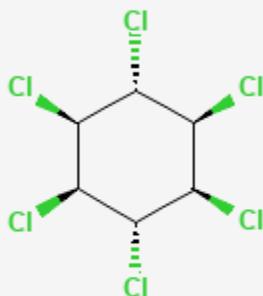




Lindane

Revised: October 15, 2024.

CASRN: 58-89-9



Drug Levels and Effects

Summary of Use during Lactation

Topical application of lindane can increase lindane milk levels for at least several days. Because it is potentially toxic in infants, is a persistent environmental contaminant, and possibly has estrogenic effects that could decrease lactation as well as affect the nursing infant, another agent should be used rather than lindane.[1-4]

Drug Levels

Lindane (gamma-benzenehexachloride; gamma-Hexachlorocyclohexane) is a fat-soluble insecticide that is a persistent environmental contaminant. Residues from its use as a pesticide are found in food and subsequently in breastmilk, particularly the milkfat. Recent data from the United States are lacking, but levels appear to be

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trending downward in industrialized countries.[5] Hexachlorocyclohexane appears to have some estrogenic activity.[6]

Maternal Levels. A German woman with a 2-month-old breastfed infant was treated with lindane 0.3% lotion (the product available in the United States contains 1%) for scabies. The lotion was left on for 24 hours, then washed off. The extent of application was not stated, but is usually applied to all skin from the neck down. A baseline lindane concentration in breastmilk was not obtained, but the average value of lindane in mothers' milk in Germany from pesticides in the food chain at the time of the study was 30 mcg/kg of milk fat. Milk from day 4 to 10 contained lindane in the range of 500 to 900 mcg/kg of milk fat. After another repeat application of lindane, lindane was found in a concentration of 2000 mcg/kg on day 11. Additional measurements on days 18 and 26 were 600 mcg/kg and 400 mcg/kg, respectively.[7]

Infant Levels. Relevant published information was not found as of the revision date.

Effects in Breastfed Infants

In a telephone follow-up study, 9 mothers used lindane topically for head lice during breastfeeding. One reported irritability in her breastfed infant.[8]

Effects on Lactation and Breastmilk

Hexachlorocyclohexane appears to have some estrogenic activity which theoretically could suppress lactation.[6]

Alternate Drugs to Consider

Ivermectin, Permethrin, Pyrethrins

References

1. Thomas C, Coates SJ, Engelman D, et al. Ectoparasites: Scabies. *J Am Acad Dermatol* 2020;82:533-48. PubMed PMID: 31310840.
2. Workowski KA, Bachmann LH, Chan PA, et al. Sexually transmitted infections treatment guidelines, 2021. *MMWR Recomm Rep* 2021;70:1-187. PubMed PMID: 34292926.
3. Yaghi M, McMullan P, Truong TM, et al. Safety of dermatologic medications in pregnancy and lactation: An Update - Part II: Lactation. *J Am Acad Dermatol* 2024;91:651-68. PubMed PMID: 38280680.
4. Centers for Disease Control and Prevention. Clinical care of scabies. Available at: <https://www.cdc.gov/scabies/hcp/clinical-care/>
5. LaKind JS, Amina Wilkins, A, Berlin CM, Jr. Environmental chemicals in human milk: A review of levels, infant exposures and health, and guidance for future research. *Toxicol Appl Pharmacol* 2004;198:184-208. PubMed PMID: 15236953.
6. Massart F, Harrell JC, Federico G, et al. Human breast milk and xenoestrogen exposure: A possible impact on human health. *J Perinatol* 2005;25:282-8. PubMed PMID: 15605068.
7. Senger E, Menzel I, Holzmann H. [Therapy-induced lindane concentration in breast milk]. *Derm Beruf Umwelt* 1989;37:167-70. PubMed PMID: 2478352.
8. Ito S, Blajchman A, Stephenson M, et al. Prospective follow-up of adverse reactions in breast-fed infants exposed to maternal medication. *Am J Obstet Gynecol* 1993;168:1393-9. PubMed PMID: 8498418.

Substance Identification

Substance Name

Lindane

CAS Registry Number

58-89-9

Drug Class

Breast Feeding

Lactation

Milk, Human

Anti-Infective Agents

Antiparasitic Agents

Insecticides