

# Gut Treatment Protocols: GERD, IBD & IBS, Part 3

Another way to regulate acid production in the stomach is by taking bitter herbs. Bitters have been used in traditional cultures for thousands of years to stimulate and improve digestion. More recently, studies have confirmed the ability of bitters to increase the flow of digestive juices, including HCl, bile, pepsin, gastrin, and pancreatic enzymes. My favorite formula for this is called Iberogast, which we talked about before. It's made in Germany and has been used throughout Europe and other parts of the world for over 40 years. Of the estimated 20 million patients using Iberogast, only 18 have reported adverse events over the years, at least according to the Iberogast website. In addition to regulating stomach acid production, it regulates peristalsis, it's a prokinetic, it reduces pain, it reduces gas, and it can have an antimicrobial effect.

Apple cider vinegar is another remedy that can be helpful, especially in patients that can't tolerate HCl. They can mix one teaspoon to two tablespoons with eight ounces of water and drink before meals or when heartburn comes on. My experience is that it's not as helpful as HCl or bitters, but it can be effective in some cases.

Site	Enzyme	Role in digestion
<b>Mouth</b>	Salivary amylase	Breaks down starches into disaccharides
<b>Stomach</b>	Pepsin	Breaks down proteins into large peptides
<b>Small intestine (from pancreas)</b>	Amylase	Continues the breakdown of starch
	Trypsin	Continues the breakdown of protein
	Lipase	Breaks down fat
<b>Small intestine</b>	Maltase, sucrase, lactase	Breaks down remaining disaccharides into monosaccharides
	Peptidase	Breaks down dipeptides into amino acids

The next thing to consider is digestive enzymes, including protein-, carbohydrate-, and fat-digesting varieties. These include protease and pepsin that are often found in HCl products, amylase, glucoamylase, lipase, etc. When stomach acid is sufficient, the pH of chyme will be

appropriate to trigger enzyme secretion, and you'll often find that digestive enzymes are unnecessary if the patient is taking HCl or has adequate stomach acid production. However, they can be extremely helpful in some patients, especially during the early stages of the treatment. Bile and compounds that stimulate bile production can also be helpful, and this is particularly true if the patient has signs of fat malabsorption, like greasy, light-colored stools that float, or fish oil burps, or sluggish bile metabolism, like itchy skin, indigestion, bitter tasting reflux, etc. Ox bile's in many enzyme preparations in small doses, like 50 to 100 milligrams, but some patients benefit from a higher dose, like 500 milligrams, before meals. Then we have cholegogues, which are compounds that are used to stimulate bile flow, like dandelion, ginger, milk thistle, taurine, and phosphatidylcholine. Apex Energetics makes a product called Bilemen, that has several of these cholegogues, and we talked about using phosphatidylcholine for this purpose in the SIBO treatment unit.

Finally, you may need to replace nutrients that are required for stomach acid, enzyme, and bile secretion, and these can often be low due to patients taking a PPI that impairs the absorption of these nutrients, so it's another reason that PPIs over the long term are not a good idea and are kind of a self-fulfilling prophecy. Niacin, chloride, sodium, potassium, zinc, and iodine—we'll be talking about how to identify deficiency of some of these in the blood chemistry unit, but you can supplement empirically if signs of deficiency are present or you know that the patient is not getting adequate amounts of them in the diet.

Step three is to restore the beneficial bacteria and a healthy mucosal lining in the gut. Probiotics are part of the H. pylori protocol that we talked about earlier, and both probiotics and prebiotics are part of the rebuilding a healthy gut protocol that we'll discuss in a future section. Also, fermented foods and fermentable fibers in the diet will play a role. In the H. pylori protocol, we talked about deglycyrrhizinated licorice, DGL, this is an important compound for restoring healthy gut lining. Also, we have mastic gum, MSM, zinc carnosine, vitamin C, which promotes collagen formation, and bone broth and glycine that are effective for this. Designs for Health makes a good product called GastroMend that has a number of these agents in it, and this can be continued after H. pylori is cleared if the symptoms continue. We'll also be discussing additional approaches to restoring gut mucosal health in the intestinal permeability section.

## GERD treatment summary

### Step 1

Identify and address SIBO & other pathologies

Transition patient off of acid-suppressing drugs

Consider low-carb, low-FODMAP, or low FP diet

### Step 2

Replace/stimulate stomach acid

Replace/stimulate bile and enzymes

Replace nutrients required for acid, enzymes, bile

### Step 3

Restore gut ecosystem

Repair gut mucosal lining

Okay, so here's a treatment summary for GERD. Step one, identify and address SIBO and other pathologies, transition the patient off of acid-suppressing drugs if possible and at the right time, and consider low-carb, low-FODMAP or low fermentation potential diet. Step two would be replace or stimulate stomach acid production, replace or stimulate bile and enzymes, replace nutrients required for acid enzymes and bile production. And step three is restore a healthy gut ecosystem and repair the gut mucosal lining.



## **Irritable bowel syndrome (IBS)**

All right, let's move on to irritable bowel syndrome, or IBS. IBS is a diagnosis of exclusion; it's what the patient is labeled with when diseases like IBD or GERD or diverticulitis that have a structural effect on the gut are ruled out. Symptoms have to be present for at least three months, with onset of at least six months previously. Recurrent abdominal pain, discomfort associated with two or more of the following: improvement with defecation and/or onset associated with a change in frequency or consistency of the form of stool. Some research suggests that food poisoning and gut infections are the triggering event for IBS, and there's actually a new blood test that screens for anti-CVTB and anti-vinculin antibodies, which react to toxins that are associated with food poisoning, so this is being promoted as a new test for IBS.

## Potential causes of IBS

Gluten/food intolerance	Toxins (biotoxins, heavy metals)
SIBO	Temporomandibular disorder
Disrupted gut microbiome	Immune dysregulation
Infections	Intestinal permeability
Hypochlorhydria	Genetic polymorphisms
Gut-brain axis dysfunction	

My belief is that IBS is a heterogeneous group of disorders with different ideologies and underlying pathologies, including and not limited to gluten or food intolerance, SIBO, disrupted gut microbiome, infections, hypochlorhydria, gut-brain axis dysfunction, toxins like mold or heavy metals, temporomandibular disorder, immune dysregulation, intestinal permeability, and genetic polymorphisms. So that's a lot to consider with an IBS patient, and consistent with functional medicine, the best long-term treatment is to identify and address the core pathology. We're treating a patient, we're not treating a disease, there's no single underlying cause of IBS so I can't give you a single treatment for it. If SIBO's the underlying cause, addressing SIBO's going to lead to the best results, or at least improve them. All of that said, I can give you some considerations and supportive therapies to use while you're identifying and addressing the underlying pathologies, or if doing that doesn't completely resolve symptoms.

In the scientific literature, there's a wide variety of both pharmacological and nonpharmacological treatments for IBS. The nonpharmacological treatments are not only safer, they're actually more effective, according to the scientific literature in many cases. Drug treatments revolve around slowing down or speeding up motility, depending on whether it's IBS-C for constipation or IBS-D for diarrhea. There are typically a lot of side effects associated with these treatments, and they have varying effectiveness, which is usually not that impressive, and some of them have even been pulled from the market due to serious adverse events. Rifaximin is an exception here, as we've discussed it can be useful for IBS even when SIBO isn't present, and it's pretty safe and well-tolerated, and we'll talk more about that in a little bit. So I'm not going to go over all the possible treatments, but I'll tell you which I think are the most effective and practical.

The first is diet. Again, Paleo's a great foundation, but in addition it's crucial to identify gluten and other food intolerances, and the Cyrex arrays can be helpful there. People with IBS are often but not always FODMAP intolerant. Low-FODMAP is one of the most, if not the most, effective treatments according to the scientific literature. Again, it achieves over a 70 percent response. One

problem is that studies have already shown that a low-FODMAP diet may have undesirable long-term effects without some other interventions like advising the patient to take soluble fibers that feed the beneficial gut flora. And in functional medicine, we're concerned with getting to the root of the problem, so just telling the patient to eat a low-FODMAP diet forever is not really that different from telling them to take a drug forever, although it's certainly better than that, from a philosophical perspective it's not that much different. That said, a low-FODMAP diet can provide short-term relief and it can be used partially; for example, a patient can remove the biggest triggers from the low-FODMAP diet but continue eating other FODMAPs that don't necessarily trigger them. And that's an important thing to point out about the low-FODMAP diet: although it's best to remove all FODMAPs to begin with, you should have the patient try to add back as many of them as possible because inevitably not all patients will respond to all FODMAPs, and the more of the FODMAPs you can include in the diet, the better it will be for their gut health long term.

Another helpful recommendation in some cases is to regulate the intake of insoluble fiber. Insoluble fiber is found in nuts and seeds, certain veggies, especially skins and peels, grains and bran, and it typically doesn't feed beneficial bacteria to the extent that soluble fiber does, so there's less risk in minimizing it. However, many foods with insoluble fiber are very rich in nutrients, and so we don't want to eliminate insoluble fiber from our patients' diets. The good news is you don't have to do that in order to get a benefit. I have an article with specific recommendations that I'll put a link to in the supplemental materials and I can summarize here, but in short, it involves things like not eating insoluble fiber foods on an empty stomach, always eating them with other foods that contain soluble fiber, which has kind of a protective, soothing effect on the gut, removing stems and peels.

So, for example, if we look at the kale on the slide, what you would do is you would remove the leaves and discard the stems and just cook the leaves separately. You could also do that with broccoli, remove the hard stems from broccoli or cauliflower, and then with apples, the patient could remove the peels and just eat the flesh. They can have them diced, mashed, chopped; grate or blend high-insoluble-fiber foods to make them easier to break down, and that can reduce the likelihood to cause symptoms, and insoluble-fiber foods are best eaten while cooked, either steamed thoroughly or boiled in soup, or braised, patients will often do better with those cooking methods rather than consuming them in stir-fries where they're still really crisp and not cooked all the way through. And if they are eaten raw, they should be prepared as I talked about earlier, where the harder, more fibrous parts are removed, or they're diced, mashed, chopped, grated, or blended.