

Beating the Bloat: Small Intestine Bacterial Overgrowth

Presenter: Dr. Allison Siebecker, ND



The following transcript and information is not intended to take the place of medical advice and/or treatment from your personal physicians.

Sean: Dr. Allison Siebecker, welcome to the Sessions!

Dr. Allison Siebecker: Thank you!

Sean: Thank you very much for being here. We're talking about something that you are totally fascinated with, as am I: small intestinal bacterial overgrowth. How did you become so fascinated with this?

Dr. Allison Siebecker: Like so many people, because I had digestive problems my whole life, ever since I was about five, and was trying to figure out what was wrong with me. I went to all the best doctors. Really, really, lots of great people. I'm a naturopathic physician and so, when I was in school, I went to my teachers, I went to my gastroenterology teachers...people, really, who know a lot.

And they couldn't figure out what was going on with me, and eventually we figured out—I got the diagnosis of irritable bowel syndrome, IBS, which is a diagnosis of exclusion, so when you can't really find anything and you've got these symptoms, then you have IBS. And so eventually, I learned it was small intestinal bacterial overgrowth, otherwise called SIBO.

So since then, I've just had—and I'll go to the side here and say that the treatments helped me very much; it was one of the first things that really helped me when I had this information—so since then, I became really passionate to share that knowledge about it, learn more for myself so I can understand it, and then share it with everyone I could, patients and doctors, to spread this information around so other people could get helped.

Sean: While you were going through this, before you actually got diagnosed and figured out what it was, what kind of symptoms were you having?

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Dr. Allison Siebecker: I had some of the typical symptoms. I had abdominal bloating, which is the worst. The term “bloating,” most people use to refer to a swelling of the abdomen and the stomach region, usually worse after you eat and getting worse as the day goes on. That’s the typical bloating pattern, but some people don’t swell out and they just have a feeling of bloating.

Technically, medically, the word “bloating” means the sensation, and “distension” is the swelling. Pretty much everyone just says “bloating” for the swelling out, the distension. So these are very—that’s a really awful symptom. You have to loosen your pants or wear expandomatic pants. I have a closet of those. Women will buy pregnancy pants, they’ll say they can’t wear jeans. A lot of people bring a change of clothes for throughout the day. It’s really, really terrible.

So that’s one of the main symptoms. There’s also constipation. That’s what I’ve suffered from, and for me, I didn’t know that irritable bowel syndrome, that you could have constipation with that. Most people think of that as diarrhea, and that’s true. You can have diarrhea, but you can also have constipation.

Or, you can have a mixture of the two, and that’s confusing. They used to think it was just, “oh, maybe on some days you have this mixture of constipation, and some days you’ll have diarrhea.” That’s called alternating. But, it can be a strange mixture. It could be that you go 10 times a day, but only little bits. That’s kind of a mixture.

Sean: Little rocks.

Dr. Allison Siebecker: Right. It could be—and it always feels incomplete. Or it could be that you go only twice a week, but it’s watery, so there’s odd ways it can all go together. Constipation can sometimes really bother people. They can feel pain, or they can get a miserable feeling. But what can maybe even be worse is the people who have terrible diarrhea where they can’t go out. I mean, if they have to always be near a bathroom—

Sean: It’s got to be frustrating.

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Dr. Allison Siebecker: It's terrible. It can rule someone's life. And then the fourth symptom that's real common is pain, and I had quite a bit of that, too. Abdominal pain. That can also keep people at home. It would keep me up all night. I would be in pain. I would sing nursery rhymes to myself, shaking myself, rocking myself. Just terrible; these people suffer with these awful symptoms.

So those are the main symptoms: abdominal pain, constipation or diarrhea, and bloating. That's how you diagnose IBS, is with those symptoms. But there's other symptoms, too, that go along with SIBO. For instance, acid reflux can be caused by SIBO. Most people are familiar with that. That's heartburn, the feeling of heartburn. Excessive burping or farting can go along with SIBO, so that's not pleasant for social situations.

Sean: Absolutely not.

Dr. Allison Siebecker: And then, nausea. Nausea can go along with that. Usually that comes with excessive burping and even acid reflux, not always. And then fatigue—all of this is exhausting for a person—and brain fog. It's just too much, so people can feel very tired and lethargic and...not feeling good.

Sean: It seems like, over the last two, three, four years, people have become more privy of the term small intestinal bacterial overgrowth, or SIBO. I tend to hear it all the time. Is this a new condition?

Dr. Allison Siebecker: It's not. It's been around for as long as people have been around, I would presume, but around 30 years ago, it was published in journals, the association between scleroderma and SIBO.

Sean: Scleroderma is what?

Dr. Allison Siebecker: Scleroderma is an autoimmune disease that affects the blood vessels, nerves, and muscles, and it often affects the gastrointestinal tract. So it slows motility, or movement, in the intestine, allowing bacteria to back up, causing SIBO.

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And so this whole association was not controversial, accepted, documented, published for over 30 years. Also, SIBO is associated with blind loop syndrome, which is surgery. That isn't done so much anymore, but lots of articles about that. So it's not new, it's been well-documented, and I think it's important to mention that there are people that don't believe in SIBO.

They don't think it exists. They think it's a fad and people are making it up and it's oh, the next new thing. It's not new. The term and the condition has been documented. It's what has changed—I'll tell you what has changed. Around the year 2000, Dr. Pimentel and associates published their theory and evidence that small intestinal bacterial overgrowth is the underlying cause of IBS, which we've been talking about, and IBS is the most common gastrointestinal condition.

It's very common. And because of this, this association: "What? You're saying SIBO causes IBS?" Then it became instantly controversial. So, SIBO itself has become controversial, not just its association with IBS. So that's a little ridiculous. So that's what's going on. So it's not new. In fact, I do think that it is increasing. I don't know, do you want to talk about that now?

Sean: Let's do it!

Dr. Allison Siebecker: Alright, so—

Sean: You know what? Actually—

Dr. Allison Siebecker: Save it for later?

Sean: Let's save that for later, 'cause I want to make sure everybody understands what SIBO is. So you talked about scleroderma, and the motility slowing down, and you said bacteria backing up. Where are the bacteria coming from, and where are they backing up to?

Dr. Allison Siebecker: Okay. So, the bacteria can come from either—we're taking them in through our mouth all the time as we eat and drink and just swallow. There are bacteria everywhere. They can be bacteria that would normally exist in the small intestine, although a very small amount should

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exist there normally, but some do. But, primarily, it's from the large intestine. I think most people know that the large intestine houses a lot of bacteria.

People talk about it all the time, the good bacteria, it's why we're taking probiotics a lot of the time. They're supposed to be there. They do good things for us. So, they can—those good, normal bacteria—can back up into the small intestine. Sort of overgrow. And because they can go in whatever direction when they're overgrowing, trying to find a home, they sort of move up that way. And that's primarily what small intestinal bacterial overgrowth is.

It's large intestine bacteria. So it's not pathogenic bacteria, actually. This is a hard concept for a lot of people because, since the condition is “bad,” you know—it causes bad symptoms—people think it's bad bacteria. And it's not. The condition is made of normal bacteria.

Sean: Oh, so it's the good stuff getting to a place where it's not supposed to be?

Dr. Allison Siebecker: Well, I don't know that we would—what terms do we want to use? “The good stuff,” I think, most people think of as being probiotics. The kind you take in yogurt. There was only one study showing that those types of bacteria were overgrown in SIBO. Most of the studies do not show that. They just show what they call normal commensal bacteria, so they're not actually probiotic. They're just normal inhabitants.

But they're not salmonella, E. coli, shigella, campylobacter...those are pathogenic bacteria. This is not a situation of those. If you had those, you would be acutely ill, throwing up and having diarrhea. They cause acute disease. They don't cause SIBO.

Sean: Talk about how this hurts our digestion.

Dr. Allison Siebecker: Okay. So, there's two main ways that we can have our digestion impaired from SIBO. First of all, the bacteria are not supposed to be up in the small intestine. That's the improper location for them, and that's the organ where we digest and absorb our food. And when and if bacteria are overgrown there, they're going to compete for our food.

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So that's one way they can hurt our digestion, is just competition. When food comes down, they can grab it. So then we have malabsorption and maldigestion, because they're eating the food.

Sean: So nutrients are being stolen.

Dr. Allison Siebecker: Stolen. They steal. They steal from us. In fact, they're really annoying little buggers. They can actually compete for micronutrients; they can uncouple B-12 from intrinsic factor, and then they consume the B-12.

Sean: What does that mean, though? Because I'm sure you said "intrinsic factor" and everybody said, "what? What are we talking about?"

Dr. Allison Siebecker: Intrinsic factor comes from the stomach, and it's just a factor that needs to bind with B-12 so that someone can absorb their dietary B-12. It's just the way it's absorbed. So, bacteria are always meddling with the way we need to digest and absorb things when they're up there in the small intestine. They take the B-12 off the intrinsic factors and then they eat the B-12. It's really rude. They can compete for minerals, they can do all sorts of things like that.

Sean: And when they steal the B-12, what kind of symptoms would somebody have from that?

Dr. Allison Siebecker: Oh, there can be all kinds of symptoms. There can be neurological symptoms, and fatigue, and B-12 deficiency—B-12 deficiency is anemia. It's a type of anemia. So, the other types of anemia are iron deficiency anemia and folic acid. SIBO doesn't tend to cause folic acid deficiency, but it also causes iron deficiency anemia.

So, in fact, I didn't mention it before when we were talking about symptoms, but some signs of SIBO are anemia and steatorrhea, which is fatty stools. So you'll see fat coming out in your stools. And so here's another way that bacteria can harm our digestion. They can deconjugate bile. So bile, when it's released from our gall bladder, it's released in a conjugated form. This just simple means that it's the way it needs to be to help us with our fat digestion. They pull that apart, and then the deconjugated bile does all sorts of things.

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First of all, we now can't absorb our fat, so a lot of people will have fat coming out in the stools, and then you can have deficiencies of fat-soluble vitamins like vitamin D. There's certainly—I live in Portland, Oregon, so we have a lot of clouds—there's other reasons for vitamin D deficiency, not going outside enough, and such. But this could be a cause. And the essential fatty acids, the omega 3s, if someone isn't supplementing with them, this could be a cause of omega 3 deficiency.

Sean: And it might be thought that it's a gall bladder problem, but it's not really a gall bladder problem. It's just that the bile's being all thrown out of whack.

Dr. Allison Siebecker: Absolutely. Deconjugated bile is damaging to the cells that line the small intestine. On those cells are enzymes, digestive enzymes. They're brush border enzymes. Most people, when they think of digestive enzymes, they think of them coming from the pancreas, getting secreted from the pancreas into the intestine, and you'll see a lot of those in supplement bottles. But also in the supplement bottles, digestive enzymes, are brush border enzymes. Brush border is another term for the lining of the small intestine.

So there's these enzymes that sit right there. So if that lining gets damaged, those enzymes get damaged, the bile can damage them. And then there's also transporters that get the nutrients into the cells. Those get damaged. The whole digestion absorption apparatus that sits along the lining can be damaged by deconjugated bile, but also from the bacteria directly. They secrete enzymes themselves so that they can digest foods for themselves. Those enzymes that they secrete can actually digest the lining of our small intestine.

Sean: Really?

Dr. Allison Siebecker: Just freaky. In fact, they in particular want to digest and consume our saccharide-digesting enzymes. Saccharides are sugars, or carbohydrates—so, saccharide, carbohydrate and sugar, those terms are all synonyms. So, they actually digest our sugar-digesting, carbohydrate-digesting enzymes. They eat them. It's really, really rude.

Sean: Which means that we can't absorb our carbohydrates as well.

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Dr. Allison Siebecker: That's right. Exactly.

Sean: Oooh, that's fascinating stuff.

Dr. Allison Siebecker: It's really, really interesting. So they do all these damaging things. Also, bacteria make us secrete pro-inflammatory cytokines. So they cause inflammatory damage in our intestine. That can cause leaky gut. So SIBO is a cause of leaky gut. So that's another way that digestion and absorption get disrupted.

Sean: So we've got B-12 issues. We've got iron issues. We've got bile problems, which can lead to the fat-soluble vitamin deficiencies, correct?

Dr. Allison Siebecker: Fat malabsorption.

Sean: Right. We've got the fact that they break down the gut itself, causing leaky gut, which can be a huge problem leading to food sensitivities and on and on. And we've got them breaking down, what was it, the—

Dr. Allison Siebecker: Our enzymes, and also the transporters get affected. And then the very first one we mentioned was that they can compete for and steal our food, and what I didn't mention was that bacteria's primary food is carbohydrates. Just like everyone, they like sweets, right? So carbohydrate malabsorption is another issue. So, I see a lot of patients with SIBO who are underweight, actually, and struggling to gain weight. Not everybody presents like that. Or just having a lot of nutrient deficiencies and not being at their best.

Sean: Can it cause carb cravings at all?

Dr. Allison Siebecker: Sure could. Absolutely. I think from various mechanisms, either because you're not getting it yourself, you're not absorbing what you need, or because...I don't know if this is really true, but I think that when there's organisms in us that want sugar, they can somehow signal us to eat more of it.

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Sean: Wow, it's like feeding the beast within. That is really crazy. Any other ways they damage the digestive process?

Dr. Allison Siebecker: Yeah. So, they can affect our mucus secretion. So in the beginning when SIBO—this is the theory, anyway—when SIBO first develops, as a defense mechanism, our intestinal lining will secrete extra mucus to try and create a buffer for all this damage from the bacteria themselves trying to eat our lining and the bile. Excess mucus, then, can coat our food particles so that our enzymes can't reach them and break them apart.

So that, in itself, can cause maldigestion and then malabsorption. And also they created such a thick lining, the food can't get through to the absorption, to the lining where it needs to absorb. So that's a problem. An extreme example of this would be cystic fibrosis. This is not cystic fibrosis, but that is a condition where there is extremely excessive mucus, so they have terrible digestion and absorption problems.

But then, over time, the cells that make the mucus can become tired, and then you have deficient mucus. So then you don't have any protective coating, and then you're more open to the ravages from the other reasons.

Sean: So how does somebody find out if they have this?

Dr. Allison Siebecker: The best thing to do is get a breath test. There's two ways you can diagnose it. The first is a hydrogen and methane breath test. So this is a simple test. It can be gotten from really any hospital or lab that has the machine that tests for it, so most facilities have this. Or there are many mail order labs that will send kits, and you can do this at home.

There's two types of sugar solutions you need to drink to take this test. I'll explain that in a second, but the main one that we use for the diagnosis has to be prescribed by somebody with prescription rights, so a patient can't just order it themselves off the Internet, as far as I know. That's lactulose. That's the best solution to do this test. Lactulose breath test is what it's called, although that can be used—no, that's primarily used for SIBO.

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So the way you do this test is, it's a challenge test, which is unfortunate, which means it could make your symptoms worse. But what we're trying to do is feed the bacteria something that only they eat. So, only they break down lactulose, and humans can't break down, digest, or absorb lactulose.

So you drink that, it feeds the bacteria, and then they make gas. And we haven't talked about that, so we have to talk all about the gas and the fermentation. Then we measure the gas and the breath. What happens is, the gas is formed in the intestine, comes across the lining, goes to the lungs, and then we breathe it out.

Sean: That's methane and hydrogen, you said?

Dr. Allison Siebecker: Methane and hydrogen. And then there's little tubes and things you collect your breath with, and then you mail it back, or if you're in a facility they check it right then. It's a three-hour test. A two-hour test is sufficient. Two hours is about the transit time of the small intestine, which is why that's sufficient.

But three hours gets us a look into the large intestine. Also, it shows us—if somebody's constipated, maybe their transit is a little longer, so it shows us better the small intestine. So I would recommend, always, a three-hour lactulose breath test. For people who need to find places to get that test, they can see my website, siboinfo.com, under Resources > Testing.

Sean: So is that a positive or negative test, or are there different levels that you're looking for?

Dr. Allison Siebecker: It is positive or negative, although it takes a bit of art of interpretation, but the general positives are hydrogen of 20 parts per million or above is positive, and a methane of 3 parts per million or above is positive, and that's new. It used to be 12, and now 3 and above is considered positive, so that's really new information in the last year.

And I think a lot of physicians probably aren't keyed into that, so they might miss that. But this test is a great test to check for diagnosing SIBO, and it's really important that people get a breath test

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because, first of all, you need to identify which gas is present, and I'd like to go over with you the difference between hydrogen and methane—

Sean: Please do, but first I want to make sure I understand this, and so, the levels that you just gave us for hydrogen and methane, do they both have to be positive or can it just be one?

Dr. Allison Siebecker: It can be just one.

Sean: Gotcha. Okay.

Dr. Allison Siebecker: And if—also, you can use a combo. So, a combo of 15 is considered positive—maybe your hydrogen was a little low and your methane was a little low, but together, they equal 15. So that's also positive. But actually, before I go on to that other thing I want to talk about, the gas, I wanted to tell you about the other tests.

There's also a culture. That is not common. This you would get during an endoscopy, which is when they put an instrument down, and it's a test to check for that upper small intestine. You would have to specifically ask for a culture. So, it could be diagnosed that way, but it's not at all common. And then there are a couple tests that don't check for SIBO that some people are unaware of.

The most common one that people get confused about is the stool test. They think you can check for SIBO with a stool test, but you can't, because the stool only reflects the large intestine and many people don't realize that. And so they'll ask over and over, "but everything is fine on my stool test." That's not how you diagnose SIBO, so...that doesn't reflect the small intestine and the bacteria that are there. So you have to use the breath test.

The other one is the urine organic acid test. There's been some papers written about the possibility of using that test to diagnose SIBO, but unfortunately, it's not been validated yet and it's very unclear whether we can proceed with that. I've run some dual tests on people, and what you see is sometimes there are matching markers and sometimes there aren't.

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So, it's not actually a diagnostic test for SIBO, and I think that's important to realize. I think there are a lot of practitioners who don't have prescription rights for the lactulose test that are using that, because they need something, but it doesn't diagnose SIBO.

Sean: So, breath test: gold standard.

Dr. Allison Siebecker: Breath test. It's really the only way to diagnose SIBO. Yeah. So let me tell you about the gas!

Sean: Tell me about the gas.

Dr. Allison Siebecker: Okay, 'cause this goes back to symptoms and the damage they can cause. When bacteria eat carbohydrates, they make gas. And so these gases are hydrogen and methane, predominantly. They also can make some carbon dioxide, but carbon dioxide can absorb easily across our intestinal lining. Hydrogen and methane don't absorb very well across our intestinal lining, so they stay there in the intestines.

That's what can cause this bloating that people are so bothered by. Additionally—because that's just obvious, it's this swelling of the balloon. We've got extra gas there. The extra gas, when it tries to exit—because it can't really just diffuse—has to come out one way or the other, so burping and farting can occur. The gas can move backward, and if that happens, gas back pressure can cause the acid reflux—

Sean: That'll blow open the valve in the—

Dr. Allison Siebecker: The sphincters.

Sean: —in the esophagus. Okay.

Dr. Allison Siebecker: Yeah. And then, nausea can come with that, so you can have belching, nausea, and acid reflux. Not everyone has those altogether, but these are symptoms. And then, the constipation and diarrhea—and this is really fascinating to me—so, it's been shown that the

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hydrogen gas is more associated with diarrhea. We don't know why. And it's been shown, for sure, that methane gas causes constipation.

To me, this is one of the most exciting discoveries that's come out of all this, because no one has ever thought that basically a bacteria could cause constipation. People have thought that bacteria can cause diarrhea, because there is a condition called antibiotic-induced diarrhea—C. diff, C. diff. Clostridium difficile—so when you take antibiotics, it kills other bacteria but not the C. diff. The cC diff overgrows, and the C. diff can cause diarrhea.

So people have associated those, but no one has associated bacteria and constipation, so now we have this association. And it's... I have to change my terms a little bit, because it's actually technically not bacteria that make methane gas. It's another class of organisms called archaea, which I hardly know what that is. I've looked it up, but I'm not a microbiologist, so I'm just saying to be technical.

Sean: Okay.

Dr. Allison Siebecker: They're not actually bacteria, so it would be more proper—

Sean: Archaea?

Dr. Allison Siebecker: Yeah.

Sean: Okay.

Dr. Allison Siebecker: So, I use the word "organisms" because it's easier for me.

Sean: Okay. Something that's not bacteria. Okay, gotcha.

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Dr. Allison Siebecker: And we know the exact organism that does this, and it's *M. smithii*. So that is the organism that's creating this methane gas, and when they take methane gas and infuse it into the intestines, it slows transit by 70%, so it's a direct cause of constipation.

Sean: Interesting.

Dr. Allison Siebecker: Yeah. Why I think this is so interesting is because if you can't find a reason for your symptoms, what people tend to do is blame themselves, and go into a lot of psychological or spiritual things, which is wonderful, but this can let people off the hook. So people might've thought, "oh, I have an anal personality," or something like that, or, "I hold on and I'm constipated all the time," and instead there's a bacteria creating a gas that's constipating a person, and they can get let off the hook.

So, that abdominal pain that people experience, that can be caused by gas too, because the gas creates this pressure, and the intestines are sensitive to pressure, so that can feel like pain to people. Also, visceral hypersensitivity, it's when your intestines or organs are more sensitive than the next person's. That's a feature of irritable bowel syndrome, so a lot of people just, as a part of their IBS, have increased sensitivity, so they're gonna feel the pain more.

And then, lastly, the muscles can contract against the gas. Muscular pain is a very serious, awful pain, so think of kidney stones and gall stones. This pain sends people to the hospital. They think they're dying from this pain. So muscular pain is bad pain, and that can happen too.

Sean: How does somebody get SIBO?

Dr. Allison Siebecker: That's a big question. Okay. So, theoretically, just for ease, I like to think of it this way: it would be anything that would slow motility of the intestine, so slow the downward movement of the intestine, anything that partially obstructs the intestine, such as something could back up behind it—the bacteria could back up behind it.

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And lastly, I call it non-draining pockets. So these are little diverticuli that form on the side of the intestine. It would have to be in the small intestine. People are familiar with them in the large intestine, but the small intestine. Or a blind loop from surgery. So these would be where the bacteria can get into this little pocket, and there's no way to clean them out. Now the first one—

Sean: Slowing motility, right?

Dr. Allison Siebecker: Yeah. That's I think the most common. This follows into the group of anything that damages our protective factors against having bacteria colonize the small intestine, because they're not supposed to be there. So, these general factors that protect us are the stomach acid—hydrochloric acid—so therefore, taking proton pump inhibitors is a real risk factor for developing SIBO, because it lowers the acid. Acid kills bacteria.

Bile kills bacteria, so if you don't have enough bile, if it's insufficient...Third is digestive enzymes that we secrete from the pancreas and along the brush border. They have an effect against bacteria, reducing bacteria. Then there's the immune system of the intestine. If your general immune system is down, or your intestinal immune system is down, then you can't fight those bacteria. And then there's the migrating motor complex, and this is what I really want to talk all about, so let me set that aside—

Sean: I remember you brought that up on the radio show. They're like sweepers or something like that, right? Oh, that was a long time ago. It stuck.

Dr. Allison Siebecker: Oh, yeah! Right! Okay, but before I say that one, the last one was ileocecal valve, and that's just the sphincter or valve at the bottom of the small intestine separates the small intestine from the large intestine. By the way, I'm saying all these terms and I haven't described gastrointestinal anatomy. Very briefly, you have the mouth, the esophagus, the stomach, the small intestine, and then the large intestine. Just so people can follow that.

Sean: And there's like a gateway in between the small intestine and the large intestine. That would be the ileocecal valve.

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Dr. Allison Siebecker: There's a gateway between all of them. There's valves, there's sphincters, at every step of the way.

Sean: Okay.

Dr. Allison Siebecker: Yeah. So the small intestine is its own separate organ with a front and back door, and so the back door's the ileocecal valve. So if that valve is just stuck open, well then the bacteria can more easily come into the small intestine. So anything, any of those factors that are decreased or impaired could be a risk factor for SIBO.

But I want to describe the migrating motor complex. So this is a downward movement, also called the house cleaner or housekeeper, of the small intestine. It's meant to, after you've finished eating, it's meant to sweep any leftover food particles or debris and bacteria out of the small intestine down into the large intestine. So what happens—away from food—when you eat food, most people know you have peristalsis, and peristalsis is sort of like a mixing, churning motion.

But it doesn't move downward fast; it just mixes and slowly moves down, so that our food has time to absorb. This is a different thing. This is like a propulsive movement. It's really sweeping. It's really sweeping things out. So currently, it's thought that this is the primary underlying cause of many people's SIBO, is when the motility is not there. There's also the others I've mentioned—partial obstruction, and that's another important factor.

So, there are a lot of diseases and reasons why you could have any of these things go wrong. Diseases that slow motility would be things like diabetes, scleroderma I mentioned before, hyperthyroid...surgery is another thing that could slow motility. What if you had some surgery and had a little nerve damage done? That can happen to a lot of people. A lot of people get SIBO after a surgery.

And then there are drugs that can affect this, like the proton pump inhibitors we mentioned as a risk factor, but the other one is opioid painkilling drugs. They slow motility. Many people are familiar; they take a painkilling drug, after having surgery maybe, and they can't go to the bathroom.

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Sean: That constipation.

Dr. Allison Siebecker: Total constipation. Slows motility. There are a lot of people who get SIBO where they never had any gastrointestinal problems before. They have something like a kidney stone, or they go in for like a wrist surgery or a knee surgery. Maybe they're an athlete. Bam. They get SIBO afterwards. And it's really just from...one could think maybe some surgery, abdominal surgery could do it. But if they're having wrist surgery, that's not it! It's just the opioid painkillers that do it. So those are some of the reasons people can get it, but I want to give you just a picture of what I see a lot.

Yes, I see people who never had GI problems, and then they have an instigating factor like the opioid medicine. The other big one that I'd like to explain in a minute is a bout of acute gastroenteritis, which is food poisoning, traveler's diarrhea or stomach flu. That's what gastroenteritis is. Some people go traveling in a foreign country and they never had GI problems. They get food poisoning, the go on to get SIBO.

And I want to explain this all to you, because this is the most fascinating thing: but, for a lot of people, it's a combination of factors that all come together to give them SIBO. So maybe they had gastroenteritis previously, because most people have. And then maybe they have hyperthyroid—which slows motility—and then maybe they have an acute period of stress. Maybe two weeks. Bam. It's like a combination of things, you know.

Or they had gastroenteritis and then maybe they had some IBS in college, but it kind of cleared up but they have a weakness, and then they take a painkiller. Something like that. So for a lot of people it seems like it's a combination of things all adding up to the tipping point.

Sean: Talk about the gastroenteritis cause.

Dr. Allison Siebecker: Okay. I think that this is the most common reason people get SIBO, as far as I know. So what happens is, you get food poisoning. So what happens is there's these bacteria that can cause it. There are other things that can cause gastroenteritis, but this is primarily about

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bacteria. These are the pathogenic bacteria I mentioned in the beginning of our talk that are not involved in SIBO in terms of they're not overgrown in SIBO.

So this is E. coli, salmonella, campylobacter jejuni, shigella...things like this. These are contaminated in the food. They come in, and all these bacteria release the same toxin. It's called CDTB—well, CDT is the toxin. It stands for cytolethal distending toxin. Big long word.

So, this toxin they release, our immune system comes out to fight. When it does that, it turns out, one of our cells in our intestine looks similar to this toxin. At least a portion of the cell does. And so, it's through molecular mimicry, or cross-reactivity, we now attack our own small intestine cell. It's kind of a nerve cell, kind of a muscle cell. It's called the ICC: interstitial cell of Cajal.

Sean: You said molecular mimicry. That's like a case of mistaken identity, right?

Dr. Allison Siebecker: Well, friendly fire. Exactly. So because one of our own nerve cells in our intestine looks like this, similar enough, to this toxin, when our immune system comes out to attack the toxin, it attacks our own cells. So that's autoimmune-mediated. It's an autoimmune thing, friendly fire. And so then, unfortunately, we damage our own nerve cell, the ICC. Turns out the ICC cells—

Sean: Can you go back to just...I want to make sure I get this, and that they get it as well. ICC means what, again?

Dr. Allison Siebecker: Interstitial cell of Cajal. And I'm very bad at—I've learned this pronunciation from Dr. Pimentel. I had been saying it wrong for years!

Sean: Interstitial cell of Cajal.

Dr. Allison Siebecker: It's spelled with a C, so I-C-C.

Sean: And what do they do, these cells?

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Dr. Allison Siebecker: Just about to say that. These cells are responsible for migrating motor complex, the all-important housekeeping wave that clears bacteria out of the small intestine.

Sean: Got you! Okay. Alright.

Dr. Allison Siebecker: So we've damaged these cells, now we can't do the migrating motor complex. And then bam, bacteria back up. So this is theorized to be now the major underlying cause of many people's SIBO.

Sean: So you're out of the country—or you're in the country—

Dr. Allison Siebecker: You're in the country—

Sean: —and you eat something bad, and it's got shigella in it—

Dr. Allison Siebecker: Or campylobacter—

Sean: —or let's say you've got low stomach acid, so your stomach acid doesn't kill it, right?

Dr. Allison Siebecker: Maybe so. Exactly.

Sean: So when it's down there, it starts to produce the toxin, the immune system starts to fight it—

Dr. Allison Siebecker: And you get vomiting and diarrhea, 'cause you have food poisoning.

Sean: Right.

Dr. Allison Siebecker: But meanwhile your body, your immune system's trying to fight it.

Sean: Tries to fight the toxin. At the same time, it has this case of mistaken identity or friendly fire with the ICCs, right? And ICCs are responsible for sweeping that bacteria along. But if they're not

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working, because they're being damaged by the immune system, you're going to get an overgrowth of bacteria.

Dr. Allison Siebecker: You got it!

Sean: Woo! That's what I'm talking about!

Dr. Allison Siebecker: So I just, I find this so fascinating that these mechanisms have been identified, because now that—and this is the work that Dr. Pimentel and his team, they spent years on this, and he's gonna be publishing a lot more information about this, the connections—and, he's working on treatment for this! On this whole autoimmune piece and the ICC, so I really look forward to this coming out.

I feel like a lot of us are just waiting around for him to come out with these treatments, because this is a difficult condition to treat. Because if you have this going on, you have, basically, these cells that are damaged. That's a hard thing to treat, you know; it's not like, "oh, here, just take this easy pill for this." There's no simple solution at this time. And also, many people also get SIBO from after surgery, or maybe from endometriosis, which is a condition where there's—it occurs in women—where there's uterus tissue outside of the uterus in the cavity.

This can cause scarring. So there can be scarring from surgeries and adhesions can form. This is very, very common. An adhesion could be kind of like a scar tissue that wraps around the intestine, constricting it. And this is another common reason to have SIBO that's not related to this post-infectious IBS. That's not so easily treated, either; you're going to probably need surgery, and surgery could maybe make more adhesions.

It's difficult. You can try physical therapy, there's visceral manipulation, but it's not a sure, easy thing. So very unfortunately, for many people, the SIBO is not so easily—the underlying cause of the SIBO is not so easily treated. What if you have diabetes, or...scleroderma is incurable. These are not the simplest things.

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Sean: So somebody's watching this right now, and they go, "this sounds just like me." They go to the doctor, they take the breath test, and it comes up positive. What treatments are available for them?

Dr. Allison Siebecker: So, I have an algorithm that I use that I developed with my partner, who you interviewed, Dr. Sandberg-Lewis. Anyone can see this algorithm, it's in articles I've published, you can find all of this on my site, siboinfo.com, but I'll describe it. And we've modeled our algorithm from Dr. Pimentel's algorithm.

So what he offers are antibiotics—pharmaceutical antibiotics—and also something called elemental diet. But what we've added to it is herbal antibiotics, and also diet as a possibility of treatment. Diet is needed for sure in prevention, but some people can achieve real good symptomatic relief with diet.

What I think is really important about this is that now that this information has been discovered about SIBO and IBS and the link, that means there's new treatment options for IBS. And that is really important, because previously, all that anyone could do is take something for pain, take something for constipation...just for symptoms. Take something for diarrhea, right? Very, masking everything, very unsatisfying for a doctor and patient.

Or, they were given, you know, "it's all in your head." Take an antidepressant. And antidepressants do have some motility action, so there was another reason for giving them, but I'm so glad we have something beyond that now. What we have is targeting the bacteria, targeting the organisms that are overgrown, causing these symptoms. But before I go on to describe all of these symptoms, what's very important to realize is getting rid of the bacteria doesn't get rid of the cause.

It's like one step further than taking something for constipation or diarrhea, but it's not—we're not all the way there yet. We need further treatments. The basic treatments are gonna be these antimicrobials. So, pharmaceutical antibiotics, there's one in particular called rifaximin, brand name Xifaxan, that is very special because it stays in the intestine and only works there; it doesn't absorb out into the rest of the body, so it's like a local antibiotic.

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In addition, it's anti-inflammatory. It's actually sometimes injected into people's joints, just to reduce inflammation. It actually works on the NF kappa B pathway of intestinal and body inflammation. I learned about that from Dr. Kharrazian, and I know you're going to be interviewing him, so you'll probably touch on that.

Sean: Yeah, I'm pretty excited about that. Dr. Sandberg-Lewis talked about that, as well.

Dr. Allison Siebecker: Fabulous. So we've both learned it from Dr. Kharrazian. So, rifaximin is pretty special. Also, it's been tested and shown that it doesn't cause yeast overgrowth, a major concern with antibiotics. So, as a naturopath, or someone who likes natural things, as far as antibiotics go this is about as good as it gets. I feel comfortable with it. Still an antibiotic, but there it is. Now, if you have methane gas, it needs different treatment. So—

Sean: So the rifaximin is for the—

Dr. Allison Siebecker: Hydrogen.

Sean: —hydrogen. Okay.

Dr. Allison Siebecker: If you have methane gas, you need to still use rifaximin, but then you have to add either neomycin or metronidazole.

Sean: Why?

Dr. Allison Siebecker: Because somehow those two, either neomycin or metronidazole—metronidazole is also called Flagyl—that seems to be needed to kill the methane organism. I don't know why, but studies have been done to show this. Now there are some gastroenterologists that I've spoken to who don't really pay attention to this or maybe don't know about it. They just give rifaximin to somebody who has constipation and methane, and it works.

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So, sometimes you get lucky and it works. I don't...I've never seen that. I don't ever see that, because I tend to see the failures and the tougher cases. So the technical algorithm is, if they have methane or constipation, you give them rifaximin, and if you're using antibiotics, rifaximin plus either neomycin or netronidazole. Now, neomycin is like—is it okay if I'm going into detail on this?

Sean: Yeah! I want to hear this stuff. Yes, please.

Dr. Allison Siebecker: Okay. Neomycin is similar to rifaximin in that it also doesn't absorb into the system; it stays in the intestines. But it can cause yeast overgrowth, and it's not anti-inflammatory, so it's not as special. Netronidazole, or Flagyl, does go into the circulation, so that means it can cause some of the standard antibiotic things like urinary tract infection or vaginal yeast infection. People speak badly of this antibiotic.

They say it's just terrible, it makes them feel awful. I have to say I've had fairly good results with it. I think it's called for in this situation, and that helps, you know, but people have concerns. Now, the good thing is, if people are concerned and they don't want to take pharmaceutical antibiotics, maybe they feel like taking multiple rounds of antibiotics in the past predisposed them to getting SIBO. I've seen that a lot. We didn't talk about that, but I have seen that. Thankfully, we have this natural herbal antibiotic option for people.

So, Dr. Sandberg-Lewis and I have been working for about four years using different herbs, and we have all of our before and after tests, and they work. We don't have it published, but just recently, Dr. Gerry Mullin, from John Hopkins, published an herbal antibiotic study on SIBO, so thank goodness, it's finally getting out there.

And it really does work. I find that they work about the same effectiveness as antibiotics, which is great news. They just take a little longer. So a two-week course of antibiotics, you would need four weeks with herbals to equal the same amount.

Sean: Is that a specific herbal antibiotic that you published?

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Dr. Allison Siebecker: Yeah. So there's...Dr. Mullin, he uses a couple of different formulas, and...let's see if I can remember this off the top of my head...I think it's....I can't remember them all, off the top of my head.

Sean: Okay.

Dr. Allison Siebecker: Oh, CandiBactin-AR and -BR, and a few others. I can't remember. But his paper's published. I have it linked on my website underneath Herbal Antibiotics. You can read what he uses.

So those formulas are large, sort of like "everything but the kitchen sink" formulas, and our approach is a little different, but it's good to know they both work. Our approach is to use more single herbs that we're more familiar with. We think it's kind of more targeted and stronger.

So what we use is we use berberine-containing herbs, and those are things like goldenseal and coptis. There are formulas called berberine complex, or berberine 500, or you can just buy goldenseal. So other herbs we use are oregano, neem—that's n-e-e-m—sometimes cinnamon, and then a very special one is allicin. It's a-l-l-i-c-i-n, kind of like my name, but not exactly. And this is an extract out of garlic, and the product that we use is called Allimed.

The reason we use that product is it has the highest amount of allicin that we can find in a product. And so this Allimed, or allicin, is effective against methane or methanogens, the organisms that create the methane gas. So this is special. So you use this one like you do the neomycin or the metronidazole, when you're using pharmaceuticals.

So we feel very fortunate that we discovered something that is effective against methanogens. We didn't discover this. Dr. Nirala Jacobi did. She's a naturopath in Australia. She did a little in-office study, figured it out, let us know, thankfully. So now we have that. We're looking for more herbs that can be effective against methanogens, but so far it's just this one.

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Sean: And you said these herbal antibiotics, you want to be on them for longer than you're on standard antibiotics, correct?

Dr. Allison Siebecker: Yes. So, four weeks would be the equal time to two weeks of antibiotics. Sometimes we go longer. Sometimes we go six weeks. Another option is sometimes we increase the dose even higher and then we can go a little shorter. It's all just playing around.

But that's something else, oftentimes people try these herbal antibiotics, they only take—like berberine, you only need to take about five grams a day, and some people only take two pills and they say it didn't work. So we'll do five grams a day for one round, and then we'll do it again. It can take a while to get these bugs down. And then the next option is elemental diet.

Elemental diet—you can also call it elemental formula, because when you use the word “diet” people get confused. They associate that with something else. This is a formula. This is all your nutrients that you need. So, your macronutrients—that's protein, fat and carbohydrates—and your micronutrients—that's vitamins, minerals—powdered, and then you mix it with water and drink it in place of all meals. So it's a tough treatment. You don't physically eat; you just drink this. So the concept here is that it can absorb very high up in the intestine before it gets to the bacteria—

Sean: Hm. Smart.

Dr. Allison Siebecker: —starving them, but feeding you. And it's very, very effective. Dr. Pimentel did a study on it. He did it with this commercial formula called Vivonex Plus, so that's what we use, 'cause that's what the study was done on, and so we know it works. And he found very, very high success rates.

Also, there's been very high success rates with pharmaceutical antibiotics, like around 90%. Same thing—84 up to 90% with antibiotics and elemental diet. We don't have statistics for the herbal antibiotics, so we can't say. I do say—I do find they work about the same, but nothing's published.

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So the elemental diet is really good because...what's special about it is that if somebody has very high gas levels, it can bring an immense amount of gas down, so a person can become negative in one two-week course. This is taken for two weeks. Actually, we test on the 14th day with, usually, an in-house breath test, and if a person is still positive, we continue for another week. So, three weeks, total.

And if they're negative—yay!—after two weeks, then they can start eating again. But, I've seen gas come down 170 parts per million in two weeks with an elemental diet. So this is—it's very good to know. What I find is, on average, antibiotics and herbal antibiotics bring gas down around 30 parts per million. Sometimes you get a miracle 70 parts per million. So this is very important for practitioners and patients to know, because one course often won't do it.

That's another reason why it's so important to do the breath test, because you can measure severity, and then you know your prognosis, which means how long your treatment's going to take, and if you think it will be effective. You just apply math, and you can say, "okay, I think this is going to take three rounds." Now if you have somebody with gas, you know, 170 to 150, this is an option they need to know about. They may not want to do multiple courses of antibiotics or herbal antibiotics.

They might just want to get it done in two weeks with the elemental. But it's very hard treatment, because you're not eating, so that's psychologically difficult. You're getting your nutrients—you should be fulfilled, in terms of your hunger. Some people aren't. They feel hungry anyway. It tastes very bad. Really bad. It can not be overstated how badly it tastes, and that's from the amino acids. Have you ever had just amino acid powder?

Sean: Yes, I have. Yeah.

Dr. Allison Siebecker: It's horrible, right?

Sean: It's not the tastiest thing.

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Dr. Allison Siebecker: It's really bad. It's gaggy, bitter. It's really bad. So that makes it very difficult for people, so what is often done is—I know this is horrible, but Crystal Light can be added as a flavoring agent. I don't like that concept but, look, if they need to get it down, do what you need to do.

These are options, but it's really successful, but it takes a lot of will to do this. And you have to be ready to do it. Some people—what a lot of people say to me is, when we finish all these antibiotics and herbal antibiotic rounds, they would say, “I wish I had just done the elemental diet to begin with,” but then they'll say, “but I wasn't ready. I needed to go through all this to then be ready to do it.”

Sean: Right. Gotcha. Is there anything that can go wrong in treatment?

Dr. Allison Siebecker: Yes. So, since I have a specialty SIBO practice I mostly see SIBO failures: people who have been to other doctors and their treatment isn't working very well, and so they come to a specialist, to figure it out. The most common thing I see is not giving a prokinetic after the end of treatment.

Sean: What's that?

Dr. Allison Siebecker: A prokinetic is also called a motility agent. These are either drugs or natural agents that stimulate the migrating motor complex. So, because we haven't done anything to fix the migrating motor complex, all we've done is remove the bacteria, you have to take—or it's recommended; it's on Dr. Pimentel's algorithm, which we follow—take a prokinetic of some sort when you're finished getting rid of the bacteria.

So when you're done with your treatment and you've got a negative test, to prevent it from coming back. So over and over and over, what I see is people say, “well, I have rifaximin,” or “I had herbs. I was all better. I felt better than ever, and then I relapsed two months later.” Or “I relapsed three months later,” or two weeks later. And I said, “well were you given a prokinetic?”

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“No. I don’t even know what that is. What are you talking about?” And so their doctors are just not familiar with these algorithms. And these algorithms were published by Dr. Pimentel in 2006. He continues to publish them. We’ve published them. They just didn’t—unfortunately, they didn’t know about them, so that’s the biggest mistake I see.

And I know we’re gonna talk more about prevention, so I’ll get back to that, but the next thing I see is—for somebody who’s constipated and/or has methane, they weren’t given the double-antibiotic. So they weren’t given neomycin or netronidazole with rifaximin. Or, if they were given herbs, they weren’t given AlliMed, because most people don’t know about that.

So, that’s the other biggest problem, they’ll say, “well I have SIBO and I was treated with the rifaximin and it didn’t do anything for me. Didn’t do anything.” They’re all mad, they think it’s a bunch of hooey that rifaximin wouldn’t even work. Well they didn’t have the proper treatment. They need double-antibiotics. So that’s the second most common thing.

The other thing I see is sort of a non-methodical approach. So a doctor just...maybe didn’t even test, so they haven’t identified the gas, they haven’t identified the severity. They didn’t even diagnose if they really have it. Which is okay; you could go by symptoms. That’s empirical treatment, but it’s not methodical. So the patient was just given rifaximin and they never had another follow-up appointment. Nothing else was done, and so the patient’s left sort of flailing because it didn’t really work.

So part of that is not testing to begin with. I just mentioned why. Testing is important because it diagnoses it, and that’s important. Do they have this condition or not? What if they don’t? Then don’t be giving them all these treatments. Find something else, then. Also, you need to know if they have methane, because that alters your treatment. And then you need to know the severity because maybe they’ll choose elemental diet. It really alters your treatment. And prognosis. You need to discuss this with the person.

But then, the other thing is many physicians don’t retest. Somehow they just forget about that part. That’s another big failure that I see. They never made sure it was gone. Retesting is so important,

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because what if a person retests and they're negative, they don't have SIBO anymore, but they still have symptoms? It's really important, as a physician. Now you know some other condition is causing their condition. We have to find out what it is.

Sean: When should they retest?

Dr. Allison Siebecker: I prefer within five to 14 days after. Really anytime within two weeks.

Sean: Five to 14 days after treatment?

Dr. Allison Siebecker: After treatment.

Sean: After treatment's ending, five to 14 days.

Dr. Allison Siebecker: And the reason I like that is because it's particularly common for our bacteria to regrow within two weeks. Anybody's bacteria. So anyone takes antibiotics for anything and are worried about, "oh, I just damaged my flora," within two weeks it usually grows back. Not full and complete; I've seen studies that, you know, you've altered your microbiome for some time, but in essence they come back quickly, within two weeks.

So, test within two weeks, because we want to see what the treatment did. I don't want to see a test a month later when you've already relapsed, because it'll just be positive again and I want to see if it worked and if we've got to keep going. So in fact, that's the other thing that I see, is that doctors don't finish the treatment! So they'll give a round, they don't retest, and that's it.

Or—and so if a person didn't get better, they'll think, "well it didn't work." Well what if somebody was at 120 parts per million gas, and they took a treatment round and it brought them down to 70? In my mind, that's a success. We're just not done yet. But a lot of doctors don't have that perspective on the treatment, so they'll just quit. They'll say, "well that didn't work." Like they want it all done in one thing, and that's not how it works, you know?

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So I think many people are familiar with sometimes you need another course of antibiotics to get rid of, you know, your infection or something. That's what this is. So you've got to keep going until it's gone. This is an encouraging thing I like to always tell patients is, don't accept no retest and don't accept until you get your negative test. Keep treating. Keep going, until it's gone. Those are the failures and the points for success that I would recommend.

Sean: So, let's go back to diet. We talked about the elemental diet. From what I understand, there are particular foods that feed the bacteria in the small intestine. So what would be the best diet for somebody to do?

Dr. Allison Siebecker: Okay, so this is a squirrely answer, but, there's no one best diet, of course, and that's always the answer, right? When we talk about what's best with diet. What I'd love to do is tell you what the diets are that I think of using, but the answer is going to be, you're always going to have to do trial and error. Any diet that you put yourself on or the doctor puts you on, you're going to have to customize, and so then it starts to flow into the other diets anyway, and then what's the name of the diet you're actually on?

This is just universal. In particular, SIBO patients are very sensitive to foods because of leaky gut and all the damage we talked about. And so, it's very individual. It's very individual. But, the main food bacteria eat is carbohydrates. So carbohydrates are grains, beans, nuts and seeds, fruits and vegetables, and sugars. Sweeteners. Did I leave any out?

Sean: I don't think so.

Dr. Allison Siebecker: Okay. Those are carbohydrates. Every single carbohydrate that we just talked about can feed bacteria. So, that's not very practical. So the diet, if you're really trying to starve the bacteria with a diet, you'd just be eating fat and protein. In fact, that was a diet that was used before the Specific Carbohydrate Diet was invented.

So the Specific Carbohydrate Diet, also called SCD, I think of that as sort of the quintessential SIBO treatment diet, and it was developed by Dr. Haas in the early 1920s. And he and his fellows

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before that time, they were treating celiac—or what they called celiac disease at the time; they didn't know about gluten then, but—before this diet was invented, SCD, they did just do protein and fat. And that's very difficult, because you know, we need some carbs for a lot of processes.

So what he did was he came in and said, “I think there are certain carbs that we can give these patients.” Now, granted, he was treating a slightly different situation, but his theory was a patient could tolerate monosaccharides, single sugars like glucose and fructose—that exists in honey and that exists in fruit—and some foods would be better tolerated.

He thought grains would not be well tolerated, so he took those out of the diet. And starchy tubers. He was trying to get rid of starch, mostly. Polysaccharides. And his diet was immensely, immensely successful. And then in the—oh gosh—somewhere in the 80s, I guess—Elaine Gottschall, she re-popularized his diet with her book, *Breaking the Vicious Cycle*. And so that's how most people know about it today. So this is an excellent diet for SIBO.

Other diets are the GAPS diet, which is a variant of SCD, the Low FODMAP diet, which is a fairly new diet that's been getting a lot of publications, and what's so fabulous about this is now that it's been studied for—and what it gets studied for is IBS. It's not been studied for SIBO. No diet has been studied for SIBO. I should say that.

But, they're doing patient trials and proving that the low-FODMAP diet helps IBS symptoms, publishing it. Now, gastroenterologists will recommend this diet. They would never recommend diet before because there was nothing published, nothing proven. But now it's published, so that's great.

Sean: What's a FODMAP?

Dr. Allison Siebecker: So, low-FODMAP stands for fermentable oligosaccharides, disaccharides... what am I getting...disaccharides, monosaccharides and polyols. It's an acronym. And they're targeting certain foods. In fact, let me just say right now, what all of these diets are doing is targeting carbohydrates, but in a different way. And so that's why you never could know, well, which target is right for that patient. You kind of just have to try.

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So, the FODMAP diet allows gluten-free grains, whereas the SCD allows no grains. So there's differences here. The FODMAP diet allows starch. SCD: no starch. What the FODMAP does is it has identified—they have identified oligosaccharides—this is a medium- or short-chain sugar that exists in many foods—they've identified these in fruits and vegetables, and grains, and so they've said if you just remove the foods with a high amount of these oligosaccharides, you should do well.

The reason why is because oligosaccharides very quickly and easily feed bacteria. They're fast food to them. So...they seem to be right. Specific Carbohydrate Diet, on the other hand, didn't know about this. This all came out after Elaine Gottschall passed away, so she didn't know that onions contain a very high amount of FOS. FOS stands for fructooligosaccharide. Onions give people terrible bloating, terrible gas.

You know, a lot of people experience farting, but burping, pain...who have SIBO. Not all of them, because everybody's different. But a lot of them. And so, her diet, you know, missed that part. The fruits and vegetables that could aggravate. The FODMAP diet gets that part, but doesn't talk about the grains and the starch that could feed the bacteria.

So what I did is that I was treating people with SCD and sometimes GAPS, and sometimes Dr. Pimentel's diet, which I haven't yet mentioned, and I was getting good results, but, I felt not as good as I could get. People, they were very pleased but they wanted more with their symptom relief, and so I combined low-FODMAP and SCD. Anyone who wants to can see that chart.

I have it—it's almost like a grocery list, or just a food chart on my website. They can look at that combination. It's not a strict combination, because it includes my clinical input from what I've seen with patients. I've put that into it. So, that's SCD plus low-FODMAP. I find that that definitely gives better symptomatic relief across the board. I've seen it over and over.

But here's the problem. It's more restricted, and so a lot of these people have low weight. Maybe they're not eating many foods because they're reacting to everything, trying to eliminate their symptoms. Or they feel nauseous, so they can't eat. So a lot of these people are low-weight, so if you put them on the most restricted diet, that doesn't sound so good.

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So, I know I'm making it seem more complicated that it needs to be, but it's because I'm coming from the perspective of a physician who is very familiar with all these diets. I pick and choose, and customize it to the patient and the situation. So while I could easily say, from my experience, that my version of SCD + low-FODMAP gives the best symptom relief, it may not be the best choice, you know. And the other thing is that, why not start with a diet that maybe is broader, like low-FODMAP or SCD, and see if that does the trick?

Sean: For how long? So if somebody's watching this and they go, "well I want to try those three." They do one for two weeks, both for two weeks? What do you recommend?

Dr. Allison Siebecker: I would say at least a month. SCD said one month, low-FODMAP does a six-week. So, in that or around that framework. I think you should know by around a month.

Sean: So try it and see what works for you.

Dr. Allison Siebecker: Try and see. Now, once you try a diet, you pick one, you give it a go. If you think you're not getting enough symptomatic relief, then you start tweaking. What are the things to tweak? Common allergens. You know: eggs, dairy—by the way, all these diets have lactose-free dairy. That's one thing they all have in common. No lactose is allowed. Also the other things they have in common are no sugar alcohols, so those are any sugars that end in "ol," like mannitol or sorbitol, erythritol, xylitol. They also don't have Sucralose.

So, they all have that, but then after that, they change. So, you would tweak those things. You would tweak common allergens like eggs and dairy, sometimes nuts can be aggravating. There's a lot of almond flour allowed in SCD, less is allowed on low-FODMAP. Maybe you have to change, switch around and look at that. And then just start manipulating your carbohydrates. Well maybe the nuts are bothering me, or maybe I need to—if you're on SCD—maybe I need to take out onions and high-FODMAP vegetables.

Take a look at those lists. You just gotta start tweaking. And what's so frustrating is that no doctor that I know of, and no test that I know about, can just tell a person what their diet should be. It's

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trial and error and it's so frustrating. It takes time! It really takes time. Now the last diet I didn't mention is the Cedars-Sinai diet, and this is Dr. Pimentel's diet, and he created this for prevention. So, he's treating with antibiotics, or elemental diet.

When they're finished with that, they're going on Cedars-Sinai diet for prevention. So it's not really meant to be a treatment diet. The treatments are the antibiotics or the other things, and his diet was for prevention. The SCD claims that it's a treatment diet, particularly for IBD, and maybe celiac. I haven't seen it be that great for SIBO. I don't see the bacteria getting cleared by diet. Now, I have talked to a gastroenterologist—I'm so pleased I got the chance—who feels like he is seeing it clear, so I guess it's possible. I just don't ever see it.

I see people, two years on SCD. Four years on GAPS. Seven years...seriously, I see this. When we test them, they're positive. So I think something more, for most people, is needed to clear the bacteria out. But, I suppose how would I know about those people? If they've put themselves on the diet, and it's working, I'm not going to see them. So maybe there are more people than I would know about with that.

So that's what I say is, you know, pick a diet and fool around with it. The Cedars-Sinai diet I didn't quite explain, but this one allows refined grains. So this is the opposite of what Weston Price would say, for those who are familiar.

Sean: Refined grains meaning what?

Dr. Allison Siebecker: White flour. So the fiber's removed. So, white flour products, white rice, and also white potato is allowed. So he allows that. And he's got some other things, like he doesn't allow beans and he doesn't allow any probiotics. So no yogurt or fermented food. That's the only diet that's like that. And this is the only diet that allows gluten, any SIBO diet that allows gluten.

Sean: That's interesting. So gluten, potatoes—which are nightshades, which are a problem for a lot of people—

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Dr. Allison Siebecker: Right!

Sean: Huh. That's interesting.

Dr. Allison Siebecker: And he does pretty well with it. I have to tell you, because this diet allows white bread and such, that means it's, I think...it doesn't specify too much on the vegetables. He has an emphasis on root vegetables over leafy vegetables, but it's not a hardcore thing. Many people can eat in a restaurant more easily this way. It's a broader diet. It's easier for our general culture.

So I have some patients that are absolutely—at least in the beginning—unwilling to do any of these other diets, and so we tried Cedars-Sinai diet. They were willing to do that. We got great results. So, he knows what he's talking about. So by taking the fiber out, that's what seems to help. Because fiber feeds bacteria. It's exclusive food for bacteria. Doesn't feed humans. Only feeds bacteria. So, the fiber's removed out of the grains and then people have less problems as the bacteria's fed less, so it really does help. But it doesn't fit with what you and I would think is healthy. We know processed grains and processed foods cause health problems, so—

Sean: It sounds very unhealthy.

Dr. Allison Siebecker: It's a real conundrum.

Sean: Whatever works.

Dr. Allison Siebecker: So you know, I wouldn't like someone to be on this, long-term. I would prefer the other diets. And so this is another point, and people will say, "well why not Paleo?" or "why not Paleo Autoimmune?" Sure. Great. You know, we start getting into just names of things that are all very similar. It's very similar. What I would say the main difference is between the SIBO diets and the Paleo—there's not one Paleo diet, but the Paleo diets.

Depends on what version you're talking about—would be raw food. So, by cooking food, you break down the fiber a bit more and you make it much more digestible. Think of baby food. If you peel

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and de-seed—this is what the SCD says to do, in the beginning—peel and de-seed your fruit and vegetables, cook and puree them. That’s it. Baby food. It’s very easy to digest.

So, I’ve seen a lot of people who are on a Paleo diet, one version or another. And were having terrible symptoms. One person I can think of in particular—actually, for a lot of people—we just took out salads and chia seeds, and bam, immediate symptom relief. So I think a lot of people on Paleo are eating a lot of raw foods, and they’re seeking after-fiber: flax and chia and hemp. So, that would be my keynote.

And also, on the versions of Paleo that allow dairy, it’s not specified that it has to be lactose-free. Yogurt is reduced lactose, but it’s not lactose-free, so that would be another point if you’re on Paleo, that you’d want to think about. So then, if a person’s on Paleo and they have digestive problems, they start realizing that “oh, I can’t really have salads. Oh, these flaxseeds bothered me,” so they take them out.

“Oh, I can’t really have dairy,” or maybe they’re on a version without, then they’ve just sort of turned it into one of the other diets anyway, so it kind of starts to become meaningless what “diet” we’re calling it. The principles are the same: to take a look at these carbohydrates, remove lactose, be very careful with your sweeteners.

I recommend honey. Actually I’d like to tell you about the honey because...SCD says honey is okay, whereas low-FODMAP says it’s not. And the reason is, they’re concerned about fructose. That’s one of the sugars that they have identified to be a problem. Many people have fructose malabsorption, which—you’ve probably heard about this.

Sean: Yes.

Dr. Allison Siebecker: I had not ever heard about this, in my medical school or anything. When I first came out practicing and I heard this, I was like, “you’ve got to be kidding me! People can malabsorb fructose?” It was just stunning to me! So, this was knowledge that came after Elaine Gottschall. She didn’t know that, so she didn’t put that into her diet.

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Well it turns out, even with honey, there are varieties of honey that are 50:50, glucose:fructose, and for some reason the FODMAPs folks don't seem to know about that. I think—my theory, the reason they don't know about that is—and I'll explain this, 50:50 ratio in a minute—but I think the reason they don't know is because the FODMAP doctors are from Australia, which is a tropical climate, and the varieties of honey that are 50:50, glucose:fructose are from northern climates, so the main one is clover, and that's Canada and northern climates.

So the 50:50 thing is, when fructose is in an equal ratio to fructose, the FODMAP doctors have shown that it absorbs fine. It absorbs absolu—even in a person with fructose malabsorption, so that's the same thing as sucrose, which is table sugar, and table sugar absorbs fine in people who have fructose malabsorption. So, you can choose these varieties of honey, clover being the most obvious, and be fine.

So I actually did test this. I took a patient that had fructose malabsorption. We did the test. We saw they had it, and then we gave them a dose of honey that would approximate the same amount of fructose in the test, in the fructose test, and they didn't malabsorb it. So they didn't—so fructose—my limited experience is—I did it on two or three people—that fructose malabsorbers don't malabsorb clover honey. So I sort of proved their theory.

So that's something on the sweeteners, but so, just back to this general thing. Here's what I would tell you—and by the way, about these diets, I did a 45-minute lecture at the SIBO symposium that we had last January, which anyone can watch. These are recorded webinars—and I just dissected all these diets, spoke about this information in detail. So if anyone wants more knowledge on this, they can watch that episode.

Sean: Where is that at?

Dr. Allison Siebecker: You can find it through my website—

Sean: Siboinfo.com.

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Dr. Allison Siebecker: Yeah. Siboinfo—I think it’s under Resources and Learning More. So, what I wanted to mention about all these diets. I just would like to give you my sense of these general diets, and what to use them for. I think SCD is absolutely the best for inflammatory bowel disease, IBD. That’s ulcerative colitis in Crohn’s. And it’s also very good for celiac. Very, very good. And good for SIBO, really good for SIBO too. But best for IBD and celiac. It has phenomenal studies on IBD.

I think the low-FODMAP diet studies best for IBS. It has excellent studies on IBS. I think my version of the low-FODMAP plus SCD is probably the best I’ve seen for SIBO. I know Dr. Pimentel’s Cedars-Sinai diet is excellent for prevention of SIBO, once you’ve already gotten rid of it. Not so much, when you’re needed active symptom control.

And I think the GAPS diet, the variant of SCD, is best for those that have digestive complaints, along with brain or mood problems. And specifically, not just a little brain fog, because anybody can have that, but actual, severe anxiety or depression, or ADD or ADHD, or autism spectrum disorder. More like that. Bipolar. I think when somebody really has these, then the GAPS...I would choose that one.

But, I do also want to say this: the GAPS diet emphasizes some highly-fermentable foods, high-FODMAP foods, right early on in its intro, which would be onion, avocado, and bone and cartilage broth. Unfortunately, people who don’t really know about the FODMAP diet, they just go into the GAPS and then they feel worse, and their bloating is worse. So you can—a person who has SIBO can do GAPS, but you may just need to take away the onions, take away the avocado, and not do the cartilage—cartilage and bone broth.

Sean: So you recommend going to your website and looking at the combo diet, SCD and FODMAP, right?

Dr. Allison Siebecker: I think it’s a good thing to look at, just so you’re familiar with—or just the FODMAP diet, which you can find online, so you can see what foods might be troubling you. It gives you a place to go. I have had patients on GAPS diet—straight, normal GAPS, not modified—doing great. Others, terrible, terrible for them. It’s all about customizing.

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Sean: I want to go back to that whole relapse thing you talked about earlier. Is one of the reasons that people call this whole SIBO thing “bunk” is because a lot of people relapse?

Dr. Allison Siebecker: I think so. I think what they’re not realizing is that we’re not treating the underlying cause of SIBO. So SIBO may be their underlying cause of IBS, but what’s the underlying cause of SIBO? We are not treating that. We are not treating the underlying cause when we remove the bacteria with antimicrobials or elemental diet. So I think people just need to understand that. They can make a decision if they want to go through treatment or not, but what I think the part is that they’re missing is, what do you do for prevention?

For prevention, the two key, essential factors are some kind of reduced-carbohydrate diet of your choice, and a prokinetic. And we didn’t talk about the prokinetics. There’s pharmaceutical and natural options, but people can read about them on my website. So, two essential things: you’ve got to be on some kind of diet, and a prokinetic, to help prevent relapse.

Now, relapse can still occur, because we haven’t—you know, we’re thinking “let’s stimulate that migrating motor complex” but we haven’t really found out. Let’s find out, what if you have an adhesion? You’re gonna need treatment for that, so...so yeah. It’s difficult, but we know people relapse. We expect it, and we’re just doing our best.

Sean: That’s all you can do is do your best and do more research and learn more—

Dr. Allison Siebecker: And information is coming—

Sean: Getting the information out, and that’s it. You do a great job of that. Your website, again, is siboinfo.com. Do you work with patients—I’m sure you work with them at the SIBO Center, but do you work with them by Skype or phone?

Dr. Allison Siebecker: I do. Yeah, by Skype—I consult distance patients, which I really love, because maybe they’re far away and they don’t have a doctor that knows about this, and so I can help give them some information. I can’t be someone’s doctor if I haven’t seen them in-person, but I can

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consult. We can do natural things from afar, because anyone can do that on themselves, but I can't order tests, and I can't prescribe medicines.

Sean: And how will they contact you?

Dr. Allison Siebecker: Oh, through my website, underneath Contact there's information about Skyping.

Sean: Perfect. Dr. Siebecker, thanks so much.

Dr. Allison Siebecker: Thanks, Sean!