

Support for Healthy Gastric Mucosa

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

Gastric Mucosa Function and Importance

The stomach lining supports digestive function through pepsin and hydrochloric acid secretion. It also acts as a protective barrier. A mucus layer, bicarbonate secretion, and tight cell junctions protect the stomach lining from digestive enzymes and acid activity.

The surface epithelial cells of the stomach lumen secrete a thick, alkaline mucus layer that adheres to the stomach lining, acting as a physical barrier against acid diffusion and providing lubrication for food movement. The surface epithelium also secretes bicarbonate ions that neutralize the acidity near the cell surface, further protecting the mucosa. The epithelial cells of the gastric mucosa are tightly connected by junctions, preventing the leakage of stomach acid into the underlying tissues.

The gastric mucosa can be disrupted by gastritis caused by infection or irritation from medications like NSAIDs or alcohol consumption. Erosions can occur when there is an imbalance between acid secretion and mucosal defense mechanisms. Infection with *H. pylori* is the most common cause of gastritis and can lead to serious GI pathology.

Lifestyle and nutrition can support healthy blood flow, epithelial cell renewal, prostaglandins, microbial balance, and immune cell activity that supports healthy gastric mucosal function. They also may help modulate the neural and hormonal factors that regulate acid secretion.

Supportive Lifestyle Practices

Encourage good mealtime habits that support the parasympathetic nervous system (PNS) such as sitting down for a meal, eating in a relaxed setting, practicing mindful eating, and chewing food thoroughly. Activating the PNS supports gastric mucosa health and enhances digestion and nutrient absorption.¹

Recommend that patients engage in low-to-moderate intensity exercise, which has been shown to support the health of gastric mucosa and gut motility.² Conversely, strenuous exercise may cause impaired nutrient absorption, low-grade inflammation, and disrupted mucosal integrity.

Whole Foods Nutritional Recommendations

Recommend consumption of foods rich in EPA and DHA such as salmon, anchovies, tuna, cod liver, and calamari. EPA and DHA support gastric mucosa integrity and modulate *H. pylori* activity.^{3,4}

Encourage patients to consume foods rich in soluble fiber such as oats, sweet potatoes, and beets. In the stomach, soluble fibers form a viscous, gel-like substance that modulates microbial communities and supports the structure and function of the gastric mucosa.⁴

Recommend zinc-rich foods like beef, oysters, pumpkin, seeds, and lentils. Zinc promotes the integrity of the gastric mucosa by supporting healthy mucus production and modulating acid secretion.⁵

Dietary Supplement Regimen



Whole Food Fiber

Suggested Use: **1 level tablespoon (approximately 6g) in a blender drink per day**

Whole Food Fiber is a good source of dietary fiber from nutrient-rich whole foods.

- Contains both soluble and insoluble fiber
- Promotes regular intestinal motility and elimination*



HiPep

Suggested Use: **1 tablet 3-5 times daily**

HiPep contains Deglycyrrhizinized Licorice, Chamomile and Meadowsweet. These herbs have been traditionally used in herbal preparations to:

- Support normal function of stomach acid secretions*
- Promote healthy mucosal tissue within the upper gastrointestinal tract*
- Promote healthy tone and function within the upper gastrointestinal tract*



Cod Liver Oil

Suggested Use: **3 softgels per day**

Cod Liver Oil supports healthy skin and eyes.*

- Cod Liver Oil contains the omega-3 fatty acid, DHA, which is important for normal brain structure*
- Supports epithelial tissue*
- Supports healthy inflammatory processes*
- Excellent source of antioxidant vitamin A



Zinc Chelate™

Suggested Use: **1 tablet per day**

Zinc Chelate is an easily absorbed zinc supplement in tablet form that promotes the healthy creation of new cells.*

Assessment of Gastric Mucosa

In Office/Physical Exam

- Signs/Symptoms such as upper abdominal pain, nausea/vomiting, heartburn, loss of appetite, black or bloody stools, anemia, fatigue/lethargy
- Lab tests: Complete blood count (CBC), comprehensive metabolic panel (CMP), H. pylori urease breath test or stool antigen test
- History of long-term use of NSAIDs, chronic stress
- Imaging to consider: CT, Chest x-ray, barium swallow
- Upper endoscopy

REFERENCES

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2. Ribeiro, F. M., et al. (2021). Frontiers in nutrition, 8, 627289.
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4. Meldrum, O. W., & Yakubov, G. E. (2024). Critical reviews in food science and nutrition, 1–29.
5. Chao HC. (2023) Nutrients, Sep 22;15(19):4093.