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Dill

Revised: December 3, 2018.

CASRN: 8006-75-5

Drug Levels and Effects

Summary of Use during Lactation

Dill (Anethum graveolens) seeds contain essential oil rich in carvone and limonene, in addition to phenolics, such as trans-anethole, and flavonoids. Dill is a purported galactogogue.[1][2][3][4] No scientifically valid clinical trials support this use, and one small, old study found no galactogogue effect of a primary dill component, d-carvone.[5] Galactogogues should never replace evaluation and counseling on modifiable factors that affect milk production.[6] Two studies found small, but measurable amounts of d-carvone in the milk of mothers given the chemical experimentally. Dill is "generally recognized as safe" (GRAS) as a food by the U.S. Food and Drug Administration. It is generally well tolerated, but occasional allergic skin reactions have been reported, especially after contact with fresh dill. In two studies, nursing mothers were given d-carvone. No adverse effects were noted in the mothers or infants. 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. Eighteen lactating women were given 100 mg of d-carvone mixed with lactose and talc in a capsule on 3 test days. Milk samples were collected every 2 hours for 8 hours starting at the time of ingestion. Carvone was detected in milk at all collection times, with the average concentrations of 1.3 mcg/L at 0 hours, 7.2 mcg/L at 2 hours, 5.6 mcg/L at 4 hours, 4.3 mcg/L at 6 hours and 2.7 mcg/L at 8 hours after the dose. The average peak carvone concentration in milk was 10.5 mcg/L. Carvone metabolites were not detected in any milk samples.[7]

In another study, 20 mothers consumed 30 mg of d-carvone in 75 grams of hummus every third day for 28 days (10 exposures) at about 2 hours before a "usual" nursing time. Breastmilk samples were obtained 2 hours after

ingestion on the first and last days of carvone intake. Carvone was detectable in the milk of 18 mothers. Average carvone concentrations in breastmilk were 2.5 mcg/L and 3.8 mcg/L on the first and last days of sampling, respectively. However, these values did not differ statistically, and the combined average carvone concentration was 3.2 mcg/L. A control group of 20 women who did not ingest d-carvone had no detectable carvone in their breastmilk.[5]

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

Effects in Breastfed Infants

A study compared 3 groups of women. One group of 20 nursing mothers consumed 30 mg of d-carvone in 75 grams of hummus every third day for 28 days (10 exposures) at about 2 hours before a "usual" nursing time. A second group of 20 nursing mothers followed the same regimen, but their hummus contained no d-carvone. A third group of 8 mothers received the d-carvone flavored hummus, but were exclusively formula feeding their infants. After this 28-day period, both groups of breast-fed infants showed greater acceptance of d-carvone-flavored mashed potatoes than the formula-fed infants who preferred the unflavored potatoes. The authors interpreted these results to mean that breastfed infants are more receptive to a wide array of flavors than formula-fed infants.[5]

Effects on Lactation and Breastmilk

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

References

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Substance Identification

Substance Name

Dill

Scientific Name

Anethum graveolens

CAS Registry Number

8006-75-5

Drug Class

Breast Feeding

Lactation

Complementary Therapies

Phytotherapy

Plants, Medicinal