Build Your Resilient Gut
MICROBIOME & BEYOND

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Common GI Problems & Solutions:

Gallstones - Bile Insufficiency

Video Transcript:

One of the most common issues in the upper GI with upper GI problems is bile insufficiencies, gallstones and gallbladder removal. Some of these conditions are increasing prevalence. The definition of these, low bile production or flow basically means insufficient bile being released from the liver or the gallbladder. So you could have two or one of the two problems in your system where either your liver is not making enough bile and therefore your gallbladder doesn't have enough to secrete, or your liver is making plenty of bile, but your gallbladder is clogged up and not functioning properly so it's not secreting the right amount. Or both can be wrong. You might not be producing enough bile and you may not be secreting whatever that is being produced effectively. So those are two significant conditions that can drive the issue of bile insufficiency. And then as a result, gallstones as well.

Gallstones are hardened deposits that form in the gallbladder. We will talk about why that is. And then gallbladder removal, which is reducing the concentration or recycling of the bile acid issues, and then, of course, getting the gall bladder taken out as well, this is increasingly happening, especially with the use of GLP-I agonists. I'll talk about that a little bit. So signs and symptoms of either having bile insufficiency, gallstone issues or gallbladder removal itself is bloating, floating greasy stools. Floating greasy

stools basically is a result of not absorbing and breaking down fat appropriately. So more fat is coming out in your stool, and so you can visually see that in your stool itself. Poor fat digestion, so you don't assimilate fatty foods well, it comes out undigested, constipation or loose stool. And then hormone imbalances as well because anytime you've got bile insufficiencies, it means you've likely got some sort of liver issue. And the liver and bile are very important for hormone balancing, especially estrogen. And so if you have estrogen issues, it is worthwhile getting checked what your liver function, gallbladder function looks like.

Gallstones tend to be sharp pains in the upper right abdomen. It can cause nausea after fatty meals, back pain, and so on. If you're having any of those, you definitely want to go and get checked. There's, of course, ways of breaking down gallstones and trying to get them removed, but one of the best ways of protecting against it is by having adequate bile flow. And then post-gallbladder removal, of course you're going to have lots of loose stool because you're not secreting bile anymore. There's an urgency after each meal because the meals are being laced with the fat and it's just moving through the system too much and you're not digesting the fat. So then you end up with reduced fat digestion as well.

The consequences of this is fat nutrient malabsorption. So your fat soluble vitamins, A, D, E, and K, because you're not absorbing fat effectively... If you remember, in the previous module, bile is a surfactant, so it can create a surfactant place where it can take oil-soluble things and then it can surround it in a way that it makes it water-soluble. So this is how we absorb our fat-soluble vitamins like vitamin D, E, A, K, is that these are fat soluble vitamins, so they won't go into the gastric system, or sorry, the digestive system easily. They won't go into blood easily. They have to be carried on lipids. And that's one of the roles that bile does, is it creates those lipid carriers, the fatty carriers of nutrients that are fat soluble. So this is where LDL/HDL comes from, the lipoproteins. The high density lipoproteins and low density lipoproteins are those structures and triglycerides are those fatty structures that bile helps create that then allows you to carry fat-soluble nutrients in the blood system.

Remember, the blood system is an aqueous system, so oils and fatty things don't mix well in that system. The only way you can carry them is through these high or low density lipoproteins, which you need then bile in order to make those lipoproteins. So dysbiosis, an increase infection and overgrowth, is also a common association because one of the things that bile does in addition to helping the absorption of fat and fat-based nutrients is that bile is a very strong antimicrobial. So it prevents the overgrowth and the colonization of dysfunctional microbes. So if you've got inadequate bile production, you have a much higher risk of being colonized and infected with infectious organisms coming through the system, especially gram-negative organisms and so on.

It reduces detoxification capability, because if your liver is not functioning properly, that's a very important component of bile's production... sorry, the liver's production of bile, and bile being part of that phase one detox, that phase one detox won't be happening effectively if you don't have adequate bile levels. And then you have the risk, of course, of gallstones and inflammation with reduced and sluggish bile flow. So bile is critically important, right? Think HCL, think pancreatic enzymes and think bile. Those are very, very important components of overall digestion, and it's extremely common to have deficiencies or insufficiencies in all three of those.

So, root cause of these conditions: highly processed fatty foods. If you're going to be consuming lots of fatty foods, especially if they are processed fatty foods, a lot of fried foods, those fats are very inflammatory. Those inflammatory fats cause endotoxemia and can cause inflammation in the lining of the gut. And then that leads to leaky gut. Leaky gut leads to endotoxemia. Endotoxemia compromises the function of the liver. So highly processed foods that can lead to inflammation in the GI tract and thereby leakiness in the GI tract can compromise how the liver functions. And that compromises bile acid production by the liver.

Dehydration is another thing. Low fiber diet because you're not getting adequate mortality and you're getting stasis in the bowel, too much fermentation, again, that leads to gas production, inflammation compromising the lining of the intestines, adding

to leaky gut, leaky gut compromising liver function as well. Toxin overload, low bile acid recycling, which we'll talk about that in a second, and then nutrient deficiencies like choline, phospholipids, taurine, B vitamins, vitamin C, magnesium and zinc, if you're low in any of these micronutrients, it can lead to bile insufficiencies by impacting the liver in a negative way.

Gallstones have a hormonal balance risk associated with it, especially estrogen dominance, which is the most common form of hormone imbalance in women. Rapid weight loss, sluggish and low bile and poor bile acid recovering... sorry, recycling are all part of the risk factors for developing gallstones. Some of the solutions that you can do in both the case of insufficiency, gallstones... And then of course, if your gallbladder has been removed, nothing you can do about that, but hopefully by fixing bile issues and gallstone issues, you hopefully will never need to even think about removing your gallbladder. So what are some of the things you can do?

From a lifestyle perspective, meal hygiene, eating smaller meals more frequently, those are going to be critically important. Stay hydrated, avoid drastic weight changes, regular exercise, and of course optimizing the microbiome because the microbiome can be very protective for the liver and thereby protective for bile acid production as well. So keep the five pillars in mind that we've talked about a few times now. Those are all going to be really important if you've been suffering with bile insufficiencies, gallstone, and those related issues.

From a food perspective, bitter greens, as I mentioned, bitters, stimulate the release of bile. Bitter supplements can work well also, lemon water, cruciferous vegetables, egg yolk in moderation, liver, salmon, dark poultry, soybeans and so on can help in this case. And then smaller amounts of healthy fats. So if you have bile insufficiency already and you're eating a very high fat daily diet, you're going to have issues with processing that fat. It's going to then create inflammation in the lining of the gut and come out as loose stool and disrupt the proper movement of the bowels overall. So you want to have smaller amounts of fatty acid, but you want to have an anti-inflammatory source of fat like olive oil, for example. So the Mediterranean diet in this case can be

quite helpful as well, but it can stimulate bile flow without overburdening the system with higher toxicity and inflammatory drive from the fatty acids.

Supplements that can be helpful here is, again, **MegaGuard** to improve bile flow and motility, **HCLGuard** to support the stomach acid and bile release signaling. Again, these are things that help with things that are upstream in the gastric system, and now they also can be quite helpful in the small bowel downstream of the gastric acid system, again, because they're all driven by very similar dysfunctions. **TUDCA** is another supportive nutrient that is really beneficial. It's got great studies on it for supporting the liver, improving bile flow and bile acid recycling, which is the reabsorption of the bile acid, cleaning it up, and then re-sending it back out into the system. Choline and phospholipids like phosphatidylcholine and taurine can be very useful. Choline really helps your cells uptake fat. So this is one of the reasons why choline can be effective in a weight loss regimen because it can improve fat digestion, which then provides more satiety and nutrient base for the individual. So that can be very useful as well.

Dandelion root, milk thistle, of course, to support the liver. Dandelion root can also support the liver, artichoke leaf extract, which is in **MegaGuard**, so you don't need to take that separately if you're using **MegaGuard**, ginger, and digestive bitters. Digestive bitters are fantastic. Digestive bitters to me are such an important part of a healthy digestion from a supplemental standpoint because, again, bitter receptors in the stomach, even in the mouth and then in the small intestine all get activated to move food through the system, break down food properly, reduce inflammation, increase stomach acid flow, bile flow, increase pancreatic enzyme flow, and then of course initiate the peristaltic movement as well in the gut. So bitters can be very, very beneficial to improving digestive health.

Additional nutrients for gallstones: magnesium to relax the bile ducts and prevent biostasis, which can be quite helpful. And then at the end of the day, the microbiome foundation to this problem are **MegaSporebiotic**, **MegaPre**, and **Tributyrin-X.** Tributyrin, of course, replaces some butyrate that may not be being produced adequately in the small bowel, or at least escaping from the large bowel into the small

bowel. And you want butyrate there to modulate immune response and mortality and so on. MegaSpore and MegaPre do an amazing job of fixing the microbiome and the tight junction, so it negates leaky gut, negates some of the inflammatory effects that go on when you have bile insufficiency and gallstone issues in the GI tract.

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