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Ginkgo

Revised: December 3, 2018.

CASRN: 90045-36-6

Drug Levels and Effects

Summary of Use during Lactation

Ginkgo (Ginkgo biloba) leaf contains flavonoids (e.g., quercetin, kaempferol, isorhamnetine) and several terpene trilactones (e.g., ginkgolides, bilobalide) as well as numerous minor components. Standardization is based on ginkgo flavone glycoside and terpenoid content. Raw ginkgo seeds contain potentially toxic cyanogenic glycosides and should not be used; roasted seeds do not carry this risk. Ginkgo has no specific uses during breastfeeding, but is commonly used as an antioxidant, a vasodilator to increase cerebral and peripheral perfusion, and to improve memory. No data exist on the safety and efficacy of ginkgo in nursing mothers or infants. In general, it is well tolerated, but occasionally minor symptoms (e.g., headache, nausea, gastrointestinal complaints, allergic skin rashes) occur in those taking the drug. Ginkgo has caused some cases of bleeding in healthy volunteers caused by its antiplatelet activity. Because there is no published experience with ginkgo during breastfeeding, an alternate therapy may be preferred, especially while nursing a newborn or preterm infant.[1]

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. Milk samples from 17 nursing mothers on uncontrolled diets were taken at 1, 4 and 13 weeks postpartum at times between 10 am and 1 pm. Average quercetin levels in breastmilk were 48 nmol/L at week 1, 60 nmol/L at week 4 and 51 nmol/L at week 13. Because of the uncontrolled diet and varying sampling times, the range of values among individuals was large.[2]

Quercetin was measured in the milk of 11 mothers after they received an onion soup that contained either 0.8 or 1 mg/kg of quercetin glucosides. A baseline milk sample was obtained after a 5-day low-quercetin diet, and 7 milk samples were obtained over the 48 hours following soup ingestion. Baseline total (from conjugated and unconjugated) quercetin in breastmilk averaged 45 nmol/L. An average peak milk quercetin level of 68 nmol/L was attained at an average of 11.9 hours after the soup meal. The average half-life of quercetin in breastmilk was 50.3 hours.[3]

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

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

References

1. Amir LH, Pirotta MV, Raval M. Breastfeeding - Evidence based guidelines for the use of medicines. Aust Fam Physician. 2011;40:684-90. PubMed PMID: 21894275.
2. Song BJ, Jouni ZE, Ferruzzi MG. Assessment of phytochemical content in human milk during different stages of lactation. Nutrition. 2013;29:195-202. PubMed PMID: 23237648.
3. Romaszko E, Wiczkowski W, Romaszko J et al. Exposure of breastfed infants to quercetin after consumption of a single meal rich in quercetin by their mothers. Mol Nutr Food Res. 2014;58:221-8. PubMed PMID: 23963751.

Substance Identification

Substance Name

Ginkgo

CAS Registry Number

90045-36-6

Drug Class

Breast Feeding

Lactation

Complementary Therapies

Phytotherapy

Plants, Medicinal