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Sage

Revised: December 3, 2018.

CASRN: 8022-56-8

Drug Levels and Effects

Summary of Use during Lactation

Sage (Salvia officinalis) leaf contains tannins (salviatannin), essential oils (including alpha-thujone, beta-thujone, 1,8 cineole, and camphor), flavones, phenolic acids, phenylpropanoid glycosides, triterpenoids, and diterpenes. Spanish sage (Salvia lavandulaefolia) is a related species with similar components, although its thujone content is lower. Sage is often misidentified and adulterated; Salvia bertolonii or Salvia pratensis are sometimes used in instead of Salvia officinalis or as an adulterant. Sage purportedly reduces lactation and has been used to aid with weaning or an overabundant milk supply;[1][2][3][4] however, no scientific studies could be located that evaluate the effect of sage on the milk supply. No data exist on the safety of sage in nursing mothers or infants. In general, sage is well tolerated, with occasional nausea, vomiting, abdominal pain, dizziness, agitation, and wheezing. Thujone and camphor are both neurotoxic in high doses.

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. Twelve nursing mothers who were19 weeks to 19 months postpartum ingested 100 mg of 1,8 cineole (eucalyptol) in the form of delayed-release capsules (Soledum-Klosterfrau Vertriebs GmbH, Germany) that release the drug in the intestine. Then they pumped 1 to 4 milk samples at the time they perceived the smell of eucalyptus on their breath which had been previously shown to be approximately concurrent. A total of 21 milk samples were obtained. Odor was rated by a panel of 3 to 5 experts as either smelling like eucalyptus or not. Fourteen of the samples had a distinct eucalyptus-like odor. Chemical analysis of the positive odor tests found 1,8-cineole in concentrations from 70 to about 2090 mcg/kg of milk, most in the range of 100 to 500 mcg/kg of

milk. Samples with negative odor tests contained concentrations in the range of 0.98 to about 20.23 mcg/kg of milk. In one woman who donated 3 samples, the highest concentration of 71 mcg/kg occurred at 1.5 hours after ingestion, with concentrations of 1 mcg/kg before ingestion and 15 mcg/kg at 9.5 hours after ingestion.[5] Eight women had their milk analyzed for 1,8-cineole metabolites. Ten metabolites and several enantiomers of these metabolites were detected.[6][7]

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

Effects in Breastfed Infants

Nursing mothers who were participating in an experiment on the excretion of 1,8-cineole (eucalyptol) in breastmilk took a 100 mg capsule of 1,8-cineole orally. Although instructed not to, 12 mothers breastfed their infants during the experiment. Mothers reported that none of their infants refused their milk or breastfed less than usual. Two mothers felt that their infants were more agitated a few hours after breastfeeding. A third mother reported that the infant stopped nursing from time to time and "looked puzzled", but resumed nursing. Upon repeating the experiment 6 weeks later, the infant did not react in an unusual way during breastfeeding.[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

Sage

Scientific Name

Salvia officinalis

CAS Registry Number

8022-56-8

Drug Class

Breast Feeding

Lactation

Complementary Therapies

Phytotherapy

Plants, Medicinal