

# Gut Treatment Protocols: SIBO, Part 5

Here are the botanical protocol dosages. Don't worry about writing these down. We're going to provide you with the handout with the dosages, timing, and detailed instructions.

## Core botanical protocol dosages

| Nutraceutical             | Dosage  |
|---------------------------|---|
| <b>GI Synergy</b>         | 1 packet BID <i>(with breakfast and dinner)</i>                               |
| <b>Lauricidin</b>         | 1 scoop TID <i>(with each meal)</i>   |
| <b>Interfase Plus</b>     | 3-4 capsules BID <i>(on empty stomach)</i>                                    |
| <b>TerraFlora or SEED</b> | TerraFlora is 1 capsule <i>(with lunch)</i> ; SEED is 2 capsules <i>daily</i> |

Here we have GI-Synergy. [The dosage is] one packet twice a day with breakfast and dinner. Lauricidin is one scoop three times a day with breakfast, lunch, and dinner. Interfase Plus, the biofilm disruptor, is three to four capsules, twice daily on an empty stomach. And then Terraflora is one capsule at lunchtime, or if you're doing Seed, it would be two capsules daily.

Here are the dosages for the digestion and motility editions that we discussed earlier. A reminder that this isn't a suggestion to add every single one of these to the core protocol, but rather assess your patient's needs and choose from these additions lists that we're giving you.

## Botanical protocol dosages: **Digestion & Motility**

| Nutraceutical                  | Dosage   |
|--------------------------------|--|
| <b>Iberogast</b>               | 20–30 drops TID just before meals  |
| <b>MotilPro</b>                | 1–2 capsules TID on an empty stomach   |
| <b>Betaine HCL with pepsin</b> | 1–5 650 mg capsules before meals; sensitive patients can use 200 mg capsules |
| <b>Digestive enzymes</b>       | Depends on the manufacturer; take just before meals                          |
| <b>Phosphatidylcholine</b>     | 3,000–6,000 mg per day with or without food                                  |

With Iberogast, we recommend 20 to 30 drops, three times a day just before meals. I have used this for SIBO relapse prevention, also using it at 30 to 60 drops at night. The pediatric dosing is generally 10 to 20 drops TID. MotilPro is one to three capsules three times a day on an empty stomach if you end up using that. [For] betaine hydrochloric acid [(HCL)], we’re going to talk a little bit more about the HCL protocol. We may have already talked about it, but [the dosage is] typically one to five, 650 milligram capsules before meals, or more sensitive patients can use 200 milligram capsules. Digestive enzymes, again, this really depends on the manufacturer, but you can take them just before meals, with meals. [For] phosphatidylcholine, we recommend 3,000 to 6,000 milligrams per day.

## Botanical protocol dosages: **Immune Regulation**

| Nutraceutical      | Dosage                              |
|--------------------|-------------------------------------|
| <b>SBI Protect</b> | 4 capsules BID with or without food |
| <b>MegaIgG2000</b> | 5 capsules BID with or without food |
| <b>ProButyrate</b> | 3 capsules BID with or without food |

Next on the list is the dosing for the immune regulation additions. As I mentioned, I generally use both SBI Protect and Mega IgG2000 for serum bovine immunoglobulins. I like both products, really, and I jump back and forth between the two for different patients. The dosing I like for SIBO is around 5 grams daily. I've seen some providers go up to 10 grams daily in severe cases, but it does end up being a lot of capsules or powders, so I generally stick with 5 grams and find that to be helpful. This can be taken with or without food. And the ProButyrate dosing is three capsules twice daily with or without food.

## Botanical protocol dosages: **Methane**

| Nutraceutical                              | Dosage   |
|--|--|
| <b>Atrantil</b>                            | 2 capsules TID at the beginning of meals<br>Maintenance dose: 1–3 capsules per day |
| <b>Allimax Pro</b>                         | 1 capsule TID with food  |
| <b>Ideal Bowel Support</b>                 | 1 capsule BID; can be taken with food but away from antimicrobials or antibiotics  |
| <b>BioGaia Gastrus (<i>L. reuteri</i>)</b> | 1 tablet per day but away from antimicrobials or antibiotics                       |

Next, we have the dosage recommendations for the [IMO] additions. Atrantil is two capsules three times per day at the beginning of meals. Some people end up using Atrantil after treatment for maintenance or as needed, like when they're on vacation, for example. So I also put the maintenance dose here for you, which is one to three capsules per day. Sometimes people will [take] one capsule before each meal. Allimax Pro is one capsule three times per day with meals. Ideal Bowel Support is one capsule twice daily, and this can be taken with meals but away from other antimicrobials. BioGaia Gastrus is one chewable tablet daily, again away from antimicrobials or antibiotics.

## Botanical protocol dosages: Hydrogen Sulfide Excess

| Nutraceutical  | Dosage   |
|--|--|
| <b>Molybdenum</b>                                      | 150 mcg BID with food  |
| <b>Hydroxocobalamin</b>                                | 2000 mcg qAM before meals or on an empty stomach   |
| <b>Bismuth</b>   | 400–525 mg TID for 4 weeks<br>Bio-HPF: 2 capsules TID before meals   |
| <b>Zinc acetate</b>                                    | 60–75 mg daily on an empty stomach or with food if nausea occurs   |
| <b>Activated charcoal</b>                              | 1200–1500 mg daily (can be taken as a single dose or split up) away from food, supplements and medications |
| <b>Korean red ginseng (aka Panax or Asian ginseng)</b> | 400 mg BID with or without food  |

Next on our dosages are the hydrogen sulfide excess products. [For] molybdenum, I have 150 micrograms BID with food. The [dose for] hydroxocobalamin, which binds to hydrogen sulfide and reduces biological activity of hydrogen sulfide, [is] generally 2,000 micrograms every morning before meals or on an empty stomach. This is the preferred form of [vitamin] B12 for this particular product, as opposed to the methylated form. Bismuth, [which] can be Pepto-Bismol or Bio-HPF, reduces hydrogen sulfide-producing or sulfate-reducing bacteria. Generally, the dosing is 400 to 525 milligrams three times a day for four weeks, or you can see the dosing for the Bio-HPF at two capsules three times a day before meals. Then we have zinc acetate; [there are] lots of different brands, depending on your preference. This binds to hydrogen sulfide and replaces the potential loss as a result of the environmental toxic burden like glyphosate, usually about 60 to 75 milligrams daily on an empty stomach with or without food. [For] activated charcoal binder for the endotoxins and hydrogen sulfide, [the dosage is] generally about 1,200 to 1,500 milligrams daily. This can be taken as a single dose or split up away from food, supplements, and other medications. And then we have the Korean red ginseng, which suppresses activity of the CBS and CSE enzyme[s], reducing hydrogen sulfide production internally. Generally, [the dosage is] about 400 milligrams twice a day with or without food. Again, a reminder [that] not all of these are being added to the core protocol, but you're picking and choosing and making additions that are appropriate.

For hydrogen sulfide excess SIBO, there are a handful of additional therapies that have [been] added to my protocols with admittedly hit-or-miss results. I want to, at the very least, share them with you because I think they are generally safe and pretty easy interventions.



The first is infrared sauna therapy for the same reasons that we generally recommend sauna therapy, detox and mitochondrial support to help enhance sulfide metabolism. Epsom salt baths are also on the list of additional therapies. Epsom salt is magnesium sulfate, and we likely will add magnesium. People with sulfate metabolism issues also need sulfate, and with transdermal absorption, it kind of bypasses the gut bacteria. So [there are] generally [fewer] symptoms. I generally recommend 4 cups per bath. You can do this daily for seven days and then reduce [it] to a few times a week, or start with just one or two a week if your patient tends to be very sensitive to therapies.



Additional therapies for hydrogen sulfide excess are a low-sulfur diet. This can be a consideration. There are various recommendations for incorporating a low-sulfur diet into the treatment plan, but I think the one that makes the most sense is a one-week elimination, followed by a food reintroduction phase with likely continuation of a modified low-sulfur diet for another 30 to 60 days. I should note that I have not seen low-FODMAP diets work well in this particular population of patients. I'll give you a low-sulfur diet handout for reference, but here are the principles of how I use it in practice. If I have a patient [who] complains of food sensitivities and reactions surrounding food, I'll take a look at their food diary [and] look to see if they're consuming a lot of high-sulfur foods.

The most common foods that people suffer from for sulfur metabolism are eggs, garlic, kale, and onion, then cabbage, Brussels sprouts, and asparagus. Meat is also high in sulfur, and I find that it's kind of hit-or-miss with people's reactivity to meat, so I tend to have them limit consumption during that first week or one-week elimination phase. The goal of this diet is to identify if high-sulfur foods [are] a problem for you. And if so, which ones? If you do not have any improvement in symptoms with the week-long elimination period, it's probably less likely that sulfur intolerance is an issue. And then I have patients return to their normal diet.

If they feel better on the low-sulfur diet, then we move forward with the introduction phase. And I'll be honest, most people aren't 100 percent sure, so I generally move forward with the

reintroduction phase in most patients and end up with some sort of modified version of the low-sulfur diet during treatment. And then we'll continue that throughout. You can start with the diet first while people are waiting on their protocol supplements for the hydrogen sulfide excess SIBO treatment plan. They can see how they feel with reintroduction. If they have a reaction to food, then they keep it out. Allow symptoms to settle down and introduce the next food and so on. Again, this is an optional portion of the treatment plan. I tend to incorporate this most of the time when I suspect sulfur intolerance in my [patients with] hydrogen sulfide excess SIBO.

I want to give you some examples of how I might combine the core protocols with some of these additions that I mentioned earlier in the presentation.

## Botanical protocol for IMO + motility

| Nutraceutical               | Dosage   |
|-----------------------------|--|
| <b>GI-Synergy</b>           | 1 packet BID (with breakfast and dinner)   |
| <b>Atrantil</b>             | 2 capsules TID at the beginning of meals<br>Maintenance dose: 1–3 capsules per day |
| <b>Interfase Plus</b>       | 3–4 capsules BID (on an empty stomach)   |
| <b>Ideal Bowel Support®</b> | 1 capsule BID; can be taken with food but away from antimicrobials or antibiotics  |
| <b>MotilPro</b>             | 1–2 capsules TID on an empty stomach   |
| <b>Allimax Pro</b>          | 1 capsule TID with food  |

Here we have a core botanical protocol, plus methane and motility support. This patient has [IMO] with constipation. You can see I kept GI-Synergy and Interfase Plus from the core protocol, but [I] added Atrantil in place of Lauricidin, switched [out] Terraflora with Ideal Bowel Support, and added MotilPro for motility support.

Here we have a protocol for someone with hydrogen-dominant SIBO, markers of gut inflammation and immune dysfunction, and low fecal pancreatic elastase.



## Botanical protocol for H2 SIBO + immune + digestive support

| Nutraceutical                        | Dosage   |
|--------------------------------------|--|
| <b>GI-Synergy</b>                    | 1 packet BID (with breakfast and dinner)                                     |
| <b>SBI Protect</b>                   | 4 capsules BID with or without food  |
| <b>InterFase Plus</b>                | 3–4 capsules BID (on an empty stomach)                                       |
| <b>Betaine HCL with pepsin</b>       | 1–5 650 mg capsules before meals; sensitive patients can use 200 mg capsules |
| <b>Digestive enzymes</b>             | Depends on the manufacturer; take just before meals                          |
| <b>Terraflora or Seed (optional)</b> | Terraflora 1 capsule (with lunch); Seed 2 capsules daily                     |

You can see GI-Synergy from the core protocol remains with the additional SBI Protect, that bovine immunoglobulin therapy we’ve talked about, and we still have the biofilm disruptor but also have added Betaine HCL with pepsin and digestive enzymes. I will often start with either of these two digestive support supplements and then add in the second if the person isn’t really having improvement right away. Then we have the Terraflora probiotic as an optional add-on. And like I have said previously, [patients with] SIBO tend to have trouble with probiotics, so I will often add in halfway through the protocol and may have to experiment with different types of probiotics to find out which one they tolerate best.

I think you are getting the picture here, but I’ve added another combination protocol just so you can get an example, and this time, it’s for hydrogen sulfide excess so that you can visualize how you might combine the supplements.

## Botanical protocol for H2S SIBO

| Nutraceutical             | Dosage   |
|---------------------------|--|
| <b>GI-Synergy</b>         | 1 packet BID (with breakfast and dinner)   |
| <b>InterFase Plus</b>     | 3–4 capsules BID (on an empty stomach)   |
| <b>Molybdenum</b>         | 150 mcg BID with food  |
| <b>Hydroxocobalamin</b>   | 2000 mcg qAM before meals or on an empty stomach   |
| <b>Bismuth</b>            | 400–525 mg TID for 4 weeks<br>Bio-HPF: 2 capsules TID before meals   |
| <b>Zinc acetate</b>       | 60-75 mg daily on an empty stomach or with food if nausea occurs   |
| <b>Activated charcoal</b> | 1200–1500 mg daily (can be taken as a single dose or divided) away from food, supplements, and medications |

Here I have GI-Synergy and Interfase Plus and then have added the H2S excess protocol supplements. You can see how they are laid out here with molybdenum, hydroxocobalamin, bismuth, zinc acetate, and activated charcoal.

I wanted to provide you with some alternatives or substitutions that you could use if you run into any issues with a particular ingredient that a patient doesn't tolerate, accessibility of the product, or preference for capsules vs. liquids.

## Alternatives and substitutions

| Nutraceutical          | Alternative/Substitution   |
|------------------------|--|
| <b>GI-Synergy</b>      | <b>Biocidin LSF, capsules or Advanced Formula</b> ( <i>Bio-Botanical Research</i> )                    |
| <b>InterFase Plus</b>  | <b>Biofilm Defense</b> ( <i>Kirkman Labs</i> ), <b>MC-BFM-1</b> ( <i>Beyond Balance</i> )              |
| <b>Terraflora/Seed</b> | <b>MegaSporeBiotic</b> ( <i>Microbiome Labs</i> ), <b>Ther-Biotic Complete</b> ( <i>Klaire Labs</i> )  |
| <b>MotilPro</b>        | <b>Motility Activator</b> ( <i>Integrative Therapeutics</i> ), <b>SIBO-MMC</b> ( <i>Priority One</i> ) |
| <b>Bismuth</b>         | <b>Pepti-Guard</b> ( <i>Thorne</i> ), <b>Bio-HPF</b> ( <i>Biotics Research</i> )                       |

This is definitely not an exhaustive list of alternatives, but I have listed a few. You can definitely find more information about dosing on the preferred supplement list, but I wanted to give you some examples here of what you might be able to find as alternatives for these products.

## Length of botanical treatment based on LBT hydrogen (H2) results

| H2 @80/90 min | Duration        |
|---------------|-----------------|
| <45 ppm       | <b>4 weeks</b>  |
| 45-70 ppm     | <b>8 weeks</b>  |
| >70 ppm       | <b>12 weeks</b> |

As for the duration of the botanical protocol, as we've discussed, you could use the results of the lactulose breath test to help guide duration, as that study from rifaximin mentioned earlier. It did not study botanical protocols, and to my knowledge, there is not much out there studying these types of treatment protocols for SIBO to determine [the] duration of treatment, so we can use this study along with clinical experience to guide decision-making. This is how we think about it as a rough guideline. With mildly positive results of hydrogen below 45 parts per million or a sum of hydrogen below 160 parts per million, we might do 30 days of the botanical protocol. If hydrogen at 90 minutes [is] between 45 and 70 parts per million, then maybe we do eight weeks. And then if hydrogen is over 70 parts per million at the 90-minute mark, then we do a 12-week duration, and we would always want to retest at the end of [the] treatment period.

Again, these are just general guides, and to be honest, clinically, this is how I generally find these products end up working out. The patient will end up taking a two- to three-week period to ramp up on the protocol supplements, and then we have the protocol clock start once they're at the full dose of the supplements. I also mostly do at least 60 days of treatment, not including the ramp-up period. So there [are] lots of variations [on] how to do this. I know that the rifaximin study showed four weeks may be enough time for rifaximin with lower levels of hydrogen, but clinically, I find that more time is generally needed with the botanical protocols. If someone has a very mild case and doesn't have a lot of GI symptoms, at that point, then I may consider a 30-day protocol.

Here are similar recommendations for [the] duration of botanical treatment based [on] the lactulose breath tests methane levels. We are again using the previously mentioned Korean study.

## Length of botanical treatment based on LBT methane (CH<sub>4</sub>) results

| Presentation   | Duration |
|--|----------|
| The highest value on the test is between 10 ppm and 25 ppm | 30 days  |
| The highest value on the test is between 25 ppm and 50 ppm | 60 days  |
| The highest value on the test is greater than 50 ppm       | 90 days  |

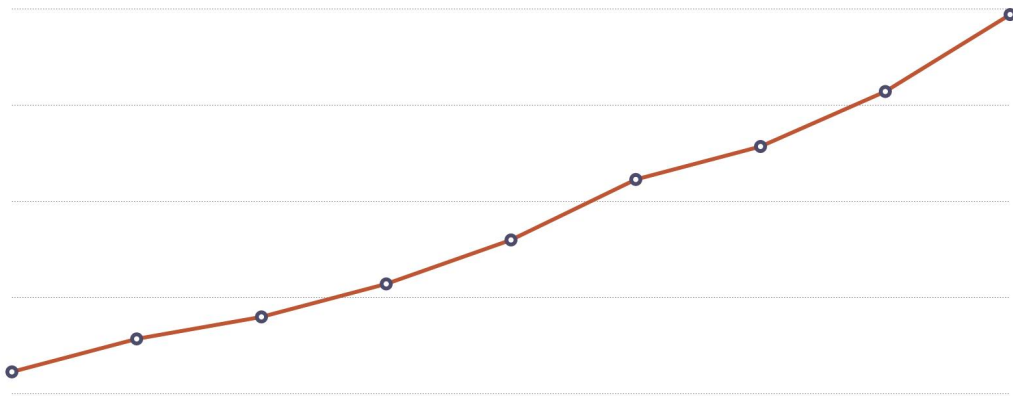
It also found that in patients who had elevated methane, granted, there weren't very many of them in that particular study because the study was looking at patients with IBS-D or diarrhea, but in the few patients that did have elevated methane, 30 days of rifaximin treatment tended to normalize methane in all patients. So it is possible that the standard 10- to 14-day course of rifaximin is effective on its own for methane. But if you use longer courses of rifaximin or longer courses of botanical protocols, I do think that they tend to be more effective. So considering that, these are the durations of treatments I recommend when methane is elevated for the botanical protocol and possibly for rifaximin. A reminder that this is empirical and based on clinical experience; it doesn't come from a study. There haven't been any studies that I'm aware of correlating [the] duration of treatment with breath test results for methane or even symptoms. But you can't combine this with the other chart we saw previously for hydrogen values and how long you should treat. And if either methane or the hydrogen value is exceeded or the highest, then you would go up to the next level.

The highest value, and again, we're talking about any time on the test for methane, is between 10 and 25 [parts] per million of methane, then you consider at least a 30-day treatment. If the highest value is between 25 and 50 [parts per million], then treatment duration would go up to 60 days, and then any methane value above 50 any time on that test would be a 90-day treatment. Just for a quick reiteration, in practice, I do find myself sticking with the 60- to 90-day protocols, mostly with that two- to three-week ramp-up for most patients. I have found this tends to work

best, but I've just given you some ranges here so you can make a decision that feels best for both you and your patient or client.

Before we move on to pharmaceutical treatments, there are a couple of things to be aware of. First is that the botanical treatment is generally well-tolerated, but it can cause a die-off or Herxheimer response.

## Minimizing Herxheimer reaction on botanical treatment



As I mentioned, we normally start people on lower doses and ramp them up slowly over time. And this is explained in the patient handout that I'm going to give you. But if the patient still has a reaction, we have them go even slower and reduce the dose even further, or maybe move to every other day dosing and then ramp up over time. If they're still reacting, I might stop everything and then have them add the supplements back in one at a time to see which is causing the biggest reaction so that they can at least proceed with the other things. This can be a little bit laborious, but it's sometimes necessary if you really do have a sensitive patient or client. [The] second thing is that although botanicals have less impact on beneficial bacteria than antibiotics, they likely still have some. And we've seen this in retesting. So after you've eradicated the SIBO pathogens that you're treating, they'll need to move on to phase two of the treatment, which is rebuilding a healthy gut ecosystem. We'll talk a little bit more about that later.