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Hops

Revised: February 15, 2021.

Drug Levels and Effects

Summary of Use during Lactation

Hops (*Humulus lupulus*) contains bitter acids, flavonoids, phytoestrogens (e.g., 8-prenylnaringenin), and essential oil. Hops is a purported galactogogue.[1] Some animal evidence indicates that a polysaccharide in hops can increase serum prolactin.[2] However, a small study in humans found that a hops soup appeared to lower serum prolactin levels.[3] Galactogogues should never replace evaluation and counseling on modifiable factors that affect milk production.[4,5] No data exist on the excretion of any components of hops into breastmilk or on the safety and efficacy of hops in nursing mothers or infants. Hops is "generally recognized as safe" (GRAS) as a food by the U.S. Food and Drug Administration. Hops can cause sedation and should be avoided while taking other sedating drugs and in patients with depression. Allergy to hops occurs rarely. Some sources recommend avoiding hops during breastfeeding because of its phytoestrogen content.

Dietary supplements do not require extensive pre-marketing approval from the U.S. Food and Drug Administration. Manufacturers are responsible to ensure the safety, but do not need to *prove* the safety and effectiveness of dietary supplements before they are marketed. Dietary supplements may contain multiple ingredients, and differences are often found between labeled and actual ingredients or their amounts. A manufacturer may contract with an independent organization to verify the quality of a product or its ingredients, but that does *not* certify the safety or effectiveness of a product. Because of the above issues, clinical testing results on one product may not be applicable to other products. More detailed information about dietary supplements is available elsewhere on the LactMed Web site.

Drug Levels

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

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

Effects in Breastfed Infants

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

Effects on Lactation and Breastmilk

Studies in animals indicate that a polysaccharide found in barley and hops is apparently responsible for an increase in prolactin after beer ingestion.[2,6] Refer to the LactMed record on Alcohol for details.

A soup of hops was tested for its effect on serum prolactin in three groups of subjects. The soup consisted of 100 to 200 grams of hops, cooked over low heat, and taken in 3 to 4 portions per day. In 5 healthy males, prolactin was measured before and after the soup twice, at 8 am and 3 am. At 8 am, prolactin was unchanged after the soup. At 3 am, serum prolactin averaged 43.4 mcg/L before the soup and 15.4 mcg/L after the soup. In healthy women who took a dose of metoclopramide, the hops soup blunted the metoclopramide-induced prolactin increase at 1 and 3 hours after the dose. In 6 women with galactorrhea, peak serum prolactin was unchanged before and after metoclopramide when hops soup was taken.[3]

References

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3. Kuang AK. Zhong Xi Yi Jie He Za Zhi. 1984;4:134–6. [*Hordeum dislichon*--effects on serum prolactin and clinical trial on patients with galactorrhea]. PubMed PMID: 6234087.
4. Brodribb W. ABM Clinical Protocol #9. Use of galactogogues in initiating or augmenting maternal milk production, second revision 2018. Breastfeed Med. 2018;13:307–14. PubMed PMID: 29902083.
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Substance Identification

Substance Name

Hops

Scientific Name

Humulus lupulus

Drug Class

Breast Feeding

Lactation

Complementary Therapies

Food

Phytotherapy

Plants, Medicinal