

Gut Health Support Protocol



CLINICAL PROTOCOL TO SUPPORT GUT HEALTH

The gastrointestinal tract requires a highly coordinated physiological cascade involving adequate gastric acid secretion, biliary emulsification, and enzymatic hydrolysis to maintain homeostasis ¹. Gut health relies on interconnected pillars consisting of efficient enzymatic digestion of macronutrients, a balanced microbial community, and an intact mucosal barrier ². When endogenous digestive enzyme secretion is insufficient, maldigestion occurs, leaving undigested substrates that can feed pathogenic microbial communities in the colon ³.

This alteration in gut microbial community structure is frequently associated with an overproliferation of putrefactive and/or histamine-producing bacterial taxa, which can markedly impair the structural and functional integrity of the intestinal epithelial barrier. Furthermore, intestinal dysbiosis is heavily implicated in the pathogenesis of histamine intolerance, a condition characterized by a disequilibrium between dietary histamine accumulation and the capacity of the body to degrade it. Dysbiosis favors the proliferation of histamine-secreting bacteria, which significantly increases the extracellular histamine burden in the gut lumen ⁴.

Elevated concentrations of microbiota-derived and dietary histamine elicit a pronounced pro-inflammatory response that compromises the integrity of the intestinal mucosa

and disrupts the function of enterocytes responsible for the synthesis of diamine oxidase ⁵. Restoring this barrier requires targeted interventions to reduce inflammation and outcompete pathogenic bacteria ¹. Beneficial bacterial strains within the intestinal microbiota play a pivotal role in host physiology by producing short-chain fatty acids, particularly butyrate, which serve as the primary energy substrate for colonocytes and exert immunomodulatory effects that attenuate intestinal inflammation ⁶.

Addressing these overlapping gastrointestinal challenges requires a comprehensive clinical strategy that prioritizes an adequate diet as the cornerstone of the treatment. Dietary management is recognized as the primary lever to improve human health, shape the gut microbiome, and manage specific conditions such as histamine intolerance ⁷. Following this dietary foundation, a targeted three-step supplementation protocol is applied. First, supplementing with broad-spectrum digestive enzymes supports the upstream hydrolysis of macronutrients, while these exogenous proteases and lipases also act as prebiotics to enrich beneficial bacteria ³. Second, introducing specific strains of beneficial bacteria helps to competitively exclude pathogens and reinforce the integrity of the intestinal tight junctions ¹. Third, directly addressing the histamine burden through the exogenous administration of diamine oxidase neutralizes the excess biogenic amines in the lumen.

THERAPEUTIC DIET AND NUTRITIONAL RECOMMENDATIONS

The following nutritional recommendations are intended to promote gastrointestinal mucosal repair and to facilitate the management of associated clinical symptoms:

- **Fiber-Rich Foods:** Dietary fiber stimulates mucus-producing goblet cells and nourishes commensal bacteria. The bacterial fermentation of complex carbohydrates produces short-chain fatty acids, which are crucial for regulating the immune system and maintaining the integrity of the intestinal epithelial barrier ^{6,8}.
- **Probiotic Foods:** Fermented foods naturally containing live microorganisms provide beneficial bacteria that support healthy immune function and help reduce overall gut inflammation ⁶.
- **Polyphenols:** Plant-derived bioactive compounds such as polyphenols actively shape the gut microbiome, exerting anti-inflammatory effects and stimulating the growth of beneficial bacteria ⁹.

- **Low-Histamine Diet:** For patients experiencing histamine intolerance, a diet restricting histamine-rich and histamine-releasing foods is the cornerstone of therapy. This reduces the burden on the intestinal diamine oxidase enzyme and prevents the accumulation of histamine in the plasma, alleviating gastrointestinal and extra-intestinal symptoms ^{4,7}.

LIFESTYLE INTERVENTIONS

Beyond the composition of the diet itself, a range of extrinsic factors exert substantial effects on gastrointestinal physiology and overall gut health. Circadian rhythms and the gut microbiome synchronize the host metabolic response to diet, making regular eating schedules and sleep hygiene critical ⁶. To further support gastrointestinal recovery and maintain microbiome homeostasis, two additional lifestyle pillars must be addressed:

- **Physical Activity:** Regular exercise is a key intervention for metabolic and gastrointestinal health. It increases microbial diversity and can shift the microbiota toward healthier patterns, including enrichment of beneficial, metabolism-regulating bacteria such as *Akkermansia* ¹⁰.
- **Emotional Stress Control:** Chronic psychological stress hyperactivates the hypothalamic-pituitary-adrenal (HPA) axis and increases cortisol, impairing intestinal permeability and worsening functional gastrointestinal symptoms such as visceral hypersensitivity ^{11,12}. To counter stress-induced dysbiosis, gut-directed psychological therapies are recommended ¹⁰.

Supplement Protocol



Digestive Enzyme Complex

Dose: Take 1 capsule with each meal, or as directed by a healthcare practitioner.

Duration: 60 days, or as clinically indicated for continuous digestive support.

Formula Highlights: This supplement targets the complete digestive pathway. It features Betaine Hydrochloride to support proper gastric acidity, which is essential for protein denaturation and optimal nutrient solubility. It includes ox bile extract to emulsify dietary lipids, making them accessible for enzymatic cleavage. Furthermore, it delivers a broad-spectrum microbial enzyme blend containing amylase, protease, lipase, and lactase. Recent evidence demonstrates that exogenous proteases and lipases can act as prebiotics by increasing the abundance of beneficial bacteria, such as *Bifidobacterium* and *Lactobacillus*, and elevating the production of short-chain fatty acids in the gut. Bromelain is also included to provide proteolytic activity and anti-inflammatory support for the gastrointestinal tract.

Biotic Supreme 50

Dose: Take 1 capsule per day with a meal, or as directed by a healthcare practitioner.

Duration: Daily maintenance.

Formula Highlights: This formula delivers 50 billion CFU of diverse *Bifidobacterium* and *Lactobacillus* species, which promote a healthy balance of microflora, lower intestinal pH, and enhance barrier defense through competitive exclusion of pathogens. It also provides 3 billion CFU of *Saccharomyces boulardii*, a beneficial yeast extensively studied for maintaining gut flora balance and supporting the gut during challenges. Additionally, the formula features specific keystone species including *Akkermansia muciniphila*, *Clostridium butyricum*, and *Bifidobacterium infantis*. These specific strains are recognized for their roles in strengthening the intestinal mucus layer, producing critical short-chain fatty acids like butyrate, and modulating systemic immune and inflammatory pathways.





Gut Histamine Support

Dose: Adults take 1 to 2 capsules no more than 15 minutes before consuming histamine-rich foods or beverages. For daily maintenance, take 2 capsules in the AM and 2 capsules in the PM.

Duration: Continuous use as needed based on dietary histamine exposure.

Formula Highlights: This formulation is designed to address food-derived gut sensitivities related to histamine imbalance. It contains Porcine Kidney Powder, which provides diamine oxidase, the primary enzyme responsible for degrading extracellular dietary histamine in the gastrointestinal tract. It also includes Vitamin C, which supports antioxidant status and assists in histamine degradation pathways. The addition of N-Acetyl Cysteine provides a direct precursor to glutathione, promoting cellular detoxification, while Alpha Lipoic Acid acts as a free radical scavenger. Finally, Bromelain and Stinging Nettle Root offer targeted botanical support to modulate the allergic and inflammatory response.

WARNINGS AND PRECAUTIONS

- **Digestive Enzyme Complex:** Patients taking blood-thinning medications or those with a history of peptic ulcer disease or biliary obstruction must consult a healthcare practitioner prior to use.
- **General Safety:** If gastrointestinal discomfort, burning sensations, or adverse reactions occur, patients should discontinue use and consult their healthcare provider immediately.

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

References

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