



Moringa

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Drug Levels and Effects

Summary of Use during Lactation

Moringa (*Moringa oleifera*, *Moringa pterygosperma*) leaves contain vitamins, minerals, and essential amino acids as well as a number of glycosides. It has been used as a galactagogue in Asia,[1] particularly in the Philippines where it is called malunggay. Many published studies are of very poor quality. Small studies indicate that *Moringa* might have some activity as a galactagogue in mothers of preterm infants by increasing maternal serum prolactin and milk volume. A reasonably well-conducted study found no evidence of galactagogue activity in the first 3 days postpartum among mothers of full-term infants in a Baby Friendly hospital. Mixed results from several small studies found that *Moringa* either did or did not improve milk quality. *Moringa oleifera* leaves are widely used as a food and medicine in Asia and Africa and studies have found no adverse effects in nursing mothers who ingested *Moringa* leaves.[2,3] *Moringa* may stimulate blood clotting, so caution is advisable in anyone at risk for blood clots.[4] One study found no safety concerns of *Moringa* in nursing infants.[3] Galactagogues should never replace evaluation and counseling on modifiable factors that affect milk production. [5,6]

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

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

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Effects in Breastfed Infants

A double-blind study in Indonesia compared the growth of breastfed infants whose mothers were given either *Moringa* leaf powder or *Moringa* leaf extract, both in a dose of 3.2 grams daily. After 3 months, the infants' growth in weight or length did not differ between the two groups.[7]

Preliminary results of a randomized study in Kenyan mothers. compared maternal supplementation with *Moringa* 20 grams daily (n = 23) to placebo (n = 21). At the end of the 3-month study, the mean infant IGF-1 and hemoglobin concentrations were significantly higher in the *Moringa* group, but no differences in infant growth, serum iron, or vitamin A status were found between groups.[8]

Effects on Lactation and Breastmilk

Two meta-analyses by the same group analyzed the outcomes of 6 studies of *Moringa olifera* as a galactagogue. Two studies with 73 patients reported maternal serum prolactin levels and found that patients in the *Moringa* groups had a statistically significant average increase of 1950 milliIU/L. and also found that weight gain at week 4 was 11.9% greater in the infants in the *Moringa* group. Pooling of two studies with a total of 51 patients revealed a significant mean increase of milk volume on Day 7 in the *Moringa* groups of 124 mL.[9,10] One of the studies compared the effect of domperidone and metoclopramide to *Moringa*. On days 7 and 14, milk volume in all of the treatment groups was greater than in the placebo group. The highest volume was in the domperidone group, followed by metoclopramide, and *Moringa olifera*. No correlation was found between serum prolactin and milk volume.[11]

A longitudinal study of 64 breastfeeding mothers given *Moringa* leaves powder 500 mg (n = 23), *Moringa* leaves extract 500 mg (n = 21), or iron-folic acid 60 mg or iron (n = 20) twice was conducted in a poor region of Indonesia. Mothers' milk was analyzed for docosahexaenoic acid (DHA) and arachidonic acid at 6 months postpartum. No difference was found among the groups.[12]

A small study compared the milk quality of 10 mothers nursing infants between 1 and 4 months of age who ate one cookie containing 3.5 grams of *Moringa* flour daily to 7 mothers who did not eat the cookies. No difference was found after one month in the nutritional content of the milk of the two groups.[13]

A small, randomized study in Indonesia compared the infants of women given *Moringa* flour capsules (n = 18) to those of mothers given an iron and folate supplement (n = 18). At the end of 3 months, infants of mothers given *Moringa* flour were less likely to have been sick in the prior 3 months at 3 and 6 months of age. So many critical facts were left out of the reporting of the study, such as supplement doses, blinding, concealment, adherence, drop-outs, extent of breastfeeding, and infant evaluation methods that it is impossible to evaluate this study's validity.[14]

A study in Indonesia compared the infants of mothers given supplements of either *Moringa* leaf powder, *Moringa* leaf extract or iron and folate during pregnancy and while breastfeeding. The end-point was social-personal development between 18 and 23 months of infant age. No differences were found between the groups. The report of methodology was lacking in many details such as dosage, blinding, concealment, adherence, extent of breastfeeding and intention-to-treat analysis so the results cannot be validated.[15]

An unblinded, nonrandomized study compared 23 postpartum mothers given *Moringa*-containing cookies, iron and vitamin A to 23 postpartum mothers who received iron and vitamin A only, both for 14 days, beginning on the first day postpartum. The infants of the treated mothers had a greater weight gain on day 14 than those in the control group. The study did not mention the extent of breastfeeding or any supplementation that took place. [16]

A randomized, double-blinded, placebo-controlled trial compared capsules containing 450 mg *Moringa oleifera* leaf powder (n = 44) or an identical placebo (n = 44) twice a day before a meal in mothers with full-term,

uncomplicated deliveries. Mothers were encouraged to breastfeed their infants and milk volume was determined by infant weighing. At 3 days postpartum, there was a 47% higher volume of milk in the *Moringa* group, but the difference was not statistically significant. At 6 months postpartum, 52% of women in the *Moringa* group were exclusively breastfeeding, which met the World Health Organization's goal of 50% by 2025. The placebo group had a 46% exclusive breastfeeding rate at 6 months, which was not statistically different from the *Moringa* group. [3]

Preliminary results of a randomized study in Kenyan mothers compared maternal supplementation with *Moringa* 20 grams daily (n = 23) to placebo (n = 21) found a median daily pumped milk volume of 1005 mL in the *Moringa* group compared to 540 mL in the placebo group. Milk lipid and protein concentrations were not different. [8]

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Substance Identification

Substance Name

Moringa

CAS Registry Number

93165-54-9

Scientific Name

Moringa oleifera

Drug Class

Breast Feeding

Lactation

Milk, Human

Complementary Therapies

Food

Galactogogues

Phytotherapy

Plants, Medicinal