PERMETHRIN FACT SHEET

WHAT IS PERMETHRIN?
- It is a stable (synthetic) form of an insecticidal compound produced by the chrysanthemum flower.
- It is commonly used to treat lice (Nix 1% shampoo) and scabies infections (5% cream).
- It biodegrades quickly in contact with soil and water.
- It is odorless and will not stain clothing.

HOW WELL DOES IT WORK?
- It has been used as a clothing treatment to prevent bites from ticks, flies, and mosquitoes since the 1970s, and used by the military since the 1990s.
- It provides a quick tick knock-down effect — both repels and kills.
- A URI study found that people wearing permethrin-treated sneakers and socks were 73.6 times less likely to have a tick bite than those wearing untreated footwear.
- Each at-home treatment lasts for roughly 3-4 weeks (with washing!).
- Commercially-treated clothes can last up to 70 washes.

SHOULD I BE CONCERNED ABOUT USING THIS CHEMICAL?
- Permethrin is over 2,250 times more toxic to ticks than humans.
- Put directly on the skin, typically less than 1% of active ingredient is absorbed into the body; DEET can be absorbed at over 20 times that rate.
- Exposure risk of permethrin-treated clothing to toddlers is 27 times below the EPA’s Level of Concern (LOC).
- A 140-pound person would have no adverse health effects if exposed to 32 grams of permethrin/day. There is less than 1 gram of permethrin in an entire bottle of clothing treatment.
- Permethrin is pregnancy category B (showing no evidence of harm to fertility or fetus).

**Caution:** Permethrin won’t hurt humans or dogs but it is harmful to bees, fish, and aquatic insects — do not spray clothing near flowers or water sources. Do not allow cats near permethrin-treated clothing until it has fully dried.

Sources:

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