

Small intestinal Bacterial Overgrowth (SIBO) Protocol

Clinical Protocol to Support the Treatment of Small Intestinal Bacterial Overgrowth (SIBO)*



Small intestinal bacterial overgrowth (SIBO) is a state of dysbiosis in which microbes normally found in the large intestine become overgrown in the small intestine.¹ Common SIBO symptoms include gas, bloating, abdominal pain, diarrhea, constipation, malabsorption, and steatorrhea, although some patients may be asymptomatic.²⁻⁴

Risk factors for developing SIBO include hypochlorhydria, motility disorders, organ system dysfunction, age, certain medications, anatomic abnormalities, and certain conditions such as irritable bowel syndrome (IBS), celiac disease, inflammatory bowel disease (IBD), and nonalcoholic liver disease.²⁻⁵ SIBO is highly associated with IBS, as IBS patients have a significantly increased risk of SIBO compared to healthy controls and non-IBS patients.⁶ Although most cases present with mild-to-moderate symptoms, some patients may experience more severe symptoms.³

The diagnosis for SIBO generally results from the clinical presentation and a positive breath test, although a stool test may also be utilized. A positive hydrogen breath test is generally associated with diarrhea-predominate IBS and IBS with mixed bowel habits. A positive methane breath test is associated with methanogen overgrowth and constipation-predominate IBS.^{1,7}

Treatment commonly incorporates antimicrobial medicinal and/or herbal treatments and probiotics to restore the gut microbiome homeostasis.^{7,8-10} An estimated 44% of patients may experience recurrence of SIBO within 9 months after treatment.⁴ This clinical protocol is designed to support a healthy gut microbiome, particularly in the small intestine.*

Diagnostic Biomarkers and Clinical Indicators of SIBO

Hydrogen breath¹

- ≥ 20 parts per million from baseline within 90 minutes of substrate ingestion

Methane breath test¹

- ≥ 10 parts per million at any time

GI Map (Microbial Assay Plus) comprehensive stool testing

Small bowel aspirate and culture⁴

- $\geq 10^3$ CFU/mL

Therapeutic Diet and Nutritional Considerations

- Recommend the trial of a low FODMAP diet, as it has been shown to improve symptoms of IBS, which is highly associated with SIBO¹¹⁻¹³ Note that this diet requires monitoring and counseling, and it is not intended for long-term use.
- Counsel patients on creating an anti-inflammatory dietary pattern, as inflammation is associated with SIBO¹⁴
- Recommend patients consume fermented foods to support a healthy microbiome noting; however, that intake of fermented foods may need to be reduced or eliminated if they exacerbate symptoms. These foods may be reintroduced after the bacterial overgrowth is resolved:
 - Kefir
 - Kimchi
 - Miso
 - Sauerkraut
 - Tempeh
 - Yogurt

Lifestyle Interventions

- Recommend reducing or eliminating alcohol intake, as moderate alcohol consumption is a risk factor for SIBO¹⁵
- Counsel patients on smoking cessation, as smoking is highly associated with SIBO¹⁶
- Advise patients to maintain a healthy sleep pattern, as sleep fragmentation and short sleep duration are associated with gut dysbiosis¹⁷
- Advise patients on stress relief strategies, as chronic stress is associated with alterations in the gut-brain axis, including altering gastrointestinal motility and the microbiome¹⁸



Supplement Protocol

Primary Support:



GI Microb-X™

Dose	2 capsules twice per day on an empty stomach (in between meals)
Duration	3 to 4 weeks
Formula Highlights	GI Microb-X™ is a targeted blend of nutrients and botanicals with a long history of use for supporting a healthy microbial balance within the gastrointestinal (GI) tract.* This proprietary blend of botanicals may help promote a healthy balance of normal gut flora.*

Warning: Do not use if pregnant or breastfeeding. Consult your healthcare practitioner for use beyond 30 days, or for use at higher dosing or frequency.

Oil of Oregano

Dose	2 to 3 capsules three times a day in between meals
Duration	3 to 4 weeks
Formula Highlights	Oil of Oregano promotes antioxidant status and intestinal health.* It also helps to maintain a healthy microbial balance.* This product is standardized for carvacrol and thymol, the principal phenolic compounds in oregano. Each softgel provides 36 mg of carvacrol and thymol from an impressive 60% to 75% carvacrol oregano oil.

PhytoBiome™

Dose	3 capsules per day with food
Duration	3 to 4 weeks
Formula Highlights	PhytoBiome™ is a unique blend of a variety of fruit and vegetable extracts featuring targeted amounts of polyphenols that promote healthy diversity in the gut microbiome.* Polyphenols can be consumed and processed by our gut bacteria, acting like prebiotics that provide beneficial compounds to promote the growth of healthy gut bacteria, such as <i>Akkermansia</i> , and helps discourage that of unfriendly bacteria.* Although traditional prebiotics can be useful, polyphenols may be preferred in situations where digestive issues exist.

Secondary Support:

In cases of gastrointestinal discomfort related to bacterial “die-off,” consider recommending the following formula to help bind and eliminate the microbes and their toxic metabolites.*

Charcoal Plus Binder

Dose	2 softgels per day taken 2 hours before or after any medications or other supplements
Duration	3 to 4 weeks
Formula Highlights	Charcoal Plus Binder is a synergistic blend of 3 research-backed ingredients that have a broad-spectrum binding capacity to help promote normal detoxification and toxin elimination.* It features targeted amounts of activated charcoal, G-PUR® purified zeolite standardized to contain 70% clinoptilolite, and organic chlorella to support the body’s normal clearance of microbes, environmental toxins, heavy metals, and certain metabolites.* These molecules have been shown in research to help support healthy detoxification pathways, healthy liver function, and a healthy inflammatory response.*

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---sibo-support-protocol-references>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities, appropriate monitoring, including liver function tests (LFT) is recommended.

For considerations regarding herb-drug and nutrient-drug interactions, please refer to reliable, evidence-based resources such as the Natural Medicine Database or Stargrove MB, Treasure J, McKee DL. *Herb, Nutrient, and Drug Interactions: Clinical Implications and Therapeutic Strategies*. St. Louis, MO: Mosby-Elsevier; 2008.

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