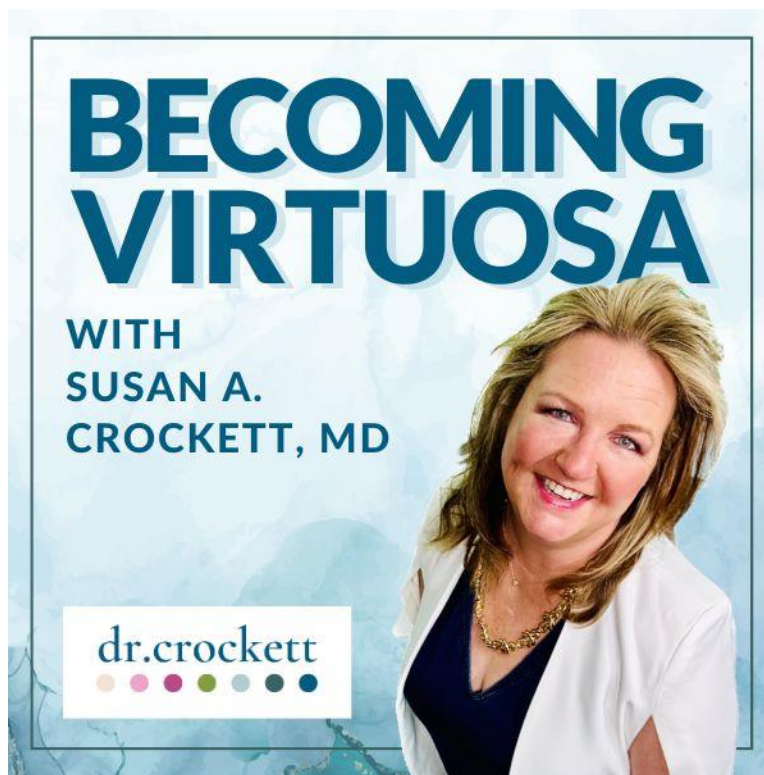


**Ep #75: Healing Your Gut Microbiome
with Dr. Reed Miloy (Part 1)**



Full Episode Transcript

With Your Host

Susan A. Crockett, MD

Ep #75: Healing Your Gut Microbiome with Dr. Reed Miloy (Part 1)

Dr. Miloy: When we look at leaky gut, what is that? There's a breakdown or loss of that integrity of the mucin layer, perhaps inflammation with the enterocytes and the lamina propria with inflammation down there. Because you have a lot of immune cells, mast cells, macrophages, so forth in that lamina propria. So, if you have imbalance in your microbiome, in other words inflammatory bacteria, that are not in the desirable, shall we say ratio then those bugs are highly inflammatory.

Welcome to *Becoming Virtuosa*, the podcast that encourages you to become your best virtuosa self. Each week Dr. Susan Crockett goes where the scalpel can't reach, exploring conversations about how to be, heal, love, give, grow, pray, and attune. For the first time ever, she's bringing the personal one on one teaching that she shares with individual patients to you on this broader platform. A weekly source of inspiration and encouragement designed to empower you.

By evolving ourselves as individuals. We influence and transform the world around us. Please help me welcome board certified OB-GYN specializing in minimally invasive GYN surgery, internationally in the top 1% of all GYN robotic surgeons, a certified life coach, and US News top doctor, your host Susan A. Crockett, MD.

Dr. Crockett: Hey y'all, welcome back to *The Dr. Crockett Show*. Happy Tuesday. I am back with my very good friend and former guest come back again by popular demand Dr. David Reed Miloy to be here.

Dr. Miloy: Honored to be here. Thank you for having me.

Dr. Crockett: Welcome back. You're welcome. It's a special treat because right now around here, we're starting to call you the professor. I just love how we interact because he like brings all the detail and the lecturing and then I kind of chime in. We bring it to you and make it relevant to you and have a really good talk.

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So we're going to do something a little bit different today. We've got a show that we're going to talk about. The microbiome is the big hot topic in our circles. So Dr. Miloy is a fellow physician. For those of you that don't know us, I'm an OB GYN, a minimally invasive or robotic surgeon in San Antonio, Texas. Dr. Miloy is an internist in Kerrville, Texas, and he owns his own practice. Another fun fact, we're both life coaches.

Dr. Miloy: Yeah, we both do wellness and life coaching. We're colleagues. We're like-minded.

Dr. Crockett: Yeah.

Dr. Miloy: Part of the tribe of people trying to get the general public healthier by going to the source of what causes pain, and then also the source for what causes happiness.

Dr. Crockett: So we're going to get into that really extensively today. So I know y'all are used to seeing the show be about 20 to 30 minutes long, and we may decide to chop this down into segments. But I want to try something different because I'm always encouraging y'all to try something different, try something new. We're going to try to go long format. Rich Roll, Lewis Howes, Andrew Huberman, all those guys where they just go for hour and a half or so and talk about everything.

Dr. Miloy: We'll see where it takes us.

Dr. Crockett: Yeah, so we're going to start with a conversation about microbiome and wander into some other things, but all of it is aimed at helping give you guys information about becoming more healthy in your environment, about helping you transform because we believe when we help the individual transform, that helps our world transform.

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Dr. Miloy: Yes, absolutely. Best version of ourselves shows up the world gets better.

Dr. Crockett: That's right. So, my practice is Virtuosa GYN, and that means the feminine, best version of yourself. Virtuosa. So thanks for that little. You didn't even know you were feeding me that.

Dr. Miloy: Or I'm sneaky.

Dr. Crockett: That could be too. All right. So hot topic. Gut microbiome. This is all over everywhere I look. It's on every podcast. It's on every television show. It's all kinds of bestsellers coming out. Everybody is talking about gut microbiome. So I brought an expert today. Dr. Miloy knows is more about this than anybody I know. So I wanted to just give you a chance to start talking about what it is. Break it down into what our patients can understand.

Dr. Miloy: Sure. So we're not going to get into too much technical stuff, but we'll kind of touch that a little bit. But basically, the microbiome is not just what's in our gut, but what's in our bodies or on our bodies. We have bacteria, bugs that live on our skin, in our sinuses, in our mouth. When we talk about, in vagina for women. So when you talk about microbiome, any place there's an opening in the body, there's going to be microbes. Gut microbiome, we're talking about mouth to anus. That's the whole the tract.

Dr. Crockett: The tract all the way through.

Dr. Miloy: It's a tube.

Dr. Crockett: It's a hollow tube all the way through us.

Dr. Miloy: Yeah, it's a hollow tube going throughout the whole body. So anytime there's an opening of the body to the environment, there's probably

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going to be microbes there. That's also where our immune system will interface with that opening. Gut microbiome, which is now everywhere and will continue to be everywhere because we're starting to appreciate, for the first time in modern science, medicine, that these microbes have been with us for our entire evolutionary path almost.

Dr. Crockett: Yeah, billions before us too. They've just helped us along.

Dr. Miloy: Yeah. They're part of us. All right, so they're along for the journey. What we want as human beings is we want to have the healthiest microbiome possible.

Dr. Crockett: So the way I've kind of learned to think about it is like a forest. Like, you want to grow a forest of healthy trees and not all the scraggly ones that are choking out the good healthy ones.

Dr. Miloy: Yes. You want diversity in the right forms.

Dr. Crockett: So in gynecology, when we think about this we talk about lactobacillus and probiotics and all of that, but that's not the only bacteria that's considered a healthy part of the gut microbiome.

Dr. Miloy: Yeah, you've got a lot of different types of bacteria that are critical to the microbiome. We know so little right now Dr. Crockett. I mean we really do.

Dr. Crockett: We're just barely scratching.

Dr. Miloy: We're just now scratching the surface. The microbiome is incredibly difficult to study because that's pretty much an anaerobic environment.

Dr. Crockett: Meaning without air. Yeah.

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Dr. Miloy: When you try to study it and pull things out, it's very difficult for.

Dr. Crockett: You expose them to air, and you kill all the aerobes.

Dr. Miloy: It just happens like that.

Dr. Crockett: Oh, gosh, I hadn't even thought about that.

Dr. Miloy: So it's incredibly difficult to study, but we're getting better. We're starting to gain insights. There are some pretty steadfast rules that we have now on what is good lifestyle as far as the microbiome is concerned.

Dr. Crockett: Okay. So this is really important for me and my patients because you said we're just scratching the surface. All of a sudden, we're understanding that what's happening in our intestines is related to all kinds of things in our body, our serotonin levels, our immune systems, never mind how our stomachs feel. But in gynecology in particular, it's becoming important for estrogen dominant conditions that we've seen a rise in over the last decade, like my favorite endometriosis. How could I blank on that word? That's my life, endometriosis and fibroids.

Endometriosis and fibroids are the two newer ones. We've known that estrogen dominant conditions like obesity and hormones that are just imbalanced can influence cancers like breast cancer and uterine cancer. But we've been questioning now for quite a while within the field of gynecology about why we're seeing such a rise, particularly in endometriosis and fibroids.

So the gut microbiome is it looks like it's kind of a key to that. So not only is it important for our immune health, our weight management, our brain function and how we feel, but it's also keeping us healthy from getting diseases that we don't want or things growing in our bodies that people have to come to me to fix. That's not much fun.

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Dr. Miloy: Yeah, it's well said, and there's so much more research underway. But you're absolutely correct. Women going through menopause have changes in their microbiome. So there's a big shift there. I think one of the most fascinating things is the gut-brain axis, and how important it is for good brain health to have a healthy microbiome. If we look at all the metabolic diseases that we have going on out there today, metabolic syndrome, type two diabetes, pre-diabetes, all of those conditions are definitely being exacerbated by an unhealthy microbiome.

Dr. Crockett: Well, and one thing that I learned recently is that a good bit of our hormonal balance happens through the gut wall. So which brings me to the question about leaky gut. I've heard that thrown around so much, and you laughed when I mentioned it downstairs. But patients want to know what is leaky gut? Does that mean that things are actually leaking out? Why is it important? What does that have to do with the microbiome?

Dr. Miloy: Yeah, so patients started showing up in my practice with leaky gut over a decade ago, and I was like who's making the diagnosis of leaky gut? I just kind of poo pood it. I'm like what the heck is that, right?

Dr. Crockett: It's never been in my textbook before.

Dr. Miloy: The problem is for doctors to most doctors don't have training in the health of the microbiome yet, but that is coming quickly as we continue to evolve in our understanding of the microbiome. But leaky gut is a loose term that is thrown around a lot. I think the best way to approach that question is just to look and kind of have a feel for what's happening in the small intestine, for example. If you look at it the intestine, you have the cells lined together, shoulder to shoulder. They're called enterocytes.

Dr. Crockett: They're held together by collagen, but that's another episode.

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Dr. Miloy: Yeah, and they're interfacing with a basal membrane lamina propria.

Dr. Crockett: I love that. Lamina propria.

Dr. Miloy: Yeah, isn't that a great word? A good medical term to impress your friends with, tell them how healthy your lamina propria is. Then on the surface of that is a thin mucus layer. Okay, a mucin layer.

Dr. Crockett: It's kind of slime.

Dr. Miloy: It's kind of, yeah, it's slimy. You want slime. So when we look at leaky gut, what is that? There's a breakdown or loss of that integrity of the mucin layer, perhaps inflammation with the enterocytes and the lamina propria with inflammation down there. Because you have a lot of immune system cells, mast cells, macrophages, so forth, in that lamina propria. So, if you have imbalance in your microbiome, in other words inflammatory bacteria that are say, not in the desirable, shall we say ratio, then those bugs are highly inflammatory.

Dr. Crockett: Oh, so that increases inflammation in the body as well as the gut doesn't keep things in that are supposed to be kept in. Is that where that term leaky gut comes from?

Dr. Miloy: Yeah, kind of. It's like the bullies. These guys are big, bad bullies, and they bully out the good bacteria.

Dr. Crockett: Oh, that's interesting.

Dr. Miloy: So now you end up with these bacteria that are often these are gram negative bacteria. Some can be gram positive, but they're producing something called LPS. That is an inflammatory protein. It gets to be very difficult for the enterocytes to function normally.

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So now you've got to break down in the cell membranes and how things are with the cells themselves. Because if you look at the cells, like I said, they're shoulder to shoulder. There are some things that will cause that border between them to open up. Okay, now you've got, there's a leak there, right? So that's a problem. Then when there's inflammation, there's usually a breakdown there.

Dr. Crockett: So is this where conditions like irritable bowel or constipation, those kinds of things come from?

Dr. Miloy: Yeah. Yeah, I think we don't. When I went through training, everybody who had this label of IBS, they were anxious and hysterical, and it was all psychosomatic. There may be a little truth to that because stress does play a role in the health of our microbiome. But what we're now understanding is that about two-thirds of the people that have this label of irritable bowel syndrome actually have small intestinal bacterial overgrowth.

Dr. Crockett: Of the bad kind?

Dr. Miloy: Of the good kind.

Dr. Crockett: Of the good kind.

Dr. Miloy: Like Bifidobacterium and so forth.

Dr. Crockett: Really?

Dr. Miloy: Yeah, there can be overgrowth of the bad. Because of that, there can be overgrowth of the bad kind too. So yeah. There's usually an overgrowth of bacteria that normally we would associate with being healthy for the microbiome.

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Oftentimes, this is not always true, but it's kind of a little rule of thumb that can kind of set a little clue off in your head is if you take fiber and your IBS gets worse, there's a good chance you have small intestinal bacterial overgrowth, or SIBO for short.

Dr. Crockett: SIBO.

Dr. Miloy: Even a probiotic. If you take a probiotic, and it gets worse. Okay, well, why did that happen? Right. Okay.

Dr. Crockett: Okay, so this is a good spot to just break for a second and talk about the difference. What is a probiotic? What is a prebiotic? What feeds good bacteria? What feeds bad bacteria? Because I think then if people understand that, then they can understand what we're talking about when we talk about overgrowth of good bacteria.

Dr. Miloy: Yeah, we could use that also is that question's an excellent question as a segue into what has become the standard approach to dealing with people who've got trouble with the microbiome. You can find a lot of this on the Institute for Functional Medicine. They do a great job. For clinicians that might be listening, taking some courses from IFM, it can be very helpful. They do a lot of great education on that website.

But they have a protocol, which has now become universal, and it's the five R protocol. The first is to remove. Okay, so what does that mean? Well, if there's pathogens in the GI tract, we want to get them out of there. Okay.

Dr. Crockett: Like parasites, yeast.

Dr. Miloy: Yeah. You can have a parasitic infection and not even know it. I've had patients who've had parasitic infections for years, and they've just been miserable. You test their stool, and boom, there it is or a lot of yeast.

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If you don't take care of these bad pathogens, then you know what? There's just nothing's getting better because these are big, bad bullies.

Dr. Crockett: Okay, so the first R is remove What's the second one?

Dr. Miloy: Well, we're not just removing the pathogens, but we're also going to remove medications, if possible, that are exacerbating the problem. So.

Dr. Crockett: Antibiotics.

Dr. Miloy: Antibiotics are like a nuclear warhead going off in the microbiome. That's why physicians are becoming more and more sensitive about trying not to over prescribe. I think a lot of patients will call their physician. They feel crummy. You want to feel better. The doctor wants you to feel better. The doctor caves and prescribes an antibiotic. 95% of the time this there'll be a virus or an allergy.

Dr. Crockett: That don't respond to antibiotics at all.

Dr. Miloy: That do not.

Dr. Crockett: So you just detonated a bomb in your microbiome, and it didn't fix your upper respiratory thing.

Dr. Miloy: Now you've knocked out a lot of the good bugs. Now the bad bugs can now come in there and take over.

Dr. Crockett: Okay, so what other medicines other than antibiotics are we trying to move?

Dr. Miloy: Probably one of the most popular and widely used ones is proton pump inhibitors. Those are going to be the popular trade names of Nexium, Prilosec, Omeprazole, these sort of acid suppressing medications are used

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to treat reflux disease, GERD, gastro esophageal reflux disease. What happens with that is now the pH of the stomach has now changed chronically if you're on these long term.

It's not that these medicines don't have a place. They do. But long term therapy is something that can be a problem. We try to get patients to eat healthier, lose weight, avoid those aggravating foods. We talked about removing pathogens.

Well, H. pylori, Helicobacter pylori, 20% of the population is colonized with us. For most people, there's different strains out there. There's some strains that are just kind of garden variety, not problematic H. pylori and then there's others that really do have virulence factors that can really wreak havoc with the stomach.

Dr. Crockett: Ulcers.

Dr. Miloy: Everything from causing reflux to causing peptic ulcer disease, ulcers, to even gastric cancer.

Dr. Crockett: Wow.

Dr. Miloy: The reflux long term untreated can contribute to esophageal cancer. These are very serious illnesses. So the last 30 years we've been suppressing acid with these medicines, and they work. But the problem is now the pH is no longer acidic. The pH of our stomachs is normally two.

Dr. Crockett: It's really like acetic acid.

Dr. Miloy: Hydrochloric acid is one. That's like one of the strongest acids out there. There's a reason for that is because we evolved eating just dirty food.

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Dr. Crockett: So it kills stuff as it comes in.

Dr. Miloy: Yeah, the stomach's got to kill off these bad bugs. So now that's gone. That can cause troubles downstream. Other bacteria that are not so desirable, like staph and strep and many others, can begin to proliferate inside the GI tract. Now, we've got trouble. Now we've got diarrhea. We've got cramping. We've got bloating. We've got all the things that go along with that.

Dr. Crockett: No, good. Okay, so the first R is remove, and we're removing pathogens and medications.

Dr. Miloy: And we're going to do two more removals real quick. We're going to remove what is the really the culprit, and that is the bad food.

Dr. Crockett: That's the hard one. No, you guys don't want to hear that. Y'all don't listen to it. No, I'm just kidding.

Dr. Miloy: They don't call me Doctor Killjoy for nothing. So.

Dr. Crockett: Remove the bad food.

Dr. Miloy: But actually get the bad stuff out, you stop craving it. Now the average American is consuming 250 plus grams of processed carbs and sugar per day.

Dr. Crockett: Refined sugar, refined flour, processed carbs. So the difference between a process carb and unprocessed carb is like your vegetable or fruit that you eat.

Dr. Miloy: Yeah, very good point. The carbs that you find in whole plant based foods are the healthy stuff. Okay? Processed carbs, breads, chips, crackers, tortillas, muffins, all of the baked stuff. I call it Franken food

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because it's made in the lab, the kitchen. The whole foods are just in nature. I've never found the bread bush or the tortilla tree. I'm still looking.

But we love those things because we grew up eating them, and they're convenient to use, but they are very addictive and cause metabolic syndrome and weight gain and everything else. But the problem is the sugar and processed carbs are causing the imbalance in the bacteria. So we need to quit.

Dr. Crockett: Feeding the bad bacteria, right?

Dr. Miloy: A great way to think about our microbiome is it is what we feed it, just like we are what we feed it right. That old saying you are what you eat. So is our microbiome.

Dr. Crockett: Wait, did you see that new Netflix special? Have you seen it?

Dr. Miloy: No, I haven't seen.

Dr. Crockett: It's great. I think this is the second episode that I've referenced it. It's called you order to eat. It's a twin study. They did identical twins, and it's a four part series. It was great. So y'all need to go check that out. The vegan or vegetarian, I think it was vegan, and then a healthy omnivore diet. They didn't give them crap omnivore stuff. They did a pretty good job of balancing it nutritionally, and it was just it's startling. I'm not going to give it away. Y'all go watch it. It's pretty good.

Dr. Miloy: I have heard about it. Haven't seen it. But there's that old saying in medicine, and that is your genes are the gun and your lifestyle pulls the trigger.

Dr. Crockett: That's big.

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Dr. Miloy: Yeah. So what we want to do is quit self-destructing here. Right? So if we're consuming 250 plus grams of processed carbs and sugar per day, how much should we be consuming? Under 25.

Dr. Crockett: Yeah, that's what you always teach is under 25 grams. If you want to find out how much you're doing, go get an app. Go download an app.

Dr. Miloy: My Fitness Pal is a great app.

Dr. Crockett: You can just log into there, and you'll see real quick those refined sugars versus the non-refined sugars. Yeah. So under 25 a day. The other food that I teach my patients to take that as the number 25 is fiber that we want at least 25 grams of fiber a day.

Dr. Miloy: Yes. Yeah, you're absolutely right, Dr. Crockett. 25/30 grams of fiber per day is what the microbiome wants to eat.

Dr. Crockett: So does it matter if it's soluble or insoluble?

Dr. Miloy: You want to balance it both. but I would just say fiber. Right now for my patients, get the fiber in.

Dr. Crockett: Okay.

Dr. Miloy: Because the good bugs are going to be feeding off that, metabolizing off of that, and making something called butyrate, which is a key source of fuel. It's a short chain fatty acid. Matter of fact, the epithelial cells, the cells that line the colon, that's all they use is butyrate. If you're not getting yourself enough fiber, your colon is not functioning properly. It's not possible.

Dr. Crockett: Oh, this makes so much sense.

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Dr. Miloy: Yeah, absolutely.

Dr. Crockett: Okay. So we digressed a little bit, but that's kind of what we're going to do today. So it's my job to get us back on track. So we're talking about the five Rs, five Rs of.

Dr. Miloy: We're removing. We want to remove pathogens. We want to remove medications. Trust me I didn't even touch, I'm just scratching the surface when it comes to medications. Alcohol is something that people, that just wreaks havoc.

Dr. Crockett: It just kills it.

Dr. Miloy: NSAIDS, non-steroidal anti-inflammatory drugs, your ibuprofen, those sorts of things, aspirin wreaks havoc with the mucosal lining and can cause leaky gut. So we want to remove these things. Then stress. So we all have stress.

Dr. Crockett: Maybe we'll talk about that later.

Dr. Miloy: We will.

Dr. Crockett: We'll get to that.

Dr. Miloy: Because stress kills, right?

Dr. Crockett: I never thought of it as killing my gut.

Dr. Miloy: Yeah, it does. It's really a problem, and it decreases immune function. Now, once again, you're going to have microbiome wherever the body is interacting with the outside world, and a big part of that is immunoglobulin A. IgA, you can find it in your saliva, your lacrimal glands, your tears, right. You can find it in your GI tract.

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Dr. Crockett: Breast milk.

Dr. Miloy: Breastmilk, yeah. It's there for a reason. Now, if you're stressed, your IgA levels could be low. Yeah.

Dr. Crockett: Okay. So we're removing all that stuff.

Dr. Miloy: Okay, that does it for removing.

Dr. Crockett: Okay. These are the five R's of what?

Dr. Miloy: Well, Institute of Functional Medicine is.

Dr. Crockett: The five Rs of healing.

Dr. Miloy: This is really healing, getting a microbiome back into balance.

Dr. Crockett: Okay, so we're removing all the stuff we just talked about. What's the second R?

Dr. Miloy: Yeah, the second R is going to be you want to replace. So if somebody has pancreatic insufficiency. The pancreas just isn't quite getting it done. The pancreas makes digestive enzymes that are very important. If you have low functioning of the pancreas, then that can be a real problem. You can get a stool elastase level done, or some will look at fat in the stool. If you have a low elastase level, that's an enzyme made by the pancreas. So that's kind of a hint there the pancreas isn't working as well.

If you have a lot of fat in your stool, that could be a sign that the pancreas isn't making enough lipase. We're not digesting fat as well. Or it could be something wrong with the gallbladder and bile production.

Dr. Crockett: How does having your gallbladder out effect is?

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Dr. Miloy: Well, it can affect things Yeah, I mean, our microbiome likes bile to a point. We get too much fat. We talked about processed carbs and sugar. If you get too much fat, then you get excessive bile and that can cause trouble with the barrier, the mucin layer and so forth.

Dr. Crockett: Okay, so we're on the R for replace.

Dr. Miloy: So we're replacing. If a person has some pancreatic insufficiency, you can repair enzymes orally, which is really simple to do. Or somebody has hypochlorhydria, this would be low acid production from the stomach. You can have them take orally product called betaine, B-E-T-A-I-N-E, and that helps with digestion of food.

Then there's other things that can be done to help the GI tract digest and handle food properly. If that doesn't happen properly, once again, bad bugs can start to set up shop and proliferate off of undigested food.

Dr. Crockett: So what I didn't hear you say in replace was probiotics, which are replacing the bacteria.

Dr. Miloy: Yeah. So when we talk about these five R's, that comes later under reinoculate. That's a great question.

Dr. Crockett: Okay.

Dr. Miloy: Yeah.

Dr. Crockett: That's also we're stool transplants are going to go.

Dr. Miloy: Yeah, stool transplants, you could look at them that way. Yeah, yeah, that's exactly what happens with stool transplants. Yeah, it's incredible.

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Dr. Crockett: It sounds gross, but I think it's just fascinating.

Dr. Miloy: It's fascinating. For our listeners, they're wondering, well, where you getting all this information about your microbiome? Unfortunately, most MDs today are not trained in this stuff.

Dr. Crockett: No, I think that's why this is so fun. It's so interesting.

Dr. Miloy: The field is evolving. But if you can find an MD or someone else who's got proper training, these are specialty tests that a practitioner can order. They ship you a kit, you give them a sample, you ship it back, and then the doctor gets the report and then is able to sit down and go over that with you.

Dr. Crockett: So there's only two sources I know of this right now. One is you.

Dr. Miloy: There's a lot. Listen, there's a lot of folks out there, but how do we connect the public?

Dr. Crockett: How do you find. Yeah. The other one is that company ZOE that's doing all the research on the microbiome. They'll do, you can send in your testing through them too. Have you worked with them at all?

Dr. Miloy: No, I haven't worked with them. I've worked with Rupa labs, R-U-P-A. They do a great job. Then any physician. You might go to the Institute for Functional Medicine and look for doctors.

Dr. Crockett: Search for a doctor.

Dr. Miloy: Look for a doctor there.

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Dr. Crockett: So we can put links down in the show notes below. But I think that it would be really helpful for people too. I mean don't come to me. You can come to me for your endometriosis. Don't come to me to get your gut microbiome fixed.

Dr. Miloy: I'll tell you, I was reluctant. I was skeptical. The more I looked at the data just kept piling up, and then colleagues that I have deep respect for. Former chief resident of my class. He's a super brilliant guy, Jeff Horacek. He has helped me. He's kind of mentored me over the years and helped me to understand it better. The more you dive into this stuff, the more you go. It just clicks.

Dr. Crockett: It's like the puzzle piece that's been missing. Now you're like oh.

Dr. Miloy: Yep. Yep. Then you look at the patient differently. Yeah, you're like oh, okay. No wonder you're miserable. When you get those test results back, for some people, there's a warzone.

Dr. Crockett: Well, I tell you where it's a warzone for me is I do a ton of pelvic prolapse surgery, a lot of pelvic prolapse. So I'm going to divert or diverge our conversation for just a second. I'm going to hijack it, not just divert it.

So pelvic prolapse is when the pelvic organs start to fall down. I'm a gynecologist. I'm not talking about men at all. But in women, I get women who come in all the time who think that doing Kegels or strengthening their pelvic floor is going to keep them from having pelvic prolapse. I always explain to them that know the pelvic floor is in this plane and things are falling down in this plane. So you can squeeze all you want. It's really good health benefits of keeping a healthy pelvic floor. It's skeletal muscle, just like the rest of the muscles.

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But if you want to do something about the prolapse, you have to do something about the stress that you're putting on the organs, which comes from increased intraabdominal pressure. Often, not always, but often that that thing that's going on that's causing that pressure is chronic constipation and straining.

It is maddening to deal with because I can deal with a woman who has pelvic prolapse because they had some trauma from childbirth, or their collagen is getting weaker because they're growing older. I can behaviorally manage people that have jobs where they're doing heavy lifting or my ranchers that are throwing hay bales around. I'm like well, you just can't do that anymore. Sorry. By the way, they're also some of my healthiest patients.

But the thing that is the bigger to me is the chronic constipation because I can fix them all day long, and they will just keep failing. They'll keep failing if they don't address that. I struggle. I send them to a gastroenterologist, and they get kind of the standard colonoscopy and meds for diarrhea or constipation or IBS. None of it is addressing what you and I are talking about.

So I've really become interested in this just because of that issue. I'm just floored by how much we don't understand about it. Like, I can't just put everybody on probiotic fiber. Just eat your vegetables, go watch my show, take your fiber and you're.

Dr. Miloy: Believe it or not, believe it or not, Sue, that will help a lot of folks right there. That will help a ton of people. But if you look at these test results when you get them back, there is a class of bacteria that are methane producers. If they're high, then those folks are more prone to constipation.

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So it's science, right? Once again, in science, we want to first measure. So you're going to get your blood drawn, X-ray, CT scan, whatever. Here, it's a stool sample. These tests are using a polymerase chain reaction, PCR technology. Which means there's a scrap of DNA, boom it's going to, and they can quantify that. So each of these bacteria or pathogens are being quantified in these reports.

So it's a big leap forward for us. We still have a long way to go, a lot to understand. But when you talk about what are you trying to replace. Well, you want to help the GI tract out first. So you say okay well, what next? Well, you want to reinoculate. So getting into your probiotics. There are a lot of probiotics out there, and it is the Wild West. Most of these have lactobacillus, Bifidobacterium, and so forth. Those are good bacteria that we want to have. So they can be helpful.

Probably the one that's getting the most attention right now is something called akkermansia muciniphila. We just call it akkermansia. It falls into the category of we'll call a keystone bacteria. In other words, this is a really important one.

I think what probably brought most of the attention to it recently is a company called Pendulum. They actually did a study. To their credit, now, this was a very small sample size. But they took type two diabetics. These weren't people with raging type two diabetes, they had like A1C of 7.5, 8.5 ish range. They gave them a combination of five strains in akkermansia. I believe it was a three month study.

After three months their A1Cs had dropped to 0.6. Now that is a bunch. If you look at also the spikes, because when you have type two diabetes, you're more prone to get blood sugar spikes. Those spikes were brought down 30%.

Dr. Crockett: Just by reinoculating them.

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Dr. Miloy: By doing that. The problem with that has been cost. So they're trying to figure, because akkermansia is very difficult to grow. So they've got to get it just right. They even ship it to you in a chilled container. You have to keep it refrigerated. I mean, this bacteria has to be treated properly.

Dr. Crockett: They're high maintenance.

Dr. Miloy: But I will get Pendulum a ton of credit. They have used interesting real science to try to say hey, cause and effect here. Now do we want to see more? The scientist in me wants to see more. Yes. There's a lot more studies underway right now. There's at least a dozen studies underway worldwide, just looking at the impact of akkermansia in a whole host of different conditions. We're going to probably hear a lot more about it.

So akkermansia is a keystone bacteria. So you can get that product. I use that for my patients who are low because that's one of the key bacteria that we measure for in the stool test. Then if there's other imbalances, we'll reinoculate them with another type of probiotic as well. But we also want.

Dr. Crockett: I'm sorry to interrupt. But just inoculations, people always think of shots like vaccination.

Dr. Miloy: Oh no. No. These are just capsules.

Dr. Crockett: These are just capsules.

Dr. Miloy: Yeah, that's a good point. No we're not going to shoot them up. We're not going to go probe you. We're not.

Dr. Crockett: You don't even have an IV fluid kind of thing.

Dr. Miloy: These are just capsules.

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Dr. Crockett: Okay.

Dr. Miloy: Yeah, very easy to take, very well tolerated. So the reinoculation stuff is very beneficial. Then we want to replenish. This is the fourth R.

Dr. Crockett: I hope you're enjoying this conversation with my very good friend, Dr. Reed Miloy. We had such a great conversation about this microbiome health issue that it actually extended into a very long interview. So we've decided to break it into two parts. So thank you for listening to part one. If you enjoyed that, please like and share with your friends. Share it with people who need to know about this, and we have more coming. So check out part two.

Thanks for listening to this episode of *Becoming Virtuosa*. To learn more, come visit us at DrCrockett.com, or find us on YouTube for The Dr. Crockett Show. If you found this episode helpful or think it might help someone else, please like, subscribe, and share. This is how we grow together. Thanks, and I'll see you next week. Love always, Sue.