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Ginger

Revised: May 1, 2019.

Drug Levels and Effects

Summary of Use during Lactation

Ginger (Zingiber officinale) root contains the pungent principles or gingerols that are considered to be responsible for its pharmacological activity. Ginger is commonly used for nausea and motion sickness. It has no specific lactation-related uses in Western medicine, but is reportedly used as a galactogogue in some parts of Asia.[1] In Thailand it is reportedly used as part of a topical herbal mixture to shorten the time to full lactation and also part of a topical herbal mixture used for breast engorgement.[2][3] One randomized study in Thailand found that milk production was higher on day 3 but not on day 7 with oral ginger compared to placebo twice daily,[4] while another found no effect of ginger on milk production on the third day after a cesarean section.[5] Galactogogues should never replace evaluation and counseling on modifiable factors that affect milk production.[6] Very limited data exist on the safety and efficacy of ginger in nursing mothers or infants. However, ginger has a long history of use as a food and medicine and is "generally recognized as safe" (GRAS) as a food flavoring by the U.S. Food and Drug Administration, including during lactation.[7] When used as a medicinal, ginger is generally well tolerated in adults, but mild gastrointestinal side effects such as bad taste, heartburn and abdominal discomfort, are reported occasionally. In Thailand it is used as part of a topical herbal mixture to shorten the time to full lactation.[2]

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.

Effects in Breastfed Infants

A woman was treated with a number of Ayruvedic treatments for rheumatoid arthritis postpartum. One of the products used was ginger 250 mg orally twice daily for 3 months. She reportedly breastfed her infant (extent not stated) throughout treatment and the infant had normal growth and development.[8]

In a study of exclusively nursing mothers receiving fenugreek seed 200 mg, turmeric 100 mg and ginger 120 mg (Fenucaps; Herbal Acharn's Home Co. Ltd., Thailand) 3 times daily for 4 weeks, no adverse events were reported in their infants, although the method used to determine this finding were not reported.[9]

Effects on Lactation and Breastmilk

A study in Japan compared the use of a mixture of 13 herbs, including ginger, to ergonovine for their effects on lactation and serum prolactin in postpartum women. The herbal mixture, called Xiong-gui-tiao-xue-yin, was given in a randomized fashion to 41 women in a dose of 2 grams of a dried aqueous extract 3 times daily. A comparable group of 41 women were randomized to receive methylergonovine 0.375 mg daily. Therapy was started on the day of delivery, but the duration of therapy was not specified. Plasma oxytocin and prolactin were measured on days 1 and 6; milk volumes were measured daily, although the method of measuring milk volume was not specified. Serum prolactin was higher on days 1 and 6 in the women who received the herbals; plasma oxytocin was lower on day 1 in the women who received the herbal, but not different on day 6. Milk volumes were greater on days 4, 5, and 6 in women who received the herbal mixture.[10] This study has serious flaws that make its interpretation impossible. First, milk volume measurement is subject to considerable variability depending on the measurement method used, but the method was not specified. Second, methylergonovine has caused decreases in serum prolactin and milk production in some studies.[11][12] Because of the lack of a placebo group, the differences found could be a negative effect of methylergonovine rather than a positive effect of the herbal preparation. Because this study used a multi-ingredient combination products in which ginger was only one component, the results might be different from studies in which ginger was used alone.

Studies of Thai herbal compresses containing ginger, turmeric and camphor have evaluated the effect of application of the compresses to the breasts on lactation. The studies showed that the compresses shortened the time to lactation postpartum compared to routine clinical care for enhancing lactation.[2]

A randomized, double-blind study in Thailand compared the milk output of mothers taking either dried ginger 500 mg or placebo twice daily starting within 2 hours after delivery. On day 3, mothers receiving ginger produced a statistically significantly greater volume of milk than those receiving placebo, 191 mL per 24 hours compared to 135 mL per 24 hours. On day 7 postpartum, the ginger group produced an average of 80 mL/hour of milk compared to 112 mL/hour in the placebo group, although the difference was not statistically significant. No significant difference in serum prolactin was found between the two groups on day 3 postpartum.[4]

A randomized trial in women with breast engorgement compared warm compresses to warm compresses containing a mixture of dried herbs, including ginger, lemon grass, Stapf leaves and leaf sheaths, Acacia concinna leaves, tamarind leaves, Citrus hystrix (kaffir lime) peels, Blumea balsamifera (sambong) leaves, salt and camphor. Both treatments relived the pain of engorgement, but women who received the compress with herbs (n = 250) had greater pain relief than those who received the warm compress alone. Because of the possible color and odor differences between treatments, the study cannot be considered to be blinded.[3]

Fifty women in Thailand who were 1 month postpartum and exclusively breastfeeding were randomized to receive either a placebo or capsules containing fenugreek seed 200 mg, turmeric 100 mg and ginger 120 mg (Fenucaps; Herbal Acharn's Home Co. Ltd., Thailand) 3 times daily for 4 weeks. Participants pumped milk on 2 days at 0, 2 and 4 weeks of the study. The average milk volumes increased by 49% at 2 weeks and 103% at 4 weeks among participants receiving the active product. The macronutrient composition of the milk did not change in either group over the 4-week period. Growth of infants was not reported.[9]

A randomized, double-bind study of 70 women who delivered by cesarean section in a hospital in Thailand compared 35 who took 5 grams of instant ginger powder in water to 35 who took a placebo with ginger scent, but no ginger. The products were taken every 12 hours up to 72 hours postpartum, starting at 24 hours postpartum. Breastmilk volumes were measured by test weighing of their infants. Total milk volume between 48 and 72 hours postpartum were compared. The median total breast milk volumes during this time were 80 mL in the ginger group and 100 mL in the placebo group. The difference was not statistically significant.[5]

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Substance Identification

Substance Name

Ginger

Scientific Name

Zingiber officinale

Drug Class

Breast Feeding

Lactation

Complementary Therapies

Phytotherapy

Plants, Medicinal