

U.S. National Library of Medicine National Center for Biotechnology Information **NLM Citation:** Drugs and Lactation Database (LactMed®) [Internet]. Bethesda (MD): National Institute of Child Health and Human Development; 2006-. Wild Asparagus. [Updated 2024 May 15]. **Bookshelf URL:** https://www.ncbi.nlm.nih.gov/books/



## Wild Asparagus

Revised: May 15, 2024.

# **Drug Levels and Effects**

## Summary of Use during Lactation

Wild asparagus (*Asparagus recemosus*) root contains steroidal saponins phytoestrogens such as shatavarins, and flavonoids, although the active components have not been clearly elucidated.[1] It is a different plant from the asparagus commonly used as a food (*Asparagus officinalis*). Wild asparagus, called *shatavari*, has a long history of use as a galactogogue in India and is included in the official ayurvedic pharmacopeia for this use.[2-7] Results of many clinical studies on the galactogogue activity of wild asparagus are mixed and inadequate.[8-10] The safety of wild asparagus has not been rigorously studied, but 2 small clinical studies found no adverse effects in mothers or their nursing infants. Galactogogues should never replace evaluation and counseling on modifiable factors that affect milk production.[11,12]

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**

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

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### **Effects on Lactation and Breastmilk**

Fifteen postpartum women who reported diminished lactation were given Ricalex (Aphali Pharmaceutical, Ltd., Ahmednegar, India) that contained 40 mg of a concentrated extract of wild asparagus, plus dicalcium phosphate 400 mg and 10 mg of ash (suvarnamakshika bhasma). They took 2 tablets twice daily after meals. Eleven of the 15 women reported an increase in milk supply and 4 of these women reported a gradual decrease in milk supply after stopping the preparation and another increase after restarting.[2] Because of a lack of blinding, randomization, and placebo control, this study cannot be considered reliable.

Forty women who complained of an insufficient milk supply at 5 days postpartum were given a combination herbal supplement as 2 capsules of Lactare (Pharma Private Ltd., Madras, India; currently available from TTK Pharma, Chennai, India) 3 times daily. Each capsule contained wild asparagus 200 mg, ashwagandha (*Withania somnifera*) 100 mg, fenugreek 50 mg, licorice 50 mg, and garlic 20 mg. By day 4 of therapy, no infants required supplementary feeding. Infants were weighed before and after each feeding on the fifth day of maternal therapy to determine the amount of milk ingested. On the day of the test weighing, infants' milk intake averaged 388 mL, and the fluid and caloric intake was considered adequate.[13] This study cannot be considered as valid evidence of a galactogogue effect of these herbs because it lacks randomization, blinding, a placebo control, and maternal instruction in breastfeeding technique. Additionally, infants were breastfed only 6 to 8 times daily, which is insufficient to maximize milk supply at this stage of lactation.

Women who were between 14 and 90 days postpartum and reported lactation failure were given instructions on breastfeeding technique and encouraged to exclusively breastfeed. If their infant had gained less than 15 grams in 1 week, they were randomized to receive either two tablespoonfuls of a mixture containing wild asparagus or an identical placebo for 4 weeks. In each 100 grams, the mixture contained *Asparagus racemosus* 15 grams, *Anethum soiva* 1 gram, *Ipomea digitata* 1 gram, *Glycyrrhiza glabra* 1 gram, *Spinacia oleracea* 2.5 grams, *Cuminum cyminum* 0.5 gram, and Panchatrinamol 1 gram. Of the 64 women randomized, 11 did not complete the trial. Serum prolactin measurements were made before a morning nursing before treatment and after 4 weeks of treatment. Infant weight gains and the number of supplemental feedings were recorded initially and after 4 weeks of therapy. No differences were found in the changes in serum prolactin, infant weight gain or amount of supplementation between the treatment and placebo groups after 4 weeks of therapy. No side effects or changes in liver function tests occurred during the study.[14]

Sixty nursing mothers were randomized to receive either the fresh roots of *Asparagus racemosus* (verified by botanists) 20 mg/kg 3 times daily or placebo rice powder 3 times daily for 30 days. Women were chosen for the study if they reported diminished milk supply, their infant crying after feeding, breast pain during lactation, maternal loss of appetite, or anxiety disorder. Infants averaged 2.8 months. Women and infants were examined weekly. Mothers who received the active herb had a 33% increase in serum prolactin over baseline compared to a 10% increase in the women who received placebo. The paper does not state when prolactin levels were measured either during the 30-day period or in relation to nursing. Infant weights increased more in the treatment group (16% vs 6%), and treated mothers rated their satisfaction and their infants' happiness greater than those in the placebo group. No side effects were noted in the paper.[15] The nonuniform composition of the mothers' complaints and the lack of optimizing nursing technique before the study detract from an otherwise well-conducted trial.

In an uncontrolled, non-blinded multicenter study in India, 1132 patients who reported inadequate milk supply were give a mixture (Lactancia, Corona Remedies Pvt. Ltd.) To take in a dose of 30 grams twice daily. The product contains *Asparagus racemosus*, *Cuminum cyminum* (cumin), *Glycyrrhiza glabra* (licorice), *Spinacia oleracea* (spinach) as well as amino acids, vitamins, minerals and DHA. Most of the mothers (1049) had improved lactation and increased infant weight.[16] However, with no placebo control group, results cannot be attributed to the product.

A double-blind study compared Shavari Bar (Act Lifesciences Pvt Ltd, Mumbai, India), a granola bar containing *Asparagus racemosus* (amount not specified) and oats along with dry fruits, honey, and sweetened cocoa to a placebo bar that was identical except for the lack of *Asparagus racemosus*. Participants who received the bar containing *Asparagus racemosus* (n = 39) reported greater volumes of milk and a shorter times to breast fullness than those receiving the placebo bar (n = 39).[17]

In a poorly controlled study, 30 postpartum women were given 10 grams daily of *Asparagus racemosus* root powder. Another 30 postpartum women served as a control group, but no placebo was given. On day 91, the prolactin level in the treated women increased from 151.81 to 296.07 mcg/L. The control women had an increase in prolactin level from 148.97 to 232.62 mcg/L over the same period. Whether this difference is clinically important is unclear.[18]

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# **Substance Identification**

#### **Substance Name**

Wild Asparagus

#### **Scientific Name**

Asparagus racemosus

### **Drug Class**

Breast Feeding Lactation Milk, Human Complementary Therapies Galactogogues Phytotherapy Plants, Medicinal