Q&A with Dr. Mark Pimentel, Part 1

Shivan Sarna: Well, it is our pleasure to have you Dr. Pimentel. What a treat and thank you. I know you're very busy, so it's an honor and a privilege that we so greatly appreciate.

We are going to be moving at a break neck speed so we can cover as many questions as possible. Just so everybody knows, Dr. Pimentel has graciously agreed to come back to SIBO SOS™ speaker series and join us on July 12th. Be sure to mark your calendars. Also, he will be making lots of announcements in June, so that's why we have him also in [00:00:30] July, which we'll touch on briefly, during our time because he's going to be announcing that at Digestive Disease Week in Washington D.C.

One thing I wanted to ask you Dr. Pimentel, that's a very consistent question is, if someone wanted to come see one of your colleagues at Cedars-Sinai Medical Group, how could they do that?

Dr. Pimentel: The only rule we have is that, we're not primary care. What we can't accommodate is, people who [00:01:00] use us as their primary GI 24/7 coverage because we don't take call that way. We're sort of quaternary care. As long as you have a gastroenterologist that you can rely on for the off hour coverage, we can take those referrals. You can be referred from anybody but as long as you have a primary gastroenterologist, that would be great.

Shivan Sarna: When you say anybody, could a naturopath refer?

Dr. Pimentel: Yes, as long as the [00:01:30] gastroenterologist was also in the mix then, because we want to make sure that if you had a sudden event in the middle of the night, we don't have those kind of call setups and we have to have that back up.

Shivan Sarna: Okay, super. All right. Good to know.

We have people joining us Dr. Pimentel from Switzerland, Arizona, Philadelphia, Sparks, Nevada, Scottsdale, I know we have someone from

South Africa also who's joining us. People from all over the world, Netherlands, [00:02:30] Australia, New Zealand, India. Super cool. Of course the good old USA. Okay, I'm glad everybody is here. We're going to get started. I'm going to grab the questions and we are going to get our learning on.

Let me find it.

As always, I like to say please don't think I'm being rude when I move along very quickly after one [00:03:00] of the questions has been answered. I just want to make sure we can get as many as possible. Out of respect for everyone who's here, I'm going to give you guys and who's jamming to get in here, I'm going to give you guys that two more minutes.

Dr. Pimentel, in terms of Digestive Disease Week, I know you'll be tweeting, how else can we learn about what you're going to be announcing there?

Dr. Pimentel: Well, we have a lot of big presentations at the Digestive Disease Week and we're very excited about that [00:03:30] because some of the new things that we're going to be presenting will be very impactful and make a difference. We're making a big leap forward.

But, yes, I will be tweeting. That'll be part of it. Obviously that's shallow information, it's only a small number of characters. There'll be probably some press releases related to some of the discoveries but also I'll be at the SIBO symposium in Oregon. That's another way I can share that information because I think that's the week [00:04:00] exactly the week after. That might be my first presentation to the public on new stuff.

Shivan Sarna: [00:04:30] First question Dr. Pimentel, I'm going to save one of dozies for later. Right now I want to get a patient's question answered. If I get food poisoning, what should I do to not get SIBO afterwards. One, should I, or A, should I take antibiotics, B, what if I don't know if it's viral or bacterial food poisoning? What are your thoughts on that?

Dr. Pimentel: We know that food poisoning causes IBS. That's now absolutely clear cut. The [00:05:00] paper by the Mayo Clinic last year, 45 studies combined

shows absolutely for sure SIBO, IBS are caused by food poisoning. But the question you're asking is, what if I have food poisoning right now, what can I do? The answer to that is, we don't know. There isn't a study that says, once you get food poisoning if you treat it with antibiotics it will avert the development of IBS. But we have indirect evidence that, that might be the case.

For example, if your food poisoning is two [00:05:30] days in duration, you're much less likely to get IBS than if it's one week in duration. If the antibiotics can cut the time down and the exposure time down, we think it will reduce the rate. It won't go to zero but it will reduce the rate.

I'll just give you one final snippet is that, in our study, in animal studies we showed that if you got antibiotics during food poisoning, meaning as prevention, if you were to travel to an area that you knew that there was a high rate and you took antibiotics [00:06:00] with each and every meal, you would never get food poisoning and you would never get IBS or SIBO. That's a big thing because if you're traveling to those areas that are very problematic, under serviced, underdeveloped countries, you can rest assured you would not get IBS or SIBO if you took prophylaxis.

Shivan Sarna: When we're talking about that prevention, what, other than Rifaximin, what's another antibiotic [00:06:30] that we can reach out to our primary care physician for. Or, is there any herbal that you think might do the trick.

Dr. Pimentel: Well studies are on Rifaximin but, Pepto-Bismol and other herbal preparations have been used. Even probiotics have been used to prevent food poisoning in underdeveloped areas. But, their reliability in terms of preventing IBS have never been studied. The only thing that's been studies is Rifaximin, in terms of preventing SIBO or IBS.

Shivan Sarna: Is it the same, what's the [00:07:00] milligrams that we should ask for.

Dr. Pimentel: For prevention 200 milligram tablet or half of a 550 is what I do when I travel to those areas of the world. That's what I recommend now. Of course that's not FDA approved, so it's not a typical FDA approval. You're using it off label for those purposes. But, I know, I think if I have my facts

correct that during the earthquake and tsunami [00:07:30] there were a number of reporters who when they went there were prophylactically taking antibiotics to prevent because the water supply was all contaminated by the tsunami.

Shivan Sarna: That makes sense. That makes sense. Which leads to my disclaimer I didn't say in the beginning. This is not personal medical advice everybody. Before you take any medical actions be sure to speak to your personal physician as they are in touch with your case. Please note that this is excellent ideas and [00:08:00] thoughts that you can share with your health team. Thank you very much for that.

Let's say there are people here. They don't have an ileocecal valve or they have this scenario in their body where they really feel like or they've been told that you're probably going to have SIBO forever. Would this be something that they could do as well when they eat? Could they add an antibiotic to their food on a daily basis? Then I have a follow up for that.

Dr. Pimentel: The [00:08:30] problem with using antibiotics chronically, doesn't matter ... Rifaximin is extraordinarily safe and has been used chronically for encephalopathy under the FDA approval for years in some patients with bad liver disease but, still the optimal is not to be on antibiotics, any antibiotics for a long period of time unless you absolutely have to.

I do have patients where they have SIBO, they have an explanation for SIBO that cannot be rectified, whether it's an adhesion or ileocecal [00:09:00] valve distortion, that they require some maintenance. What we try to do, and again, this is an off label use, what we try to do is reduce the dose to the lowest possible doze. I have some patients who are on half a Rifaximin every five days and that's enough to keep it away. There's ways to strategize to minimize the antibiotic exposure.

Or, you could try alternatives. Of course, you know there's herbal antibiotics and prokinetic [00:09:30] that can also keep the bacteria out so there's lot strategies that can be used.

Shivan Sarna: People are asking about the longterm use, the multiple rounds of Rifaximin. Six, seven rounds. Some of them get results, some of them

don't but they're not giving up. Have you found that there is a rate of diminishing return with multiple rounds or have you found, has it been studied. Like, "Maybe you should cut it off at five."

Dr. Pimentel: Well, let me start [00:10:00] by saying one of the new studies that we just finished we showed that Rifaximin has about a 30% of patients who respond to Rifaximin are almost won and done. For example in my clinic just this last, just before I left ... The week I had no voice, let's put it that way. The week I had no voice, I had a patient and I hadn't seen her in five years. She was fine. She took Rifaximin that one time, five years ago and she had not had a recurrence until now.

I have hundreds and hundreds [00:10:30] of patients like that where I see them at the mall, not in the clinic. The importance of saying that is that some patients are almost won and done or I don't see them for a very, very long time. It's the patients who need it again and again ... We had to study that. We've studied it up to six treatments and showed that there was no diminished return up to six treatments. [00:11:00] In other words if you responded the first time, you responded almost equally while the sixth time. Some time you took the dose and you got six months of benefit, sometime you took the dose and you got two months of benefit. Maybe there was diet, other things that were making one time longer than the other. Then you took it again and it was six months again. There was no predictable pattern to suggest resistance.

Shivan Sarna: For anybody who's just beginning with their SIBO treatment and figuring [00:11:30] it all out, let's do a quick definition of what post infectious IBS is and how it could possibly lead to SIBO.

Dr. Pimentel: This is work we've done for about 20 years of trying to figure out the pattern of how this happens. What we know is that food poisoning has a particular toxin in it, that then leads to changes through autoimmunity to the enteric nervous system. Then, the gut doesn't flow correctly because the nerves are not connected. It's like the wires in the wall [00:12:00] of your house are almost touching the light switch but they're not and so you can't get the lights on or you can't make the gut move in a coordinated fashion.

As the small bowel is a fast moving, fast flowing stream, when it's not moving fast, it starts to accumulate bacteria because it's all this warm yummy food for bacteria. They'll grow on it very quickly. The weeds start to grow in the garden as I say. That's how, then when the bacteria accumulate [00:12:30] they create symptoms and we characterize that as Irritable Bowel Syndrome.

Shivan Sarna: Okay. When in this whole protocol of all the different SIBO treatments do you recommend probiotics. Before, during, after, at all?

Dr. Pimentel: The problem with the probiotic story is, there are, as you go to the GNC or to your Walgreens [00:13:00] you'll see that there's a host of probiotics. But, the problem is there isn't a host of studies to show that all these probiotics work, except I say for digestive health.

I'm not knocking probiotics, I'm not against probiotics. What I'm against is saying it does something and you don't have data. I would love more data. If you focus just on the Irritable Bowel Syndrome side, IBS is either made worse or not better in most cases with probiotics based [00:13:30] on double blind studies.

Now, there is a handful of studies that are suggesting benefit. Align GI, which is the probiotic from Procter & Gamble was shown in a large clinical trial, a double blind, that it had some benefit in one out of 12 time points. But, they published it and it made an impact on how much they sold.

But, the point I'm trying to get at is, that there are data to suggest there may be benefits [00:14:00] but there is also data that suggest there may be bad things that happen. I recently posted on Twitter that a probiotic cocktail that was being used was actually driving methane production higher. The patients were getting constipated and the methane as getting to the point where it was causing trouble. I think what we need to do is understand what works, study it, prove it and then find better utility for it. I hardly ever use probiotics.

Shivan Sarna: Okay. Fermented food? Kombucha, that's taking over the world, these days?

Dr. Pimentel: [00:14:30] I don't have a problem with fermented food, I just don't know that it's going to be beneficial. The problem with fermented food is often it is things that are not on the list of good diet maintenance of SIBO. I would generally shy away from it only because it seems like it would be a bad thing.

Shivan Sarna: Then, how about prebiotics?

Dr. Pimentel: Prebiotics is the same thing. A lot of prebiotics are fermentables and what we try to do is not feed the bacteria of [00:15:00] the gut, try to starve them to clear that small bowel of bacteria. Remember the small bowel is an organ that receives all this fresh material. It's the food that makes you who you are. Not leftovers.

Humans are very good at extracting the nutrients but if you now expose probiotics or good bacteria, if you want to call them that, to fresh food, they're going to proliferate. When they proliferate they produce gas. When they produce gas, they make you bloated. It doesn't matter what bacteria, [00:15:30] if you're accumulating bacteria in the small intestine, where fresh food is, you're going to have potentially more trouble.

I'll say one more thing though, we do know that Bifidobacteria can have prokinetic action. There are some who argue that Bifido and even one study maybe with lactobacillus, that certain strains can have prokinetic, meaning making the gut more actions.

I've always held hope that someday, that somebody does [00:16:00] a study that proves that will work for SIBO but so far I haven't seen it.

Shivan Sarna: Are there alternative test that you could recommend since the IBS check is no longer available? What's the future of this kind of testing that you've developed?

Dr. Pimentel: This testing is reemerging. It's going to reemerge this year. It will be available. It will be available in its original proper form that has been validated in one trial. The good news [00:16:30] about that test is that it tells you that food poisoning caused your IBS or SIBO.

The second thing, it tells you that if you were to get food poisoning again, it's going to make it worse. It tells you that when you travel, you need to be much more careful than somebody without the antibodies. But, even more importantly, we think it's going to predict new drug therapies that we're actually working on right now. If you have those antibodies and we can get rid of them. This will go away.

All of this takes [00:17:00] time and work and we're heading in that direction.

Shivan Sarna: Okay so, of course as SIBO patient, I'm going to follow up with, when does Santa come. Is it like, 2019, 2020, thing?

Dr. Pimentel: If it was under my control Santa would hae been here a long time ago but it's a complicated process of getting companies that do this professionally to do it correctly and to properly bring it to the market. If it was me, [00:17:30] I'd be selling it out of my garage but I can't do that because then I could have done it years or months ago. It's a complicated thing.

Shivan Sarna: Maybe within the next five years.

Dr. Pimentel: Sorry.

Shivan Sarna: Maybe within the next five years.

Dr. Pimentel: The blood test or the treatment.

Shivan Sarna: Both. Well, the blood test is happening this year right?

Dr. Pimentel: This year. The treatment, I'm hoping in the next three years we'll have some exciting news.

Shivan Sarna: Oh. Sounds great. [00:18:00] Okay, what are the implications and prognosis of having antibodies from your past gut infection showing up on the IBS check test for positive anti-CDTB but not a positive result for anti-vinculin?

Dr. Pimentel: The anti-CDTB or the anti-vinculin, positive suggests that you have IBS. It's used as an IBS-D test. Why some people don't develop [00:18:30] the vinculin is still a bit of a mystery but, the bad news, good news/bad news, if you're positive for anti-vinculin we have noticed that you're more difficult to treat and sicker. If I were a patient, I wouldn't mind having the anti-CDTB to get the diagnosis but the anti-vinculin makes it harder.

Patients come to my office, honestly these are true stories from ... If they're anti-vinculin positive, they are so excited, they say, "Now, [00:19:00] I know I have this." I say, "Yeah, but it's harder to treat." I don't know what you want to wish for, but we're trying to find the cure to it. We're trying to find something that will treat the anti-vinculin antibodies. We think we know how to do it. We're working on it right now. But, hopefully it will work. It's something we have to keep working on over the next two or three years and maybe we'll have the answer and maybe we'll be able to cure this.

Shivan Sarna: How many times do you see [00:19:30] SIFO, small intestinal fungal overgrowth combined with SIBO and, which would you treat first?

Dr. Pimentel: SIFO is more complicated because we don't have a good diagnostic test short of aspiration from the small bowel. That's what makes SIFO difficult.

Now, I do believe there is some SIFO. The thing that confuses me though is, if SIFO is so common and I'm not saying it's common, but if it was really common, then antibiotics [00:20:00] would make it worse because that's what antibiotics do. One of the side effects of antibiotics can be fungus in the mouth, fungus in the esophagus, and we don't see that. We also don't see worsening of symptoms with antibiotics. More than 90% of the time, it's not worsening. It's either better or it doesn't work.

In a small handful of patients or a small percentage we do see something that suggest that it's SIFO. Dr. Rao has a different opinion. He does, I don't know if those of you will know [00:20:30] on this webcast, know Dr. Satish Rao from Georgia but he does the aspirates and he's finding SIFO again, in a relatively small percentage of patients and he's having some good success with treatment.

The next question is, have I ever tried a SIFO treatment? The answer is yes. In some patients, they do respond very well. But, I can't say, like a patient walks in my office and after some questions I know who's who. It takes some time to sort out.

Shivan Sarna: [00:21:00] When it comes to ... It's hard to prove that you have SIFO, and if you do is there any time that you would treat it before the SIBO?

Dr. Pimentel: I've never done it that way. I always go the other way around because there's a lot more data on SIBO and IBS than there is on SIFO. But, if they're failing to respond and they continue to have bloating and distention, all the symptoms and there's [00:21:30] no obvious explanation then I will try to treat it as SIFO.

Shivan Sarna: That leads me to a question that I saw multiple times on the submissions of questions, which is this. I've done treatments, whether it's Rifaximin or it's, herbal antibiotics and I did a breath test again, lo and behold it's negative but I still have bloating or I still have other symptoms. What do you say to a patient who is facing that?

Dr. Pimentel: [00:22:00] Well, so remember there is a fourth gas, hydrogen sulfide. I know those are some questions that are coming up these days because we have teaser abstract last year. Hydrogen sulfide is a gas we can't measure on conventional breath testing. If you don't measure that gas you can't see the whole story. That's all I'll say for that.

But, having a negative breath test conventionally doesn't mean you're negative. Hydrogen sulfide is critical [00:22:30] to knowing exactly what's going on.

Shivan Sarna: For anyone who does seem to have hydrogen sulfide, that was people interpret like a straight line on the test as probably being that.

Dr. Pimentel: Exactly.

Shivan Sarna: Okay. When it comes to methanogen here's [00:23:30] a good one. This is from one of your colleagues is joining us today, can methanogens ... What's a bloom. How should we be thinking about these blooms and what's a bloom versus an overgrowth or is it the same thing.

Dr. Pimentel: Well, we use the word bloom for methanogens because we're actually ... Well, when we study the stool microbiota for SIBO of hydrogen origin, we don't see much difference [00:24:00] between somebody who's sick and somebody who's not sick. What's happening there is we're seeing E-coli growing in the small bowel and that's small bowel overgrowth. They don't belong there.

When it comes to methanogens what we're seeing is that, the methanogens in the stool are higher than they ought to be. That higher number correlates with what we're seeing on the breath tests. What we're assuming is that in stool, and maybe other parts of the gut, maybe in the small bowel as well, that methanogens are over abundant. Basically, [00:24:30] they're blooming, you could say. That's the term we've used in some of my talks as well.

That methanogen bloom is abnormal. Bacteria can be in the wrong place or with the wrong proportion or number. Proportion of number means bloom.

Shivan Sarna: Okay. How do you test for the migrating motor complex? Maybe if somebody is new you want to ... Do you have a quick way of explaining what that is?

Dr. Pimentel: Sure. If you haven't eaten in the morning and you wake up [00:25:00] and you hear this grumbling sound in your stomach and you're embarrassed and you're on the bus or you're sitting in a classroom and the person next to you is looking at you like your stomach is making all these sounds,

that's a good thing. That's the cleaning wave coming through. It lasts about 10 minutes. Starts in the stomach actually and goes all the way through the small bowel stripping out all the junk from last night's meal that you couldn't digest and sweeping it into the colon.

That occurs, that sound occurs because of the migrating motor complex or housekeeper wave, we call it. [00:25:30] It's like your dishwasher cleans up. Then it'll go away for about 90 minutes and then it'll come back. Then it'll go away for 90 minutes and come back again. All through the night when you're not eating this cleaning wave is cleaning you up getting ready for breakfast.

But, when you don't have that cleaning wave, the debris, the yucky stuff from the meal last night sits in the small bowel and doesn't get cleaned out and then the bacteria start to grow on that. We think ... We don't think because in 1976, a study proved that if you don't have this wave, you get overgrowth. If you take narcotics, which inhibit this wave, you get overgrowth. Anything that inhibits this wave or any disease that causes this wave to be less you get overgrowth.

Now, the question you had was how do you measure it? The problem with measuring the migrating motor complex is there's only one way currently and that's invasive. We have to put a tube through your nose all the way down into the stomach, through the stomach into the [00:26:30] small intestine. You have to guarantee that it's there under an X-ray kind of guidance and then for six hours we measure the waves and see how many you have, how strong are they, how long do they last and look at all the morphology of it.

Shivan Sarna: What is the test called.

Dr. Pimentel: It's called a antroduodenal manometry.

Shivan Sarna: Do they hand those out like lollipops?

Dr. Pimentel: You know there's probably, I would say six or eight places in the country that still do it. [00:27:00] In California two places only.

Shivan Sarna: Is it the kind of thing where if you really do get a script from your gastroenterologist that you could have one of these tests?

Dr. Pimentel: If you really wanted to know that the migrating motor complex was a problem you could get this test.

Again, we don't do it as often as we used to because we've shown that approximately 80% of patients with SIBO, the migrant motor complex is the problem. It's better than Vegas that, your migrating [00:27:30] motor complex isn't working so well in most cases. But we still do it. We still do a couple a month because we find the circumstance where it would be more helpful than not to do it.

Shivan Sarna: Which leads us to meal spacing. Can you explain how meal spacing is helpful for preventing relapse of SIBO and why it's important. Everybody is talking about intermittent fasting these days. What do you think about that versus just meal spacing or is [00:28:00] meal spacing really intermittent fasting and you were fashionable before everybody else?

Dr. Pimentel: The migrating motor comp- The small intestine is designed to have eating mode and cleaning mode. Cleaning mode when you're not eating. Humans are designed to have periods of fasting because that allows these cleaning waves to start moving through. If you have 10 cleaning waves a day, which is a normal person, then you're [00:28:30] fine. You don't get SIBO, everything is fine. But if you're a SIBO patient and maybe you're lucky if you have two a day, you want to make it more or you make to make sure those two come and you don't get in the way.

Let me give you an example. You need, when you eat a meal, it completely shuts down cleaning waves, immediately. In fact as you're sitting at the table, the cleaning wave is already shutting down because you're going into what we call cephalic phase of eating because your mind is saying, "Okay, I'm just about to eat. Let's [00:29:00] start producing digestive juices, let's start getting the motor going for digestion."

As soon as you put food in your mouth and you start swallowing it, you're not going to have cleaning waves anymore for about two hours. You will

not see any cleaning waves coming during it, because if you had a cleaning wave during a meal, imagine you're forcing all that food into the colon in 10 minutes. The cleaning wave will be very dramatic to the meal. It will get rid of it. You can't have cleaning waves.

The gut turns into eating mode. [00:29:30] But, even if you had a candy with sugar in it, you shut off the cleaning waves. Maybe not for two hours but you shut it off or 40 minutes, 50 minutes. People who sit at desk jobs and they're working and they have a disk of candy in front of them and they're just popping a candy every couple of hours or something like that, they're shutting down their cleaning waves constantly. Between the candies and the breakfast lunch and dinner and then your coffee, latte with milk in it or whatever, you [00:30:00] could have no cleaning waves all day and that may be okay for somebody who doesn't have SIBO tendency but if you have SIBO tendency, you want to have fasting periods, as much as possible.

Shivan Sarna: A mint, no good. It will disrupt that cleaning wave, but what about water?

Dr. Pimentel: Water is non-nutrient. If you talk about nutrients, we think coffee does not, tea without anything in it, does not. Water does not abort [00:30:30] the cleaning waves, but anything with a calorie or a calorie-trigger.

For example, some of the substitute sugars can bind to receptors in the gut indicating that there's a meal even if they don't get absorbed like Stevia, those types of things. Even those items can trigger or stop the cleaning wave.

Shivan Sarna: What if someone has low blood sugar?

Dr. Pimentel: Yeah, so a low blood sugar, you have no choice, [00:31:00] you have to respond to it. You have no choice, you have to take some sugar.

Shivan Sarna: You just mentioned dairy and I know that when we spoke, when I was interviewing you for the next summit, you were talking about how you don't feel that folks with SIBO tendency should really be doing dairy.

Dr. Pimentel: Yeah, the more specific answer is yes, dairy and the lactose in dairy is a carbohydrate that is difficult for humans to digest. [00:31:30] An average adult human can tolerate a glass of milk without any lactose getting to the colon, but two glasses of milk and some lactose will spill over into the colon even in a normal human without SIBO, but one glass of milk requires the entire 15 feet of small bowel to absorb all the lactose because your enzyme is very relatively deficient as an adult, the lactase enzyme.

If you had SIBO, basically you're giving [00:32:00] amazing sugar, easy to digest to this whole 15 feet of small bowel before you absorb it. Now, contrast that to glucose. Glucose, it's absorbed in the first two or three feet. You're grabbing glucose like crazy. The bacteria hardly have a chance to take it in because you're grabbing it so quickly. Sucrose is the same thing, you're grabbing it extremely, so the white granulated sugar, you pick it up really quick before it ever gets to bacteria. For lactose, it just lingers [00:32:30] too long and then is symptomatic, but if you did lactose-free milk, you'd be fine.

There are people in my clinic who are die-hard cheese fans and they resist me, but the older the cheese, the harder the cheese, the less lactose it has in it. For example, Parmesan, Asiago cheese, super aged cheddars usually have almost no lactose in it and probably you can get away with it.

Shivan Sarna: Okay. [00:33:00] When it comes to retesting, we're switching gears a little bit here, so I've done my Rifaximin or I've done my anti-microbials and I want to retest to see how I did. What's the window that you see as being the best idea for that?

Dr. Pimentel: If you have a response to antibiotic as 80%, so I'm 80% better as a result of antibiotics. [00:33:30] You don't need to retest because it's hard to get better than 80% with anything for SIBO. I tend to tell patients that, "If you want to retest and you're motivated to retest, then go ahead, but rather than waste healthcare dollars and your money, I would say, you're done." But if you have a partial response or a 30% response and you don't know what's going on, those are the patients I retest.

The other group I tend to be more [00:34:00] likely to retest is methane-positive, because if you're methane-positive, it's really important to get that methane to zero to get the best effect. We do think and this is not yet published and not even being presented yet, but we do think that if your methane doesn't quite get down to below that five or three, that your chance of recurring or relapsing with methane is much higher, so we think it can predict relapse.

Shivan Sarna: If somebody has that, what's [00:34:30] your advice for them to be thinking about? Is this just a way of life? Is this just going to be something I have to deal with, if that's the kind of numbers I have, periodically, for the rest of my life? Is it a lifetime change, a chronic condition that I need to manage or do you think maybe with some of the new announcements or whatever, we could resolve it? Can we ever cure?

Dr. Pimentel: My goal is that in 5-10 years, we don't treat this with antibiotics anymore, that we treat the root cause. [00:35:00] Antibiotics are ... Remember, the idea of SIBO, SIBO is not a diagnosis, it's caused by the migrating motor complex deficiency. If we can fix that, then we don't need antibiotics.

If we can fix the vinculin antibodies, then we don't need to fix the migrating motor complex, it'll fix itself. We need to fix the root, not trim the trees. What we're doing right now is trimming the tree with antibiotics. We're not really dealing with [00:35:30] the big problem.

Shivan Sarna: In terms of finding an underlying cause, let's say somebody had an IBS check test and they didn't have those antibodies. They have SIBO. We realize that SIBO is a result of something else. Do you have any strategies that you can share with everyone about what are some ... like a domino effect that we can participate in to find an underlying cause? Do you have anything that you always test [00:36:00] first, three things, or ...

Dr. Pimentel: I know ... Let me see it another way and I've expressed this before, one of the things that's most frustrating is the number of diagnostic tests patients receive or undergo, the years of suffering, the years of seeing physicians without getting identified, even some physicians still saying they don't know what this is or they don't believe this is something ... I understand all

of that, that's extraordinarily frustrating how much patients have paid out [00:36:30] of pocket to get to the final answer.

My goal is not to keep adding dollars to people. If you respond to Rifaximin or an herbal antibiotic or some antibiotic and you're doing great, then getting to the bottom of it isn't so important, because as I say, 80% of patients, it's the migrating motor complex. It's the patient where they're relapsing really quickly that it's important to get to the bottom of it, because, for example, there have been patients where they [00:37:00] come into my office and they have SIBO, no doubt, but it turns out that it was a cancer in the small bowel that was causing a blockage.

I don't want to put fear or the fear of God into patients that everybody needs to check for cancer of the bowel because if you have cancer of the bowel, you took an antibiotic and you got better and it came back in a week, then you have to start thinking about things that are causing the SIBO. If it comes back in a year, the SIBO, then you don't have anything like that because [00:37:30] a blockage would present itself really quickly. Cancer of the small bowel, by the way, is extremely rare. It's so rare, we maybe see one cancer in 10 years of the small bower in my clinic.

But adhesions, we see more commonly. Adhesions can cause SIBO, but then again, it would come back within a week or two weeks after the antibiotics, after you felt better for that period of time. There are indicators that tell us when we [00:38:00] should go more aggressively to figure it out.

Shivan Sarna: When it comes to the drug, Alenia, there's some interest in Alenia with Rifaximin. What's your take on Alenia?

Dr. Pimentel: Alenia Nitazoxanide is a drug that's similar to Flagyl or Metronidazole. [00:38:30] You could argue that it has similar characteristics. We use Rifaximin, for example, with Neomycin for methane. As an alternative, we use Rifaximin and Metronidazole for methane. We found that that's effective.

Rifaximin and Neomycin is a double-blind study published. Rifaximin plus Metronidazole, only experiential data, so I don't have a published

paper. Although, in experience, we see that it works really great for methane. I don't have a lot of data [00:39:00] combining with Alenia, mostly because you're combining one expensive drug with another expensive drug. That's the biggest hurdle, in my opinion, for using Alenia.

Shivan Sarna: Neomycin, so we have a couple of people in the group that have hearing loss or what is it you call tinnitus? I never pronounce that right.

Dr. Pimentel: Tinnitus.

Shivan Sarna: Tinnitus. Is Neomycin absolutely off-limits for those [00:39:30] folks?

Dr. Pimentel: If you have kidney dysfunction or you have hearing dysfunction, then I would say no Neomycin, but to put a caveat around that, the reason that claim is in there is for a couple of reasons. Neomycin is in the same family as Gentamicin. Gentamicin is a non-absorb antibiotic, it's only used intravenously.

Back in the day when people used to get heart valve infections, Gentamicin used [00:40:00] to be critically important to take intravenously to help get rid of the heart valve infection. You had to take Gentamicin for three months, intravenous. They noticed that people's hearing diminished on Gentamicin.

Neomycin, because it's exactly the same class of drug, got that label. It had to be on the label because it's the same class of drug, but Neomycin is oral, doesn't get absorbed. I have never seen tinnitus or hearing loss from Neomycin [00:40:30] in any clinical trial or in any clinical practice that we have done.

The interesting story that I'll tell you is that there was a patient in the double-blind, randomized control trial over Rifaximin and Neomycin. First patient in the trial, the FDA required us to tell people about the ear changes and we had to do ear testing before. If anybody complained of anything, we had to do it again.

First patient in the study says, "My hearing is going." Because they read it [00:41:00] in the brochure we gave them. Sure enough, we stopped the

drugs, we test their hearing a second time. In the meanwhile, the patient developed a very bad cold and so it was probably the beginnings of a cold.

Then after they stopped the drugs, they fell out of the trial. We did their hearing again and it was better than the first time. People know about it, but we really don't see a negative effect [00:41:30] that way, but again, back to the question, if you have hearing problems, I probably wouldn't recommend it and would be contraindicated.

Shivan Sarna: I know some people feel like their last resort and that was and that that was the one thing they hadn't done, so they're very interested in that, of course. Do you see a lot of success with the elemental diet in your practice?

Dr. Pimentel: We're the ones who started this whole elemental diet pathway because we ... It was an interesting story because there [00:42:00] was a patient of mine who was struggling. We got rid of their bacteria, this is pre-Rifaximin and Neomycin only days. We got rid of their overgrowth once, they were brilliantly improved.

Then we can never treat it again, they got resistance. That's why we really were pushing towards Rifaximin because it doesn't develop resistance because we were seeing so much resistance back then. Because of all that resistance, we were moving towards the elemental diet.

[00:42:30] We knew that Vivonex, which is one of the elemental formulas used in the 1970s before going for surgery on the colon to try and reduce bacteria, so we said, "Well, let's try this for SIBO." Sure enough, that first patient, it was brilliant. The patient was fine for months after. That's how it all started with that one patient, but we've done, probably, 3000 patients with elemental diet. We've been doing it less now [00:43:00] because the antibiotics have been more successful with less resistance, but we still do it.

Shivan Sarna: If someone has hearing issues, can't do Neomycin, certainly look at the elemental diet as a possibility?

Dr. Pimentel: Yes. The problem with the elemental diet is taste. They get a little weight loss because they feel very ... They may be tired on it or their not taking enough of it because they don't like the flavor. Those are the things that make it challenging and it's two full weeks. No [00:43:30] cheating, no coffee, no tea. It's just water and elemental diet for two full weeks.

I always tell my patients, there's three stages of the elemental diet. The first three days where they feel like they're starving because they aren't chewing on food. The middle time where they feel okay, they're getting used to it and the last three days where they put up a picture of my face on their wall and throw darts at it because of what I've put them through. [00:44:00] It's tough. It's not easy to do 14 days.

Shivan Sarna: Speaking of which on underweight and I have to ask you this, there are so many people who are really dealing with this serious issue which is if you are underweight, you cannot keep that weight on. They may have SIBO, certainly digestive issues, what do you do for folks like that?

Dr. Pimentel: All right, are you suggesting that they're not responsive to the therapy, first of all or ...

Shivan Sarna: I think that [00:44:30] a lot them are ... It's everything. They're underweight, they can't keep the weight on. They've done some treatment and maybe their SIBO is clear, but they still keep losing the weight. Some of them are dealing with diarrhea and they can't the weight on. There just seems to be this group of people who are really struggling to maintain body mass.

Dr. Pimentel: Yeah. In those instances, there's a lot of things we do. For example, there was a patient that I had who had [00:45:00] SIBO classic. Everything SIBO, but again, low body weight. We tried the elemental diet. That worked, but only temporarily. We tried antibiotics and so forth and so on.

It turns out then on CT, she had an atrophic pancreas. Her pancreas was maybe 10-15% the size of what it normally should be, so she couldn't produce enough enzymes. Sure enough, we treated her for overgrowth, put her on pancreatic enzymes [00:45:30] and she did well.

The patients with Ehlers-Danlos Syndrome who develop SIBO have a great tendency to lose weight. We don't understand that entirely, but looking for Ehlers-Danlos. My point is there's a list of about 40 different things that we start to shuffle through as we see patients who have profound weight loss or difficulty maintaining weight and they are at a low body weight. We have to make sure that we exclude some of these disorders [00:46:00] that we're noticing.

Shivan Sarna: When it comes to enzymes, people have a lot of questions about enzymes, can you take too many? Do you take them before, during or after the meal? What's the difference between a digestive enzyme and a pancreatic enzyme, for example?

Dr. Pimentel: Enzymes, lactase is an enzyme, so we use that for lactose-intolerance. Beano is an enzyme that's used to help digest beans. The term enzyme is basically a protein that helps [00:46:30] digestion or helps to break down something, that's an enzyme, or to facilitate a chemical reaction, but when it comes to digestive enzymes, there's over-the-counter and then there's prescription variations.

In general, the prescription are stronger, higher concentration and higher purity. That's why people tend to see a better response to the prescription, but the natural enzymes, you can buy in store. They [00:47:00] have those enzymes, then they may be enough for some people and you don't require a prescription, per se.

But basically, the premise of enzymes, if you want to just treat SIBO, for example, let's say they don't have an atrophic pancreas like in my last comment, but they just have some relative deficiency or they want to treat their SIBO. Basically, what we're doing is, we're not doing Vivonex or elemental diet, because that's elemental, but what we are hoping is that the enzymes can break food down faster, [00:47:30] more for you, less for the bacteria and help prevent feed them.

Now, it doesn't mean you gain weight because, eventually, those calories the bacteria eating go to you anyway because when they die, they release their chemicals, you get them. It's not that you're absorbing more,

therefore gaining more weight, it's therefore you're absorbing them faster than the bacteria can, therefore you're getting the calories and they're not, initially, so you get less bloating.

Let's say if I were to take a SIBO [00:48:00] patient, never treated them with anything, put them on pancreatic enzymes. I would get probably 20 or 30% improvement in symptoms with enzymes alone. That's what we use to see in some of the refractory patients back in the day when didn't have Rifaximin. We will get some response, but we couldn't get 80 or 90% improvement.

Shivan Sarna: Well, some of us would take 20% of an improvement, for sure, right?

Dr. Pimentel: No question, yes. We do use that for some of the toughest cases even now.

Shivan Sarna: [00:48:30] What usually comes when we start talking about enzymes is HCL, apple cider vinegar. Do PPI, Proton Pump Inhibitors cause SIBO or create an environment for SIBO to either be worse or to actually start?

Dr. Pimentel: I love this topic because it's never what you think and it's always more complicated than you think. There are patients who come to my clinic wanting to go on HCL or Betaine HCL [00:49:00] or they're convinced that PPI is the cause. Let's take it in two bites. Acid in the stomach kills bacteria, because if you eat an apple or take a bite of an apple, that apple's covered with bacteria. You can't help putting bacteria in your mouth, so the acid is one protective mechanism for preventing bacteria build-up. But it's a different type or overgrowth we're talking about. We're talking about oral bacteria, gram- [00:49:30] positive bacteria. It's a different level of overgrowth.

The other part that confuses people is that in IBS, we don't see more SIBO in PPI users. Remember, how much acid do you need to kill bacteria? How many minutes of acid exposure? If you were to pour hydrochloric acid on a bacteria sitting on my desk right now, I guarantee you, within a minute, that bacteria is dead. Even [00:50:00] on a PPI, you probably have half an hour, an hour of acid breakthrough in a 24 hour period. You just wiped out the bacteria in that upper gut from that little bit of acid for that short period of time. We don't think PPI is as big a deal as it could be.

Now, on the flip side, let's talk about HCL, Betaine HCL. HCL, if you add more acid, could you kill bacteria? Well, I can tell you that [00:50:30] if you took the amount of acid that the stomach produces in a drink, you would rip your esophagus apart because the stomach produces massive quantities of acid, so taking small amounts, I doubt, is going to be all that useful.

However, after saying that, what we know is that acid is a hydrogen source. Methanogens, methane bacteria, use hydrogen sources to produce methane. [00:51:00] If you're a methane-producer and you add more and more acid to your gut, you're going to make more and more methane. If you don't know what type of overgrowth person you are, you're going to get more methane production by taking HCL. That's really a contraindication to taking HCL.

Now, going back to PPI, we noticed that people who are on a PPI had less methane, it was statistically less. Maybe [00:51:30] PPI is good for overgrowth if it's methane and bad for overgrowth if it's not. As I said in the beginning, it's a very interesting question, very complicated and it could be bad, it could be good.

Shivan Sarna: Okay, that's so ...

Dr. Pimentel: Did I just confuse you all or was that somewhat clear?

Shivan Sarna: If I'm on a PPI, it's not like top priority, necessarily, to get off of it, necessarily?

Dr. Pimentel: That's correct. I don't [00:52:00] take people off PPI if you have overgrowth. If you have methane overgrowth, I definitely don't take you off the PPI because you actually are reducing the methane fuel because you have less acid going through the gut.

Shivan Sarna: Wow. All right, we're going to keep going here. Per your, this has nothing to do with diet and treatment, so per your theory, the patients with SIBO should not have any diet restrictions when they're going through the antibiotic treatment to avoid the bacteria from hibernating or

encapsulating. That's one [00:52:30] thing, if you want to comment on that, but then also, interestingly, why then when we're instructed to have very restrictive diet for the breath tests, does that make sense?

Dr. Pimentel: Let me give you an example, if I were to eat beans as part of my dinner, not as the full dinner, beans can take and linger in the gastrointestinal tract. They will inhibit the migrating motor complex because they are complex carbohydrate and they bind [00:53:00] to the receptors that tell you, "You're still eating, you're still eating, you're still eating, you're still eating" because they take almost 24 hours later, there are still bean residue in the small intestine.

If there's bean residue in the small intestine still, your hydrogen level in a breath test, whether you're a normal human or a SIBO person, is going to be too high to start. That's the extreme end of it, but we put people on a somewhat restrictive diet so that we make sure that that hydrogen is at its lowest [00:53:30] level.

Hibernation occurs if you're on restriction for a prolonged period of time because the gut bacteria expect that you're fasting and eating, fasting and eating. That's what normal humans do, we sleep at night. It doesn't mean the bacteria are becoming spores at night, they're resting, but if you fast for a week or for 10 days, in terms of on a relative fast, meaning you're on a restrictive diet, but if you fast for a real long time like elemental [00:54:00] diet, then the bacteria usually die between days 10 and 14. That's what we figured out was the best fasting time. They can't live longer.

Yeah, they may form spores, but those will be passed out into the bowel. They can't ... Spores can't hang-on to the intestine with hairs or the adherence molecules, they tend to be shed. I don't know if I'm answering the question, but basically, your fasting for a day doesn't do it, doesn't do [00:54:30] anything to affect the breath test negatively. It's actually good for the breath test to start at a lower number.

Shivan Sarna: Okay, that does answer the question. Then basically, beans are not happening anymore?

Dr. Pimentel: No Bueno, no.

Shivan Sarna: No Bueno.

Dr. Pimentel: They're not good. I mean, beans are the top of our list of 'do not eat if you have SIBO', beans, lentils, legumes, they are at the top of the list.

Shivan Sarna: Even if you do like a Bean Zyme enzyme, [00:55:00] it's just not strong enough?

Dr. Pimentel: Even with lactase enzyme, we know that it does break down lactose, but the reason there is lactate milk is because the pills never worked good enough. As soon as those enzymes hit acid in the stomach, they degrade already. Probably 70% of a lactate pill is broken down before the enzyme even has a chance to work. It's never going to be as good as [00:55:30] lactose-free milk.

Shivan Sarna: Got it. This next little group of questions has to do with methanogens or methane-dominant, which is constipation-dominant SIBO. Have you worked at all with Atrantil or had any experience with or are you comfortable commenting on that?

Dr. Pimentel: Atrantil is being used fairly commonly in patients with methane, to some effect. I don't use it all that often because we have such good success with what we're doing, but I have seen patients who've [00:56:00] taken it and had some success on the methane side.

Shivan Sarna: How long does it take for methanogens to actually produce methane gas?

Dr. Pimentel: This is why the breath test is different from methane, in part. When we do breath testing for methane, you don't need to have lactulose. The methane is there right from the get-go, because to get to methane, you have to have a sugar. The sugar has to interact with a hydrogen-producing bacteria. The hydrogen-producing bacteria have to produce hydrogen and that takes [00:56:30] about 90 minutes, 60-90 minutes.

Then once the hydrogen is produced, the hydrogen goes into the methane bug, then they produce methane 60-90 minutes later from the hydrogen. You're not going to see a rise in methane for hours and hours and hours after lactulose. We don't look for a rise in methane we look for 'is there or not' in an abnormal quantity. That's how we determine methane.

Shivan Sarna: Okay. I think you've been talking [00:57:00] about how methane is actually a different disease than SIBO. Am I getting too close to the stuff you're going to be revealing at DDW?

Dr. Pimentel: No, I've said this in lectures already that methane, number one, in methane or in constipation, because methane is attributed to constipation and methane actually causes the constipation, that in the constipation side of this disease otherwise known as methane, the anti-vinculin, anti-CDTB antibodies are almost [00:57:30] never present, so you don't see them there.

We don't think food poisoning, per se, is a definitive trigger for the constipation side. Again, supporting the bloom, for reasons that we don't know or why it happens in these methane people. Again, we don't know why, but the good news about methane is that there are a number of treatments available and some treatments coming down the pipeline that could really eliminate methane [00:58:00] altogether. That could be something that could be cured in the next couple of years.

Shivan Sarna: Very exciting. What if methane and hydrogen are both positive with constipation, is that still SIBO or could it be something else?

Dr. Pimentel: The thing about methane is you need hydrogen to produce methane. If you have a lot of hydrogen, you can produce more methane or that the methane bugs aren't high enough to get rid of all the hydrogen, but what we see is if we get rid of methane, [00:58:30] then the hydrogen builds up. Hydrogen building up actually inhibits the hydrogen bacteria, they start to reduce in number. Getting rid of methane can actually reduce hydrogen bacteria also because they tend to pickle themselves with all their hydrogen. It's kind of a two hit if you get rid of methane.

Shivan Sarna: Okay. If somebody has a breath test and they have it, be high in hydrogen, they take their treatment, they do another breath test, can it still [00:59:00] be high? It switches, not it's high in methane. Does that make sense?

Dr. Pimentel: No, it doesn't. The reason I say it doesn't make sense is because in 20 years of doing breath tests, I think we can find three instances where somebody converts from only hydrogen-producing to methane. Now, we can get rid of methane and see hydrogen go up, but we almost never see the reverse, like three times in 20 years, we've seen [00:59:30] somebody who's predominantly hydrogen switch and become a methane-producer after treatment. That almost never happens.

Shivan Sarna: Okay, interesting. Now, can hydrogen SIBO lead to leaky, hydrogen or SIBO, lead to leaky gut more than methane SIBO or is it just equal opportunity?

Dr. Pimentel: I don't know the answer to that question because I don't think anybody studied that, but in terms of leaky gut, when you have too much bacteria in the digestive tract, there is some attempt [01:00:00] to get those out because the cleaning waves is not working so there are ... It's not good to have all that bacteria there. Some of the gaps between cells do open to allow immune system chemicals to come out and see if they could get rid of the bacteria. That may be why leaky gut occurs in some of these cases.

Now, vinculin, as it turns out, isn't just in nerve cells of the gut, it's also in the epithelium. If you inhibit vinculin, then it's possible that leaky gut could be caused that way as well from the antibodies in [01:00:30] the bloodstream, the anti-vinculin.

Shivan Sarna: If you help to get rid of those antibodies, you're going to help your leaky gut?

Dr. Pimentel: That's true.

Shivan Sarna: Theoretically.