Q&A with Dr. Mark Pimentel, Part 2

Shivan Sarna: Let's talk about the vagus nerve, the vagal nerve; what do you think about the tongue depressors, the laughing really loud, and the singing really loud, and trying to stimulate that to help with the migrating motor complex?

Dr. Pimentel: Anytime you trigger the vagus nerve, so the way the vagus nerves is, when it's active, it's telling you it's food time. So, turning on the vagus nerve, turns [00:00:30] off the cleaning wave, because if you cut the vagus nerve all together, you get no acid in the stomach, you get reduced migrating motor complexes, and of course, the stomach gets delayed and all of that. Turning on the vagus nerve would do the opposite. In other words, you get more acid in the stomach, so maybe that's beneficial. But it also, when you turn on the vagus nerve, that's [00:01:00] what you turn on when you want to eat. We don't know that turning on the vagus nerve makes any difference. We think it actually would make things worse because it would sort of convince your gut that you're in eating mode when you're not.

Shivan Sarna: I went to the acupuncturist. She puts some needles in there. She was like, "Oh, I'm helping your vagus nerve to get stimulate," I'm assuming that's what it was and then, all of a sudden, I went into like, "Oh, I'm so chill," like it was an instant parasympathetic [00:01:30] response. Is it like my migrating motor complex or ... ?

Dr. Pimentel: The answer is, we don't know 100% for sure because it hasn't been studied with a tube down looking at migrating motor complexes. You know that's a challenging thing to put that tube in and not too many centers do it. But, if you, like I said, if you're just about to eat food, you start turning off the cleaning waves because you get vagal activation. [00:02:00] The brain, through the vagus nerve is telling the stomach, "Start producing enzymes, stop the cleaning waves now because you don't want the food going all the way into the colon, and start producing more acid; food is on its way."

When you start to eat, the vagus nerve turns on even more, again further inhibiting all those activities or augmenting those activities. We think turning on the vagus nerve makes your body or your gut think it's going into feeding more. Now, [00:02:30] there's also a back signal from the gut. When you have food in your stomach, you feel, "Ah, I feel good." So, the back stimulation is the satiety centers in the brain are activated and you feel satiated. You may feel good from vagus nerve stimulation from the signals going this way, but it may not be helpful from the signals going down the other direction.

Shivan Sarna: Very interesting. Okay, these are sort of bullet points. People are wondering about SIBO and fiber. How do we get [00:03:00] enough?

Dr. Pimentel: The bigger question is, what is enough fiber and do we really need fiber? The question other than that is after eating cardboard for 20 years, have we made an impact on colon cancer at all? I don't know that we have good answers to those questions, and so a lot of people have been eating fiber because they think it's healthy and then, now, everybody's going Paleo and going to even keto diets, [00:03:30] and all these diets seem to be even healthier than high-carb diets. I don't know that you need a lot of fiber in your diet. I think fiber can be helpful in terms of if you're a normal person and you want a nice, smooth bowel movement and maybe fiber to help the beneficial bacteria of the colon, have more food. For SIBO, fiber is no good either.

Shivan Sarna: [00:04:00] No bueno.

Dr. Pimentel: No bueno. It's just a lot of fermentation, a lot of gas, and a lot of trouble.

Shivan Sarna: So, that leads, I think most of us to be thinking about the low FODMAP diet and how we don't want to allegedly be on it for a really long term because it reduces the variation of the microbiome in terms of variety and that kind of thing. Do you agree with that? Should we be ... That's what makes me think like, fiber mainly to more diversity in the microbiome? What [00:04:30] should we be thinking about?

Dr. Pimentel: Fiber, yes, leads to more diversity in the colon. But as I've said before, if you put fiber in the gastrointestinal tract like beans, it's going to take a lot longer for cleaning waves to recover. It's going to take a lot of time for the fiber to evacuate from the small intestine leaving more fermentables there for gas, bloating, and distention. But, the low FODMAP diet is not healthy long term, and even those who discover and continue to discuss low FODMAP diet have suggested that, Bill Chey from Hanover, Michigan presented at the ACG Meeting the first study looking at how bad is it to be on low FODMAP.

The answer is after three months, you start to see micronutrient deficiencies. It is not a long-term solution to IBS, [00:05:30] is what it's touted for. SIBO was kind of the extension of it. Now, it can be helpful. So, I kind of tell people, "If you don't eat any food at all, your SIBO will disappear," because the bacteria can get no food, but that's not a solution. The more you restrict calories, the more better your SIBO will feel, but then, you're going to cause harm to yourself, so you've got to find that best practice for you, which is why we sort of developed the low-fermentation diet. We developed [00:06:00] that in 2001 or something, and it's meant to be 100% recommended daily allowance of all mineral and vitamins, so that you don't get the deficiencies, and yet calorie-restrictive enough to help SIBO.

Shivan Sarna: When it comes to that diet that you're talking about for when you're taking the rifaximin or your treatment, and you're saying, "Eat whatever you want because we want the bacteria having a party," so that [00:06:30] they're out and about, so the medicine can do its job of killing it.

Dr. Pimentel: Yes. I don't tell people to go and eat like a gallon of Haagen-Dazs ice cream every day to make their SIBO go away. But, you want to be a little more open with your diet during SIBO treatment, that's what I suggest. What you'll end up happening is you'll feel worse on the treatment thinking that the antibiotic that's making it worse, when it's actually the diet. I just tell people, [00:07:00] just go about your normal business, eat

what you normally eat while you're taking the treatment. You don't need to hyper activate the bacteria.

Shivan Sarna: Nor would you suggest like really being super strict on a low-fermentation diet?

Dr. Pimentel: I would suggest not to be on a low FODMAP diet while you're taking the antibiotics because you are restricting calories to a great extent and bacteria will tend to be more resistive to antibiotics in hibernation.

Shivan Sarna: Okay. [00:07:30] Let's talk about the gallbladder, rifaximin, and SIBO. What are your thoughts on this, I don't want to call it a trend, but this development that some people are working with the partially hydrolyzed guar gum, and rifaximin with this whole bile connection.

Dr. Pimentel: Guar gum is sort of a fiber as well, and so there is some turning on of bacteria with guar gum. What are you referring to, [00:08:00] I don't know. Maybe I'm not answering the question regarding the colon.

Shivan Sarna: Some of the people who are working with rifaximin are finding some improved results in their observations and their practices by adding some partially hydrolyzed guar gum to their rifaximin treatments.

Dr. Pimentel: Yeah, again, I have no problem with that. I think that you're basically augmenting the feeding of the bacteria. In the context of a gallbladder or no gallbladder.

Shivan Sarna: [00:08:30] I think it was something about the bile. I mean, if we don't have good bile production, would it mean that the rifaximin might not work as well for us?

Dr. Pimentel: Bile is like soap. If you have a lot of soap coming through the gastrointestinal tract, you're going to kill off some of the bacteria. Bile is actually good. In fact, some people think that the bacterial overgrowth that occurs in cirrhosis is due to a change in the composition or the quantity of bile. [00:09:00] So, bile good; no bile, bad.

Shivan Sarna: How can we improve our bile? I think, doctors taught me about bitters. Is that something that can help us?

Dr. Pimentel: Bitters? Some people are going to take bile. They are encapsulated, I guess Ox Bile or other types of bile products. I'm not suggesting that because I don't know how good that works. Again, very little data. But my point is that bile is basically like enamels [00:09:30] of fire, but it also fights fats and lipid layers of bacteria, so it will be a detergent for the bacteria to some extent. Remember bile gets absorbed, so it doesn't work all the entire length of the gut, only the first portion.

Shivan Sarna: Interesting. Okay. Changing gears just a little bit. A lot of people are wondering about parasites. Do you see a relationship between parasites and SIBO, and let's say they've done some stool tests, they were actually, I'm going to say lucky enough to find that they had a parasite [00:10:00] because they're so hard to determine; which would you treat first?

Dr. Pimentel: If they had a parasite that was detectable, I would definitely treat the parasite first before treating SIBO. There is a link between giardia for example, and the development of IBS. They have giardia, they travel to a location where giardia is common, they get it, they come back, they detect it; treat that first. But there are some patients, after treating giardia, they still have SIBO. [00:10:30] It turns out giardia has vinculin in it. So, maybe that's what's triggering the post-infectious IBS from giardia.

Shivan Sarna: Wow. I've never heard that before. Thank you so much for that. Wow, that's intense. Okay. Breath testing, there's some controversy around it. We have somebody out there on the online world talking about how maybe SIBO doesn't even exist, I'm not even going to give it a lot of energy. [00:11:00] But, what are your comments on that?

Dr. Pimentel: This notion that maybe SIBO doesn't exist is it's a little extreme these day. I remember the days when I was saying SIBO and nobody believed it, and now, we're sort of at the other end of that spectrum where everybody believes it except for a few who say, "I don't believe it." I'm not here to convince people one way or the other. The science has been convincing. I

mean, there's over [00:11:30] 100 papers on treating with antibiotics and the methods that I've outlined here in this, so far over an hour of discussion. But, let me leave you with this. In a study that we were presenting, I started to talk about the results, but I'm going to finish it now. Just for facts and forget about all the different types of treatments for SIBO.

We have seen a 30% reduction of referral to my center [00:12:00] for diarrhea IBS/hydrogen SIBO in the last decade, concurrently with the increasing use of rifaximin to treat diarrhea IBS. You could say that it's still there, it's out there in the community, but the community is treating it before it gets to me and they're having success because they're not sending them in or they're being treated and they're in that 30% group one and done. We have [00:12:30] eliminated 30% of the population with diarrhea IBS from the pool of patients who require tremendous amount of CT scans, testing, expenses. We're reducing the cost, we're reducing the disease burden by 30% already. That's the ultimate test. The ultimate goal is less patients with this disease, period, and we're already seeing that. You can [00:13:00] be a naysayer but you're in the small camp now.

Shivan Sarna: Okay. What shall we call a positive methane-only breath test?

Dr. Pimentel: Again, I think it's a methane Bloom. I don't know that it's SIBO, but the argument there is if methane is positive and hydrogen is always flat, it means that everywhere, there's a hydrogen producing bacteria, there's a methane bacteria eating the hydrogen. We know there are some hydrogen-producing bacteria in the small [00:13:30] bowel in almost everybody. The methanogens must also be in the small bowel whatever that means. So, it's a Bloom and it includes the small bowel.

Shivan Sarna: If someone doesn't have a lot of money, right, they can only afford a SIBO breath test, they are fairly educated about their alternatives, their doctors maybe even willing to give them a script for rifaximin, without a breath test just based on symptoms; would you [00:14:00] encourage them to just carry on or you test so we know?

Dr. Pimentel: No. In the trials we did ... Let's go back to this because it gets confusing. People say, "Is it IBS or is it SIBO?" Rifaximin is FDA-approved for the treatment of diarrhea predominant irritable bowel syndrome. Diarrhea predominant irritable bowel syndrome is you have diarrhea mostly, and that you have bloating and distention, and [00:14:30] changes with having discomfort in the abdomen. That's diarrhea IBS. That's exactly the same symptoms as SIBO. We know from breath test studies, we know from small intestinal aspirate studies that 60% of diarrhea IBS is SIBO. The trials for diarrhea IBS, which is the diagnostic in ... Your diagnosis is diarrhea IBS, but the most likely [00:15:00] cause of your IBS is SIBO. Diarrhea IBS as the indication for rifaximin, on those trials you didn't do a breath test, you just treat it and it worked. Those were published in the New England Journal Medicine. It worked without a breath test.

Now, it leaves you in somewhat of a mystery because what if it doesn't work, then, maybe you do a breath test then. So, that in the hydrogen side of things. If you treat, and you get 80%, it can't be anything else. I can promise [00:15:30] you that Crohn's disease will not get 80 to 90% better after two weeks of an antibiotic. It won't. Celiac disease will not get better after two weeks of rifaximin or an antibiotic. If you take two weeks of rifaximin without a breath test and you get 80 to 90% improvement, what else can it be? It almost can't be anything else.

Shivan Sarna: Okay, all right. People are just wondering about these connections. SIBO and [00:16:00] FMT?

Dr. Pimentel: Yes. The highest hydrogens I've ever seen or patients who were very severely affected after FMT, and in particular those that are given by mouth. Back in those days, and this is different now because they put it in capsules where it releases in the colon, which is a much better way to go. If you release it in the small bowel where they used to put a tube and [00:16:30] pour the material into the small intestine, that was no good either because we had some of the highest hydrogens ever. There is a study for diarrhea IBS that's being published. There's another study that was presented at the Digestive Disease Week, and other meetings, other

studies are emerging showing that it either makes you worse or it doesn't make you better. I would predict that these trials will fail because [00:17:00] why would you put more bacteria into the situation where you accumulate bacteria?

Shivan Sarna: FMT, just so everybody knows is Fecal Microbial Transplant, okay. If you have SIBO and/or you have surgery, and for pain medicine, they give you codeine, which is an opioid, if you have SIBO, would you tell your patients like, "Hey, if you can take another thing like a Tylenol or [00:17:30] something, do that," to avoid the opioids?

Dr. Pimentel: If you have an extensive surgery, you will be in pain, so you have to do something. I have patients where they will take prophylactic treatment during the surgery to prevent SIBO from reaccumulating ... If they're doing well and they've been stable, and they are going to have surgery and were anticipating high pain, they might take prophylaxis. Again, this is off-label use. It's not a [00:18:00] FDA-approved use of treatments for SIBO or IBS, or any of that. But, some people do that. The alternative is, remember that if you take narcotics, you have to be on narcotics for 10 to 14 days straight before SIBO develops in a normal human. Now, in a person who's got a low MMC already, then, that may be shorter. All you need is two or three days just to bridge the first couple of days, I don't think that's going to be a terrible problem.

Shivan Sarna: Very good.

Dr. Pimentel: Most surgeries that you're taking a high [00:18:30] amount of narcotics in the first couple of days, you're not eating much anyways in those couple of days to fuel the SIBO. Again, if it's just for two or three days, it's the patients who have very bad back pain or other indications for long-term narcotic use, then, it's more problematic.

Shivan Sarna: Somebody asked a question about could SIBO be actually causing their back pain?

Dr. Pimentel: We haven't seen ... I've seen a lot of things disappear from treating SIBO, [00:19:00] but I've never seen back pain disappear from treating SIBO.

Shivan Sarna: Okay. Do you see any connection in your practice between viruses like Epstein Barr and SIBO?

Dr. Pimentel: The answer is no. We haven't seen that connection so well, but I have patients, there has been a number of cases that we've seen over the years with encephalitis from viruses that we think have damaged the vagus centers in the brain and then, they get SIBO as a result of that. I had a patient [00:19:30] who had severe viral meningitis. She was actually incapacitated in bed and slowly, over time recovered. It wasn't until she fully recovered, the SIBO disappeared. If you damage the vagus tracts whether it's in the brain or along the tract, another time we see, not to get off topic but sometimes patients get radiation for Hodgkin's lymphoma in the neck and they damage the vagus nerves, they get SIBO also and those are harder to treat [00:20:00] as well. But, direct viruses like Epstein Barr, which affects more the liver and the spleen, and lymph nodes, we don't see that too often.

Shivan Sarna: Traumatic head injuries, do you see SIBO more prominently in that?

Dr. Pimentel: We do sometimes, and that's a hard one to treat.

Shivan Sarna: Terrible, yeah. People are also asking about, we were just talking about opioids, they're asking about antidepressants or other drugs that are, like Adderall or Ritalin, [00:20:30] because of the impact on their nervous system and their sympathetic nervous system. Do you think that those medications could possible inhibit the MMC?

Dr. Pimentel: Anything that would lock nerve transmission like serotonin antagonists, they have the potential to potentially reduce MMCs. I always thought that tricyclics, contrary to [00:21:00] what it's used, for example, tricyclics are used for diarrhea, IBS, and to reduce diarrhea, I always had the thought that they would reduce the migrating motor complex as well. The problem we have with the migrating motor complex is if we had a noninvasive test for that, we would test all these theories of what drugs are making them more, what drugs are making them less but because it's such an invasive

procedure, we don't have a lot of information which drugs inhibit, which drugs make [00:21:30] the migrating more complex, more robust.

Shivan Sarna: Also, there's a question about like if you have a cold or a flu, do you think any of those over-the-counter medications could impact the MMC and then, also, a lot of people who have SIBO tend to have insomnia and so, they're taking the Unisoms of the world; do you see that impacting MMC?

Dr. Pimentel: I don't know. I don't have an answer to that. I've never seen any study to my knowledge that's tested that.

Shivan Sarna: Can [00:22:00] dyspoiesis in the large intestine, they're saying high LPS caused the MMC to malfunction leading to SIBO.

Dr. Pimentel: The LPS is lipopolysaccharide, generally from gram negative bacteria like E.coli. The LPS, when it gets into the system, it activates a whole bunch of sort of fight-or-flight reactions because it's like you have an infection or you feel unwell, or you feel weak, or fatigued. Can it inhibit migrating motor [00:22:30] complex? The indirect evidence we have for that is that when we test and we published our paper on MMCs, when people had treated their overgrowth and the overgrowth was gone, by the time we did the MMC test, the MMCs were better. Not having SIBO made the MMCs better, still abnormal, still not normal but better than patients where SIBO was currently still active at the time [00:23:00] of the MMC testing. Does that make sense? You have overgrowth. Overgrowth is almost making your MMCs worse, to keep themselves there.is that due to the LPS? I don't know. Is it due to some chemical the bacteria is producing, probably. LPS seems like a good culprit, but I don't know for sure.

Shivan Sarna: Could a chain of events leads them to SIBO over time, weakening the MMC? People are asking about stress, lack [00:23:30] of sleep impacting the MMC, obviously eating too frequently. Food poisoning obviously triggers what we've been talking about. But what about the rest that are not autoimmune, such as food intolerance? Can food intolerances cause SIBO?

Dr. Pimentel: I don't see that too much. I mean, mostly SIBO is causing food intolerances, so it's hard to sort through that. This is important question because stress [00:24:00] decreases MMC. We know that that happens, but it doesn't cause SIBO per se. Let me give you the study and I've quoted this study with you before is that, the US military studied the deployment to Iraq or Afghanistan of tens of thousands of people. They looked at whether they had IBS before, whether they had IBS when they came back. What they found was, you go to Iraq or Afghanistan, you get deployed there, you come back, a lot of people had IBS. [00:24:30] Now, what they looked at was all sorts of factors that they experienced in those countries during the deployment. If you were shooting your weapon, active combat, injured, killing other humans, all that kind of stressful activity, you were not more likely to develop IBS.

Stress, anxiety, and super extreme stress that you experience in active war did not predict the development of IBS. The only thing [00:25:00] that predicted the development of IBS was food poisoning. If you were in those areas and you developed gastroenteritis, you're more likely to get IBS. We don't think stress is a cause, but it is a modifying factor that makes the migrating complex worsen. If you already have overgrowth, the overgrowth can get worse with stress.

Shivan Sarna: Have you ever seen genetics impact the possibility of having SIBO? There's two questions there. One is, [00:25:30] if my sister has SIBO, am I more likely to have SIBO? Then, the other one is about the genetic SNPs.

Dr. Pimentel: Yeah. There are genetic things that are being determined. The group in Canada that studied the outbreak of gastroenteritis in Walkerton, did do some genetic work and found that there were some cytokine genetic abnormalities that were predicted, IL-6 for example have some genetic mutations that may have predicted the development of post-infectious [00:26:00] IBS for example, so we think there is some genetics to it. The problem in the Mayo Clinic Study, when they tried to look at genetics, the problem is there were connections between family members, but remember when you travel to a foreign country, you travel as a family and

you all get sick from the same food. So, it can be that your sister has IBS and you have IBS, and it all stems from your trip to, [00:26:30] I'm not going to name a country because I don't want to insult anybody, but it started on a trip that you went on, you ate some food that caused trouble for you and you had gastroenteritis, and ever since then, both of you have it.

Shivan Sarna: And that can happen to us here in the States or anywhere, right?

Dr. Pimentel: Exactly.

Shivan Sarna: Right, okay.

Dr. Pimentel: Like there was a nurse's convention where a group of nurses ate at the same buffet and they got IBS. So, it did happens.

Shivan Sarna: Have you [00:27:00] seen how gluten might affect SIBO, people eating gluten?

Dr. Pimentel: This is a complicated issue because even the FODMAP group has proven that the gluten restriction in low FODMAP is not necessary, that gluten really isn't the major concern for IBS treatment. Again, assuming that the good proportion of IBS is essentially SIBO. If you go on gluten-free diet, essentially, [00:27:30] in part, you're going on a lower carbohydrate diet. We know the bacteria love the carbs. They don't care about the sugar or about the oils, or the proteins. If you're on a low-carb diet, you're essentially using a lower fermentation diet, and therefore, you will feel better. The problem is you get trapped into this no gluten diet because you think it's the gluten, but it's actually the low carbs. Now, I'm not saying that there [00:28:00] aren't people who are truly gluten-sensitive without celiac. I think there is a group like that, but what I'm saying is that, if you have SIBO going on low-gluten will help but it's not because of what you think. It could be because of the low-carb diet that you just put yourself on rather than the low gluten.

Shivan Sarna: As we get older, does SIBO get worse? Do we have more of a chance of getting SIBO because we're older?

Dr. Pimentel: I get a lot of questions similar to that. [00:28:30] SIBO increases with age, absolutely. People over the age of 60 have a higher tendency to get SIBO. We're also seeing more methane as people get older. In the 90 plus group, that's the highest methane rates we see in all of our population as a whole. Another question people ask is, "I've had SIBO for 20 years. Is that harder to treat than somebody who has had SIBO for one year?" The answer is no. [00:29:00] Just because you've had symptoms for 20 years, you never saw a doctor and now, you're seeing a doctor, it's just as easy to treat the 20-year SIBO as it is the one-year SIBO.

Shivan Sarna: That's encouraging. If somebody's on a budget, what would be your best suggestion for them in dealing with SIBO?

Dr. Pimentel: It depends on the budget. Some of these drugs are very expensive and I understand that fully. If you really want it to be on a budget, then try the diet first. [00:29:30] If the diet restriction works really well, and I don't mean low FODMAP. The are little fermentation diets out there somewhere on the internet. You think Allison's site has some version of it as well. If you feel terrific, then maybe that's all you need. But, I can say that for example, rifaximin is getting more than 90% covered by almost all healthcare plans now, and I think in part because it's actually saving money because if you have [00:30:00] a 20-year woman with IBS, why would you do a colonoscopy if two weeks of rifaximin makes them better? It saves money, less colonoscopies, less testing, less blood work, all sorts of stuff. Insurances are covering it, so hopefully, if you have some form of insurance, it will cover.

Shivan Sarna: Just to clarify, correct me if I'm wrong. The SIBO low-fermentable diet is not going to cure your SIBO, but it certainly will help you feel better by managing your symptoms. Is that true?

Dr. Pimentel: [00:30:30] That's correct. For some people, it really works well, but I don't think you're going to get more than 30 or 40% benefit from it, 30 to 40% improvement.

Shivan Sarna: You think 20% improvement from the diet, is that what you're-

Dr. Pimentel: No, I think 30%, 40% that can happen. I mean, not with everybody but it depends how religious you are with the diet.

Shivan Sarna: Okay. This has to do with people who are trying [00:31:00] to figure out that very important piece of SIBO treatment which is the prokinetic. Can you describe a couple of bullet points of what can help with prevention of relapse when it comes to SIBO?

Dr. Pimentel: Yeah, so our goal to not to need to treat often. The less often we treat, in my mind, the better we're managing the patient. The way we, you know, if you take a treatment like rifaximin [00:31:30] and then, you're fine for a year and then, you had a relapse, you don't need to do any prevention because why? Why would you suffer for 365 days taking a pill, or a drug, or a chemical to prevent something that's going to happen a year from now? What are you going to do? You're going to take a pill for a year to prevent something for an extra month or [00:32:00] an extra two months, or whatever the case may be. If you relapse within a month, two months, then you need to take something because you can't rifaximin every month, every month, every month, 12 times a year. You're almost half a year on it. Either you look for some other cause that's causing it to relapse early, or you take a prokinetic to try to and trigger the cleaning waves.

The one we use most commonly again off-label is erythromycin because they have [00:32:30] very tiny dose. It activates migrating motor complexes. Now, remember migrating motor complexes only occur when you're not eating. If you ate just now, you take erythromycin, you're not getting a cleaning wave. You have to be two hours without eating before you take erythromycin, before it's working like cleaning waves. Usually, we say take at bedtime. Try not to eat any calories for two hours before. The second goal is try to do [00:33:00] the diet. Again, you don't need to do the diet if it's a year before you relapse because then, you're just making you and your social life miserable with being too choosy at restaurants and not being able to live your life. My goal is to live your best life and try to take things as less often as possible, and taking antibiotic as least as possible.

Shivan Sarna: What is your take on biofilms and biofilm disruptors?

Dr. Pimentel: [00:33:30] There's a lot of work being done in this area and a lot of good research being done in this area. The question with biofilms is, a biofilm is sort of a protective layer as well. It's not just a ... It can be good and it can be bad. If you disrupt the biofilm and you get rid of that film along the bowel, are you actually allowing things to come in that wouldn't otherwise come in because the biofilm is there? Or is the biofilm a special type of film containing bacteria you [00:34:00] don't want, but are causing trouble to you and you should get rid of it? That is the question I'd like to pose to the audience because I don't have the answer to that question.

I don't know what's right or wrong yet with biofilms because there can be a good biofilm or a bad biofilm, and how do we know which one it is. It's a little perplexing. As you know, there's a tremendous literature on emulsifiers in food as an unknown ingredient like polysorbate 80, and these [00:34:30] things can actually be a contributor, for example obesity, there have been some links to obesity that these things are in their food items. That's an emulsifier, so I don't know that there's going to be easy, final answer to emulsifiers until the data is more clear.

Shivan Sarna: When you're thinking about the MMC or even SIBO in generally, have you seen visceral manipulation helping?

Dr. Pimentel: Visceral manipulation, we've used for example for adhesions, [00:35:00] and I have some patients who benefited from visceral manipulation. The question I have for visceral manipulation is the reasons adhesions get bigger is because as the things are moving, they're tearing and a new scar forms, and then they tear, a new scar forms. Is it increasing adhesions by doing visceral manipulation or is it breaking down the ones that are causing blockage and that's a good thing. I think it's probably a little bit of both. [00:35:30] I have seen some good success with it, but the problem is, you can't quantitate adhesions, not easily, not the ones that are not obstructing. So, there's no scan you could do that. Say, you have 5% adhesions or 10% adhesion, we don't have a quantitative measure, so it's a little difficult.

Shivan Sarna: When it comes to underlying causes and you're there, you're talking to your gastro who may or may not have a lot of background on SIBO, [00:36:00] and you guys are trying to figure out an underlying cause, I've kind of asked this before, so it's treat the SIBO because you've tested and you see that you have it, and then if the SIBO goes away and then, if it relapses quickly, then you really need to look for the underlying cause. Otherwise, you're saying, "Don't obsess about it."

Dr. Pimentel: Sort of what I'm saying. Remember, 80% of the cause of SIBO is probably the migrating motor complex, which isn't something you can [00:36:30] obsess over because that is the underlying cause, which is why we don't test everybody at the beginning. Again, my goal is not to bankrupt people, so if it's SIBO-treated, if they get better and everything's fine for six months, forget about it. It's got to be the migrating motor complex or some mild version of that. If it comes back in two weeks or a month, and you can't get it under control, start looking because you don't [00:37:00] want to miss a cancer or miss an adhesion, or something that could be remedied in a different way. Again, the way I treat patients, they come in to my office. If they're a classic SIBO-like symptoms, treat first. If they don't get better, then we start to investigate.

Shivan Sarna: When someone's getting an MRI, is there a specific technique that they should ask their doctor's help? I mean, are there certain, like I had an MRI once and they [00:37:30] didn't get a lot of images, so I felt kind of like it was an incomplete picture.

Dr. Pimentel: Right. The MRI is very motion sensitive, so you've got to stay really still and sometimes, the quality of the images don't come out as good as you would like. MRI is good for looking for tumors in pancreas, and all that kind of stuff. There really isn't a special way to look at those. I mean, if you really wanted to look at the pancreas, there are pancreatic protocols and other more specific ways to look. But, [00:38:00] if you want to look for adhesions, MRI is not the way to go. What you want to do is barium study. The problem with barium studies is, there's a barium study and then, there's a barium study

What I mean by that is a lot of peripheral community hospitals, they give you the barium, you drink the barium, they take two pictures, and they say, "It looks fine." I've had this happen a number of times. You're going to hear a helicopter here in a second. We got a level one trauma center that flies right over my building, if you hear it. [00:38:30] That's what it is. You do a barium at a community hospital, two pictures, they charge you exactly the same price as we would a barium study here and we take 28 shots, moving the bowel around with a paddle, isolating every loop of small bowel. If you get an expert barium person, you can find adhesions if they're there. If you get just a two-shot barium study, you're going [00:39:00] to miss adhesions. I'm sorry, you just will.

Shivan Sarna: What a shame! How often is the structural problem found on a barium Si series after a CT revealed nothing?

Dr. Pimentel: I don't know the answer to that, but the CT doesn't show adhesions at all. Now, if you have a full-on blockage of the bowel, you're going to see on the CT because the bowel will be all dilated, puffy, and full of fluid, and so forth. But a small, subtle adhesion that is [00:39:30] very positional, so for example, remember when you have ... If you grab, I'm trying to talk about like a hose, right? You have a hose in one position, it's kinked and won't let water through, but in another position, it unravels a little bit, and water is flowing. So, a CT, you're always on your back.

Shivan Sarna: Mm-hmm (affirmative).

Dr. Pimentel: You're lying flat on your back. You go into the tunnel. They do a CT. In a barium study, they get you on your left side, they get you on your right side, [00:40:00] they get you standing up, they get you lying down, and you could be hanging like a hook with an adhesion and you only see it when you're in the upright position. So, barium sees all the different body positions and sees where the adhesion is grabbing on and how it's hooking onto the bowel

Shivan Sarna: Once you see these adhesions, it's not like you're going to get surgery to remove the adhesions.

Dr. Pimentel: Obviously, adhesions beget adhesions and surgeries beget more adhesions. It's taking adhesions down [00:40:30] by surgical procedures can actually make more adhesions later, and so, there's always this debate about what to do. Now, if you're distended, miserable, you can't go on in life without at least trying something, we send these patients to surgery and they often do much better. I have so many cases like that. Now, there are cases occasionally where they do operation for the adhesions, they feel great for four or five months and then, the adhesion come back and then, it's all back again. [00:41:00] I hate that, and they hate it of course because we were hoping for the miracle, and it isn't always a miracle.

Shivan Sarna: Okay. They're not random because they're real, but they might be a little bit of an outlier set of questions. Have you ever seen SIBO and hair loss if any?

Dr. Pimentel: You know, I've seen hair loss occasionally come up over the years, but it's not a consistent beam and I can't say that treating SIBO makes hair [00:41:30] better. I just can't. I mean occasionally, I'll have women who say that the quality of their hair is different when the SIBO's gone, less frizzy, I guess is the term that they use but I can't say that that's something that is definitively noticeable.

Shivan Sarna: What about oral iron? A lot of people say that their ferritin levels or their iron levels are impacted when they have SIBO. Then, [00:42:00] they're taking oral iron and it can constipate them.

Dr. Pimentel: Right. There is a possibility that iron goes down with SIBO because the iron's being used by them, all these bacteria. B12 can be down in SIBO because B12 can all be used up by bacteria. Generally, folate goes up. Bacteria produce folate and one of the ways they test dogs for SIBO in the veterinary world is they do a folate level. Now, if the folate level is super high, dogs get SIBO and they treat [00:42:30] it with antibiotics, and they do much better. Humans are not dogs, but it's the same principle. The bacteria produce folate.

Shivan Sarna: Okay.

Dr. Pimentel: We see a lot of elevated folate in our patients.

Shivan Sarna: Is that something that humans should deal with, so we try to reduce it?

Dr. Pimentel: No, I mean, folate is not toxic at high doses. Like for example, during pregnancy, folate's given because it's a good thing. Folate's good for pregnancy.

Shivan Sarna: Speaking of pregnancy, if somebody has [00:43:00] SIBO and they're pregnant, do you have any suggestions?

Dr. Pimentel: I just had two patients brought their babies in and they had a very successful pregnancy. If you have SIBO and you're planning pregnancy, plan your pregnancy because it's not ... I would say there are some diseases for example Crohn's disease, the rule is, a third get better, a third get worse, and a third stay the same during pregnancy. [00:43:30] What I find is that during pregnancy, most women with SIBO get better. Women become superhuman during pregnancy. It's absolutely amazing. Well, you're super human in general, but women become just unbelievable, like all functions kind of up-regulate and turn-on, and are augmented during pregnancy for the protection of the fetus.

I have seen time and again SIBO patients get dramatically better during pregnancy. I've [00:44:00] one, she's now six months post-partum and she still doesn't have SIBO recurrence. She still doesn't need anything and breastfeeding. Everything is going great. Now, it's not 100% like that, but a good proportion. So, don't not plan a family because of SIBO. Now, adhesions are different because if you have adhesions, the uterus can really push those around and cause more problems over time.

Shivan Sarna: Do you see that some people actually get more SIBO after they have the [00:44:30] baby?

Dr. Pimentel: If they have adhesions, you mean?

Shivan Sarna: Yeah.

Dr. Pimentel: If they have adhesions or they've had for example, previous surgeries, even endometriosis surgeries, it's a big situation because they get a lot of scar tissue. The pregnancy can make things a lot worse or for some of them, not everybody but for some of them.

Shivan Sarna: Have you ever seen a relationship between SIBO and C.diff?

Dr. Pimentel: [00:45:00] In all the years we've used rifaximin, I have not seen in my clinic, at least, a case of C.diff. Rifaximin is purportedly able to treat C.diff in a study versus vancomycin. It was roughly equivalent. I don't think C.diff is a big issue although it is in the label for rifaximin for dIBS because there was one case of C.diff in a Target 3 trial or third trial.

Shivan Sarna: So, some people [00:45:30] who are worried about C.diff are hesitant because of that on the label, is that what you're saying?

Dr. Pimentel: I guess they would be, but in that case, the patient develops C.diff long after they completed the rifaximin and they were taking cephalosporins for urinary tract infection. It's probably the cephalosporin that did it and not the rifaximin, but it gets tagged to rifaximin because the FDA can't say for sure.

Shivan Sarna: What about people who have SIBO and microscopic colitis? [00:46:00] Is the word collagenous colitis ...

Dr. Pimentel: Collagenous colitis.

Shivan Sarna: Yeah. Do you ever see a relationship there or this is another question where people are asking which do you treat first?

Dr. Pimentel: If you have collagenous colitis, treat the collagenous colitis because, I don't say that there's a relationship between SIBO and collagenous or microscopic colitis, because we don't see that. But we do have patients and it's typically a female person or a woman in their sixties [00:46:30] or older that get these microscopic colitis type events. Nobody knows the cause, but treat that.

Shivan Sarna: Is that similar to ulcerative colitis?

Dr. Pimentel: No, because ulcerative colitis, there's a plethora of drugs that you have to treat. They're harder to treat, but microscopic colitis is relatively a lot easier to treat than it used to be with budesonide, which is a type of steroid that doesn't get into the bloodstream as much.

Shivan Sarna: Could you repeat the name of that one more time?

Dr. Pimentel: Budesonide.

Shivan Sarna: Okay, all right. Let's talk about Resolor for a second, because there are a lot of people who are ... This is a prokinetic for any of you who are just learning about SIBO in the beginning here. Resolor, do you hear anything about it possibly being available in the United States soon?

Dr. Pimentel: I know Shire has the rights to Resolor and I suspect that they will be [00:47:30] looking for FDA approval of Resolor at some time in the future, but that's all I know at the moment. Resolor is a prokinetic. It's available around the world. Shire has the rights in the UK for example. In my opinion, it's one of the best prokinetics we have on the planet and it's very effective.

Shivan Sarna: Some people don't have a great reaction with Resolor. They get TMJ. Have you [00:48:00] ever heard of that before?

Dr. Pimentel: Never. Never seen it.

Shivan Sarna: Okay. So, straight up, what if I have SIBO, I take rifaximin, I have a negative breath test, but I don't get better?

Dr. Pimentel: That's one of the things we're presenting at DDW.

Shivan Sarna: Yay!

Dr. Pimentel: You have to wait for that one.

Shivan Sarna: Okay, that's cool. Have you ever seen SIBO and [00:48:30] a flu-type response happen simultaneously and swollen lymph nodes?

Dr. Pimentel: Not so much swollen lymph nodes, but we've seen sort of flu-like effects, foggy sensation, or sensorium feeling like your thinking is not super clear. I'm going to digress a little, but in patients with liver cirrhosis, it's believed that they get cloudy mentation [00:49:00] because of all the bacteria coming in. The liver is not filtering it. There's two ways for the liver to be overwhelmed. One is the liver can't have it because it's cirrhotic, and then, the bacterial toxins and other chemicals from bacteria make it pass the liver, or there's so much stuff coming to the liver, the liver can't handle it and it gets pass the liver, which I think could be what's going on in SIBO. To be honest, I think in my experience and again not published, is that the methane bugs or [00:49:30] the methane patients are more affected by this fogginess than the hydrogen overgrowth. There's something about methane that is at least associated with more of this cloudy sensation.

Shivan Sarna: Speaking of prokinetics and brain health, what about LDN, low-dose naltrexone? What's your take on that? Do you love it? Do you're like, "Oh, if it works for you, great."?

Dr. Pimentel: Yeah. I mean, I use it on and off. [Dr. Rezaie 00:50:01], [00:50:00] my colleague uses it a little more often and he's happy with it in some patients. The thing is, if everything's going really well and everything's easy, everything's easy. We don't use prokinetics at all, maybe a little bit of diet, and that's it. It's when it's hard and it's refractory and the SIBO is hard to treat, that we start to look at all these other options. To say that I've never used it is wrong, I have. I can't [00:50:30] say that there's one magic thing in the tough, tough, tough cases.

Shivan Sarna: Speaking of tough, tough cases, what about MCAS and it being a cause for SIBO, then there's the Ehlers-Danlos and then, there's POTS, and we recently did a master class in Q&A with Dr. Leonard Weinstock who talked a lot about this; what's your observations about that? Any advice you can give anyone who feels that that's a factor for them?

Dr. Pimentel: Yeah, you know what? I really feel for these [00:51:00] categories of disease because it's so challenging. EDS is so challenging. POTS is, I wish I could relate to some of the stories, too, but I think they're too emotional because they're really tough. They're patients suffer immensely and nothing is really happening. I had a very particular patient that I was very fond of, but she passed away from POTS. These [00:51:30] things are, we need to get better answers and maybe it's due to the microbiome in some of these cases or whatever it is, but POTS has become a really serious problem, and more and more recognized.

Shivan Sarna: In case somebody wasn't at that seminar, what is POTS for somebody who's just listening?

Dr. Pimentel: It's Postural Orthostatic Tachycardia Syndrome. Essentially, your autonomic nervous system is not behaving correctly, and you get very wide fluctuations [00:52:00] in pulse, wide fluctuations in blood pressure. You basically feel terrible and in addition to that, because of autonomic dysfunction, the gut doesn't function well. It's almost like somebody's playing with the dimmer switch on your electricity. It's sometimes up, sometimes down and patients just can't find and even heal, and it's really hard on them. But I've seen it so much. It's real, [00:52:30] it's just we don't have a good solution for it. I mean, there are treatments, there are autonomic centers. Stanford has a very good autonomic center. We use them a lot and they've been very helpful in trying to get patients a little balanced, but there's no magic cure for it yet.

Shivan Sarna: If you see a relationship with H.pylori and SIBO?

Dr. Pimentel: Helicobacter hepaticus, which is not H.pylori, Helicobacter pylori has [00:53:00] CDTb and can cause IBS, we believe. But, Helicobacter pylori, we don't know. But, at least, we don't think it's causing SIBO. But, there are patients who have Helicobacter, think Helicobacter is the cause of their symptoms, treat the Helicobacter, but didn't realize they actually treated SIBO because it's an antibiotic regimen, and they got better. So, they treated the H.pylori but it was actually treating SIBO, because in [00:53:30] many countries, H.pylori almost everybody has it after the age

of 60. It doesn't mean almost everybody has SIBO. H.pylori is very common, not so much in the West these days.

Shivan Sarna: Have you ever heard of Yucca schidigera helpful for methane? I don't know if it's a Yucca-

Dr. Pimentel: That's a new one for me. No.

Shivan Sarna: Okay. Have you ever used homeopathy to help your patients?

Dr. Pimentel: [00:54:00] I haven't. Again, I've seen a lot of patients doing these types of things. It's just like probiotics, for example. I do have patients who take probiotics, and swear that it's made their SIBO much better. Six months later, they're in my clinic saying they're suffering from SIBO. I say, "What about the probiotic?" "Well, it stopped working." You know, there are a lot of things that can work and do work, or work temporarily. Dr. Allison Siebecker actually taught me that [00:54:30] some of the products that are used for methane, they work but temporarily and then, they were off and then, a few weeks later, they're back to square one or a few months later. Yeah, there are things that might work but we need long-term solutions.

Shivan Sarna: How about the thyroid function and SIBO?

Dr. Pimentel: I haven't seen a lot of relationship but there is a relationship between autoimmune diseases and autoimmune diseases. A lot of the thyroid diseases are autoimmune. For example, we see in [00:55:00] scleroderma patients, which is another autoimmune disease that anti-vinculin antibodies are highly prevalent in that population as well. That's the only other population that has high anti-vinculin is scleroderma. People who tend to get autoimmune diseases, tend to get autoimmune diseases and so, maybe there's a link there but I can't say that we know for sure with thyroid, specifically.

Shivan Sarna: When you have patients come to you, they've [00:55:30] chronic diarrhea or they've chronic constipation.

Dr. Pimentel: Yes.

Shivan Sarna: Probably associated with either the hydrogen or the methane-constipated hydrogen diarrhea, and they need to eliminate if they're constipated and they need to stop eliminating if they have diarrhea. Do you have any go-to protocols or suggestions?

Dr. Pimentel: You mean to treat specifically the symptom?

Shivan Sarna: Yeah, to treat those symptoms in particular.

Dr. Pimentel: Our whole philosophy at our center is we don't treat symptoms, we treat [00:56:00] cause. But, there are times where no matter how hard we try to find a cause, we end up treating symptoms. There's a lot of therapies for constipation ranging from MiraLAX or laxatives, to magnesium, to prokinetic agents, to secretagogues like Linzess or linaclotide and plecanatide, and newer ones on the block. We use all of the above as needed in the appropriate [00:56:30] setting. On the other side, to stop diarrhea, a lot of different things, of course, Immodium, any anti-kinetic, Zofran, which is ondansetron is a highly effective at improving diarrhea in the toughest of some tough cases where we don't understand what's causing the diarrhea.

Shivan Sarna: Could you say the name of that one more time?

Dr. Pimentel: Ondansetron, Zofran is the trade name.

Shivan Sarna: Okay. Any observations about lime [00:57:00] and SIBO? There's a lot of talk about that.

Dr. Pimentel: Yeah. I don't know that lime causes SIBO. Lime can cause all sorts of disorders of function of the gut. It's sort of a great deceiver because it can affect any part of the body in different ways. Whether lime causes SIBO is an unknown to me. I do see some cases though where they have both. The problem with SIBO is, it's very common and so, it's common to see SIBO in other conditions [00:57:30] and therefore, it's tempting to say that the SIBO is caused by it.

Shivan Sarna: People are still asking because when we get that migrating motor complex a rest, they're like, "No coffee, guys." You can have coffee, right, as long as there's no calorie in it, right or a sweetener that tells your body that there's the calories like Stevia, and then, and herbal tea-

Dr. Pimentel: I'm having coffee right now.

Shivan Sarna: He's having some coffee right now, guys. Then, would a little bit of [00:58:00] herbal tea would be okay, too?

Dr. Pimentel: Herbal tea is fine, even caffeinated tea is fine as long as there's no sweetener or milk, or sugar in it.

Shivan Sarna: Okay. No calories.

Dr. Pimentel: No calories, correct.

Shivan Sarna: Bottom line, okay. Weight gain with SIBO, we've talked about people who have weight loss and what about people with weight gain?

Dr. Pimentel: Weight gain is very common with SIBO and especially the methane side. [00:58:30] We've attributed some weight gain, for example in the study that was by our group here. Methane, if present in already obese population was associated with the obesity having 50 more pounds of weight than in a non-obese population. In other words, if we took people with a BMI over 30, the ones with methane had 50 more pounds or almost 7-point BMI higher [00:59:00] than if you didn't have methane. Now, it doesn't prove cause and effect, that's an association. Then, we look at the general population of people doing breath tests. If methane and hydrogen are both on that breath test, they had a higher body mass index than people who didn't have methane on their breath tests.

Then, we treated the methane in a small group of pre-diabetic patients and their glucose got better when the methane was eliminated and their metabolic parameters got [00:59:30] better. So, we're really excited about what we can do with methane and what methane is doing to us, and how

we can make a lot of things better. I'm not saying it's secured to obesity, but we're going to chase that one. [Dr. Mathur 00:59:43] at our center is chasing that. She's part of our group.

Shivan Sarna: Very cool. We've about four minutes left, people are asking about, when they're doing elemental diet, do you ever recommend doing antimicrobials or rifaximin at the same time, or is that just double duty?

Dr. Pimentel: It's double duty. I mean, one [01:00:00] of the things as I mentioned before is bacteria going to hibernation when they're starved. Now, by day 10, they're starved so much, they can no longer hibernate, they don't have enough energy and they die or they're passed out in the gut. But, if you give antibiotics, you're really throwing them in the toilet because if they're in hibernation, they're not going to be affected by the antibiotics as much as if it they were fed, so I would suggest, don't waste your money.

Shivan Sarna: Okay. Resolor, [01:00:30] are you comfortable with people staying on it long term?

Dr. Pimentel: Resolor as I said, we'll hopefully have it on the market in the United States shortly. The laws do allow obtaining in patients who desperately need something that isn't available in the US, the laws do allow obtaining these from outside, and there are ways to get them. In Europe, my colleagues in Europe have great success with long-term use of Resolor [01:01:00] and have conveyed great experiences in terms of long-term safety and other things. I'm very excited. Hopefully, it'll on the market here, easy to get in the coming year.

Shivan Sarna: Is there a preference for you between Resolor and low-dose erythromycin?

Dr. Pimentel: You know, erythromycin's cheaper and if it works, go with the cheap thing because even if Resolor is available, trust me, drugs that are new are expensive as we all know, and so for us, if erythromycin [01:01:30] is good enough, go with that.

Shivan Sarna: If people are, you've been talking about PPIs, what if they have the reflux and SIBO? It's not even ... They're taking PPIs or they're not, but acid reflux, GERD, and SIBO; do you see a relationship?

Dr. Pimentel: Anything that increases pressure in the abdomen will make more reflux. When you're distended and bloated, and that pressure, you're going to have more reflux, if you already have reflux to begin with and so, getting the SIBO down actually reduces the amount of reflux patients [01:02:00] often experience. It doesn't mean the reflux is gone. It just means it reduces because you've reduced the pressure on the abdomen. Often, if I have a patient who comes in and say they have classic SIBO and they have reflux, I'll treat the SIBO first and see what the reflux looks like after. If the reflux is gone, then, one treatment took care of both.

Shivan Sarna: One minute left to go. If you're doing [01:02:30] meal spacing and I take a supplement or my medicine in-between, is that going to mess my migrating motor complex up?

Shivan Sarna: I'm doing my meal spacing and I'm supposed to take some medicine or a supplement; will that stop the migrating motor complex?

Dr. Pimentel: Potentially because a lot of pills have filler, carbohydrate filler, lactose even. Check your pills. They contain lactose. It's unbelievable. You should look at the ingredient of lactase enzyme. [01:03:00] I think you'll be shocked. They have sucralose in the sweet ones. So, it doesn't make sense to me. That's what I understand, anyways. You just look at the fillers of pills because they can be a problem.

Shivan Sarna: When someone is looking for a doctor, how can we suggest ways for them to find them in their area? Do you have any suggestions for that?

I have a whole list in one of the courses about [01:03:30] how to do that, but do you have any suggestions for them? Then, we'll wrap.

Dr. Pimentel: I don't. I don't have a master list of doctors in the country. I have my go-to people all across the US that I know, but I don't have it written down

where somebody could search and say, "I'm in Atlanta. Who do I see?" Unfortunately, first of all, I probably wouldn't be allowed by Cedars-Sinai but I know it's tough. I know it's tough for patients. But most good gastroenterologists, [01:04:00] most large groups of gastroenterologists are very good at this. Of course, a lot of naturopathic physicians are very good at treating SIBO and Dr. Allison Siebecker, both of you, have been very effective at educating the community. So, there's hope.

Shivan Sarna: Thank you so much. We really appreciate you, Dr. Pimentel and we will see you to learn more during Digestive Disease Week. Thank you so much.

Dr. Pimentel: Thank you so much. Take care.

Even though Shivan Sarna was plagued with "stomach" troubles throughout her childhood, her pediatrician never gave it much attention. Her mom and dad, on the other hand, were determined to find her some relief. When Shivan was about 15, her mother consulted with a functional nutritionist and it helped Shivan change her perspective on the way food impacts overall health. But her journey didn't stop there.

As she got older, her digestive troubles kept her at the doctor seeking treatment in any place she could find. Acupuncture, steroid shots, Ayurvedic medicine, massage, reflexology, cranial sacral, multiple other functional nutritionists — the list goes on and on. Shivan tried almost everything she could think of to get rid of her issues, but with limited success.

Shivan describes this time in her life as, "A bewildering, frustrating, anxiety-ridden roller coaster filled with high hopes and crushing disappointment," which, to hear other SIBO survivors tell it, is exactly how many other people feel. This was all going on while she was having an amazing life by many measures — a yoga studio, a fantastic marriage, and a flourishing career on TV. Throughout it all, her condition persisted, but she never gave up trying to find out what was going on with her health.

It wasn't until 2015 that she learned SIBO was the underlying cause of her digestive struggles. Once diagnosed, Shivan finally started finding the relief she needed and realized that there were millions of other people around the world suffering the same as she once did.

Shivan created the SIBO SOS™ Summit to spread the message that people who have SIBO and other chronic digestive problems DO have MANY options for treatment and healing. She's out to set the record straight and help thousands of people start on their journey to newfound health.

"Join me at the SIBO SOS™ Summit and I promise you'll leave knowing as much or more about SIBO, IBS, and other digestive issues and their treatment than most doctors do!"