



Lindane

The Food and Drug Administration has issued a Public Health Advisory about the use and misuse of topical lindane lotion and shampoo for the treatment of scabies and lice. Lindane (gamma-hexachloro-cyclohexane, a chlorinated hydrocarbon) is approved only to be used as second-line therapy—in patients who cannot tolerate first-line drugs or when first-line treatment therapy has failed. (First-line drugs of choice include permethrin, crotamiton, and malathion 0.5% with piperonyl butoxide). There have been reports of serious adverse effects and deaths when lindane products have been misused, and rare cases of toxicity with normal use. In addition to the Public Health Advisory, the FDA has mandated the following to minimize the risks:

- All products must have a boxed warning about the risks associated with lindane use;
- Lindane product package sizes will be limited to 1 and 2 ounces;
- A Medication Guide must now be dispensed by the pharmacist with each new prescription.

Lindane results in toxic effects when it is absorbed following topical application, especially when used on excoriated skin, on small children or the elderly, with concomitant use of medications that lower the seizure threshold, or when used in excessive amounts. Lindane is also very toxic when ingested unintentionally by small children. Absorption results in interference with the normal flux of Na⁺ and K⁺ ions across the axon membrane as nerve impulses pass, and blockade of the GABA-receptor coupled sodium channel. This results in irritability, dizziness, headache, paresthesias, lethargy, sensory disturbances, and seizures. Other toxic effects include nausea, vomiting, diarrhea, and elevated liver function tests. Renal insufficiency and metabolic acidosis occur secondary to seizure activity.

Treatment consists of activated charcoal to adsorb ingested lindane, and soap and water washing for topical exposures. Benzodiazepines (diazepam, lorazepam) are given for seizures. Call the Maryland Poison Center at **1-800-222-1222** for more information on managing exposures to lindane and other products.

Lisa Booze, PharmD

***DID YOU KNOW THAT.....* Poison Centers save valuable health care dollars?**

A 1995 report to the U.S. Congress indicated that every \$1 spent on poison center services saves \$7 in health care costs. In a recent study published by the Middle Tennessee Poison Center (*Annals Emerg Med, Jan 2003*), 76% of callers stated that they would go to an emergency department if the poison center was not available. If callers to the poison center who are on state medical assistance went to the ED instead, the cost to the state would be greater than the poison center's budget! This study and others demonstrate that poison centers decrease unnecessary health care costs.



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If you do not wish to receive faxes or emails from the Maryland Poison Center, call 410.706.7604 or circle your fax number and fax this back to 410.706.7184. Supported by Maryland Department of Health and Mental Hygiene