Pet Flea And Tick Collar Hazards To Soldiers

FACT SHEET 8-009-1115

Just the Facts... *Soldiers who wear pet flea and tick collars next to their skin or over their uniforms risk severe skin reactions and other adverse health effects. There is no evidence that wearing pet flea and tick collars in any manner will prevent bites from sand flies, mosquitoes, fleas or ticks. The safest and most effective protection for Soldiers from biting insects is the DOD Insect Repellent System.*

How are pet flea and tick collars misused by Soldiers?

Care packages with pet flea and tick collars are being sent from well-meaning citizens or civilian groups to Soldiers deployed overseas. Soldiers are taking these pet flea and tick collars and wearing them over their clothes, boots or field uniforms or next to their skin, around their wrists, ankles, arms, or belt lines, to repel insects. There is no evidence that wearing flea and tick collars in any manner is useful in preventing insect bites on Soldiers. Pet flea and tick collars are not registered for human use by either the United States Environmental Protection Agency (USEPA) or the Food and Drug Administration (FDA). It is therefore a violation of federal law for Soldiers to use pet flea and tick collars on themselves.

Wearing pet flea and tick collars on skin or over clothing or footwear (red arrow) to repel insects is illegal, ineffective, and unsafe.

How could pet flea and tick collars cause illness in Soldiers?

Soldiers may experience severe skin reactions and possible systemic poisoning from wearing pet flea and tick collars. Sweat, which is secreted through pores from glands in the skin, can leach out large amounts of pesticides, and possibly other chemical ingredients, from pet flea and tick collars. This sudden, massive dose of pesticides can result in direct skin damage, including redness, blistering, chafing, and skin erosion. Pesticides released by pet flea and tick collars can also be absorbed into the body through pores in the skin, causing possible internal damage. Sweat can even draw pesticides from pet flea and tick collars right through fabrics, so wearing collars on the outside of pants, socks or boots is not a safe practice.

Large amounts of pesticides are released when pet flea and tick collars get wet, causing severe skin reactions.

What kinds of pesticides are commonly found in pet flea and tick collars?

Pet flea and tick collars contain a wide variety of pesticides that can be absorbed into the skin in toxic amounts. These pesticides include carbamates (e.g. propoxur), organophosphates (e.g. tetrachlorvinphos), insect growth regulators (e.g. pyriproxifen), and formamidines (e.g. amitraz). Carbamate and organophosphate pesticides inhibit acetylcholinesterase, an enzyme critical in controlling nerve impulse transmission in humans. Skin exposure to low levels of these types of pesticides can result in weakness, headache, and gastrointestinal upsets. More severe skin exposure to carbamate and organophosphate pesticides may result in respiratory distress, hypertension, convulsions, and coma. Human exposure to formamidine insecticides can result in paleness, dry mouth, drowsiness, disorientation, light headed feeling, slurred speech, and loss of consciousness.

Why are pet flea and tick collars not as hazardous for use on dogs and cats?

Pet flea and tick collars are not as hazardous for use on dogs and cats because these animals do not sweat like humans do. Sebaceous glands in the animals' skin secrete oils that spread small amounts of the pesticides from the collars across the animals' skin. This must happen in order for the collars to work; otherwise, fleas, ticks, or other arthropods would have to contact the collar directly in order to be repelled, and protection would only occur at the location of the collar.

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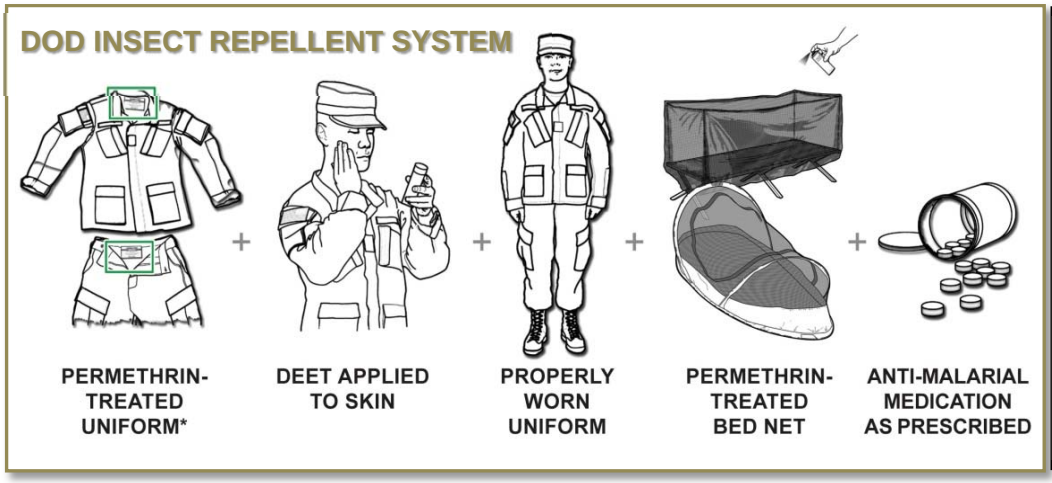
What is the best and safest method to protect Soldiers from biting insects?

The best method to protect Soldiers from biting insects is the use of the DOD Insect Repellent System. It is also the safest way to prevent the attack on Soldiers by insects which can transmit diseases such as malaria, dengue, and leishmaniasis. Use of the DOD Insect Repellent System by deployed Soldiers is required by DOD policy.



Combined use of all elements of the DOD Insect Repellent System provides maximum and safe protection from disease-bearing and nuisance biting insects. Deploying Soldiers are now issued Flame Resistant Army Combat Uniforms that are factory-treated with permethrin (FR ACU-Ps), with "INSECT REPELLENT APPAREL" on garment labels (green boxes).

What can I use to treat my clothing with permethrin?

Army Combat Uniforms (ACUs) that are factory-treated with permethrin (ACU Permethrin) are now available to all Soldiers. The ACU Permethrin will have a sewn-in label on both the trouser and the blouse indicating the uniform has been factory-treated with permethrin. If not factory-treated, apply permethrin to uniforms in the field before wearing using either the IDA Kit (NSN 6840-01-345-0237), which can last up to 50 washings, or aerosol can (NSN 6840-01-278-1336), which lasts 5-6 washings. Other aerosol products containing 0.05% permethrin and permethrin-impregnated garments are also commercially available for civilian use.

What are the standard military insect repellent products available for use on 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 repellents are:

- **Ultrathon™** (NSN 6840-01-284-3982) contains 33% controlled-release DEET lotion; one application protects for 12 hours.
- **Ultra 30™ Insect Repellent Lotion** (NSN 6840-01-584-8393) contains 30% Lipo DEET; one application protects for up to 12 hours.
- **Cutter® pump spray** (NSN 6840-01-584-8598) contains 25% DEET; one application protects for up to 10 hours.
- **Sunsect** combination sunscreen & repellent (NSN 6840-01-288-2188) contains 20% DEET and SPF 15 sun protection.
- **Natrapel® pump spray** (NSN 6840-01-619-4795) contains 20% picaridin; provides improved protection against *Anopheles* mosquitoes (carriers of malaria) for up to 8 hours.
- **Chigg-Away® lotion** (NSN 6804-01-137-8456) contains 10% precipitated sulfur and 5% benzocaine, repels chiggers.

All standard approved insect repellents for use on exposed skin are registered by the U.S. Environmental Protection Agency (USEPA). These products are safe to use and effectively repel mosquitoes, sand flies, fleas, ticks and other potential disease vectors and pests. Photo: VID, APHC

What is considered a "properly worn uniform"?

Worn properly, your uniform acts as a physical barrier against ticks and insects. Wear the sleeves rolled down. Close all openings in your clothing that might provide access to insects: tuck your pants into your boots and your undershirt into your pants. Wear your uniform loosely since mosquitoes can bite through fabric that is pulled tight against the skin.

What are the standard bed nets available to help protect Soldiers from tick bites while sleeping?

Treated bed nets provide a barrier between a sleeping soldier and pests (e.g., mosquitoes/ticks). Lightweight, Self-Supporting, Pop-Up Bed Nets factory-treated with permethrin are available in Coyote Brown (NSN 3740-01-518-7310) or OD Green (NSN 8415-01-516-4415). Untreated Mosquito Bed Nets (NSN 7210-00-266-9736) should be treated with permethrin aerosol and set-up by properly tucking in and kept off the ground.

Use of trademarked name does not imply endorsement by the U.S. Army but is intended only to assist in identification of a specific product.
For more information please consult the APHC website - http://phc.amedd.army.mil