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# Elderberry

Revised: December 3, 2018.

## Drug Levels and Effects

### Summary of Use during Lactation

Elderberry (Sambucus nigra) fruit contains flavonoids such as quercetin, and anthocyanidins. The bark, leaves and root contain sambunigrin, which is potentially toxic because it can release cyanide. Cooked berries do not carry this risk.[1] Elderberry is most often used for influenza and immune stimulation. It has no specific lactation-related uses. No data exist on the excretion of any components of elderberry into breastmilk or on the safety and efficacy of elderberry in nursing mothers or infants. Elderberry preparations have rarely caused allergic reactions. No recommendations can be made on the use of medicinal doses of elderberry products during breastfeeding.

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. Vlachojannis JE, Cameron M, Chrubasik S. A systematic review on the sambuci fructus effect and efficacy profiles. Phytother Res. 2010;24:1-8. PubMed PMID: 19548290.
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

Elderberry

## Scientific Name

Sambucus nigra Sambucus canadensis Sambucus racemosa

## Drug Class

Breast Feeding

Lactation

Complementary Therapies

Phytotherapy

Plants, Medicinal