

Understanding & Treating SIBO

A Patient Guide to Small Intestinal Bacterial Overgrowth

What Is SIBO?

Small Intestinal Bacterial Overgrowth (SIBO) occurs when bacteria that normally live in your large intestine (colon) build up in your small intestine, where far fewer bacteria belong. These bacteria ferment the food you eat before your body has fully digested and absorbed it, producing gas and other byproducts that cause many of the symptoms below.

SIBO is typically classified by the type of gas the overgrown organisms produce, which helps guide treatment:

- **Hydrogen-dominant SIBO** — often associated with bloating and diarrhea.
- **Methane-dominant SIBO (intestinal methanogen overgrowth, or IMO)** — often associated with bloating and constipation.
- **Hydrogen sulfide SIBO** — often associated with diarrhea and a distinctive sulfur-like odor.

What Causes SIBO?

SIBO usually develops when the small intestine's natural "housekeeping" process is disrupted. Between meals, a wave of muscle contractions called the **migrating motor complex (MMC)** sweeps residual food, debris, and bacteria out of the small intestine and into the colon. When the nerves or muscles driving this process are damaged or underactive, the small intestine contracts less than it should. Food and bacteria then move through more slowly than normal, giving bacteria that don't normally accumulate there the time and opportunity to overgrow.

One of the most common triggers we see is a **prior gastrointestinal infection** (a bout of food poisoning or acute gastroenteritis). Certain infections trigger antibodies that can inadvertently damage the nerve cells controlling the MMC — part of what is sometimes called post-infectious IBS. This damage can be long-lasting, which is one reason SIBO often recurs even after successful treatment.

Other common contributors include:

- **Structural changes** that create pockets where bacteria can pool, such as diverticula (small pouches in the intestinal wall) or adhesions/strictures from prior surgery
- **Underlying motility disorders** affecting the nerves or muscles of the gut, including diabetes, scleroderma, and hypothyroidism
- **Long-term acid-suppressing medication use** (e.g., PPIs), which reduces one of the body's natural defenses against bacterial overgrowth
- **Chronic opioid use**, which slows intestinal transit
- **Underlying IBS or inflammatory bowel disease (IBD)**

Common Symptoms

- Bloating and visible abdominal distension, especially after meals
- Excess gas or belching
- Abdominal pain or cramping
- Diarrhea, constipation, or an alternating pattern
- Nausea and early fullness
- Fatigue or difficulty concentrating (“brain fog”)
- In longer-standing cases: deficiencies in vitamin B12 or fat-soluble vitamins (A, D, E, K) due to impaired absorption

How SIBO Is Diagnosed: The Breath Test

SIBO is diagnosed with a **hydrogen/methane breath test**, which measures the gas produced when bacteria ferment a sugar solution you drink at the start of the test. Two versions exist — **lactulose** and **glucose** — and your provider will choose based on your situation: lactulose can detect overgrowth further down the small intestine, while glucose is absorbed higher up and may produce fewer false positives.

What to expect:

- **Duration:** The test usually takes between 2 and 3 hours. After a baseline breath sample and drinking the test solution, you’ll breathe into a collection device roughly every 15 minutes for the rest of the test.
- **4 weeks before:** Stop antibiotics, laxatives, and promotility drugs/supplements — these can alter your results.
- **24 hours before:** Eat only simple, low-fiber foods — plain chicken, beef, pork, fish, eggs, and white rice are good options. Avoid whole grains, beans, dairy, fruit, vegetables, and sweeteners, which can ferment and raise your baseline gas levels.
- **12 hours before the test:** Fast completely except for plain water.
- **Day of the test:** Avoid smoking/vaping, sleeping, and exercising during the test, as these can all affect gas measurements.
- **Results:** A rise in hydrogen of 20 ppm or more by 90 minutes indicates SIBO; a methane level of 10 ppm or higher at any point indicates IMO. The two can occur together.

Evidence: These procedures and diagnostic thresholds follow the North American Consensus on hydrogen/methane breath testing (Rezaie et al., American Journal of Gastroenterology, 2017), the standard reference most GI breath-testing protocols are based on.

Your Treatment Plan: A Four-Phase Approach

Treating SIBO isn’t just about clearing the bacterial overgrowth — it’s about restoring normal gut function so it doesn’t come back. Your plan has four phases. Timelines are approximate and will be adjusted to your response.

A note on the evidence below: some of these recommendations (like the antibiotics themselves) are backed by large clinical trials, while others rest on smaller studies, or on research in related conditions rather than SIBO directly. We’ve noted the strength of evidence for each recommendation so you can weigh it accordingly — not everything here is supported equally.

Goal: clear the bacterial overgrowth.

- A course of antibiotics prescribed by your provider (commonly rifaximin, sometimes combined with neomycin or metronidazole for methane-dominant SIBO/IMO), typically for 10–14 days.

Evidence: Rifaximin has been tested in many studies and is the antibiotic doctors have the most research on for SIBO. Adding a second antibiotic (neomycin) has been shown to work better specifically for the methane type of SIBO.

- **Partially hydrolyzed guar gum (PHGG, e.g., Sunfiber)** — 5 g/day, added alongside your antibiotic course.

Evidence: In a study comparing the two approaches, 87% of patients who took the antibiotic plus this fiber cleared their SIBO, compared to 62% who took the antibiotic alone — a meaningful difference.

- **Saccharomyces boulardii (e.g., Florastor)** — started alongside your antibiotic and continued through later phases.

Evidence: In a study of patients prone to SIBO, adding this probiotic to an antibiotic cleared the overgrowth in 55% of patients, compared to 33% using the probiotic alone and 25% using the antibiotic alone. Because it's a yeast rather than a bacteria, antibiotics don't kill it off, so it can safely be taken at the same time.

- **Herbal antimicrobial therapy** (e.g., Candibactin-AR & Candibactin-BR, or Dysbiocide & FC-Cidal) — an alternative to antibiotics in select cases, typically 2 capsules of each formula, twice daily, for 4 weeks.

Evidence: The evidence here is limited and notably weaker than the evidence for antibiotics. One study found these herbal products worked about as well as rifaximin — 46% of patients on the herbal combination had normal follow-up testing, compared to 34% on the antibiotic — but that study looked back at patient records rather than testing people in a more rigorous, controlled way, so it suggests comparable effectiveness rather than proving it. Antibiotics remain the better-supported first choice; herbal therapy is a reasonable alternative in select cases, not an equivalent one.

- Whenever possible, we confirm eradication with a repeat breath test before moving to Phase 2.

Evidence: Feeling better doesn't always mean the overgrowth is gone, and vice versa — retesting is the only way to know for sure.

PHASE 2: Motility Restoration

Weeks 2–6

Goal: support the gut’s natural “housekeeping wave” (the MMC) so bacteria don’t re-accumulate.

- **Diet: low-fermentation or low-FODMAP** — a temporary reduction in fermentable foods to limit symptoms while your gut recovers. Not meant to be permanent. We may recommend either approach depending on your symptoms:

Evidence: Both diets work by limiting the food that bacteria can feed on, just in slightly different ways.

Low-FODMAP cuts out specific hard-to-digest carbs and sugars and has been studied the most (mostly in IBS research). The **low-fermentation diet** is a bit broader — it also limits certain proteins and pairs the diet with structured meal timing. Neither diet has been proven to cure SIBO on its own; both are used to control symptoms while the main treatment does the work.

- We always recommend working with a **registered dietitian experienced in SIBO management** during this phase.

Evidence: These diets can be easy to get wrong on your own, and done incorrectly, they can lead to missing nutrients. A dietitian helps make sure the plan fits you and helps you transition back to regular eating safely.

- **Structured meal timing:** eating defined meals with 4–5 hour gaps rather than grazing, so the MMC can activate between meals.

Evidence: The gut’s “cleaning wave” only turns on between meals, when you’re not eating — so frequent snacking can prevent it from doing its job.

- **Prokinetic support:** a prescription option (e.g., low-dose erythromycin or prucalopride) your provider may recommend.

Evidence: A study found that both a low-dose antibiotic (erythromycin) and a motility drug (tegaserod) helped delay SIBO from coming back. Since tegaserod is hard to get today, we often use a similar drug called prucalopride instead, though it hasn’t been tested in SIBO patients directly.

- **Ginger** — commonly 500–1,000 mg, taken 15–30 minutes before meals, as a food-based prokinetic option.

Evidence: Ginger has been shown in studies to speed up stomach emptying and support gut motility, at doses in this same range — mainly in research on functional dyspepsia (indigestion) rather than SIBO specifically. It’s a reasonable, low-risk option based on that mechanism, though it hasn’t been tested directly in SIBO patients.

PHASE 3: Gut Repair

Weeks 6–10

Goal: support repair of the intestinal lining and reintroduce foods.

- **L-glutamine** — 5 grams, three times daily.

Evidence: In a well-designed study of IBS patients with a “leaky gut,” this supplement significantly improved symptoms and helped repair the gut lining, compared to a placebo (an inactive substance used for comparison). This is one of the strongest studies behind any supplement in this plan.

- **Saccharomyces boulardii (e.g., Florastor)** — continued from Phase 1 as ongoing probiotic support during gut repair.

- **Gradual food reintroduction** — foods restricted during Phase 2 are reintroduced one at a time, guided by your symptoms.

- If you’ve had SIBO for a while, we may check **vitamin B12 and fat-soluble vitamin (A, D, E, K) levels** and replete them if low.

Evidence: Long-standing SIBO can specifically impair absorption of these nutrients — bacteria compete for B12, and fat malabsorption affects vitamins A, D, E, and K. Checking for and correcting deficiencies is standard practice once they’ve likely been present for a while.

Goal: reduce the chance of SIBO returning.

- Continued low-dose *S. boulardii* as an ongoing supportive probiotic.
- **Partially hydrolyzed guar gum (PHGG / Sunfiber)** — 5–10 g daily, continued as a gentle prebiotic fiber (start at the lower end and increase gradually to minimize gas).

Evidence: Based on the same study mentioned in Phase 1, plus other research showing this type of fiber can support healthy gut bacteria over the long run.

- Continued attention to meal spacing and prokinetic support, since ongoing motility is one of the biggest factors in preventing relapse.

A Note on Other Probiotics

The *Saccharomyces boulardii* in this plan is different from the probiotics you might see on a pharmacy shelf — it's a yeast with its own supporting research in SIBO specifically. Standard bacterial probiotics (*Lactobacillus*, *Bifidobacterium*, and similar strains found in many over-the-counter blends) are a separate question. One study found a link between using these probiotics and worsened bloating and mental “fog” in a subset of SIBO patients, possibly related to extra gas byproducts made when bacteria ferment in an already-overgrown small intestine.

Evidence: This link comes from one study that was not a randomized trial and has been disputed by other researchers, so it isn't proof that probiotics cause this problem. It's not a reason to avoid probiotics altogether, but it's worth checking with us before adding a general probiotic blend on your own during treatment.

Why SIBO Can Return

SIBO recurrence is common, particularly when an underlying cause (such as impaired motility or a structural issue) isn't fully addressed. This is why Phases 2 and 4 of your plan focus so heavily on motility, rather than treatment stopping once symptoms improve after antibiotics. If your symptoms return, this does not mean treatment “failed” — it often simply means the underlying driver needs additional attention.

Elemental Diet: An Option for Difficult-to-Treat Cases

For patients who don't achieve lasting improvement through the standard four-phase protocol, an **elemental diet** is sometimes recommended. This involves replacing regular food for 2–3 weeks with a fully pre-digested liquid formula — amino acids, simple sugars, and fats that are absorbed very high in the small intestine, leaving little for bacteria further down to ferment on.

Evidence: A landmark study found roughly 80–85% of patients normalized their breath test after a 2–3 week elemental diet, making it one of the only dietary interventions studied as a standalone SIBO treatment rather than just a symptom-management tool. Because it requires giving up regular food entirely for several weeks, it is generally reserved for refractory cases rather than used first-line.

If SIBO Comes Back: Retreatment Options

If your symptoms return, or a follow-up breath test comes back positive after you've completed treatment, this is common and treatable — it does not mean we're starting from zero. In most cases, we simply repeat an eradication approach, guided by what worked (or didn't) the first time and by how well Phase 2 and Phase 4 motility support have been maintained. Options for retreatment include:

- **Another course of antibiotics** — the same antibiotic used before, or a different one (e.g., switching from rifaximin alone to a combination), depending on your SIBO subtype and prior response.
- **An elemental diet** — particularly if antibiotics alone haven't kept symptoms away, or if you'd prefer a non-antibiotic approach for this round.
- **A repeat herbal antimicrobial protocol** (e.g., Candibactin-AR & Candibactin-BR, or Dysbiocide & FC-Cidal, or berberine) — a reasonable alternative, especially if you responded well to this approach previously or prefer to avoid additional antibiotic courses.

We'll also use a recurrence as an opportunity to look more closely at what might be driving it — for example, whether motility support needs to be strengthened, whether an underlying cause (like a motility disorder or structural issue) needs its own evaluation, or whether the diet and prokinetic phases need more time before stopping.

When to Contact Our Office

- Your symptoms return or worsen after completing treatment
- You notice signs of a possible nutrient deficiency (unusual fatigue, tingling in hands/feet, vision changes)
- Before starting or stopping any supplement in this plan, especially if you take other medications
- You experience new or severe abdominal pain, unintended weight loss, or blood in your stool

This guide is intended to support the personalized plan discussed with your provider and is not a substitute for individualized medical advice. Doses and phase timing may be adjusted based on your symptoms, SIBO subtype, and response to treatment. Always check with your provider before starting, stopping, or combining supplements and medications.