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Green Tea

Revised: December 3, 2018.

Drug Levels and Effects

Summary of Use during Lactation

Green tea (Camellia sinensis) contains caffeine, polyphenols (e.g., quercetin), and tannins. Fussiness, jitteriness and poor sleep patterns have been reported in the infants of mothers with very high caffeine intakes (see the LactMed record on caffeine for details). Giving tea directly to infants can interfere with iron absorption and cause anemia,[1] but anemia in breastfed infants has not been reported with maternal tea ingestion. Application of wet tea bags to the nipples has been studied as a method of reducing nipple pain during the first few days of nursing. Two small, moderately well-controlled studies found a positive effect of the tea bags, but warm water compresses were as at least as effective as tea bags.[2][3] No studies were found that examined the use of oral green tea extract, topical application of green tea extract to the nipples, or to the topical product Veregren applied to genital warts during breastfeeding. Topical products applied away from the breast should pose negligible risk for the breastfed infant.

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

Caffeine is excreted into breastmilk. Refer to the LactMed record on caffeine for details. Relevant published information on other components was not found as of the revision date.

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.[4]

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.[5]

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. Merhav H, Amitai Y, Palti H, Godfrey S. Tea drinking and microcytic anemia in infants. Am J Clin Nutr. 1985;41:1210-3. PubMed PMID: 4003328.
2. Buchko BL, Pugh LC, Bishop BA et al. Comfort measures in breastfeeding, primiparous women. J Obstet Gynecol Neonatal Nurs. 1994;23:46-52. PubMed PMID: 8176527.
3. Lavergne NA. Does application of tea bags to sore nipples while breastfeeding provide effective relief? J Obstet Gynecol Neonatal Nurs. 1997;26:53-8. PubMed PMID: 9017547.
4. 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.
5. 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

Green Tea

Scientific Name

Camellia sinensis

Drug Class

Breast Feeding

Lactation

Complementary Therapies

Food

Phytotherapy

Plants, Medicinal