN 6840-01-656-7707) contains 20% IR3535®; provides protection for up to 8 hours.
- Natrapel® pump spray (NSN 6840-01-619-4795) contains 20% picaridin; one application protects for up to 8 hours.
- Chigg-Away® lotion (NSN 6804-01-137-8456) contains 10% precipitated sulfur and 5% benzocaine, repels chiggers.
- Ultrathon™ (NSN 6840-01-284-3982) contains 34% controlled-release DEET lotion; one application protects for up to 12 hours.



Can I use insect repellents if I'm pregnant?

Yes, especially if you may be exposed to disease-carrying insects. Insect-borne diseases such as Zika virus and malaria can be extremely harmful to both mother and fetus. While there is no scientific evidence that DEET, picaridin, IR3535 or permethrin have an adverse effect on the mother or fetus when you follow the label directions, pregnant women should try to avoid exposure to disease-carrying insects, apply insect repellent sparingly on their skin, and wash off insect repellent when it is no longer needed. If you have questions or concerns about insect repellents, contact your health care provider.

Where can I get more information about the DOD Insect Repellent System and protecting myself from insect-borne disease?

- Army Public Health Center (APHC), DOD Insect Repellent System webpage: <https://phc.amedd.army.mil/topics/envirohealth/epm/Pages/DoD-Insect-Repellent-System.aspx>
- AFPMB Technical Guide 36, "Personal Protective Measures Against Insects and Other Arthropods of Military Significance" <https://www.acq.osd.mil/eie/afpmb/docs/techguides/tg36.pdf>
- Centers for Disease Control and Prevention: <http://wwwnc.cdc.gov/travel/page/avoid-bug-bites>
- U.S. Environmental Protection Agency: <http://www2.epa.gov/insect-repellents>