

MERYL: Welcome back everybody to the Rebel Nutritionist podcast. Today, I am super excited to be interviewing Dr. Mary Pardee, who is a naturopathic medical doctor and certified functional medicine doctor. And she specializes in an integrative approach to gut health and longevity. So of course, that's right up our alley. She is the founder of ModernMed, a medical practice that provides medical and health services to patients, both in person and through telemedicine. So Welcome, really excited to be with you today and talking to you about all things gut poop

MARY: all the fun, fun, sexy things, right? Absolutely. Yeah, exactly. Welcome though. Thank you for being on. Thanks for having me. I'm excited.

MERYL: Yeah. Yeah. So that's your specialty is GI. And of course, that's one of the areas that we find ourselves in every day. I always say people say, what do you specialize in? I'm like, well, it really depends on how the sun, moon and the stars align that week, because it's always different.

Right. But without fail, every every day, we are dealing with someone who's got gut issues. And And it seems to be pervasive, right? And I actually think that it's more common now than it ever was. Are you finding that? ———

MARY: Yeah, and I think we're going to see it become more and more common just because of some of the causes for these functional GI issues but stress being a big one and that doesn't seem to be going anywhere anytime soon.

MERYL: You know, I love that you brought that up first because that always comes into the picture. We had an event last night and it was funny because it was all about longevity and radiant aging. And we start talking about hormones, right? Because the crowd was of that age. And, I mean, 40 and older, you start talking about hormones, right?

But then, of course, we get into gut health and we get into stress. And, so let's talk about that first, because I do think That when people start to present with gut issues, like you said, the stress, right? And, and I feel like they come in and they say, Oh, well, I was diagnosed with IBS, right?

That sort of blanket. Right. So, so let's talk a little bit about stress. And even though we keep talking about it and keep saying how people really need to work on their stress levels, like you said, it's more prevalent than ever when really, if we're, if they're receiving the message the right way, it should be less. —

MARYL: Yeah, absolutely. No, it's a huge driver, especially when we look at the functional GI issues, which **when I say functional GI issues what I'm talking about is, those gastrointestinal issues that are usually chronic but they also don't have an organic cause. Like if we did a colonoscopy or an endoscopy, everything looks normal in the colon, the stomach, the intestines.**

**And then if we did blood tests, we don't see any elevated CRP levels, sed rate levels, which are your inflammatory markers. And so this is kind of this class of functional GI issues. And specifically in this, we really see how stress can have a huge impact on the gut.**

And so one of the hypotheses, especially for IBS specifically that we look at is this hypothesis of the stress IBS cycle, which we can go into right off the bat if we want to, or we can wait till later. But what we're looking at there is that **when you're under stress, your brain sends out corticotropin releasing factor, CRF. Which is a hormone that gets released from the hypothalamus. And then it goes around to different areas in your body to, to do certain things that should happen when we are under stress.**

So you probably have heard of just like the stress response, right? Like what should happen if a lion, I have a picture of a lion to the right of me, so if a lion. — Starts to attack us. **We should increase our blood flow to our extremities so that we can run away. We should increase our heart rate, our breathing rate.**

**We should shunt blood flow away from the intestines because it's not crucial to digest right now. We just need to fight or flee.** But in that stress response, that corticotropin releasing factor is thought to be kind of upregulated. And in IBS patients specifically, they've done a study where they use intravenous CRF.

So to really to be able to induce it automatically and measure it right then. So in a laboratory setting and what they see is that in patients with IBS, when you infuse CRF — into their veins, you see an increase in abdominal pain and increase in colonic motility or movement patterns in IBS patients specifically much at a much higher degree than their normal controls that don't have IBS.

And so we can see that like **people with IBS are more sensitive to a stress response and respond differently, and it really affects their gut more.** And so it's a physiological response that we're seeing. And you know, and people without IBS, most people have their own stress response. So some people, when they're stressed, they'll get headaches, right?

Other people, they'll get really tired or crash, or I think we kind of all know how stress can affect us. In IBS patients, it really affects the gut at a higher degree. —

MERYL: A hundred percent. So, so and, and **there's people with IBS who are, have diarrhea, right? Which is that motility you just talked about.**

**And IBS people who have constipation.** So but either way so this is sort of twofold, right? The stress piece is, is huge yet. I feel like it is so dismissed people like, Oh yeah, well, I just have stress. And okay, well that's my life, but give me a pill or give me something that's going to help me with this.

And you know, you turn around to them and I'm like, no, no, no. Do you understand? It's your lifestyle. Like you have got to make a change. What does that conversation look like in your practice with, I mean, I'm sure we say the same things, but how do you really get people to listen I think without being dismissive and going, okay, but that that's not going to change.

**I mean, I always say to people, look, if you want it to change, you cannot do the things that got you here in the first place. You've got to change the behaviors that got you here**

**in the first place.** And you can throw every excuse out to me. I'm still going to say the same thing.

MARYL: You know, absolutely. And Merrill, we have the same issue, it sounds like, so. — And this is, this is really common. We have a team call with all of our doctors every Thursday. And we talk about this probably every other week. As to how we're going to change the conversation. How we can make it more approachable. Because I don't know about you, but what happens a lot of the times with the people that I see is **there's a resistance to the idea that it could be stress causing their symptoms.**

**They want it to be a parasite, an infection. They want it to be something tangible that there is a medication for, and then it'll be gone,** right? Which I totally get.

I also was there myself. I did the search looking for that parasite, that like one magic thing for years of my life. And it's, it's the reason I'm here today is to really just help people understand there's very rarely that one magical thing that's going to give you that one day answer and that one pill.

So while I understand the frustration from a really personal level It's also now that I'm kind of on the other side of it and really understand how much stress impacts it It's a really delicate conversation to have with somebody who's still in that search mode of I'm gonna find the one answer and so how we really Approach it with people is first to just see where they're at. You can kind of sense it you know, where somebody is at in terms of being receptive to talking about mind body exercises, talking about the gut brain access and how it affects their symptoms. And based on where somebody is at, **I may go the scientific route. So if I see that they really like to know the physiology behind it, then I'll talk about C.**

**R. F. I'm going to talk about how that impacts the motility factors. We'll talk about how diaphragmatic breathing actually changes those stress hormones,** right?

**And then with some people, we're just talking about things in a more general sense in the beginning, and it's over a series of appointments where I'm starting to pull things but it's a continuous conversation that happens over a series of appointments where we start to build rapport and trust.**

**And then I think it's also nice that people know that I have a personal experience with it because I think when you haven't gone through it before, it can feel a little bit isolating too.**

MERYL: 100%. 100%. I mean, and that's we do try and bridge that gap. You know, I have coaches who work with me and that it is very much about, okay, yeah, here is the clinical aspect.

Here's what's going on, right? When I'm doing that work with them, like, here's what's going on. Like you said, the physiology. But really, we need a plan to be able to meet them where they're at and then help them understand the nuances of, like you said, it's not just a, here's a pill and you know, it'll make you better.

And I do think we do talk a lot about that **diaphragmatic breathing, how it does slow down, right, that from sympathetic to parasympathetic calms you down.** I feel like I have to say that over and over until people are like, Oh, right. That's what that with that is. — And I think the other thing that's come to light, and if we can talk a little bit about is this whole vagal nerve thing, right?

**That the vagus nerve is very much connected, which is what that gut brain access is for people.** And where that and why that's so important people are hearing, Oh, stimulate the vagus nerve for longevity, the cold plunges, all that. Right. But how does that relate back to these GI issues that we're seeing? —

MARYL: Yeah. And so to, to go backwards a little bit to the other method I use, **I have a PowerPoint presentation on this that I'll literally pull up and share screen with a patient. Cause I'm usually doing video and we'll go through it step by step. step to really talk about that gut brain axis** that you're talking about, because that is kind of the core as to where this starts with.

**The conversation begins with, how are your gut and your brain even communicating with each other? And so your gut and your brain communicate with each other with this gut brain axis, and it's a physical connection with that vagus nerve that is coming out of the brainstem and then innervates almost the entire gastrointestinal tract from the mouth to the lower part of the colon.**

So that's one of the physical connections. It can send messages back and forth as to what's going on, but then **you're also going to have hormones that are going to communicate. So CRF is one of those hormones, your hypothalamus, pituitary, adrenal, axon. — is able to communicate with the gut with those stress hormones.**

**And so that's more of a biochemical way of communication.**

And then we have the gut microbiome. So the gut microbiome made up of bacteria, viruses, protozoa, all of these little bugs in the intestines. similar to like the jungle where we have different plants and animals. Your gut has different species that reside there.

And, and these things feed off of the food that we can't digest. So the fibers, the prebiotics in our food, and they're able to produce substances that then go and communicate with our human cells. So just like when a lion poops, that, that poop fertilizes the soil and allows other. plants to grow.

**Our bacteria are producing substances that interact and are beneficial to our human cells and affect our mood or metabolism and so much more.** But all of these different things are how our gut and our brain are communicating back and forth. It's really multifactorial and it's really complex to, which is why I tell people we're just scratching the surface of what we know in research with this connection that's here.

**But it's also why some people I feel a little bit resistant to the stress conversation because I think it can be viewed as somebody saying this is all in your head. Right. You have control over this and you're deciding not to control it. And in reality, that's actually not what we're saying.**

**So I really try to clarify with people. We're not saying it's made up or it's in your head and it's a fictitious thing that's happening. What we're saying is that gut brain connection, when it's happening smoothly in your body, or you're gut and your brain are sending messages effectively, then it's able to sense that there's actually bloating in the stomach just after you eat, but it's not going to send an exaggerated pain response to the brain, which can happen oftentimes in these functional bowel issues.**

**So I tell people there's almost like a kink in that communication between the gut and the brain that can happen here, just like there can be like a kink in the in a hose that impedes water flow. And so that communication is impeded in some way, and that's why it's sending signals to your brain that there's tons of pain that are ha that's happening, or tons of bloating, distension, when in reality that may not be what's actually going on at the gut level. But, In order to fix it, we have to right that kink, we have to un kink it, and **the way we do that are these gut directed behavioral therapies, mind body work, diaphragmatic breathing, to re establish a healthy communication between the gut and the brain.****

MERYL: That was a great explanation. Thank you for that.

So when you say some of these strategies, what, besides the diaphragmatic breathing, what, what other things are you recommending that people can take away with from this in terms of like concrete things that they can do?

MARYL: Yeah, great question. We can use the example of urgency as one of them in IBS. So, a lot of times people will have IBS, which is diarrhea predominant, and urgency will be a main symptom. And it can be really difficult for someone's quality of life because they don't want to go out in public because it's like, where's the bathroom? They'll even look up all the bathrooms, where they're going.

They don't want to leave the house before they go to the bathroom. **And so when somebody has urgency, one of the things that I'm talking about with them is what is happening in that urgent response. So when you have to go to the bathroom and you've had maybe accidents in the past or close calls in the past, immediately when you feel that potential urgency coming on, it can induce a stress response based on the thought that comes into your head** So i'll kind of pause somebody i'll say what's the first thought that you have when you feel the urgency? —

And a lot of the times it's the same exact thought with all people which is like oh You know, oh no Where's the bathroom? **Am I gonna make it am I gonna have an accident like oh not this again. I'm frustrated so all of these are totally normal responses. However, that thought alone in the brain starts to signal a stress pathway, — right?**

That's a stressful experience of am I going to make it to the bathroom? So it heightens the stress pathway in the brain and that increase in cortisol and adrenaline and norepinephrine that's going to happen from that thought. **Those stress hormones actually increase the motility in the colon. and increase the urgency just by having that thought as your first response. —**

And that makes a lot of sense when I tell that to people, but they're like, okay, but it's a normal response. I'm like, yes, totally normal. Almost anybody would have it, but **we can actually**

**change that with cognitive behavioral therapy. So really working to change that first thought pattern. And so I'll have people, the first step is just identify that you're having it. And the second step is trying to go outside of the stress response and go right into diaphragmatic breathing.** — So then they start to retrain themselves. When I feel urgency, I go

into diaphragmatic breathing. Because I want to go out of a stress response, not into a stress response. And that can delay urgency.

It can reduce urgency and it can get people results really quickly. And that's a really nice way to get buy in from people like, Oh, this actually works. I want more of it too because I feel way better knowing that I actually have some control over my symptoms versus feeling like I don't have any control over anything.

So that's an example of a behavioral therapy that we can start to do. The other thing I'll have people do is **we just start to identify where are all these thoughts now? Because we know that that's one thought, but what other thoughts or behaviors are forming over your symptoms? And so really common ones will be checking symptoms where if you have bloating or distension, meaning pushing out of the stomach, a lot of the times, especially women will start to look in the mirror and see.**

**How distended am I? How bloated am I? They'll look down, maybe they'll touch their stomach even. Does it feel like it's really pushing out right now? How pregnant do I look? Some people will take documented photos to say, okay, today's Tuesday versus Friday. Other checking behaviors that are common are like looking at your stool after you have a bowel movement to see what it looks like. Is it watery? Is it hard today? Kind of thing.** These are all things that again, totally normal if you're having these symptoms, because we want to figure out what's going on. However, when we have diagnosed that it is a functional bowel condition, that's a big part of this is the assumption that we've diagnosed that, right?

If you just have recent onset diarrhea, you need to go to the doctor. Like, don't, don't be thinking that we've already figured it out yet. **But when we've diagnosed you with IBS, we know that those checking behaviors are not going to be beneficial to outcomes anymore. Looking in the mirror never reduces bloating.**

**Looking in the toilet never fixes diarrhea or constipation, right? But what they do do very effectively is they heighten that stress response in the brain that says, Oh, it's still bad.** Oh, I'm still bloated. I can't wear this outfit. I have to buy new clothes. It makes you start to go into that cycle that we can all go into.

But when you know that that cycle will then perpetuate the symptoms and make them worse. And when the symptoms get worse, the stress is going to get worse. And now you have this feed forward cycle of worsening, worsening symptoms, worsening, worsening stress. And you just become like a cyclone. And I think a lot of patients really resonate with that where it's like, yeah, I can feel out of control. I can feel like I'm spiraling.

**What we need to start to do is change the checking behaviors. Don't look in the mirror anymore. Don't look in the toilet anymore. Don't touch your stomach. Try to redirect to something that you do. So I had a patient the other day where it's like, what do you like looking at in the mirror?**

**She's like, I like looking at my face. Great. Look at your face every time you look in the mirror. Don't look anywhere else right now. Give it a break.** Like we know it doesn't change anything. Let's not focus on the bloating right now.

MERYL: Absolutely. it's so funny you're talking and I'm like. I'm going to save this snippet for every single client that comes in and, and I have to do this with because it is endless. I get I just had a message from a client. Oh I think I'm going to stop my supplements. My bloating is worse. Right. But she neglected to kind of address in that, that. Well, she was off her diet for the holiday, not diet, but right. She went off the rails in terms of really eating poorly during the holidays and there was a little more drinking. Oh, yeah. And the stress was a little high, right? But it's the supplements that are not working. — And, it's less about the supplements and it's more about what is going on in your head. That is driving that behavior, and like you said, it's not about we're saying you're making it up, could be very real, but literally the way you are thinking is impacting your physiology.

MARY: 100%. Yeah, 100%. And I think that's empowering. It can be empowering if we start to view it the right way, right? Where there's changes we can make that's going to improve this, and it's not gaslighting. It's not like you're saying, yeah, this is all in your head. There's nothing to do here, kind of thing. Like, that's the opposite of what the message should be.

MERYL: A hundred percent. I think it's very, because it's intangible for people, right? We, we've grown up in the medical model that everything is tangible, and yet so much of what we talk about in functional medicine is very intangible, because The brain, your thoughts, especially now what we know with I spoke with Catherine Clinton.

I don't know if you know she is. She does a lot of the quantum biology, right? How our thoughts actually create the chemicals. Same thing like the stress response, but we're finding it more and more that even the energy of what we put out right is affecting our physiology. And I think it because it's so intangible people like you had mentioned, right, we want to know the quick fix.

We want to know what to do so I can change it. But it really comes down to, are you willing to put in the work to change the behavior? Are you willing to change your belief system and your thoughts enough to make that change? And that's what it takes. And I think for a lot of people the question is, are they willing to put in the work?

MARYL: Yeah, yeah, and **it also takes some, some introspection, right, which can be kind of scary for some people you and I were talking about some vulnerable stuff before the call, but it's like an ego check where you're like, I gotta admit I was wrong. Like, I gotta admit that there's something else here.**

You don't know that you were wrong, but like, there's that **there could be another story besides the story we've created in our head that feels so real to us.**

And I come, I come here because I had this Whole process happened to me where I remember being 18, 19 years old, so sure that I was gonna find like that one thing and and was so

resistant to the idea that it could be stress, it could be that I was obsessive about what I was eating, like that whole thing.

And so it's definitely humbling when, when you can see. Just what's going on in your own brain from a different perspective and to be open to, to something. But when people see that it starts to work, usually that's where the buy in starts because they, they just want to feel better is the bottom line.

MERYL: Yeah, a hundred percent. So let's tie in a little bit because, and, and I do want to talk about constipation, but let's kind of, or let's talk about constipation first because then I also want to tie in. Some of the nutritional component because clearly there's a big nutrition component to this, right?

We're talking about lifestyle and we can talk about movement and all that how that's so crucial for all of this, but Constipation is such a big issue and especially with my younger clientele These young girls who are all coming in way constipated. I mean, even the older women too, but it is, it is by far pervasive across the timeline of aging.

So what, what, how do you deal with it? What are your thoughts on that? Let's talk about constipation.

MARYL: Yeah, absolutely. I mean, first I want to make sure somebody actually has constipation. Sometimes when we throw around the words constipation and bloating, it can mean one thing to one person and something else to somebody else.

**And so with constipation, we're looking at about 25 percent or more of your bowel movements are associated with two of like a bunch of factors where it's either straining, you're having to like really push down, you're having those really lumpy, hard stools, which I call like little rabbit pellets. It feels like you're not fully voiding, so it feels like only a little bit is coming out.**

**It feels like you actually have to use, like, a manual maneuver, so some people actually use, like, a finger or something to actually initiate a bowel movement. It feels like there's an obstruction that's happening, or you're having less than three bowel movements. per week.** So we want to make sure that we're in like kind of those lines before we even start with constipation.

And then once we've diagnosed, **we want to make sure that we've ruled out organic causes for constipation because hypothyroidism, low thyroid function can cause constipation. Diabetes can cause constipation because it slows down the intestinal tract. Certain like neurodegenerative diseases can obviously cause constipation.** less common, especially in younger populations. Pregnancy normal cause for constipation because of the increase in progesterone that happens during pregnancy slows down the intestinal tract. And similarly, — there's a, **a decent amount of women who will get. constipated right before their period in the luteal phase.**

And that's because of those high levels of progesterone that are in the luteal phase that will slow down the intestinal tract and cause constipation. That's a totally normal physiological response and we can treat that, but we would likely just treat those people just in that luteal phase because the rest of the month they feel totally fine.

**Eating disorders is a huge cause of constipation, often underdiagnosed as well, because it can be a diagnosable eating disorder like anorexia or bulimia. But you also see it in people with just deep disordered eating patterns that don't fit in a formal diagnosis of an eating disorder.** But those make a lot of sense from just the perspective of if you're not eating a lot and not a lot's not going to come out.

**But then we also see that caloric restriction actually slows down the GI tract. — itself as well. So there is a direct tie that's there.** And then you have a bunch of medications that can cause constipations.

We want to make sure that there's no like real cause that we can fix in the short term. And then you're kind of left with **this group of people that fall into this category of idiopathic constipation, — which just means we don't really know what the cause is. Majority of people in that group, it's going to be irritable bowel syndrome.** That is the cause of the constipation. constipation. And then you have things like dysenergetic defecation, which is the inability to move the muscles correctly in that anal rectal area to have a complete bowel movement. And then you just have like slow transit constipation as well, which means that your intestines are moving slower than normal.

And so almost out of breath because there's so many causes, right? We're just like, we need to start to figure out, like, **which area do you fall into? Because that's going to change how we're going to treat you,** potentially.

And so, when we're looking at constipation, if we've kind of ruled out all the organic causes, **the first place I'm starting with people is going to be stress. food, fiber, and an osmotic laxative of some sort.** And so, I'm always doing a really thorough intake and asking, I show the Bristol stool chart to my patients and I'm like, what do your poops look like? And they'll be like, but you told me not to look at them. I'm like, you're right. But you still know what they feel right, like, right when you're having a really hard bowel movement, you don't have to look at it like it's just a sensation that's, that's there.

**And so if it is a really dehydrated stool, then we're using an osmotic laxative, something like magnesium or something to pull water into the colon to hydrate that stool and increase the the speed at which things move through the colon to alleviate constipation. Soluble fiber sources can be really helpful in constipation as well.**

Some people go one way or the other with fiber sources and some people, especially that are prone to bloating too much fiber too quickly can make things a little bit worse. So I go really slow with people like don't go up to two tablespoons of psyllium husk right off the bat, like taper it in slowly.

And that can be a huge game changer. **Kiwis are by far one of my favorite foods for constipation. There's a research study that was done that if you eat two kiwis per day, and if you have constipation, it increases the number of bowel movements that you have in the week really statistically significantly.**

And so that's like one of my go tos where they're delicious, they're high in vitamin C, they're high in soluble fiber, and they can be a game changer for somebody with some of us that's lower transit constipation. And then we may be talking about other causes in terms of small intestinal bacterial overgrowth or intestinal methanogen overgrowth.

And all of this comes up in our testing because **the first thing that we do with our patients is comprehensive intake, ask all the questions that we need to ask and then comprehensive testing to eliminate all those organic causes and see if there is an overgrowth of methanogens in the intestine that's slowing down the intestinal tract.**

MERYL: So question for you. Now this we're going to go down a whole other rabbit hole that you're talking about bacterial overgrowth, right? Because I also feel like now we're seeing so much of this bacterial overgrowth or fun, right? Seafoam, sebo, the fungal kind of thing. And we were talking a little bit before offline about about the testing.

So how are you because I feel like we've got so many people and and a lot of times you can just do a, like you said, a really thorough intake and be like, Oh, yeah, you've got some of that going on. But what are we when people who are coming in with the symptoms and we can talk about what those are, if you want to elaborate on that a little bit.

Then we'll get back to the whole constipation thing. But how are you evaluating that? And what are you, because again, I feel like this area is just, there's the research keeps coming through and we're getting more and more data on. Is it? Are you doing the the three gas breath test? Are you doing this? Is that valid? Or and how and really the other thing is, is then the treatment protocols, because it seems that these bacterial overgrowth conditions are so chronic, right? They get treated. They come back. They get treated. They come back. So what are your thoughts on those?

MARY: Yeah, and I really think we're still learning in this.

So if you and I end up talking in five to 10 years, I guarantee the conversation is going to be different. I'm excited. I'm really excited for that. Actually, like, yeah, we were we were a little bit off there because it's so clear when you work with so many people that were it feels like we are maybe missing a little bit. Of something here in terms of maybe more validity and the testing more specificity or sensitivity of the testing but it's not foolproof, but it's what we have right now And that's what we have to go with right like medicine is just going to keep getting more and more advanced.

But Yeah, there's definitely a reoccurrent nature in cbo and imo That's really frustrating for everybody involved because we all just want to get the patient better or get better ourselves, right?

and so You know, really what I am honing in on is much more of this stress response because kind of **that hypothesis that I have, which is not proven at this point, is that that may be an underlying factor that keeps things becoming recurrent because stress is recurrent in our lives.** And then, and looking at motility patterns as well, which is directly affected by stress, but those are the two that I'm really honing in on to see if we can really establish more regular motility in the intestinal tract. Will that help to decrease the reoccurrence of SIBO or IMO? And,

and really just focusing in on reducing just managing the stress part, I should say. You're not going to get rid of stress, but figuring out all of your copings skills, your breathing techniques, the changing the thoughts and behavior patterns around it, if we can mitigate those.

But with my patients, it's a direct correlation that I see. They'll be great. And then they'll say, yeah. And over the holidays, I went to see my family and we had a fight and like, now I feel terrible kind of thing.

And I see this time and time again. So I think that that is a big piece of it.

MERYL: 100%. So just to clarify for people that are listening, because we talked about SIBO and IMO, can you want to just clarify what SIBO is for them? —

MARY: Absolutely. Yeah, I should have gone over that first. **So SIBO is small intestinal bacterial overgrowth, and then IMO stands for intestinal methanogen overgrowth.** But what these are really looking at is **in SIBO, you're looking at just the small intestines and overgrowth of bacteria. That is producing gases like hydrogen or hydrogen sulfide.** So all of those bacteria, remember I talked about, are like lions and tigers and things in the jungle. And they produce different things. And when they consume fibers, some of the things that they produce are things like gases because of the fermentation process. And those gases are gases that are in the intestines. **And if we're overproducing those gases, then we can feel bloated or have distension. pushing out of the intestines.**

And then you have intestinal methanogen overgrowth, which is an overgrowth of methanogens, which are a little bit different than bacteria, but pretty darn similar. But they're producing methane, and so methane is CH four. It's another byproduct of fermentation that happens in the intestines from those little microbes. But all of this to say is that **it's producing gas and that's pushing out, causing that feeling of bloating, discomfort, or actually passing gas as well.**

**These gases, though, have different effects on the intestine. So methane, for instance, slows down the intestinal motility. So we usually associate that with constipation versus hydrogen. speed up motility in the intestines.** So it's more associated with diarrhea and then both of them are going to be associated with the gas and bloating that's there.

It's very, very common. And like I said, in the beginning, **the testing is not foolproof in my mind, because we know that if we test a bunch of people that don't have any symptoms, some people are going to turn positive and I would never treat those people.** And so we need to keep looking and make sure that we're like.

Making these things better to get things more accurate. But right now that's what we have. It is the standard of care too. So it's a validated test. But hopefully we get some more tools in the future.

MERYL: No, agreed. And are you using the, the three, the three gases about the trio smart breath tests? Yeah.

MARY: Yeah. We use trio smart and then depending on the patient, sometimes we'll use food marble, which is an at home device too. If there's like a financial component or they don't have insurance or something like that.

MERYL: Yeah. Gotcha. Gotcha. And so. You know, so it's so interesting, but I do want to talk about treatment.

But I feel like also, like you said, right, testing isn't perfect. **And I always say, you don't treat the paper, you treat the person.** And I had a conversation with a client who did the trio smart, right. And she was normal, normal, normal. And then at the end of the test goes up and rises whatever, one of them, I don't remember, which maybe it was the hydrogen.

And so she's like, she's arguing back and forth, like. Well, I don't have SIBO. I don't have SIBO. I'm like, okay, right. **You technically don't have SIBO, even though all of her symptoms are consistent with SIBO. So I said, okay, you may not be that may not show up on the test. However, symptomatically, you, you are presenting as that.**

And the fact that you did go up at some point is telling us there is some kind of dysbiosis, right? There's something going on. And so. We also have to get but clients sound like part of our work and our training is that we are, **we've done the training and we have to interpret the tests for them. It's never just here's what it is.** And right. Would you agree with that? —

MARY: Yeah, totally. **I mean, testing is a 1 part of it, but we really want to go based off of how somebody feels as well.** So we're taking into consideration all of those different factors that you can, you know. If you look at some of the guidelines from AGA you can, you can treat SIBO without ever doing a test too.

So empirical treatment is something that happens all the time in conventional gastroenterology. So the, the testing is just another tool that we have right now, but it's not the end all be all.

MERYL: Right. So when you find someone who has it, I mean, what is your protocol? Are you giving them the antibiotics?

Are you doing an herbal based protocol? Food wise what's your. What are your strategies to treat that?

MARYL: Yeah, yeah, and this is something that keeps evolving. Currently what I do is **I use antibiotics most of the time with people, and then I also use antimicrobial herbs because it's pretty common that just a two week round of antibiotics alone doesn't fully get rid of things.**

And so we add the antimicrobial herbs onto it as well for a continuation of treatment. And that seems to keep things at bay and reduce levels down to a lower place and get better results in my experience. But then again, like, like you said, right, we're not **We're treating the person**

**that's there. So if you come in with constipation, like that's gonna be my number one thing.**

**It's like we gotta get those bowels moving and just get you more regular because SIBO is really hard to treat when there's constipation that's present.** And so we may be adding in prokinetics, whether it's a pharmaceutical like Motegrity or magnesium or things like that speed up the movement of the gastrointestinal tract as well.

We'll use the low FODMAP diet sometimes with people. It's not my first kind of pick. And there's a bunch of reasons for that, but putting somebody on a really restrictive diet is not ideal. And in my. So if I can do it without that, then I really would like to do that, but it's another tool that we have is a low FODMAP diet, and it can be a big game changer for some people.

**The disclaimer I always like to make on podcasts is if you go and you say, I'm going to try the low FODMAP diet because Dr. Mary mentioned it. You shouldn't be on a low, strict low FODMAP diet for the rest of your life. So make sure you're working with somebody so you can reintegrate the foods.**

**Ideally what you want to do is just to identify a couple of the FODMAP groups or one of the FODMAP groups that's causing the most symptoms. And maybe just keep that one out, but reintroduce the rest.** So there's been some studies that show long term low FODMAP diets may reduce diversity in the intestinal microbiome. And so we want to have as much diversity as possible.

MERYL: Absolutely. Yeah. Thank you for that. All right. So I want, I think we kind of answered the whole, did we, did we, did we answer the constipation piece? Do we need to go back to that? I feel like, I feel like that was, I mean, right. We ended with the Kiwi, the foods. I think we're pretty good on that.

Are you good with that?

MARY: I feel like, I feel like we really covered it. Yeah. So we can always jump back on if we need to.

MERYL: Exactly. Exactly. So I think the other thing that I do want to cover and then and then maybe we do talk about the whole farting thing at some point, right?

Because we were like, what, but I think we have got to talk about the pro, yeah, we, this would not be a complete podcast if we didn't throw in the whole probiotic thing, right? I feel like. People come in, they're like, wait a minute, you didn't put me on a probiotic. And I'm like, okay, let's have this conversation.

Not everybody needs to be on a probiotic. So, **so what are the misconceptions and the myths about GI health, do probiotics work** and all that kind of stuff? Like, what's your take on that? ———

MARYL: Yeah, I mean, I get the same thing where it's like, you specialize in integrative gastro. How are you not putting me on a probiotic right now?

**Probiotics, first of all, they don't recolonize the gut microbiome, so if you're feeling like for some reason you need to recolonize your gut microbiome, — probiotics don't do that. So probiotics act more as passive travelers through the intestines, and they do affect you. You know, they affect things when they're in there but then you poop it out and if you stop the probiotic, you go back to where you started.**

So it doesn't change the microbiome for the long term. It's a transient effect that we see with probiotics. So that's a big one right there. That's a misconception where you're not going to take a probiotic and then have this different gut microbiome.

**The other thing is that a lot of functional G.I. issues when I'm treating patients, I don't have success with probiotics.** There's actually there's some research that's being done. A lot of it is still in, like, mouse models that we see with probiotics. But a lot of the guidelines don't actually even recommend probiotics and **they don't recommend them because the studies don't show a huge efficacy when we're using them for things like constipation, bloating, IBS.**

And I've used many of them because there are, like I said, some of those studies and I haven't had reproducible effects that are common enough in enough patients to warrant me saying, yeah, this is definitely worth it for you. So they're pretty low on my list. I will still use them, especially in certain conditions like ulcerative colitis. Probiotics usually seem to work with that specific condition more so than they would with something like IBS in my experience.

MERYL: Right. Same. I'm with you on that. And thank you for clarifying that. So what about the people who say Oh I took my, a probiotic, it fixed my constipation or right. I mean, it's, it's basically right.

Like, so you're saying, okay, so temporarily it could work, but it's not really the long term solution to recolonizing all that good bacteria because we have trillions of bacteria. So. Then what's your feeling? And I feel like there's so much more. Like you said in five years, we're going to come back and have this conversation and everything is going to change because of what we're finding out.

I think even now the research into short chain fatty acids, like we knew they were important, but now we know talk about a gut brain connection, right? Butyrate, how it, — Talk metabolism and brain health and all of these things, how so, which is part of that short chain fatty acid component.

So what's the conversation around that and prebiotics and so forth?

MARYL: Yeah. Yeah. And I want to go back to an important point that you made in terms of, you will hear people and I guarantee people listening to this podcast will be like, Oh, I had constipation and I took this probiotic and I don't have it anymore.

It worked miracles. Or I had diarrhea and this one worked for me. You definitely hear those. And I've had patients that have had the same experience. And in that case, I say, amazing, you don't even need to see me. Cause you're a fix. Like there, there isn't even a company. Usually those people aren't coming to me.

Right. Cause — they're already feeling good, but they will work for some people. And one of the thoughts behind why they work for certain people and not other people, like if you give 10

people with constipation a probiotic and somebody responds to it, why did the other nine not respond to it when they had the same symptoms, it may be.

To do with the variation in different people's microbiomes to start with so **you get 10 people with constipation all 10 of those people have a different microbiome to start. This gets back to my kind of — just important fact that everybody's microbiome is so different. We don't even know what the ideal gut microbiome is right now.**

We have no idea. We don't have this map that says this is what we're shooting for. We know that this increases lifespan. It increases diversity, whatever it is.

**And so if you have 10 people with 10 different microbiomes, a probiotic that has certain strains and it may benefit one of those people and help to resolve their GI issues, but not help any of the others because maybe they already had that strain in their intestines and it wasn't the thing that was leading to their constipation.**

And so, yeah, I'm all for it when they work. Great. Use it. But when you see I've seen hundreds, if not thousands of people with GI issues. And if, if only one out of a hundred gets benefit, it's not going to be my first line treatment for people. Cause it's just going to be a waste of money.

MERYL: Right. A hundred percent. So you, so let's go back. So the prebiotic question, right? Like. —

MARY: Yes, yeah, thank you for the reminder. Yeah, so the pro, the, — **the probiotics are the actual bacterial strains themselves, and then we talk about prebiotics, and prebiotics aren't to the bacterial strains. What they are is the food for the bacterial strains.**

So we talk about things like shikari root, onions, Jerusalem artichokes garlic, all of these things have prebiotics in them that our gut microbes then go and eat. And when they eat them, they produce the compounds like short chain fatty acids, but other metabolites that they produce as well. And those metabolites in my mind are going to be some of the biggest.

search that we'll look at in the future when it comes to gut microbiome is what are all the things that bacteria are producing? What are those doing for our body? Because we know that some of these metabolites can cross over the gut wall into our blood circulation and affect our liver. They can affect our brain. They can affect all of these different areas of the body.

**And in the liver, we know that they can have a huge effect on our metabolism, potentially. We don't know what that is yet, so that's why I'm, I'm not for like trying to change any of it, because it would just be really rolling the dice.**

**But I think that there's going to be some promising things that come in the future that we start to learn about these things.**

**But I'm a huge fan of increasing fiber in the diet, increasing prebiotic rich foods, like I had mentioned in the diet. Increasing fermented foods as well in the diet can help with microbial diversity.**

And as long as we are consuming those, those effects will, will keep benefiting us too.

MERYL: Absolutely. I and, and, and I do want to touch on because I think this is also going to be an amazing area of research that again, it's like we're at the tip of the iceberg, but what we are noticing also, and **the research has shown is that the microbiome of people who are obese.**

**Is very different than the microbiome of lean people, right? And now we know, I mean, a good percentage more than three quarters of the population is actually actually metabolically insufficient.** So I think that has to be one of the areas that we really pay attention to. Is looking at what is your microbiome saying about like you had mentioned right metabolic health because we know there is a difference.

How have you seen that? Or where you know, what's your thought on that?

MARY: Yeah, yeah, we have we have a good amount of research when it comes to animal models. There's some mice, so studies that have been done and they've actually done some fecal transplant in the mouse model as well where if you have an obese mouse and you take the stool and you put it into a lean mouse then the lean mouse can get obese and vice versa if you take the stool from a lean mouse put it into an obese mouse then the obese mouse can become lean.

We haven't seen it be reproducible in human models yet so I think that we're still kind of missing something there but Regardless, we do believe that there is this connection with our metabolism at some level because of the interaction with those metabolites and the, what's happening in the liver specifically.

And so I'm really excited for that research. One of the questions we have to be asking is, Is it the chicken or the egg? Meaning, is it what is causing the obesity that's changing the microbiome, or is the microbiome causing the obesity? And so I think that's going to take some teasing out. I think it's probably going to be like yes and both ways a little bit, where there's so many factors that we have to take into consideration.

But yeah, excited to see where it does go and what we'll actually be able to take from it.

**There's been probiotic strains released that have shown to reduce hemoglobin A1c levels in pre diabetics and diabetics,** which is really interesting. And so you can see a tie there where if you're just changing the gut microbiome transiently, you're seeing a reduction in blood sugar levels over time, which is fascinating. So lots of interesting stuff out. I don't think we're quite to the point where we can make clinical recommendations yet, which is what I'm waiting for, but we'll, we'll wait and see. Yeah, same.

MERYL: I mean, I think again, it's like you said, so I'm assuming when you're talking about the last thing about the blood sugar, we're talking about acromantia. — Yeah. So everybody's on the acromantia craze. But I do think, I mean, I've got some clients who, who I did who are on it because they're, they're metabolically so off kilter.

And like you said, right. And some people it's made a difference in some people that hasn't. But I think it still has to come back to what are the foundational things. Like you said, that people are doing, I mean, talk about this all the time. I mean, your food is your first line of defense. So you got to get the sugar out of your diet.

You got to get the processed food out of your diet, right? Take the processed food out and put more fermented food in, put more fiber in. And, and you start to see those shifts. I'm assuming that's what I preach all day long. I'm assuming that's what you're saying to like your first, **first line of defense. has to be what you're putting in your mouth.**

MARY: Yeah. I mean, **if somebody comes to me and they are overweight then that's usually what they're coming to see me for is just general preventative medicine and longevity. Then, then body composition is going to be one of the things that we talk about.**

**So. I usually will measure the body comp first as long as there's no history of like body dysmorphia or anything like that. But with weight loss, we're really wanting to reduce calories and one of the ways you can reduce calories is to get hyper palatable foods to be really reduced in the diet and your hyper palatable foods mean that something that when you start eating it, you can't stop because it has a nice combination of fat, salt and sugar typically, right?**

So these are going to be typically your processed foods. Apples are not hyper palatable. If I gave you a bag of apples, you're not going to go through and eat the whole thing. So the hyper palatability of food is a real thing that we know can increase caloric intake throughout the day. So that's one of the big things that I, that I harp on.

**fiber is really satiating. So if you increase the fiber in your diet, eating tons of fruits and vegetables, especially non starchy vegetables, but honestly, all of them, that's going to add bulk to your food and increase how full you feel. Nevermind all of the benefits of fiber, like fiber reduces the risk for colon cancer, diverticulitis, breast cancer.**

I mean, the list is too long to even go through right now. But really just focusing on what feels like a really well balanced diet. And protein is my other big one with people. **It's like increased fiber, increased protein proteins, really satiating.** And one of the things if you're a patient of mine, you know that I talk about all the time is muscle mass.

**So we want to increase your lean muscle mass So that you age well, and you're still able to do all the things that you want to do when you're 85 90 years old and keep you metabolically healthy too,** you know having enough lean muscle mass on you helps with metabolism in general and so you need protein you need that building block to maintain your lean body mass And, and that's kind of my approach when it comes to weight loss.

It's obviously really nuanced. **It's not as easy as it sounds because there's so much emotional stuff that comes with weight loss and food and all of the things that we've kind of been programmed through with our families and just societal norms** and all of that, right? There's so many layers to it.

MERYL: Oh, so many layers. I mean, I I'm just looking at the time I'm going. We could spend a whole hour on protein and muscle mass, right? I mean, it's 100%, — you know, it's beyond. And I, listen, I've been talking about it since before I was in vogue to talk about it thank you again, Gabriella Lyon, who's really brought that to life. — But good, right. The more we can get women out there to say, I got to eat protein when. So many women, and I'm sure you see it, especially women grew up in the 80s and the 70s. Now,

don't eat so much protein, don't eat. So, it's, it's like you say, right? We're, we're, we're trying to debunk half of the things that people believe in.

And we know the data shows otherwise. So, Yeah, bigger conversations to have, but I love this conversation. I think you were so informative and so articulate. So thank you for sharing all of that because I know people out there, our listeners, our audience, probably your audience do going to I'm gonna want to hear this and really really think about even from the stress piece that I feel like we started with an hour ago, which feels like forever ago at this point, but all really important points that if you have GI issues, we really need to pay attention to. It's not always so cut and dry. So —

MARY: yeah, absolutely. Thank you for a wonderful conversation. You're so easy to talk to. It's been a pleasure. ———

MERYL: Thank you. Thank you. All right. Any last words you want to, you want to share before we have to call it a day? —

MARY: No last words. I just really appreciate the open mindedness in our conversation and I hope it helps some people that are listening.

MERYL: I'm sure it will. I'm sure it will. Keep doing the amazing work that you're doing and until next time everybody, this is your Rebel Nutritionist signing off. Make it a great day.