

# Support for Intestinal Cleansing II

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

## Physiology of Intestinal Cleansing & Repair Functions

The intestinal epithelium is highly dynamic, continuously undergoing regeneration and repair to maintain barrier integrity and functional homeostasis. Normal intestinal repair mechanisms involve coordinated cellular processes, tightly regulated by signaling pathways, immune interactions, and the intestinal microbiota.

After a parasitic infection, the intestinal environment experiences profound structural and immunological disruption. Protozoa and helminths damage the epithelial barrier through a variety of mechanisms. Cytotoxic stress leads to enterocyte apoptosis, and parasite-secreted enzymes degrade tight junction proteins. Microvilli blunting reduces surface area and digestive capacity. Goblet cells are depleted, compromising the mucus layer that protects the epithelium. Secretory IgA declines, leaving the immune interface less protected. Nutrient malabsorption is also typical after a parasitic infection, leading to various health problems and hindering normal intestinal repair processes. Restoration of intestinal barrier integrity is a critical and foundational step in the body's recovery after parasitic infection.

Lifestyle and nutritional interventions can support the intestinal environment and intestinal barrier integrity by promoting epithelial and tight junction structures, renewing the mucosal layer, and modulating immune function.

## 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.<sup>1</sup>

- Greater exercise and cardiorespiratory fitness positively correlate with short-chain fatty acid (SCFA)-producing bacteria and fecal SCFA concentrations.<sup>2</sup> Moderate-intensity aerobic exercise maintains intestinal blood flow, positively modulating GI motility and reducing inflammation. Conversely, strenuous exercise may cause impaired nutrient absorption, low-grade inflammation, and disrupted mucosal integrity.

## Whole Foods Nutritional Recommendations

- Zinc-rich foods are recommended to support intestinal health and innate and adaptive immune signaling pathways. Adequate zinc levels support the integrity of tight junctions in the intestinal epithelial barrier and a healthy gut microbiome.<sup>3</sup> Good sources of zinc include oysters, beef, organ meats, and shellfish.
- Encourage patients to consume foods rich in soluble fiber, such as oats, sweet potatoes, and beets. Soluble fibers form a viscous, gel-like substance that modulates microbial communities and supports the structure and function of the intestinal barrier.<sup>4</sup>
- Omega-3 fatty acids support healthy microbiota composition and the production of short-chain fatty acids. Evidence suggests that the interplay between gut microbiota, omega-3s, and immunity helps to maintain the intestinal wall integrity and modulates the activity of host immune cells.<sup>5</sup>
- Encourage the intake of foods rich in Vitamin A, which regulates mucin production, epithelial cell differentiation, and plays a key role in immune function. Vitamin A regulates the activity of IL-22, a major cytokine involved in intestinal barrier function homeostasis, barrier repair mechanisms, and the permeability of epithelial tight junctions.<sup>6</sup> Foods rich in preformed Vitamin A include eggs, dairy, and liver.

# Dietary Supplement Regimen



## GI Stability

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

GI Stability supports the GI tract by delivering targeted prebiotic action, supporting a healthy gut microbiome, and feeding the growth of beneficial bacteria\*

- Designed for everyday and acute gastrointestinal (GI) needs\*
- With prebiotic 2'-FL: studies show that 2'-FL helps support the growth of beneficial bacteria\*
- May help support the immune system\*
- Contains Collinsonia Root, which has been historically used to support normal elimination and digestive health\*



## Zinc Chelate

Suggested Use: **One tablet per day**

Zinc Chelate is an easily absorbed zinc supplement in tablet form that supports a healthy immune system and promotes the healthy creation of new cells.\*



## Cod Liver Oil

Suggested Use: **Three softgels per day**

Cod Liver Oil helps bridge the gap in dietary omega-3 intake.

- Supports epithelial tissue\*
- May support liver function\*
- Supports immune system response\*
- Supports healthy inflammatory processes\*
- Excellent source of antioxidant vitamin A
- Good source of vitamin D



## Whole Food Fiber

Suggested Use: **One level tablespoon**

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\*
- Supports healthy epithelial cells in the bowel\*
- Provides food for beneficial microorganisms in the lower gastrointestinal (GI) tract\*

## Assessment of Intestinal Health

## In Office/Physical Exam

- **Signs and symptoms** such as irregular bowel movements, bloating or gas, joint pain, fatigue, rashes, weight loss, brain fog, nutrient malabsorption, and mood issues

- **Lab Studies:** zonulin, calprotectin, SIgA, lactulose-mannitol, CRP, microbiome health, other functional GI testing
- **Medical Hx:** history of intestinal infections, autoimmune disease, allergies, and food intolerances

## REFERENCES

1. Browning, K. N., & Travagli, R. A. (2014). Comprehensive Physiology, 4(4), 1339–1368.
2. Koblinsky, N. D., et al. (2023). The journals of gerontology. Series A, Biological sciences and medical sciences, 78(2), 195–205.
3. Wan, Y., & Zhang, B. (2022). Biomolecules, 12(7), 900.
4. Desai, M. S., et al. (2016). Cell, 167(5), 1339–1353.e21.
5. Costantini, L., et al. (2017). International journal of molecular sciences, 18(12), 2645.
6. de Medeiros, P. H. Q. S., et al. (2018). Nutrients, 10(9), 1128.