Build Your Resilient Gut
MICROBIOME & BEYOND

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Common GI Problems & Solutions:

Bile Salt Recycling

Video Transcript:

Bile salt insufficiency and recycling of the bile, that's another issue, because your liver may produce enough bile, it then goes to the gallbladder to be secreted, it's secreted in the proximal or the upper part of the small bowel, and then it moves through the entire 20 feet of the small bowel, that bile acid pool, and then gets reabsorbed at the terminal end of the small bowel back to the liver for cleanup and removing all the things that the bile captured, and then gets sent back to the gallbladder for release again.

In a single meal you can have up to 15 cycles of the bile acid pool going through the liver, gallbladder, small intestine, back to the liver, gallbladder, small intestine, and so on. And you want frequent bile release because, again, bile is so important for maintaining a healthy microbiome in the small bowel, for negating the growth of pathogens, for detoxifying the system, for controlling bacterial overgrowth, and then, of course, absorbing fat-soluble nutrients as well. So bile is so critically important, and the recycling of bile is equally important in order for bile to function properly.

So the signs and symptoms of this very similar to the bile acid insufficiency and liver issues to begin with, floating greasy stools, bloating, gas, difficulty digesting fats,

constipation, as a result of low bile salts, diarrhea where you have bile salt malabsorption, and then skin issues, rashes, brain fog. This can come from inflammation in the large bowel as a result of bile salt insufficiency and recycling insufficiency. These are now areas that can start to affect the large bowel and thereby cause clinical conditions that are impacted by the large bowel.

Dysbiosis, increased infection and overgrowth, this is a SIBO driver. Insufficiency in liver function or bile salt production or recycling of bile salt is a definitive risk factor in SIBO and potentially a driver of SIBO. I'll talk about that when we hit SIBO next. But SIBO is characterized by the allowance of overgrowth, the bacteria in the small bowel. Bile's job is to prevent microbes from overgrowing in the small bowel. So without bile, you can certainly get SIBO and then, of course, compromise fat nutrient uptake, A, D, E and K, reduce detoxification capacity just like the previous one. And then the root causes are poor bile acid recycling due to lack of fiber and proper mortality of the system, liver dysfunction if the liver is not functioning the way it should, and then nutrient deficiency as well. Impaired liver function, toxic overload, and then microbiome imbalances can also drive this particular kind of issue.

This is just an illustration on the recycling of bile itself. Bile is secreted by the gallbladder in the duodenum, or duodenum as some physicians may say, and then gets reabsorbed in the ileum back to the capillary bed, and then goes through the hepatic portal back to the liver. And again, in the liver it's reconditioned, the toxins are removed, the nutrients are removed, the bile acid pool is refurbished, sent back to the gallbladder for release. Fiber-rich meals can promote bile acid recycling, so that's another way of improving bile acid recycling, if that's the problem that you're facing. And then, of course, fiber-rich foods also optimize the microbiome, which then supports liver function and gallbladder function as well.

Prebiotic foods, so things like onions, garlic, cassava, and asparagus that can nourish the beneficial bacteria and maintain bile salt effectiveness, these foods in particular can support the not only bile functioning but the recycling of bile as well.

From a supplement standpoint, again, **MegaGuard**, **HCLGuard**, and **TUDCA**, just like in the previous, can also be really useful. There's another supplement called TCA which can support liver health and reduce hepatic lipid accumulation. So the liver, sometimes due to certain dysfunctions, can accumulate too much lipid and get fatty deposits and so on, and that can inhibit bile acid refurbishing and recycling. So TCA can help reduce the accumulation of lipids in the liver. Calcium can be really important to aid in bile acid recycling. The form of calcium that works best for this is calcium citrate, but calcium phosphate can help as well, and you want around 500 milligrams a day in order to be able to do that. And then again, microbiome foundations are critically important for anything in the small bowel. So **MegaSpore**, **MegaPre**, **Tributyrin-X** are all really, really effective as general GI health components that are really functional and important in the small bowel itself.

The microbiome plays a very important role here with bile recycling in particular because you've got groups of bacteria like Bacteroides and Clostridia species that can deconjugate bile acids in the small intestine, transforming them back into a form that can be reabsorbed in the ileum and make its way back to the liver. This recycling process is really important. It's a really important part of enterohepatic circulation, and this is part of the key of maintaining healthy bile levels for digestion and overall liver support. So having the right microbes in the right diversity in the microbiome is really important here as well.

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