

# Nutrition: GERD, IBS, and Other Digestive Disorders - Part 2

Medications can also cause intestinal permeability, and these include NSAIDs, like ibuprofen or aspirin, and PPIs, acid-suppressing drugs that create a pretty profound shift in the overall gut environment. Antibiotics are certainly necessary at times, and even lifesaving, but they should be used judiciously and avoided when possible. Antibiotics, as I'm sure you know very well now, can kill beneficial species of bacteria in the gut, and then that shift in the gut microbiome can lead to a pro-inflammatory gut environment that induces intestinal permeability.

Environmental toxins may also play a role in provoking gut permeability. Bisphenol-A, or BPA, is a chemical that used to be used, not as much anymore, but it used to be used in the manufacture of plastic water bottles, in the inside of canned foods, on receipts and a number of other substances, and it's one of the most ubiquitous chemicals in the environment. Studies have shown that it shows up in the urine of most adults and in the cord blood of babies. It's really just kind of a giant, society-wide experiment that we've been doing, introducing chemicals like this into the system, and there is quite a lot of research, both in animals and in humans, that suggests that BPA is not only an endocrine disruptor, but also has adverse effects on gut health, including inducing intestinal permeability, so you'd want to assess the exposure to chemicals like this in your patients and reduce it as much as possible, and we'll be talking more about that in the environmental toxins section of the training.

Chronic stress can also induce intestinal permeability. Make sure your patients have some kind of mind-body practice in place. Daily practice is the most effective; patients don't need to practice for a long time each time, especially when they're starting out, and especially if they aren't very interested in a mindfulness type of practice. They just need to get started, and even doing as little as five minutes a day on a consistent basis can have a huge impact. Gut-directed hypnotherapy can be very effective, especially for IBS, and patients should have proper sleep hygiene to help them reduce stress, and sleep is a time when the gut, which is a nervous system tissue, gets a chance to rest and regenerate, so sleep is very important for gut health.

Make sure to tell patients what they should eat as well as what they should avoid. Only telling them what to avoid can make dieting a negative experience, and as I mentioned before, patients should focus on getting plenty of fermentable fiber, which soothes the gut, creates a mucilaginous substance, and just has a soothing effect overall, but is also a food source for beneficial bacteria that produce short-chain fatty acids such as butyrate, and butyrate can have an anti-inflammatory effect and it also has an immune-regulatory effect, so it's very important for gut health and overall health. Resistant starch is an insoluble fiber, but it's different than other insoluble fibers in that it is highly fermentable by beneficial bacteria, and some studies have shown that it can be helpful for those with gut issues, although it's worth pointing out that some people respond pretty negatively to resistant starch and have a very difficult time tolerating more than a tiny, tiny amount, so you

might have seen recommendations on the internet to supplement with two to four tablespoons per day of Bob's Red Mill Unmodified Potato Starch, which is probably the most concentrated form of resistant starch available, and that can work well, again, for some people, but I would strongly recommend that you tell your patients to start with a much, much lower dose, maybe half a teaspoon or a quarter of a teaspoon to begin with, because I've seen some horrible reactions when patients have started with that higher dose. In some cases, patients ended up in the hospital because they had gas pains that were so intense, they thought they were having appendicitis or something like that. So it's no joke, it can be very debilitating, so start with a very low dose, or better yet, start with consuming foods that have resistant starch in them, like ... you can cook and cool white potatoes if the patient tolerates potatoes, or they can cook and cool lentils if they tolerate lentils, they can make plantain chips with unripe plantains, so they would slice them and dehydrate them. The cooking often destroys the resistant starch, so that's why ... the unripe plantains contain the resistant starch, but if you roast or cook them, they'll lose it, and then the potatoes, if you cook them and then cool them, that cooling process is what forms the resistant starch, so that's important to understand. Cooked potatoes don't have the same benefit in terms of resistant starch, nor do cooked plantains.

Bone broth is also an important part of a diet for gut health. Patients can make their own or purchase from several online vendors now that sell pasture-raised bone broth, and some cities even have storefronts selling bone broth, or you can get it at farmers markets. Bone broth is rich in glycine and gelatin, which are crucial nutrients for gut health. I'd recommend half a cup to a cup of broth daily in the form of soups, stews, teas, or sauces.

We talked about fermenting vegetables previously to make them more digestible, but fermented veggies also have a beneficial impact on digestive health via the healthy bacteria that they contain. When vegetables are fermented, or when anything is fermented, this bacteria forms in that fermentation process, and these bacteria are organisms that human beings have been consuming for the vast majority of our evolutionary history, and they have a really important regulatory effect on the gut. So I'd recommend one to two tablespoons of fermented vegetables like sauerkraut or kimchi with each meal, and then there are also additional fermented foods and beverages like kombucha, yogurt, beet kvass, etc., that patients can consume throughout the day. Note that cheese and sour cream and alcohol, while they are fermented, don't tend to provide the same therapeutic benefits as the other fermented foods we've talked about on this slide.

If you've been addressing diet and lifestyle changes to promote gut health and you're just not making any progress at all, the next step of course would be to investigate and treat any underlying pathologies like SIBO, small intestinal bacterial overgrowth, gut dysbiosis, or specific pathogens like parasites or bacteria. If those things are present, no matter what you do with diet and lifestyle, you're not going to be able to completely resolve them in most cases. So if it's within your scope of practice to do that kind of testing or treatment, then you could do that yourself, or you can refer out if that's not part of what you do.