KRESSER INSTITUTE FOR FUNCTIONAL AND EVOLUTIONARY MEDICINE

Nutrition: GERD, IBS, and Other Digestive Disorders - Part 3

Signs of low stomach acid

GI tract

Feeling of fullness after meals (high-protein), gas and belching 1-3 hours after meals, acid reflux or burning sensation in the throat, nausea, constipation, undigested food in the stool, bad breath, food sensitivities

Skin, nails and hair

Acne vulgaris, acne rosacea, eczema, dry skin, dry/brittle nails, hair loss in women

Systemic

Chronic fatigue, anemia, hypoglycemia, neuropathy, difficulty concentrating, poor memory

Diet and lifestyle factors are crucial when you're dealing with any kind of digestive problem, but supplements can also, of course, be part of the solution. You should first assess your patient and see if they need any kind of digestive support in the form of hydrochloric acid, which is the stomach acid, or digestive enzymes or liver and gallbladder support. So you can ask your patient if they feel any sense of fullness after meals, especially high-protein meals, which can be an indicator that they need HCl support. Other signs that the stomach acid might be low would be gas and belching shortly after a meal, reflux, nausea, constipation, undigested food in the stool, bad breath, and food sensitivities. Signs in the skin, nails, and hair would include acne or rosacea, eczema, dry skin, brittle nails, and hair loss, largely due to poor nutrient absorption. Systemic signs might include chronic fatigue, anemia, hypoglycemia, neuropathy, difficulty concentrating, and poor memory.

If the patient has symptoms of low hydrochloric acid, slowly titrate HCl and take up one capsule at a time until they experience a slight burning sensation or sense of warmth in their epigastric area, then have them drop back down to the lowest dosage that they were taking before they experienced that, for a period of time. I wouldn't advise patients going above four or five capsules; it's not common to see additional benefit above that dose, and I don't know that there's any reason to go higher there. And in terms of how long to take hydrochloric acid, if the patient has very low stomach acid, they often will have SIBO or some other underlying gut pathology, so you'd want to try to address that, and then slowly get them off HCl so that their

body returns to normal production of HCl. When supplementing with hydrochloric acid, it should be combined with either pepsin or acid-stable protease, which are other protein-digesting enzymes, and they'll get a better effect that way.

In addition to HCl, some patients may need digestive enzymes. Those with low pancreatic enzyme production will often present with similar signs and symptoms to those with low HCl. They may have undigested food in the stool; that's a big red flag for low enzyme production. A combination product with multiple enzymes in it is often the best approach. It should include ox bile, which is not technically an enzyme, it's more for fat digestion if the patient has trouble tolerating fat or doesn't have a gallbladder. And on that, sometimes taking ox bile separately at 100 milligrams or 500 milligrams per day can be really helpful if the patient notices that they have a lot of problems digesting fat, or if their stools are really greasy and would tend to float, if they have itchy skin or other signs of gallbladder problems, taking ox bile can be helpful. Also, taking phosphatidylcholine, which promotes bile metabolism, can be helpful as well.

In terms of the digestive enzymes themselves, we've talked about pepsin and acid-stable protease to improve protein digestion. Pancreatin is a mixture of enzymes produced by the pancreas, including lipase, which breaks down fat; protease, which breaks down protein; and amylase, which breaks down carbohydrate. Bromelain is an enzyme found in pineapple that helps with protein digestion and may have systemic anti-inflammatory effects. Ginger is a time-tested digestive aid. So there are a number of enzyme formulations out there; many of them are quite good. Now Super Enzymes is a popular one and pretty affordable, so we like to use it. But there are a lot of good choices in this category. Enzymes should generally be taken with meals right before the meal or midway through a meal is a good time to take them. Some patients may need to take them with snacks as well.

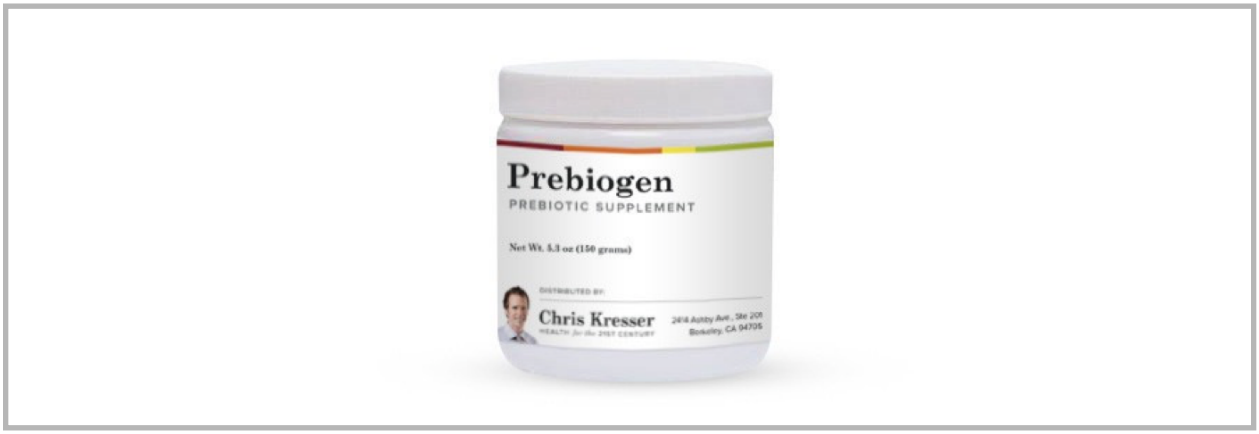
Probiotics should also be recommended for those with digestive complaints. There are many, many options, as you know, for probiotics. I'm going to talk about a couple that I think are a great choice for most patients, beginning with Seed.

This is a relatively new formulation, at least at the time of this recording in December 2018. It's a synbiotic, which means it contains both probiotics and prebiotics, and it has some unique features. One of them is that it uses a new patented delivery mechanism, I believe it's an algae-based polymer that allows the organisms to survive the stomach acid and digestion in the small intestine and reach the large intestine where they are needed. This has a couple of positive benefits. First is that obviously the concentration of organisms that reach the colon is going to be much higher than a product that does not have this type of delivery system. Second is that it will be better tolerated by patients with SIBO and other upper GI conditions for whom standard probiotics that don't have this protected delivery system might exacerbate their symptoms. If you have patients who say they don't tolerate probiotics, it doesn't necessarily mean that will be the case with Seed. I've actually found very good results with Seed, even in patients who haven't tolerated other probiotics in the past. The other advantage to this product is that it contains some unique patented strains of various Lactobacillus and Bifidobacterium species that have been shown to be highly effective in studies. I think it's a great company and a great product.

Terraflora contains transient commensals that use soil as a vector for getting into the body. That's the more technical definition. Some people refer to these as soil-based organisms. They are mostly Bacillus species that contain Bacillus clausii among other Bacillus species. Bacillus clausii is the most prescribed probiotic in the world, not so much in the United States but outside of the United States. The advantage to Bacillus species is that they also are able to survive the

stomach acid because they are spore formers. They last for about 21 to 27 days in the body so they do not colonize the intestine, which is a myth that's out there from people who have expressed concern about spore-based probiotics. These Bacillus species have been used for six decades, again in a lot of cases outside of the United States, they're very safe they are recognized as safe by the FDA, and they have some unique properties. They're antimicrobial, some of them produce carotenoids in the digestive tract, and like Seed, they tend to be very well tolerated even by people who don't tend to do well with other probiotics.

We'll be talking a lot more about how to use probiotics therapeutically, including specific probiotics for specific pathologies or symptoms later in the course.



Prebiotics can also be helpful for patients with digestive problems, although they're a little more challenging to work with, depending on the patient. As we've been discussing, they serve as a food source for beneficial bacteria, and they do that selectively, so in some cases, prebiotics have been shown to selectively stimulate good bacteria without aggressively feeding bad bacteria. The issue with prebiotics is a lot of them can provoke digestive symptoms in patients with a sensitive gut, especially the non-starch polysaccharides, which are FODMAPs, so these are things like inulin or fructooligosaccharides or galactooligosaccharides, and in most cases with prebiotics, what you want to do is start patients with a very small dose, like an eighth of a teaspoon, and have them work up really slowly to minimize the bloating and gas that can happen with these supplements. But I do believe it's important to do that, even if a patient is reacting, because it's a kind of a chicken and egg situation, where the patient is often experiencing digestive symptoms because they have a compromised gut microbiome, and the compromised gut microbiome paradoxically causes symptoms and intolerance to prebiotics, but prebiotics can be an important part of the long-term goal of restoring a normal gut microbiome, so there's a little bit of a dance you have to do to get the prebiotics and fermentable fibers into your patients. Do it very slowly and carefully, but do it, so that their gut can heal over the long term.

It's crucial to address the gut in almost every patient. Pretty much everyone who walks through our door gets some treatment, or at least we focus on the gut and it's rare that someone doesn't have something going on that needs to be addressed, and this is true even in patients that don't have active or obvious gut issues. So for example, someone comes in with a skin issue, first thing I'm going to be looking at is their gut, even if they don't have digestive issues. We know from research that up to 30 percent of patients with intestinal permeability don't have gut symptoms. There are also some interesting studies that have shown that, for example, one study showed that 42 out of 42 patients with fibromyalgia had SIBO, but only half of them had gut symptoms. I've seen many men with high cholesterol as their sole complaint, they don't have any other health complaints, and we tested them and they have various gut issues, and when we treat their gut, their cholesterol goes down, so it shouldn't be surprising given what we understand about the importance of the gut to overall health, but it's just something that you need to keep in mind.