In-Depth Investigation into

SIBO, IMO & Hydrogen Sulfide

with Dr. Ken Brown, MD

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Shivan Sarna: Hey, I'm Shivan Sarna. I'm so glad you're here. This is SIBO SOS® talking with Dr. Ken Brown, double board-certified physician, gastroenterologist, internal medicine doctor. And we're going to be talking about the different types of SIBO. And we're going to be talking about Atrantil which is the supplement that he developed that is the only one clinically shown to help reduce bloating.

But there's some new research out that he just found out about that kind of make a lot of sense that we're going to dive into.

This is my book, Healing SIBO. Dr. Brown was gracious enough to have me on his blog/webinar/podcast to talk about it. If you don't have it, it's $20 well-spent. Atrantil is in the book as well. It's a very inexpensive way to get a lot of SIBO information.

Okay, Dr. Brown is here. Great to see you! Hi sir… hi!

Dr. Ken Brown: Well… hello Shivan!

Shivan Sarna: So you were just doing some hemorrhoid surgery this afternoon. And we just learned before I hit record some very interesting information about hemorrhoids. I know that's not why everyone joined. We will talk about that before it's over because it is astonishing what Dr. Brown just said… I promise!

Dr. Ken Brown: If you suffer from SIBO, especially constipation-predominant, then hemorrhoids are a big part. So they kind of go all hand-in-hand.

Shivan Sarna: They really do.

Dr. Brown, I appreciate your perspective. You've been here on the ground, boots on the ground, with clients and patients for so long now. And that really makes you I think a different voice within the world of the SIBO community. How many people do you see a week?

Dr. Ken Brown: Well, between me and my physician assistant, we see a lot… like a lot! I do procedures three days a week. I do hemorrhoids in one day. And since I have this fantastic physician assistant, Megan Kennedy, who understands our protocols, fully understands the whole concept of SIBO and embraces it, we get people from all over. And they've usually failed a bunch of stuff!

I talked to Chris Kresser about this. That's pretty much what his whole practice is also—a bunch of people that are desperate showing up. It's one of those things, when there's no easy fix and you're always trying to think of new things. And you're always seeing different angles.

[02:59] Beating SIBO

Shivan Sarna: I was just talking with Dr. Allison Siebecker about this today, that there is this vibe out there in the health space that SIBO, there's no cure for it. And that's just not true. There are treatments. There are ways to get better. If you are in a situation where you're sort of have gone to everybody—and Dr. Brown is one of the last frontiers—then yeah, you probably do think that it's never going to get well and it's never going to get better. But there is success to be had.

I just want to give a message of hope, Ken, because so many people are suffering and so many people are digging deep to try to resolve it.

Okay, tell me a little bit about your perspective and what makes it different. And then, let's talk about some new research that just came out today or recently.

Dr. Ken Brown: Well, there's always research coming out. There's lots of really cool things. I think that, today, what we can talk about, what I'd like to address with the

audience—I'm sure that your audience is extremely well-versed in SIBO, so we can kind of just do the quick visit or...

Shivan Sarna: It's everybody. We have beginner minds. We have advanced people. So let's do our best to get everybody in there.

Dr. Ken Brown: Do you want to read your book out loud really quick for everyone?

Shivan Sarna: No, I don't. Go ahead, go ahead.

Dr. Ken Brown: Congratulations on that also.

Shivan Sarna: Thank you.

Dr. Ken Brown: I think it's a fantastic book. If you have not read the book, she does an amazing job of going over some very complicated stuff in a very plain way that's enjoyable and that's fun. And it's an easy thing to get through. So I would suggest everybody taking a look at Healing SIBO.

Shivan Sarna: I appreciate that very, very much. I really do.

Dr. Ken Brown: So as far as hope goes, right now, I can think of just a few people in my practice that we say, "Okay, you have SIBO definitely. And you're just not getting better." It isn't a situation like that. Almost everyone eventually seems to come out of it. That's at least what I see in my practice. And I see a lot.

But it takes time. And it takes a little effort to change your diet, change your lifestyle. I think a lot of that stuff plays a big role. We can get into all those different things. That's kind of the protocols that we try to do in my practice. We want to treat this. We want to diagnose it. But mostly, we want to address the symptoms.

We want to get good history, see where it's at, see what's happening, and then work our way back to different lifestyle changes that we can do—which includes diet,

which include stress management, which includes sleep and all those other things we should all be doing anyways. But it really allows your body to heal itself going forward.

And then, the big thing that's probably unique to my practice is the knowledge and the people that I'm surrounded with, different PhD's, that are this science, this new frontier of how polyphenols interact with our bodies, I think that is going to be the future of how we end up treating a lot of these different intestinal diseases. It is using polyphenols and allowing your body, or allowing Mother Nature's secret weapon, to use molecules to help you.

[06:08] Polyphenols: Why Vegetables Are So Important

Shivan Sarna: What is a polyphenol?

Dr. Ken Brown: So broad definition, all a polyphenol is the molecules that make vegetables colorful. So when somebody says, "You should eat your vegetables?", I always come around with "Why? Why should you eat your vegetables?"

"Oh, they're good for you."

"Well, why are they good for you?"

We're always talking about this.

They're good for you because they have insoluble fiber, most of them. The insoluble fiber is there, the soluble fiber and insoluble fiber in certain ratios so that we can have enough bulk in our stool to be able to have an effective bowel movement.

There are some trace minerals and vitamins… which are good for you also. **The real workhorse of why vegetables are good for you is because it is polyphenols**.

Polyphenols are the molecules that plants produce so that it actually protects them. But our bodies have adapted to use these polyphenols. And our microbiome breaks them down into smaller phenolic compounds, into smaller products that do allow for anti-inflammatory aspects, anti-aging aspects.

Certain polyphenols that are used now—**quercetin** is one of them, and that's a smaller phenolic compound—**curcumin** (turmeric), those are all polyphenols.

There are huge broad classes of these. **What we really need to have are large, stable polyphenols that make it to your colonic bacteria and your microbiome.** And then, your microbiome breaks them down. It's a really cool conversation that we can get into. But just real briefly, that's what it is. And that's where we're going.

I'm working with some scientists in Italy and Argentina right now who have come up with some very fascinating data to show how these molecules can actually help you. **Basically, you're allowing the body to help itself**.

Shivan Sarna: We love that. We love that part.

[07:58] Diagnosing Hydrogen, Methane (IMO) & Hydrogen Sulfide SIBO

Shivan Sarna: So, let's talk a little bit about your clinical observations these days for IMO. And can you define that, hydrogen and then hydrogen sulfide? That was the title of this talk. And then, I definitely want to ask you about the research you just read about and then the genesis story of Atrantil.

But what do you see in your clinic these days as being like, "I have this. And this is what we tried… but it didn't work" or "It didn't really work, but I'm not giving up hope."

Dr. Ken Brown: So generally speaking—and I know you've had some amazing experts on like Dr. Siebecker. You've had Dr. Pimentel, Kiran Krishnan of MicrobiomeLabs has been on. All these people, I don't want to step on any toes there. I'm kind of just in there giving my observation as a clinician that sees a lot of it.

By the time somebody comes to see me, they've usually seen a few functional medicine doctors. They usually come in with a whole stack of breath test or fecal analysis tests and things.

But really, to help them not continue to spend so much money, I just want to get to the history and say, "What is going on? Where are you with this? What time of day are you feeling…?"

My observation is that when you have an event that then leads to something and you say, "Okay, I got sick six years ago, and I haven't been right since. Every time that I eat, especially carbohydrates, I bloat up," to me, that is just almost pathognomonic for SIBO.

And that would be argued by some of the academic guys saying, "No, that would just fall under IBS," and all that stuff. But this is what I'm seeing, and this is what I'm treating.

So, the IBS-D or the SIBO diarrhea-predominant, which would be hydrogen sulfide or hydrogen, seems to be a little bit more responsive to our traditional treatments which would be the Xifaxan and things.

Now, the constipation, that's where Atrantil comes in because we have one unique polyphenol in there that has been shown to get rid of the organisms that produces

the methane, the *Methanobrevibacter smithii*. So that's the one that a lot of people come to see me with.

If somebody comes in and they've never been treated, I love the guy! And I say "the guy" because by the time they come in, they're just so frustrated that they tend to go to the doctor later. The guy that comes in is like, "Look, I'm a pilot." I've had several of these. "I'm a pilot. I've been totally regular my whole life. And now, I'm delaying flights because I have to stop and use the restroom."

"Well, when did that start to happen?"

"Well, I was on a trip to such-and-such. And then I got sick."

I'm like, "Oh!" I put them on a round, and they just think that I'm amazing because they're like, "Oh, my gosh! I'm back to normal." Now, the next step… now comes the conversation.

And then, we'll do the same thing with the methane-predominant which leads to constipation or it leads to a different type of dysmotility. I don't want to be nuanced about it. **The methane production actually results in just non-propulsion so it does lead to constipation, almost a paralysis, so to speak.**

And those people tend to take a little bit longer. And I set the expectation of that, "We're going to have to do… and go a little bit longer."

And then, with that, there's usually a component of functional constipation where the hemorrhoids come in, where the bathroom use, bathroom hygiene comes in. It's all part of that too… to correct the whole thing at the same time.

So, Dr. Pimentel came out with his breath test, the Trio-Smart™ Breath Test that does evaluate for hydrogen sulfide. I've been ordering that a ton, using that a ton on people.

And I take breath tests with a little bit of a grain of salt because sometimes I see different breath tests that people come in with and they're very variable. I think that there's a lot of things that can happen with it that can change the results. So I don't completely hang my hat on it. But it certainly helps us when I look and see if there's a spike either farther down or very early. And those kind of help us nuance the treatment.

So, in my practice, if you were to come in and you have this early hydrogen spike, like really early, I'm going, "Okay, is it possible that your overgrowth is happening somewhere high in the duodenum and all the medications we're doing are actually not dissolving the area where they should be. And it's happening from the bowel." And then, vice versa, "Oh my gosh! You have a hydrogen spike or a methane spike linked. Do we need *more* medication because a lot of it is being broken down early in the small bowel?"

There's little things like that *that* I really like the breath test for—not so much to say, "Yes, you have it," or "No, you don't"—a lot of people get very frustrated when they come in with a classic history, they do a breath test, and then it comes back negative. I say, "Well look, your history is so consistent with this. We're going to go ahead and treat you." And almost everybody gets better with that.

Shivan Sarna: That's awesome!

Dr. Ken Brown: I'm different in that. Treat the symptoms...

Shivan Sarna: Yeah, you are different.

Dr. Ken Brown: But I'm kind of forced to. I have a different type of practice. I don't order a whole lot of test at this point. I just need to make sure you don't have something bad. I have found Crohn's disease. I have found colon cancer. I have found Celiac disease. I find all these things.

So, as a gastroenterologist, I need to make sure that you don't have something else. We will do procedures. We won't do procedures on somebody that's just had it.

I talked to Mark Pimentel about this. And being in his institution, when he sees people, he's floored at how some of them will get seven scopes in one year. But they're still normal, still normal. And that's the other extreme.

Shivan Sarna: Yeah, I did too in a very short period of time because I was convinced I had cancer.

And actually… what's today? So in 2016, the last appointment before they went on Christmas break, God bless Dr. Michael Schulman who got me in and he's like, "Nope, there's nothing there, Shivan." I was devastated.

I talked about this in my book. It's so strange to be devastated that you don't know your diagnosis. But that's how frustrating it can be when you're like, "I don't know what's wrong with me. But something is wrong with me." And yes, it's inconvenient.

[14:20] Healing the Brain through Healing the Gut

Shivan Sarna: There's research that you just read which solidifies your theories—all of our theories probably—about why getting this conditions taken care of is so much important than you can possible imagine.

Dr. Ken Brown: Everybody has their *why*. If you don't have your why, find your why. Your why is that thing that gets you to get out of bed and continue to pursue something.

My "why" I'm learning is really to protect the brain by healing the gut. I think that, deep down, my biggest passion as we continue to move forward, we continue to

develop products and meet with scientists, there's just this theme that keeps coming back which is: **If you have inflammation in the gut, it will lead to inflammation in other parts of your body, but specifically can be in the brain as well**. And we're seeing this over and over again.

Now, on a personal note, we all have lives. You go through your whole life—you write a book, and you do this. And I always kind of joke around with my kids and my wife that I'm not really big into buying things, but I'm pretty loose about purchasing memories—meaning traveling and eating good food and doing things like that. I try to teach my kids that I think that there's nothing more valuable than memory.

I tell my kids about my parents. My father died in my early twenties, so they never met him. The stories, what is the value of that? It just got me thinking. The value of that is priceless. And a life where all of that is taken away—meaning dementia—what is the impact on not only the person but on other generations.

And so, this whole concept of my "why" is ultimately healing the gut to protect the brain. And so I'm always scouring journal articles. And we were texting a little bit, I said, "I found these two cool articles that just came out last month and the month before," and it solidifies exactly what I'm talking about because people are now starting to look at this.

The title of the first article that was published in the *Journal of Neural Transmission* last month is *Small Intestinal Bacterial Overgrowth in Alzheimer's Disease*, looking at the mechanisms behind that and the positive result of a SIBO test, then retrospectively looking at Alzheimer's patients, and then talking about how this ultimately is inflammation in the gut leading to the inflammation of the brain which is happening 20 years before any neurologic dysfunction.

Shivan Sarna: Boom!

Dr. Ken Brown: And then, the next one is *Small Intestinal Bacterial Overgrowth as a Potential Therapeutic Targets in Parkinson's Disease*. This one is interesting because, basically, they're discussing intestinal inflammation, but as you sit there and watch somebody where their intestinal transit changes, they started developing these gastrointestinal issues, that should be the time to target therapeutic potential so that they don't develop Parkinson's disease.

Now, that's just two diseases that I'll align there. But my belief is that **the inflammation that takes place in the intestines which leads to leaky gut (or intestinal permeability depending on whatever wording you want to have) ultimately is what turns on autoimmune disease**.

I think that the inflammation leads to a handful of other deals—which I don't want to get on this rabbit hole right away. But something that I'm seeing a lot of is somebody will develop, let's just call it SIBO—I don't know what's coming first—and then, over years, it's almost like an epigenetic phenomenon where we're seeing people with Ehlers-Danlos Syndrome, plus SIBO, plus median arcuate ligament syndrome (MALS), then they end up with this dysautonomia problem where they have this tachycardia and they develop POTS…

I've actually had some of my patients—one of them probably for sure is going to join us here—I did a podcast with her because she's kind of made herself a dysautonomia expert. And so I'm learning from my patients. They're looking into this, and I'm being taught by my patients. What starts out as "Oh gee, you're bloated" can potentially lead to dysautonomia, can lead to severe bowel pain, can lead to other issues. And then, those are the people that manifest that, but it could also lead to dementia and different things like that.

Shivan Sarna: Define dysautonomia for everybody if you would?

Dr. Ken Brown: It's like a dysregulation. In the most simplest of terms, POTS is a dysautonomia. That's *postural orthostatic tachycardia syndrome*. And we see people where they'll stand up and their blood pressure will drop. Their heart rate will just race for no reason at all. You don't have proper control of your autonomic nervous system, the nervous system that should be just going on at all times—which includes the gastrointestinal system. The enteric nervous system is part of the autonomic parasympathetic and sympathetic.

And that is ultimately full circle coming back that, once you start seeing that, you're like, "Wait a minute!"

So, Angie and I—Angie is the one that came on the podcast. And she helps me find these articles. She's the one that sent me these articles. I'm hoping she's on here and she can answer the questions.

Shivan Sarna: Hey Angie! I don't know if she's here or not. I'm just saying hey to her anyway.

Dr. Ken Brown: Yeah... well, hopefully...

What we're doing is we're working backwards.

Shivan Sarna: Angie Cook, she's here. Hey Angie!

Dr. Ken Brown: What she did the whole podcast on was she had this really good breakdown about this dysautonomia. We started talking about acetylcholine. And then, it comes back to full circle. Wait a minute! Everything comes down to motility.

So, when we get back to SIBO, is it a bacterial overgrowth? Or what I'm seeing is it's a motility issue.

If you have a portion of the intestine that is not moving appropriately, that's when bacteria can grow there. That's when we start realizing we have to affect the motility.

The antibiotics that we use, that's first level. Adding the Atrantil with the polyphenols, that's right there with it. And then, we start going, "Well, how do we improve the motility?" because, without that, you're just going to have recurrent issues.

And then, we start looking at that. And that really is just level one of dysautonomia where level 10 can be life-threatening. It all comes down to acetylcholine, neurotransmitter response, parasympathetic/sympathetic response. Very complex. But did it start in the gut? And did it turn all these things on?

Does somebody have mold syndrome, living with the syndrome, that then results in dysmotility of the intestines, that then results in...

Maybe we could start seeing all these Venn diagram like your SIBO SOS® logo right there with circles coming together.

Shivan Sarna: Yeah, my logo. And then this is the intestines with the balloon because it's so bloated.

[21:55] SIBO & Dysmotility

Shivan Sarna: Let me ask you a couple of things here. Which came first, the SIBO or the motility? That's the question. We don't need to answer it right now because that's the million dollar question. And it may or may not even matter.

But I know a lot of people in our audience are curious about Atrantil, have taken Atrantil, some super successfully, some were like, "I tried half a bottle, it didn't really work."

Several questions… how did this come to be? Does it work for all types of SIBO? And because it's so rich in polyphenols, is it also just like a great thing for everybody—like just taking Resveratrol and grape OPC and all that? How did it start?

Dr. Ken Brown: I will get into that in two seconds because I just saw something that I do want to address really quick from Naveed.

Naveed, he just wrote that "I have gastroparesis and motility issue." That, I love that statement because I get a ton of people that are diagnosed with gastroparesis. All that means is that the stomach is emptying slower than it should. People will have that.

Typically, in medical school, I was taught that *that* was due to a nerve issue (like there's some sort of nerve damage) or diabetes or the blood sugar is out of control. Those are the main things that we look for.

But now, we get all these people coming in and they're 22 years old and they're like, "Yeah, I've been diagnosed with gastroparesis." Well, I'm glad you brought that up because the small bowel, if it gets distended from air—so remember, with SIBO, bacteria is growing in there. Every time you eat specifically carbohydrates, the bacteria will break the food down before you can. So there's **autodigestion** going on. Instead of digesting the food on the brush border of the lumen, and then being absorbed, the bacteria get this little buffet before you can absorb it. And then, they produce the gas—hydrogen, hydrogen sulfide or methane. And then, the small bowel will distend—hence the bloating, hence the picture of the gut in the balloon there.

When your small bowel blows, it sends a signal to your stomach, that says, "Hey, we're full. We just ate." So it tells the stomach to not empty.

A lot of people are mis-diagnosed as gastroparesis, when in reality if we treat the small bowel, then the gastroparesis gets better.

Shivan Sarna: Boom! Yes! I love that. That is so exciting.

Dr. Ken Brown: Yeah, I totally forgot about that. And then, when you said that, I'm like, "Oh, my gosh! I do that in the clinic all day long. I have the same conversations. I forgot to even bring them up!"

Shivan Sarna: Holy smokes! Holy smokes!

[24:36] Prokinetics

Shivan Sarna: That's why we also do prokinetics, to get that motility—even though it's not a laxative, but it synchronizes the whole orchestra of the digestion?

Dr. Ken Brown: For sure, we know that—"we know," I should say that, obviously, Dr. Pimentel did all the research that I adapt. I add a few other little tricks that I've seen play along. I have the liberty of being in private practice. It's my own practice so I can do what I want. So I'll push boundaries and stuff. Him being in an academic institution in tertiary care, he's got a little bit more conservative with what they can try unless it's for a research study… which gladly, he's doing quite a bit of that, looking at some different statins and things like that.

So, when we treat people for bacterial overgrowth, this comes down to a motility issue. I'm much more trying to focus on the motility aspect than just the treatment. If we can get people feeling better—I don't know how many people I've treated, they're like, "Oh, I feel really good," and then two weeks later, they're like, "Everything is back! What happened?" Well, probably when you go to sleep, you do not have what's called the **housekeeper phenomenon**.

About every 90 minutes or so, you will have a wave from your stomach that just starts as a peristaltic wave, and all it does is it just moves all the way through the

small bowel and shove everything into the colon, which is where you're supposed to be moving everything—dead cells, bacteria, undigested food, fibers, all that stuff. That is supposed to happen while you're sleeping. And this leads in to exactly how I developed Atrantil.

But what Dr. Mark Pimentel demonstrated—in fact, I'll just jump into that real quick. I met him when he came to Dallas many years ago. I had just started to do clinical research for pharmaceutical studies—phase 3 and phase 4 studies. And he had come to town because he was slowly getting involved in the development of Xifaxan.

He came to give a talk. And I sat with him afterwards. I'm like, "That was fascinating!" He was starting to show his animal models about how he could take a mouse and put it in a stressful situation, like in front of a cat or something like that, and 20% of the mice would then end up having IBS.

And that was where his research really started where he just went, "Okay, what is causing this? How do I fix this?" And then, that's when he realized through cultures and things in the mice that it was bacteria.

Then looking at that same thing, he realized that the same mice, they did not have the migrating motor complex taking place. So that's where the whole concept of, if you're going to treat this, you're not being treated appropriately if you do not have a high enough dose of Xifaxan, neomycin, Atrantil, whatever you want to use, herbal antibiotics. Whatever it is that your doctor is treating you with, it must be sufficiently high.

And that was shown in dosage studies when he was first developing the whole Xifaxan protocol. We got significantly better results with 550mg. 3x a day as opposed to the 200mg. or the 220mg. that initially existed. So, we know that it's dosing.

But then, as you do that, when you sleep, you absolutely have to help your body heal itself by stimulating that migrating motor complex. And if you have SIBO, almost by

definition, you're probably lacking that because, if you have an area that doesn't move well, it's like connection between cellphone towers that get disrupted. You come to this point, but then in this area, it's a lost signal. So then, it will just continually happen every single time.

Shivan Sarna: Okay! A couple of things… he does say that stress doesn't cause SIBO. Just FYI, that was way back in the day. Remember, a lot of it is coming from food poisoning, adhesions, et cetera. He did some observations with the military and all of that.

I need to ask Joan's question: "I have IMO (just the methane) and constipation. I take 0.5mg. of prucalopride"—which is a prokinetic (which is that orchestration of the symphony of the motion of your housekeeping wave)—"every night before going to sleep. I want to start taking a milligram of melatonin each night as well. Can I take it with the prucalopride? Or will the melatonin get in the way of the MMC?"

There you go! And this isn't medical advice, guys! This is just some insight and education.

Dr. Ken Brown: Yeah, insight… my gut reaction is I do not believe it will affect it. I personally have kind of moved away from using melatonin on a regular basis due to the variability in how it's made and how many different melatonins can have variable milligrams going on.

If you listen to Andrew Huberman who's a neuroscientist, he's actually kind of saying that we're taking too much melatonin and it can potentially disrupt some hormonal stuff that's going on. So I've kind of backed off the whole taking extra melatonin kind of thing.

Knee-jerk reaction… it probably will not affect the prucalopride, its absorption or its migrating motor complex. I will say that the migrating motor complex, you have to

get into the different stages of sleep to really allow that to actually clean out and take place.

Shivan Sarna: Oh cool! Let's go back to Atrantil and how that happens because I know a lot of people haven't heard it. But it's not a prokinetic, Linda, just FYI. It is not. It is that polyphenol that he was talking about.

[30:24] How Atrantil Helps

Shivan Sarna: So, how did Atrantil come to be? I have my bottle. I think it might be downstairs.

Dr. Ken Brown: I have one here.

Shivan Sarna: Okay, good. And we have a link to the best price of Atrantil in the SIBO SOS® marketplace, by the way. Thanks for that.

Dr. Ken Brown: Shivan gets the friends & family discount there. And she shares that with her listeners. So take advantage of that. I don't want the rest of my team knowing that, that I'm promoting them to purchase from you. But...

Shivan Sarna: Thanks man! It keeps the light on. This project has been incredibly expensive. So thanks everyone for the couple of shekels that comes our way when you buy through our link. We really appreciate it.

So, how did this come to be? And it has to do with a cow... I thought the Holy Cow!

Dr. Ken Brown: So I was doing the original research—I was doing pharmaceutical research—and got to know Dr. Pimentel. He came up with this whole concept of "Oh, IBS is not in your head. It's actually in the intestines." And I was sitting there. And I was one of the leading enrolling sites for the Xifaxan original trial that made it into New

England Journal of Medicine. And he's the one that said, "Well, the problem is that we'll be able to help the people that have irritable bowel with diarrhea," in other words, SIBO with diarrhea, "But we're not really going to be able to help the bloated/constipated person" because the organisms that's creating the methane which his causing it, the *Methanobrevibacter smithii*, is an archaea species. It's in its own kingdom. "So, modern antibiotics will not affect this."

So I've written on my whiteboard "methane," and I just was thinking about that. And my research manager, Brandy, came in. She's from Iowa (and I'm from Nebraska originally), and she's like, "Methane? Weren't they trying to figure out how to decrease methane production in cattle? I was working with a senator in Iowa. And they were trying to mandate legislation to these farmers so that they can decrease it. And that's for the greenhouse effect. The methane being burped out by cattle, ultimately they thought that it was causing a greenhouse effect. It was part of it."

So, we started with this bloated cow, and then worked our way back. We looked at all the literature that was being used in these cattles. And then, we realized that there was one thing that kept popping up and it was this polyphenol called quebracho. And it is a very large, stable tannin.

And as I was trying to develop Atrantil, we found other studies looking at cattle where another institution would then use horse chestnut for a different reason. And then, another institution was adding some peppermint over there for a different reason. And combining the studies, I went, "Wow! If we put all three of these things together, these are three natural polyphenols already in our diet, already being used. And they have very specific mechanisms on potentially how it could help!"

The **peppermint** anti-spasmodic sort of slows the area down, calms it so that the quebracho can come in. The **quebracho** is a large, stable tannin which is the largest of the polyphenols. And that works to absorb the excess gas, what we call **hydrogen sink**. We know that hydrogen is produced. And so what it does is it absorbs it all sort

of like a sponge. But it has a natural defense or it has the ability to get rid of the methanobrevibacter. And it does that just with contact of the cell wall.

And then the **chestnut** actually comes in and shuts off the enzyme that produces it.

So, looking at these animal models, we're able to show that this is a very specific way how it can actually get rid of this, the IBS with constipation.

We did two clinical trials and we published them… incredible results! That was six years ago, maybe seven or eight years ago now. We launched about six years ago. And it's just grown organically. And our literature really holds exactly what we kind of expect. I tell people, "Four or five people are definitely going to get better if you have these symptoms of bloating. We're going to fix the bloating."

So, since we did that, now it's gotten really exciting because now we're starting to see the greater picture of what we can do and how we can help—**not just bloated/constipated. Now, we realized the same mechanism helps with the hydrogen and helps with the hydrogen sulfide**. So, we're seeing benefit with that.

But the polyphenols, what is really cool is that these polyphenols, all of them—which includes turmeric (curcumin), resveratrol, quercetin—all these other ones that you hear about, they're very poorly absorbed. They actually go to the colon where they all get broken down.

A study that I was just looking at recently looked at green tea extract, what people talk about all the time, the bioavailability of it is very poor. But once it made it to the colon, then they're able to show that there were 28 other smaller phenolic compounds that it gets broken up into.

So, keep that in mind because now we're starting to get into the nuance of how effective this could be which is also why longer treatments—so when somebody says, "I took a bottle, and it didn't do anything," my encouragement is, "Hey, it's an

anti-aging, anti-inflammatory molecule. Why don't you just stick with it and let's see what happens?" They come back in three months, and they're like, "I'm better. It just got better."

Now, I know why. The reason is because we know that when these polyphenols make it all the way to the colon, then your normal bacteria, your microbiome, naturally is built to cleave them into smaller phenolic compounds. It then gets absorbed. And those are anti-inflammatory and anti-aging. And more importantly, it encourages microbial diversity.

We know that if you have dysbiosis, meaning you should have this big, broad, beautiful flora in your colon, the more bacteria that you have with a diversity (meaning they keep each other in check), then the healthier you're going to be. And then, when you eat, your body is able to break down these different molecules into beneficial things.

And that's where our research is now headed. That's where we're going. And we're dealing with these scientists that have done some really incredible things. And that's a super cool topic in itself.

Shivan Sarna: That is very, very cool.

"What if you're diabetic? Is it counterproductive to use Atrantil?" somebody is asking.

Dr. Ken Brown: That is a great question. Oh, I'm sorry, horse chestnut, peppermint and quebracho colorado. You're probably like, "I've never heard of that." Well, that's part of the things. That's how we got a patent on it. Somebody just asked that question. The quebracho is the thing that makes it extremely unique. That is the work horse.

What's really wild is you need to have something which is stable in an acidic environment, stable in a basic environment. So if it makes it through the stomach,

then chances are that it might not survive the basic environment of the small bowel. When we were developing this, that's when we realized this is probably one of the only ones that stays essentially intact as it moves through the lumen of the small bowel. So that's where it can help with a SIBO person.

What was the question you had? Sorry, I got digressed by that. I don't know how you do that. I don't know how you do these webinars. I shouldn't have turned on the chat. Now I'm staying in it.

Shivan Sarna: Don't look through the chat and the Q&A's. That's my job, man! That is my job.

Dr. Ken Brown: I'm going to close my little chat window here.

Shivan Sarna: Yeah, do it. It's too stressful.

So, what if you're diabetic? Is there a problem?

Dr. Ken Brown: No, there's actually not.

Shivan Sarna: What about nut allergies?

Dr. Ken Brown: Oh, that one is a really good question because, really, technically, horse chestnut is a tree nut. So although it's a tree nut, we don't have the whole nut because that can be toxic. So we just take out the portion of it that's important which is the aesculus portion of it. So we tell people, if you have a tree nut allergy, probably not. I'm not at the point in my career where I'm willing to study that aspect. So I just say no. That's kind of my knee jerk...

Shivan Sarna: Thank you for that. I appreciate that.

What about the peppermint for people with GERD?

Dr. Ken Brown: Ooh, good question also… back to the diabetic question really quick, yes. In diabetes, we do know that the polyphenols have been shown to help with metabolic syndrome, the whole diabetes/obesity/insulin resistance… all of that. So yes, 100%, we believe that…

And then, also, let's talk about SIBO and diabetes, diabetics will tend to have dysmotility. Remember when we were talking about gastroparesis? They can actually have that which predisposes them to SIBO. And then the inflammation caused by the SIBO results in increased cortisol which then can make your blood sugar rise and go unchecked. So I treat a ton of diabetics, and we end up getting their sugar under better control because we stop the inflammatory process.

Shivan Sarna: Awesome!

[39:53] Atrantil: Dosing & Duration

Shivan Sarna: Several people have this question: "What's the usual length of treatment for Atrantil for SIBO? And can you take it two to three times a day? Is there any harm in staying on it long term?" I mean it sounds like vegetables to me. [40:10]

Dr. Ken Brown: So, let's put this in perspective. I'll work my way back to what the dosing is. But let's go ahead and put this in perspective.

So, Eric and I just did a podcast—oh, by the way, my podcast is called The Gut Check Project, so I can see a little bit of what I'm talking about. It's the Gut Check Project in YouTube and the usual places.

Eric and I just did a podcast where a study came out of China where it was looking at coffee intake. They looked at 35,000 people. People that had at least three cups of coffee (or the equivalent of tea) had upwards of 30%-something decrease in

dementia and strokes. And that study just came out. It made a bunch of news. So I had patients asking me about it.

I always love it when patients see something, and then they ask me, then it turns into a podcast. And then, I can go down that rabbit hole.

So, that study came out. And they did not come up with the reason why. So then I found another study that came out in 2018 done by a Japanese group where they were looking at all-cause mortality, and they were looking at metabolic syndrome in the Japanese population. And what they found is that 50% of the people would drink coffee (or the equivalent in tea), those that had a certain milligram equivalent of polyphenols due to the coffee—

So, you can have anywhere between 120 mg. to 200 mg. of polyphenols in the coffee. What a lot of people don't realize is that, in the Western diet, many times, most of our polyphenols come from coffee because that is kind of something that many Americans do. But not many Americans will eat the equivalent amount of vegetables.

I found another study that looked at all-cause mortality. And what it showed was those people—and most of this is out of the Mediterranean literature or Mediterranean populations where they tend to be able to track how many polyphenols people have. So this included the use of coffee, tea and then vegetables. And what they showed was all-cause mortality decreased significantly if you could take 600 mg. or more of polyphenols. And up to 500 mg., they did start seeing significant long-term chronic health issues—coronary or artery disease, hypertension, obesity, diabetes and so on.

So, that comes down to "Well, what do you need to do to make sure you get your 615 mg. of polyphenols?" That would be 5 ½ cups of coffee, that would be five bowls of berries, or that would be two doses of Atrantil.

Shivan Sarna: Got it! Okay… we need a graphic, two capsules of Atrantil and then all the berries or all the coffee as the equivalent.

Dr. Ken Brown: Two doses! So it's two in the morning, two in the evening which would be the equivalent of a thousand milligrams. So now we're getting way over.

So now we're getting back to what should the dosing be? Knowing that if you have significant issues with bacterial overgrowth or gastrointestinal issues, then start out with two capsules three times a day.

And quick sidebar… what about the peppermint and GERD? That's actually why we recommend it with food because we were seeing some people have some reflux issues with that.

I don't. I take it all the time randomly with food or without food. So my suggestion is, if you have acid reflux, try taking it two or three times a day with food.

Take it at least, *at least,* 20 days. People will tend to start seeing some benefits at 10 days. Much like we do when we dose with neomycin or Xifaxan, it's a 14-day regimen. And my protocol is actually a little different where I'll re-treat. I'll do it for 28 days right off the bat because we need to make sure that it's completely gone.

So, taking it two or three times a day, minimum of 20 days, you should start seeing some benefit at that point at least with the bloating.

Now, if you feel worse *before* you feel better, that's actually a good sign. That's that die-off reaction. And when we initially launched, I keep telling everybody that would happen. And then, they would have it. I quit saying it and it seems like people have less of it now. So I don't know if it was the power of suggestion.

Shivan Sarna: Oh well, we do have someone on Facebook who said that she blew up and was super miserable after taking it. So she was just wondering why. So I think

that's great. I mean, I'm sorry that happened. I don't think that's great. But go ahead and explain what may have happened.

Dr. Ken Brown: Yeah, what probably happened is that, when you actually took it, you have such a load of probably the methanogens. You had such a load there that, as these organisms die, they actually expel their innards, toxins and things like that—which causes a local inflammatory reaction. **So some people get worse before they get better**.

The ones that are my patients, I warn them about it. They get really excited because then they realize, "Oh! Well now, I'm definitely, so to speak, winning here and making a difference."

And I've got a handful of people that they're like, "I take it and I get super, super, super gassy, like three to four days into it—not so much bloating, but gassy." And what that tells me—or maybe we could talk to Kiran about this—probably your microbial diversity is narrow, and it's struggling to break down these polyphenols which is probably why you get so gassy after certain vegetables, which is probably why certain foods will do this.

And in that case, that is "stick with it." Eventually, the microbiome will adjust and grow.

Same thing that I see when people come from a different country and they come here… oh, my gosh! They're like, "This is horrible!" I've actually heard this. This is really funny. In their country—and we could talk about all the different countries they come from. But there are certain countries where the foods are very consistent. And they come over here and it's like, "What's going on? We'll go to Chinese one day. And then, the next day, we'll go and have Mexican. And then, the next day…" There's no consistency to let your body get used to the foods as opposed to let's say Israel

where it's usually some of the hummus and the different things and the meat and the chicken and some variation thereof.

So, if you are feeling worse, my suggestion is to back off the dose. We do do this sometimes. Let your body slowly adjust to it. **And then, go back up**. Now, 99% of my patients will take two 3x a day and have a pretty good result.

Then that comes down to, "Well, what then? I'm feeling better." And we learned all about these polyphenols and everything from my patients because I was seeing all these people that would take it, and I'm like, "Oh, you feel better? That's great," and they go, "Yeah, but I'm going to keep taking it. I just like it. I just feel better on it." I was like, "Hmmm..."

We didn't develop it for that. We didn't know anything about how beneficial this could be long-term. I was doing strictly for the symptoms. And that's when we started meeting with these different scientists and looking at different things.

So, taking it to get your polyphenol dosing which is the antioxidant and the anti-inflammatory. We can get into all the aspects of protecting the brain and all that other stuff. I'll get into that study. I'll tell you about this really quick in a second.

But then we get into, after you do that, if you're taking it on a regular basis, the people that have food sensitivities (like this guy talking right here that has a gluten sensitivity), we realized that actually the quebracho itself forms a film over gliadin. So people that have a gluten sensitivity can actually take Atrantil with it and tend to do better. And we were always wondering what that mechanism was. We had a PhD on the show that that's what her thesis was, very specifically how **quebracho binds to gliadin and nullifies its effect as an antigenic molecule**.

All this stuff is going on as I'm sitting here just trying to treat bloating. I'm like, "Holy cow! Wait a minute... we're onto something much, much, much bigger." This is why

I'm saying this whole frontier of we're going to be shifting and protecting the gut-brain axis through this is the key.

Shivan Sarna: That's amazing!

So people are asking, "Look, I'm going to take rifaximin. Can I take Atrantil while I'm doing that treatment?" And we're going to wrap up in nine minutes everyone. Don't hate me because I didn't get to everyone's question. But Dr. Brown is so generous to give us his hour, I appreciate it.

Dr. Ken Brown: I mean, I have time if you want to get to questions.

Shivan Sarna: Oh really? Okay great!

Dr. Ken Brown: I have no more hemorrhoids to treat today.

So, I printed it out. I did kind of a mad dash and printed a bunch of stuff. I didn't know which way we would go.

So, my protocols that a lot of doctors call and ask me, **I frequently will use Atrantil + Xifaxan + neomycin + Motegrity (prucalopride)** on the routine. But remember, I treat really recalcitrant people. So there's all these people that come and they've usually seen a few people. So yes, I do both all the time. I think I'm still one of the leading Xifaxan prescribers because of that. And I've had really good success with that.

[49:57] Atrantil + Probiotics

Shivan Sarna: And Linda is saying that, on your site, I think it read *not* to do any probiotics other than spore-based at the same time taking Atrantil. What is your comment on that?

Dr. Ken Brown: Initially, it was all about the fact that different protocols were being done by different doctors—Dr. Pimentel, Dr. Satish Rao, people like that. What they

were showing was that the probiotics probably were not beneficial, could be hurting. And then, Dr. Rao came out with that study where he showed that those people that took probiotics that had SIBO had an increased incidence of anxiety and some mental stuff. And then, he showed that it had increased lactic acid which crossed the blood-brain barrier resulting in some anxiety. At least that was the study that was published.

My deal is that if traditional probiotics worked, then I probably would not have a practice because everybody has tried at least 50 of them. And traditional probiotics—I tread lightly here because a lot of people really like them. And I'm just going to say… if it works for you, awesome! Keep taking them.

Shivan Sarna: Because it does work for a lot of people… .

Dr. Ken Brown: Yes.

Shivan Sarna: The traditional ones, right?

Dr. Ken Brown: Yes.

Shivan Sarna: It has worked for a lot of people. You have to try it for yourself.

Dr. Ken Brown: The data in our literature shows that at six months, most of the studies have determined that the probiotics are equivalent to placebo. So that's our society statement. That's the American College of Gastroenterology Society statement.

That being said, we've had people, we've had drug reps come in, and they want to talk about VSL #3. It has to be refrigerated because it's so powerful. If you go to Whole Foods, there's a whole refrigerated section of probiotics. I just asked our scientific liaison, I'm like, "It's so powerful it has to be refrigerated?"

"Yes."

I'm like, "Are you saying that it can't survive room temperature?"

"Well…"

I'm like, "How does it survive 98.4° in an acidic environment and a basic environment of pancreatic enzymes then?"

"Oh! Okay…"

So, it's just a matter of… if it helps, great! But the logic there is a little…

It's hard for me to wrap my brain around the fact that you need to keep it refrigerated, otherwise it may not survive. How does it survive in the intestines?

So now, that being said, I'm working on—well, we have something really cool. **We're actually coming up with Atrantil Pro for only healthcare providers. And we've teamed up with a scientist, Kiran and company**. And they've come up with three very specific spore-based biotics.

Shivan Sarna: Kiran Krishnan, our friend from MicrobiomeLabs who I will be talking on the Dec 21st at 3pm Eastern time. He's done a SIBO presentation for us in the past. And then, he's been making the rounds. And I even sent it out with somebody else who was the host. And I'm like, "You know what? I want to talk him! I have questions!"

So, he's coming on… same thing! It's at 3:00 pm, Dec 21st Eastern time.

Sidenote: Watch Kiran Krishnan's webinar replay here: *Examining the Root Cause of SIBO – Going Beyond the Bloat*

Dr. Ken Brown: So, a lot of what I'm saying about probiotics is when he came on my show. And I picked his brain on it. And he's saying all these! He was the one that make you go, "Hmmm… but it has to be refrigerated?" I'm like, "Good point!" So these are not my novel ideas. This is actually him coming out with that.

So, the spore-based ones… we've come up with a combination called Atrantil Pro which we are just launching only for healthcare providers specifically because it is the combination of **polyphenols + a sporebiotic**—three in particular which have been studied that have certain abilities (at least in the literature) to show how it can use the polyphenols' fuel, the polyphenols do not affect it, and then when it germinates in the colon—and Kiran will tell you all about how these spore-based ones germinate right when they hit the ileum because it's the right environment—then they send signaling out to improve the microbial diversity which allows these polyphenols to then get broken down more into these beneficial things.

And so, this is where all these literature now starts piling on top of each other and you're like, "Oh, my gosh! This is making total sense now."

So, the whole spore-based aspect of it is what I like for probiotics.

So, I just pulled up an article where I was looking at *Bacillus subtilis* which is one of the ones that we are using in here. It's a spore. And a company or a research group was trying to see if you made coffee with the spores, would the boiling destroy the spores. And then, they put it through a digestive tract—meaning the exact HCl + protease enzymes, and then ultimately fermented it—and what they showed is that the *Bacillus subtilis* in coffee—now remember, I just got done saying that the coffee is polyphenols—when they made it, 95% survived the heat process. Then they put it through a digestive tract, and it remained at 95%! It completely survived the acid, the base, and the pancreatic enzymes.

And then, when they fermented it—meaning when they put it with other bacteria—it germinated. And immediately, it had a tremendous boost because it used the polyphenols that it had ridden down with as fuel.

Shivan Sarna: Ooh, so exciting!

Dr. Ken Brown: Yeah, this is getting super, super cool!

Then what they did is they took traditional probiotics, a lactobacillus and another one (I don't remember what it was, but basically the most common ones), they made coffee with it (so they put it through the coffee-making process, the heat and everything), and then they cultured it… and zero percent of the probiotics survived that. So they said, "Okay…"

Then they put it through their digestive tract… and zero percent made it to the colon. It didn't survive that either.

So, what they're able to show is that a spore-based version of a probiotic can at least—and this is where I hang my hat—can at least make it to the colon where it will use the polyphenols as its fuel (so it uses the polyphenol as a vehicle)—in our case, the Atrantil Pro, the quebracho plus these three different spore-based probiotics. It basically ride to the colon where then it germinates, and then it uses the polyphenols that it rode down there with as immediate fuel to break it down. And then, that starts becoming more of the natural things that you want.

Shivan Sarna: That's cool!

Dr. Ken Brown: Now, let's talk about why would probiotics still probably work in some people. Maybe it doesn't have to make it all the way to the colon. Maybe the local effect in the small bowel can be very beneficial. Maybe that's why some people benefit from it. My people is the people that choose to purchase Atrantil, many do have SIBO, and we don't really want the SIBO people adding more fuel to the fire… at least initially. So that's my long-winded probiotic "If it works for you, that's awesome. But maybe it could be doing more harm."

Shivan Sarna: And then, if you go to Jason Hawrelak's website, Probiotic Advisor, he has studies there that show that it does help with IBS some. It does help with IBS symptoms. So it's so personalized you guys.

Dr. Ken Brown: It totally is!

Shivan Sarna: This is your microbiome. This is your fingerprint. This is your ever-changing microbiome.

Eric, I didn't get to your question earlier. Dr. Brown, what do you think about the FoodMarble?

Shivan Sarna: Do you ever do it?

Dr. Ken Brown: Oh!

Shivan Sarna: Oh, oh, oh...

Dr. Ken Brown: I have to watch my language on your show. I tend to be a little more colorful on our show.

Shivan Sarna: That's good.

Dr. Ken Brown: I was going to say a few things.

Yes! Oh my gosh! I totally forgot.

Oh! That was turned on to me by a patient. And they are having incredible results with it. So I just sent an email to them. They're in Dublin, Ireland. We ended up having a conference call with all of their people—the CEO, their IT people. And they sent me one. They're going to come on the show here shortly. I completely forgot about that. I've just gotten so busy!

Yes, I think that could be a game-changer. I think that could be super fun. I have not used it myself. My patients have told me that they are modifying their diets significantly because of it.

Shivan Sarna: Oh yeah, baby! That's cool.

Dr. Ken Brown: Yeah, really cool. Oh, my gosh, getting into the whole Ehlers-Danlos, mold… I learned about this from one particular family that I have where the whole family is presenting with SIBO, Ehlers-Danlos, mold to the point where they're teaching me, to the point where they're telling me which surgeons to use and all that stuff. And I got an email from the dad. He said, "Hey, I had some dental work. And unfortunately, they put me on a bunch of antibiotics. And I just checked my FoodMarble, and I'm starting to slip into this. I'm feeling it… can we jump on this early?" And so, his warning sign was the FoodMarble saying that he's having a change in his gas production on the foods that he normally could tolerate.

Shivan Sarna: That's cool. That's very, very cool. Will you hook me up with them?

Dr. Ken Brown: Yeah, I will! Super cool people… super, super, super!

Shivan Sarna: Well, you know, I'm half-Irish…

Dr. Ken Brown: Oh, yeah! So yeah, thank you for reminding me. Oh, my gosh! I feel like a jerk.

Shivan Sarna: Thank you! No, no. No, no, no. That's our great audience here.

[60:01] Atrantil: Contraindications & Shelf Life

Shivan Sarna: "Any ingredients in Atrantil contradicated for atrial fibrillation?"

Dr. Ken Brown: You know, the only thing that I tell my patients is if you have atrial fibrillation and you're on a blood thinner, if you have had an organ transplant and you're anti-rejection meds, those are what we call "very narrow therapeutic window medications." And since we have not studied it in conjunction with that, my

recommendation is to not take it together. And that's not for anything other than it just hasn't been studied. And as a physician, I don't feel comfortable saying that.

If you're on atrial fibrillation and on aspirin alone (or even probably a little Plavix fall into that, but mostly the simple anti-coagulants), there should be no contraindication with that.

Once again, it's poorly absorbed for a reason. That's what we want, is for it to be poorly absorbed, make it to the colon where the microbiome then starts utilizing it for what it's worth. It's Mother Nature's sort of secret weapon...

Shivan Sarna: Very cool!

From Laura: "For MCAS patients"—that's mast cell activation syndrome which is related to histamines and all that everybody—"that take quercetin and chromalin, how does Dr. Brown recommend taking Atrantil in combination?"

Laura loves Atrantil, "It's been a lifesaver for me." Awesome, Laura! That's exciting.

Somebody else was saying, "I have MCAS and I'm not supposed to do polyphenols."

Dr. Ken Brown: Oh! What? Really?!

Shivan Sarna: I don't know.

Dr. Ken Brown: No, I have a ton of MCAS people—from mast cell activation syndrome all the way to mastocytosis (which actually becomes a malignancy, it does that).

So quercetin, the thing about quercetin is it's a polyphenol. And believe it or not, quercetin is actually poorly absorbed. So its role in blocking the histamine, I don't know the exact mechanism of how it would do it on a local level. I use a lot of chromalin. I use a lot of H2 blockers in my mast cell activation people. And they're all on Atrantil. They tend to do better while being on it.

I think that, remember, as you have anti-inflammatory components to this, you have immune regulation, the mast cell is an immune cell which, when stimulated, will release histamine and a few other inflammatory mediators… and that's its job. The histamine actually is there to try to increase local swelling, increase blood flow, so that if there is an injury or something like that, it's there to try and bring in soldiers to heal, to fight, to repair, and to get rid of. And so, it's all part of it.

Shivan Sarna: Alright, guys, sorry about that! "What is the FoodMarble?" Apologies!

FoodMarble is this new device out of Ireland that can check your gut gas levels. And it's brand new. I was talking to Dr. Brown cutting-edge here. I'll try to get them to come on so they can explain it. But for lack of a better discussion, **it's like a personalized, on-the-spot breath test**.

I don't know anything else. We will find out!

Dr. Ken Brown: Man!

Shivan Sarna: I got so much else to talk to you about though, man!

Dr. Ken Brown: Just super quick… it's tied to your phone, it's an app. You breathe into a little thing like this big. And then, your phone picks it up. It's Bluetooth to your phone. It's awesome!

Shivan Sarna: Some people do feel that Atrantil has been enough for them to get rid of their SIBO. I found that to be true. People say that in the Facebook group.

But what's the shelf life of Atrantil?

Dr. Ken Brown: So, the FDA requires us—the FDA or the FTC, whatever, whoever it is that does this—that you have to put a shelf life on something because that's just part of all supplements, all drugs, all everything. We've got a 3-year printed shelf life. I

have been taking markedly expired Atrantil because I take all the stuff that we can't sell. I take it.

In World War II, we worked with the people that supply this directly a lot. And so we get to hear all these stories. In World War II, the United States had purchased a bunch of quebracho because it's used in wine-making, food preservation, beer-making. So they stockpiled some quebracho that was 30 years old. And these guys brought it back. And then, they did a mass spec on it. And it had completely unchanged after 30 years.

So technically, it's probably good for a very, very, very long time. The bottle will tell you three years after manufacturing is when you're supposed to not sell it.

[65:18] Rapid Fire Q&A

Shivan Sarna: Okay... so we're going to go rapid fire here.

What about parasites? A lot of people have parasites. And Dr. Ilana Gurevich likes to treat those first. But a lot of people don't want to admit they have parasites, blah-blah-blah. So what's your deal with parasites?

Dr. Ken Brown: I'm going to admittedly say that my bandwidth has not allowed me to really dive deep into that. I'll tell you that traditional medicine—which is how I'm trained—traditional medicine says that they probably are not an issue in the US. I just admittedly defer to the people that are better at it.

Shivan Sarna: A lot of GI doctors say that or feel that way or are actually in that position and don't say that. They do the Quest or LabCorp stool test which is not that sensitive, and then you get the results, "Oh look, you don't have parasites." But then if

you go to Parawellness, GI-Map, Vibrant Health, the way they do test for parasites… there they are showing up!

So, Dr. Anne Hill, Dr. Ilana Gurevich, both of them have masterclasses at SIBOSOS.com under Courses where they go over what you need to know for that very thoroughly. So please check those out!

> Masterclass: How Bacterial Infections & Parasites Could be the Missing Link to your SIBO & IBS Diagnosis by Dr. Anne Hill

Shivan Sarna: That's great. That's great.

Dr. Ken Brown: And I will say this… I think one of the reasons why we're really bad at finding it is that it's a skill to look for the trophocytes, to look for the eggs, to do that. And it actually does require somebody sifting through stool and being good at it.

If it's going to be done the traditional way where you send the stool over there—I know Vibrant may have the ability to do it through genomic sequencing and stuff like that or PCR which is different.

Shivan Sarna: Right! That's literally why I did masterclasses on that with those doctors because they really deal with it all the time. That's Dr. Anne Hill and Dr. Ilana Gurevich. Go to SIBOSOS.com to find out about that.

So let's see… Ajilah: "Had the best three months in the past few years since food poisoning/IMO diagnosis that happened to be while taking Atrantil. But after a few months, I seemed to be back to symptoms and even worse reflux. Have you seen Atrantil work for a few months, then stop working?"

"Also, thank you for the explanation on gastroparesis… the sensation being actually caused by SIBO gas. I definitely suffer from that."

So, Dr. Siebecker sees people—or did see people because she's on hiatus writing her book now—who take supplements or take a medicine when they have SIBO. It works really well, and then it stops working. That's a pattern that she's seen a lot. What about that and Atrantil?

Dr. Ken Brown: I see that with everything also. So we'll see it with rounds of Xifaxan, rounds of neomycin. The reasoning behind it… not too sure other than is it one of those situations where the motility wasn't fixed and then it came back… and it came back in a different location? Do we need different dosing?

Coming back to that thing of "How do I interpret a breath test?" I've had a handful of people in the extremes who were either very high up or very low. And ultimately, I've had a couple of people that did amazing, and then three months later, they're like, "Oh, I think it's coming back. But it's not working as well." We increased the dose or we increase the frequency, and then it got it to go away. So then it tells me "Okay, maybe it's the location. Maybe it's the concentration location thing that we need to figure out." It's a moving target.

Shivan Sarna: Yeah, it's a moving target.

Dr. Ken Brown: I think everybody is learning from everybody else. At least we're just not sticking our head in the sand and saying, "It's in your head."

So yeah, I'm sorry if that isn't the case. I don't know! We just don't know.

It's going to be fun… it'll be really fun to keep working with these scientists looking at this and saying, "Oh, maybe you need a higher ratio of the quebracho versus the horse chestnut."

Shivan Sarna: What do you do for hydrogen sulfide patients?

Dr. Ken Brown: The hydrogen sulfide patients, if they've got bad diarrhea, I will treat the same way, Xifaxan + Atrantil. And sometimes, I'll add Pepto-Bismol. And I've had some people that have had tremendously fast transit times. Hydrogen sulfide apparently just speeds everything up. And then, I'll actually need to slow it down a little bit, the exact opposite of what we would do. Sometimes, I'll add a little bit of **Zofran (ondansetron)** which is the exact opposite of a prucalopride for the small bowel motility aspect of it. But that's the extreme cases. These are just the protocols of people that have failed everything. So there's little tricks like that that I'm throwing out there that I've had some success with.

Shivan Sarna: Can you repeat the names of those medicines that you take to slow it down?

Dr. Ken Brown: Oh, this is just kind of a little bit of an extreme. So, if I have somebody with IBS-D—that's what we'll call it—and I believe that it's due to SIBO and probably hydrogen sulfide, then it'll be Atrantil two to three times a day for 30 days + Pepto-Bismol, 2 capsules three times a day + and then the Xifaxan 550 mg. three times a day.

And then, occasionally, we'll need some Zofran during the day (not at night because we do not want to block that migrating motor complex).

One of the side effects of Zofran is it can cause significant constipation. It does through serotonergic receptors, same with prucalopride does in the 5-HT4. The Motegrity (prucalopride) stimulates the 5-HT4 receptor. The anti-nausea effect of Zofran actually does the opposite. That's why it can cause such severe constipation. So, sometimes I use that in the extremes.

Shivan Sarna: When people have Crohn's, when people have cancer, how do you feel about Atrantil in those cases? This is not medical advice. I don't even like to say

the C-word, but I just wanted to bring that up because we definitely have people asking.

Dr. Ken Brown: Yes… all the time, with good science behind it.

So right now, I'm trying to develop my verbiage for how we're going to discuss Atrantil Pro. I found this article. I got to show this to you. A group out of China is using a spore-based biotics. It was one of the ones that we have. I think it was *Bacillus coagulans*. And they're embedding it with curcumin, the polyphenol.

Shivan Sarna: Wow!

Dr. Ken Brown: And they're doing the exact opposite. They're trying to get the spore to drive the curcumin to the colon. They took a mouse model of colon cancer. And they treated colon cancer with the spore + polyphenol combo.

Shivan Sarna: Wow!

Dr. Ken Brown: What they're trying to do is develop a drug to treat colon cancer. So in theory, I treat a lot of that.

Let's talk about Crohn's disease as one aspect. Crohn's is an autoimmune process where your body gets turned on and starts to attacking your intestines. So we know that autoimmune is one of the issues related to the dysregulation of the immune system. So if you have that going on, then it's only fitting that anything that can help balance the immune system will help with the disease process.

Cancer is a whole separate animal over there. But we do know that autophagy and apoptosis—meaning that the body sends signals to tell sick and dying cells to go away—polyphenols have been shown to do that, specific polyphenols. In fact, **polyphenols are what are called a *fasting mimetic molecule* meaning that it does the same thing as an extended fast on a cellular level**.

So, apoptosis and autophagy is what will help with cancer. And balance of your immune system is what will help with all immune diseases—Crohn's, ulcerative colitis, Hashimoto's thyroiditis… all that! That's all dysregulation of the immune system.

Shivan Sarna: Wow! Alright… well, there you go!

Okay, so we've answered about how you treat hydrogen sulfide which is very consistent with the way Dr. Pimentel treats it, the way Dr. Siebecker treats it. What about people with mixed, alternating constipation and diarrhea?

Dr. Ken Brown: Same thing… I don't have a particularly different protocol other than I really focus on, if they're really tough to treat—

We're going to learn this with the FoodMarble. We're going to start seeing this. The FoodMarble checks—I want to say it checks all three. I may be wrong on that. It was just a Zoom call that we did with them. But what we're going to see is that, possibly, you have differing amounts of gases being produced. It may not be as black-and-white as "You have this, or you have this." So, if you have mixed, the underlying pathophysiology is the same thing. It's a dysmotility of a certain part of the intestines, resulting in bacteria digesting certain things—which cause a symptom. So you treat the underlying issue, and then the symptoms will resolve.

So, I actually don't differentiate at all because I still use prucalopride at night with diarrhea people and I still use it with constipation people because we're not treating the constipation, we're treating the motility.

Shivan Sarna: Got it!

"I have a right hemicolectomy secondary to apodictical mucoseal. I have no ileocecal valve. Just before the diagnosis, I had food poisoning which led to the discovery of appendix cancer." Oh, my gosh!

Dr. Ken Brown: Oh my!

Shivan Sarna: "I find natural prokinetics have worked for me for my motility issues. I was recently diagnosed with orthostatic hypotension. Did my food poisoning cause SIBO or not having an ileocecal valve?"—or, I'm just saying, could it be both?

Dr. Ken Brown: Theoretically, it could be both. In my clinical experience, I don't see those that have had right hemicolectomies develop SIBO. And that is kind of counter to what a lot of other people will say. I don't see that in my clinical practice. And remember that I have lots of Crohn's disease. And a lot of times, that is the treatment for ileal Crohn's, a right hemicolectomy. I just don't see those people developing SIBO.

It's just an observation that I have here. But in theory, you can. You can retrograde. The colonic bacteria can go up what's there. I believe that your root cause is still that you had a gastroenteritis, that that resulted in dysmotility which results in bacteria growing.

I'm sorry you had to go through that. But I think that if you treat the SIBO or the motility, everything will probably resolve.

Shivan Sarna: Rachel O, go ahead and take that many because he's already talked about that. I know you posted that a little while ago.

Mouth breathing, let's talk about that. I just a Dental Health Connection Summit.

"I'm a mouth breather because of a nose problem. Lots of air gets into my system for that reason that result in gas from above and below. Any chance this is happening from excess oxygen coming into my digestive tract during and after the times I eat?"

I'm just going to ask you this question, anonymous attendee, do you eat with your mouth closed or open? If you can't breathe, you tend to eat with your mouth open.

Anyway, what do you say to that?

Dr. Ken Brown: Oh, I feel bad for you because I read James Nestor's book.

Shivan Sarna: I wrote to you about that. It's called *Breathe*.

Dr. Ken Brown: My life just laughed. I've got a whole bedtime regimen where I'm taping my mouth and I'm doing everything and all these other stuff […]

Well, I think that mouth-breathing in itself is just… boy, I would strongly suggest discussing with ear-nose-throat doctor what can be done to try and resolve that because we do know that the long-term health benefits of that are probably not very good.

Now, as far as breathing, Shivan is exactly right. If you're eating and swallowing air—we call that ***aerophagia***. But most of the time, it actually causes distension of the stomach, but never makes it to the small bowel and you'll burp it up. And a lot of times, it won't even make it to the stomach. I've had a lot of patients that have no idea. They'll come to me for burping. And as I'm talking to them, they'll be talking and they'll go, "[Burp!]" And they'll go like, "Yeah… see, did you hear that?" I'm like, "That was not a burp. That was swallowed air. It got stuck in your mid-esophagus. And it makes this burping type sound as it comes out."

So, swallowed air *usually* never even makes it into the stomach. It can when you're eating. So you're exactly right… if you're eating with your mouth open, if you're breathing, probably not an issue to digestion based on that. The human physiology tends to get rid off it before it can actually be absorbed.

Shivan Sarna: Okay. Belle is asking about SIBO and CoVID-19. So Dr. Brown and I have had this conversation before…

Dr. Ken Brown: I'm sorry, what was the question?

Shivan Sarna: Do you see SIBO developing after CoVID-19.

Dr. Ken Brown: Ooh, ooh… hot topic…

Shivan Sarna: Go carefully tread sir… please…

Dr. Ken Brown: I have seen some interesting things. I have seen people flare in their ulcerative colitis. I have seen people have extreme flares in their dysautonomia, in their POTS—not only from CoVID, but also from the vaccines. And if we were to stop and think about it, that makes a little bit of sense in that you're turning the immune system on. Both ways, you're turning the immune system on. And if you don't have regulatory checks and balance, then yes, you can have all different kinds of things.

I do see a lot. Who knows? I see a lot of people with long-standing issues post-CoVID. And it's unfortunate because, very clearly, some of these immune system are just not turning off-same thing that could happen with really any severe infection.

Shivan Sarna: From Betsy: "Four generations had bowel problems, depression and vitamin B problems. My mom had Parkinson's. My grandpa in 4th generation was diagnosed with pernicious anemia. Also, B vitamins help make dopamine. Wellbutrin was the only anti-depressant they gave me any relief from depression (and I've tried many SSRI's). Do you think there's a B vitamin connection?"

Dr. Ken Brown: All the B vitamins or just B12?

Shivan Sarna: Well, let's do B12 because a lot of people get blood work done with SIBO and have crazy B12 levels.

Dr. Ken Brown: Like low?

Shivan Sarna: High… high, high, high… without supplementation.

Dr. Ken Brown: Oh, interesting…

Shivan Sarna: And the theory I've heard was that the bacteria was maybe producing it, but you weren't absorbing it, or you just weren't absorbing it, what you did have. And also, have you had your DNA done? Have you had your methylation checked adn all that?

Dr. Ken Brown: Hmmm... yeah, that's a little bit beyond my scope. A lot of these stuff, I find super fascinating. I love people like you that are putting on masterclasses and things, the parasites...

My experience with B12 is pretty traditional in that you need to have the acid to cleave it from the R-protein, then it needs to travel down to get absorbed in the ileum and blah-blah-blah. So mine is pretty basic when it comes to that. Getting into the deeper stuff, I'll defer.

Shivan Sarna: So, Joseph is asking: "Can you take herbal antimicrobials with Atrantil and rifaximin together?"

Dr. Ken Brown: So, I'm just going to tell you... Dr. Siebecker says don't mix your herbals with your rifaximin per se necessarily especially in the beginning because you want to know did that work in its own little column. Re-test, did it not go down as much as you hoped for or whatever? Try a different path.

So, if you cross-pollinate the herbals with the pharmaceuticals, she kind of feels like it muddies the waters. And I'm sorry I'm speaking for her. But I have heard her say this multiple times.

What do you think?

Dr. Ken Brown: I think that's a very reasonable, academic way to look at it. I'm a little bit different. I'm a little bit more just sort of "I just want you feeling better." But I end up going that. I end up getting the pilots that say, "Oh, my gosh! I can't take off. Do something now!"

Shivan Sarna: Right, exactly.

Dr. Ken Brown: "What are you on now? Do you think that helps? Okay, let's add this and see what happens."

So, mine is much less academic. But that's also just the nature of who I treat and the people that just have to get on. I have a lot of professionals that just don't want to play the game of "Let's try this and see what happens." They're like, "I'll do anything!"

Shivan Sarna: Right… and that's why we love you, one of the reasons.

Betsy, about your B12, low B12, check out Ben Lynch's work, *Dirty Genes*. Check out Carolyn Ledowski, she's out of Australia. I think it's called MTHFRsupport.au. Genius! She's been in some of my summits. She's amazing! So, I would check that out.

SAMe, have you ever taken that supplement? That's what I've got for you.

Dr. Ken Brown: Just to show… my functional medicine guy at Smart Wellness now, twice a year, I get this *insane* blood panel. And he's like, "You need to take this and this. You're MTHFR. You want to read about that." I'm like, "Dude, I'm so behind into my other reading that I have to do for this. You just tell me what to do, and I'll do it." I go to a doctor for this kind of stuff. So I just don't have that time to read on everything.

Shivan Sarna: "Does B12 feed the bad organisms?" I've never heard that. "I've heard some polyphenols do deplete B1. What is the effect of the ones that you're using?"

Have you ever heard of that?

Dr. Ken Brown: No, I haven't really gotten into the whole B-vitamin aspect of everything, yeah.

Oh! I was going to say super, super, super quick… I did want to talk about this one thing. The people that we're working with in Argentina—I totally forgot to get to this

earlier. But remember when I said that green tea gets broken down into a bunch of different molecules. Her thesis was taking quebracho and chestnut, the two ingredients in Atrantil, and she put them through a digestive followed by fermentation process. And what she showed—which is fascinating—was that the **quebracho and chestnut get broken down into tons of smaller phenolic compounds** to include **quercetin**, **ellagic acid**, **green tea extract**, **urolithin B**, **urolithin A**, **turmeric**, **vanillic acid**, tons of these other ones that you're buying smaller phenolic compounds.

And so, this is the new frontier where you've got to have the microbiome to do this.

And then, what she showed also in her research was that the microbial diversity improved resulting in higher, a significantly higher, increase of short-chain fatty acids like butyrate.

So, these are the scientists that we're dealing with now. And this is what she presented as thesis to get this.

And so, I just wanted to throw it out there really quick. This research is out there. And it's really cool—which is one of the reasons why I think that, if you continue to take it, ultimately, you improve the diversity, you allow for these butyrate to be produced and things like that.

Shivan Sarna: And Steve Wright is our butyrate guy who talks about Tributyrin-X. He talks about all of that.

What about iron? A lot of people—we were talking about B12 levels—a lot of people are anemic or low ferritin with SIBO. What do you think about that?

Dr. Ken Brown: So, the extreme form of SIBO, remember, when we were taught about SIBO in medical school, it was the people with blind loop syndrome and things like

that. We saw the opposite of B12. They talk about how the bacteria will eat the B12 and drop the B12.

And so, that's why I was like, "It goes up? That's interesting."

The same thing with iron… poor absorption can actually cause that nutrient deficiency—ultimately, any nutrient deficiency. So let's even get to the other B vitamins. In theory, all nutrients could potentially be either poorly absorbed or destroyed before they could actually be absorbed in severe SIBO.

So, I think that it's varying degrees of bacterial load that can affect a whole lot of different things.

Shivan Sarna: "Can coffee enemas cause SIBO?" Now, the reason why I'm bringing this up is because I did talk to Gary Stapleton who owns Aerodiagnostics Lab, a very reputable SIBO breath testing company lab. And he felt that colonics—which is different from an enema, I know—could actually be leading to some SIBO because of that ileocecal being stuck open after a colonic.

Dr. Ken Brown: Hmmm… okay. I don't know. I've not done a whole lot of digging into the colonics. Here's what I do know about this. When we do barium enemas, when we have an x-ray and we have radio-opaque paste and we give an enema, for it to actually make it all the way around the colon is extremely difficult. You have to move the patient. You have to do it under pressure. You have to turn a balloon up. You have to forcefully do this.

Understanding the anatomy of the colon, it's not stick an enema in and it's going to end up in your ileocecal valve. It's actually really hard to get the fluid over there.

So, if you're doing that, you're taking a very large load.

There was a company that tried to do bowel preps where you hook yourself up to a machine, you get into this little personal enema, and it would try to clean you out and suck it out and everything. And even that, under high pressure, under the perfect setting was not cleaning the right side of the colon out. The fluid is not making it there.

Shivan Sarna: Wow!

Dr. Ken Brown: And we can get into the anatomic reasons for that.

So, that's why I've never really gotten into the whole colonics thing because, seeing what I'm seeing with x-rays, it's just probably only getting into the left side of the colon.

Shivan Sarna: Okay! Last question, gastric bypass surgery and SIBO...

Dr. Ken Brown: Oomph! Yes, lots... lots! Lots of it, lots of it. And those people, I tend to have to re-treat and re-treat. They get better, and then they'll come back. It's just anatomy. You've got this blind loop that's sitting there. It can just sit there and just produce bacteria. And it's not being exposed to the digestive juices and all that.

Shivan Sarna: So they could take antibacterials, the antimicrobials, periodically and pulse it. They could do rifaximin in a pulsed fashion. Thoughts on that? Like how often do you do that?

Dr. Ken Brown: All of the above. And everybody is individual. Sometimes, when we finally treat people several times, then it just kind of goes away.

But a lot of it is because of this blind loop. You've got this area that's kind of connected to the stomach that's shut off, and then it connects later—at least that's the roux en y gastric bypass which is the one that's most traditionally done.

Shivan Sarna: Guys, you can find the best price for Atrantil in the marketplace here. If you would like to try it out, I would love it if you'd use our link. It really helps support the work. It's very expensive to do this 24/7/365 which is what we've been doing. We try to take two weeks off at the end of the year. I sent an email to everybody saying we were closed. Then I was like, "Yeah, but I can get Dr. Brown. I can't not."

Dr. Ken Brown: You know what, let me go ahead and just speak for you here to everybody that's listening to this. I mean, very clearly, what Shivan is doing is pretty incredible. She's got these experts that are coming on, very renowned experts. Even myself sitting here listening going, "Oh, that guy, I need to listen to that person on this because they're on here. Oh, this is what's going on." So, we're very, very proud at Atrantil to be teamed up with Shivan. And we love the work that she's doing.

So everyone, if you want to try this and you heard all these different benefits that we're talking about, I believe in it, I'm on it. My family is on it, my kids are on it. Everyone I know is on it. All my employees are on it. And I believe that strongly about it. But I also believe that strongly, that's why I'm taking my time to come on here because she's doing this amazing job of putting these pieces together. And ultimately, every one of these people that you've had on is probably too busy to dabble in these other things. And what you're doing is playing conductor and bringing them on.

So, one way to thank her is to use that link. It's a win-win for everybody. We get to probably help you in the least of ways protect your brain. That's my thing. We'll be coming back on with more brain stuff eventually. And you get to help Shivan keep bringing people on.

So, I want to thank everyone that came on. And clearly, your audience loves you. You have a bunch of people that joined here. So I just want to thank you for everything that you have been doing and working diligently to get this done.

Shivan Sarna: Wow! Very kind of you! Thanks. We're a great team. We're a great team. Thank you so much, Dr. Brown.

Well, many blessings to you. Keep up the great work! We can't wait to see what you come up with next. And I'm looking forward to our next conversation sir.

Dr. Ken Brown: Awesome! Take care everybody. Thank you so much for joining.

Shivan Sarna: Thank you!

Dr. Ken Brown: Bye bye.

Shivan Sarna: Alright, everyone is wondering, "How can I get the replay?" If you're on our Facebook Live—I just snuck that in there because I really like to do it through Zoom—it will be in the Media section or the photo section (that's where you can find all the videos). If you are here in Zoom, thank you! Thanks everybody for the kind words. I appreciate it. We will be sending out a replay.

We're probably not going to do a transcript. We're a little bit behind on the transcripts. But definitely, definitely watch the replay.