Standard Process
WHOLE FOOD NUTRIENT SOLUTIONS

Nutritional Support Protocol

Support for Healthy Lactation

Developed and reviewed by the clinical, chiropractic, and naturopathic members of the Standard Process team

The Physiology of Lactation

Before birth, lactogenesis—the differentiation of the mammary gland for milk production—begins. Milk is produced and stored in the alveoli, while ducts and lobes form an organized transport system. Two primary hormones drive lactation. Prolactin, from the anterior pituitary, establishes and maintains milk supply. Oxytocin, from the posterior pituitary, triggers contraction of myoepithelial cells, releasing milk through the nipple. Sensory input from the areola activates a neuroendocrine reflex, creating the letdown reflex, a positive feedback loop that sustains milk ejection. Additional hormones—including growth hormone, cortisol, parathyroid hormone, and insulin—facilitate nutrient transfer into breast milk.

Despite widespread recognition of breastfeeding's benefits, perceived low milk supply leads to discontinuation in about 35% of cases. Other frequent challenges include infant latching difficulties, nipple pain, mastitis, and blocked ducts. Educating patients on lactation physiology is essential, but education alone rarely resolves the most common barriers to breastfeeding. Practitioners must also address maternal stress, fatigue, pain, perceived or actual low milk supply, and infant latching difficulties—factors that directly influence prolactin and oxytocin activity. Supportive nutrition, adequate hydration, and realistic lifestyle strategies can help maintain hormone balance and promote the letdown reflex, but ongoing reassurance, troubleshooting, and individualized care are often required to sustain healthy lactation.

Supportive Lifestyle Practices

- Promote good maternal hydration for optimal milk volume and consistency.[1] When a mother is even mildly dehydrated, the body prioritizes maintaining blood fluid balance over milk production. This can lead to reduced milk volume, slower flow, and less efficient letdown.
- Nighttime breastfeeding can help establish and maintain milk supply, as this is when prolactin levels peak.[2] Prolactin follows a circadian rhythm and is required for optimal and continued milk production.
- Support patients in developing healthy stress reduction practices such as yoga, meditation, deep breathing, and exercise. Acute physical and mental stress can impair the milk let-down reflex by reducing oxytocin secretion during breastfeeding.[3] Repeated episodes of diminished oxytocin release may prevent adequate breast emptying, reducing milk production.

Whole Foods Nutritional Recommendations

- Recommend increased protein consumption for lactating women, as the current estimated average requirement may be insufficient.[4] Exclusive breastfeeding also requires approximately 500 additional calories daily to support the body's energy-dependent processes and milk production. Whole protein sources include meat, dairy, poultry, seafood, legumes, and eggs.
- Incorporate fennel into meals for added nutritional and culinary variety. Consuming fennel seeds may help modulate prolactin levels in breastfeeding mothers.[5] Whole fennel seeds may be toasted to enhance flavor, then added to curries, soups, or stews.
- Recommend fenugreek as an addition to the diet to support healthy milk production.[6] Fenugreek seeds are commonly sprouted or dry-roasted and used in dishes such as curries, dals, and chutneys.

Dietary Supplement Regimen

Catalyn with Iron

Suggested Use: **Two capsules daily**

- Supports cellular health*
- Supports the body's physiological and biochemical processes*
- Supports energy metabolism, which helps cells convert macronutrients into energy*
- Contains a combination of key ingredients from Catalyn® and Ferrofood® as well as *Tillandsia usneoides* (Spanish moss)
- Excellent source of vitamin D, riboflavin, vitamin B_6, iron, and antioxidant vitamin A
- Good source of thiamin, vitamin B_{12}, and antioxidant vitamin C

Mammary PMG®

Suggested Use: **1 tablet, 3 times per day on an empty stomach**

Mammary PMG contains bovine mammary PMG™ extract, a proprietary Protomorphogen™ blend.

- PMGs contain a unique profile of nucleotides and peptides from bovine mammary

Fen-Gre®

Suggested Use: **3 capsules per meal with a full glass of water**

Fen-Gre® is used to support pathways associated with normal glucose metabolism and the action of the mammary gland.*

- Fenugreek, an ingredient in Fen-Gre®, has been historically used to support healthy levels of mucus and phlegm in the lungs and bronchial tubes*
- Supports metabolic pathways associated with normal glucose metabolism*
- May modulate lipid metabolism pathways*

SP Complete™

Suggested Use: **One to three servings per day**

- Provides all essential amino acids
- Supports intestinal and immune system health*
- Supports muscle growth and repair processes*
- Provides ingredients with antioxidant activity*
- Supports healthy liver function*
- Excellent source of protein
- Good source of dietary fiber, choline, and calcium

Assessment of Lactation

In Office/Physical Exam

- Signs and symptoms such as breast pain/tenderness, poor infant bonding, chronic stress, mood issues, fatigue, delayed post-partum recovery, menstrual irregularities, dehydration, hair loss, skin changes
- Assess infant-related health clues for early insights into lactation issues
- Lab Studies: prolactin, iron panel with ferritin, thyroid panel, complete blood count, 4-point salivary cortisol
- Assess for insufficient caloric intake, macro- and micronutrient inadequacies
- Medical History: breast surgery/augmentation, medications, recent illness

REFERENCES

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3. Dewey K. G (2001). The Journal of nutrition, 131(11), 3012S–5S.
4. Rasmussen, B., et al (2020). Current Developments in Nutrition, 4(Suppl 2), 653.
5. Barkhordari A. F., et al (2020). Int J Pediatr 8(3): 11063-69.
6. Terbeche Y, et al. (2023) Archives of Clinical and Medical Case Reports, 7(3) 414-423.

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*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

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