Revitalize Your GI Health: Integrative Approaches To PCOS & Digestion Transcript

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Introduction to Integrative Gastroenterology

Welcome to this episode of the PCOS SOS Summit. I'm your host, Dr. Felice Gersh. With me for this episode is an amazing, unique doctor, Dr. Sam Rahbar. He is so unique.

There's only a few of them, I think, in the entire United States. He's an integrative gastroenterologist who focuses on the whole person. So we're going to delve into what does that mean and how does this relate to women with PCOS?

So welcome, Dr. Rahbar. Sam, thank you so much for joining me and please tell the audience a little bit about your own journey into this really critically important field of integrative gastroenterology.

And then we'll talk about what that really means. Great. Thank you, Dr. Gersh, for inviting me. I really feel honored to be here today and share my experience.

I mean, about 20 years ago, I just realized that what we were experiencing in traditional medical model and into interaction with the patients just was not enough to be able to answer some of the question that the patients had or the medical conditions that they were experiencing, and how do we explain these scenarios.

And, you know, the problem is started with something close to my heart. You know, the reality was something that ended up studying the area. And I just feel like that I just opened up a can of worms.

And the proper way really would be that when we evaluate a patient, particularly with digestive problems, is to look at the whole person because, you know, multiple other organs and conditions are involved and there's a major interaction between us and the environment and is something that is not really discussed in traditional models, you know, at least to this point.

And I think we need to factor in as well is our what is, you know, is interacting with the Indian environment and the toxins, chemicals and other things that we might be exposed and that might have affected our endocrine system or our microbiome.

So many people out there actually are told, even by physicians, it doesn't matter what you eat. I heard that on a number of occasions, which is so shocking.

So let's delve into what really are the impacts on the gastrointestinal system and then what are some of the conditions and the labels or diagnoses that are given?

Because as it turns out, women with PCOS have a myriad of problems involving their gastro and are all there involving their GI systems as a general rule.

And this really plays into their overall health and quality of life. So let's talk about what are some of the factors like in terms of food and toxins and even emotional stress that can impact on GI health?

PCOS, GI Symptoms, and Inflammation

I mean, those are great questions that if it's okay, I think we may touch base. Just briefly on the definition and our understanding of the PCOS and the I mean, what is the consensus on the criteria for this diagnosis?

And how is that related to the GI system? And when I look at more so did you know articles and literature from

going to college in endocrinology? You know, we see, you know, three main things were diagnoses based on the NIH criteria and the Rotterdam criteria that, you know, you need some sort of no arbitration or reduce ovulation.

It changes in the menses and we have evidence of hirsutism and also some sorts of cystic changes in the in the ovary. And if you look at these, really what we have is an endocrine abnormality, which either involves insulin or the female hormones and the androgens, or we have an ovulatory issue and we have a issue with the cystic changes in the ovaries that is not always there.

However, patients who have these type of set up, they have a variety of other conditions. And what is not entirely really demonstrated in this PCOS presentation is the role of inflammation.

And you don't hear much about inflammation being part of this equation there. And also there's not much discussion, you know, with the role of the microbiome and the gut presentation and the GI symptoms that are commonly associated with this is not like PCOS with PCOS, the only have PCOS problems.

They also have a variety of digestive related issues. And I think in the future we would need to see more collaboration between GI and gynecology, maybe something called the Gyno Gastroenterology, something that is going to have to, you know, kind of tie up these two departments together.

But assuming that's it, it is the case that that we have a lot of patients with PCOS, they do have a lot of GI presentations. This is what we see in the office and that this is how we get involved because patients come with GI presentations to us and then we end up basically finding out that there's also a PCOS in the background.

Now the common symptoms that the patients come to us, you know, with in the field of GI, when you look at the number of digestive symptoms that are out, there is about ten of them appetite, you know, nausea, vomiting, pain, bloating, altered bowel habits, bleeding, diarrhea and constipation and about ten symptoms.

And the number of illnesses underlying this is over 300. So there's got to be a lot of overlap going on. And it's very interesting that sometimes you see patients come in with upper GI symptoms, but you also have lower guy's symptoms, like somebody may have nausea or vomiting or heartburn or indigestion, but at the same time they have irregular bowel movements.

And sometimes bowel was a you know, it could be more on the constipated side or more on the diarrhea side. Well, how do you tie up these, you know, departments together?

They're almost 15 parts apart from each other, that the reality is that the problem is in the middle, and that's where the small bowel is located and that's where the majority of the immune system is located.

As far as monitoring how the nutrients come in and how the body is controlling its connection with the gut, microbiome and when we look at our patient population, many of the patients who have average symptoms, they have evidence of buy in the stomach and that means that the normal physiology that the bile needs to move downward into the small intestine is backing up into the stomach.

And this type of bile induced gastritis, which makes me so the patient's symptoms it is actually have very little written in textbooks of medicine, maybe two or three paragraphs.

However, in our experience that we have noticed that this finding is very commonly associated with the beginning parts of proximal intestinal dysbiosis.

It could be parasites, it could be fungi, it could be bacterial, it could be a whole variety of these scenarios, that type of alteration of the microbiome, whether it is bacterial or fungal, may lead to fermentation process.

The fermentation is a term obviously is a culinary term. I mean, you use bugs, you use foods and put them together. You produce a byproduct, you produce gas.

And based on the type of gas, one can get a sense with what type of material may be fermenting the food that is passing through. So when you have a patient who has elements of upper GI symptoms, they have elements of lower just symptoms that have middle abdominal symptoms with pain, cramping, bloating, diarrhea, constipation irritable bowel nausea.

We must think that the middle parts may be majorly involved, and it is important in this scenario to see if by these is still present in your stomach or not.

Because presence of bile in in the stomach, in my experience, is never a normal finding. bile cirrhosis through to the stomach lining and is present long term can produce surface changes with formula hyperplasia and these type of pathology, even though is not much discussed, is not entirely favorable in once, you know, once health.

So we must make efforts to see if we can change that.

Bile, Gallbladder, and SIBO

So the key is when we look at the patient who has PCOS and they present with this GI symptom, we need to map out what are the symptoms, where is it coming from, from and more importantly, how do they get to this point?

Because how we got to that point might actually have something to do with how the PCOS got to that point. When I look at the literature, I see a lot of pathophysiology, but it is still we don't have a great understanding.

How did we get to this point? Why the PCOS becoming more common? We know there's some genetic predisposition, but why is that? They need to have more of these.

And almost 15% of the women in the world now, they have some sort of PCOS going on. And is this somehow related to our interaction with environment? Because I believe that this based on our experience that when things go wrong between us and our environment, sort of the universe, the same thing not only can affect the gut, it can affect the endocrine system, it can affect the metabolic pathways.

And now we have a vicious cycle of multiple players going on at the same time. So in our practice, your role is to map out what is going on with the GI system and then is start to take therapeutic interventions hoping that that type of intervention will actually calm down the inflammatory process.

And hopefully by doing that one would feel better. But also you could actually correct what might be detrimental to one's health down the line. Well, absolutely.

I hope everybody was listening, because I'm sure a lot of people are wondering, like, where does bile come from? So maybe we could just do a tie. A little tiny overview of the liver and the gallbladder and the role that they play in digestion and certainly women with PCOS and unfortunately a lot of overweight, middle aged women get gallstones.

And why would somebody get that? And what's going on with the liver? What is bile? What does it do? Just sort of of just a little basic here, overview of what those organs do and why they matter.

I mean, in simple words, that bile is basically is a product of the liver outputs. And through the bile duct system, it opens up in the small intestine.

And it is part of the digestive process, particularly with emulsification of fats and trying to break down the molecules and make them absorbable. Now the gallbladder is just a temporary reservoir for bile to stay there, you know, for a while.

And then, you know, when the food comes and we're ready to digest the food for it to get pushed out into the small intestine and, you know, help the process of digestion.

I mean, in practice, you know, when in reality, even if we don't have a gallbladder, it is still the bile can flow into the intestine and it through the hepatic and interior circulation, the bile will recirculate back into the liver.

So our buying pool is going to remain more or less stable. Now, the issue of gallbladder getting involved, inflamed or having gallstones was, I mean, the whole discussion of its own.

However, even the recent literature suggests that we need to look at this as a a manifestation of inflammation in a way that if somebody forms gallstones, I see that as a light, which really represents a more of a systemic inflammation.

It's not if you listen carefully to the patients who study them, you see there is systemic, inflammatory problems going on. And it's very interesting that that is in one publication, they notice that if the gallbladder is out and, you know, apparently the risk of Siebel is less with almost sounds that wow, maybe if the gallbladder got involved in that, the gallbladder bile became, you know, contaminated every time it actually pushes the pile into the intestine.

If the while is actually contaminated, it may keep adding to the Siebel, but it is also possible that the involvement of the gallbladder to begin with and is contamination is started with the gut itself that was contaminated and there was excessive amount of bacteria or SIBO present to into in the intestinal milieu.

So that dynamic is not entirely well-described. However, there are some theories about it, but personally I see the gallbladder called cystitis or gallstones as part of a generalized systemic involvement.

This is not just a single item issue that has been noticed there. They are certainly both 100% all the people in the integrative world see the interconnectivity of all of these things.

Now you did mention SIBO, so maybe quite a few people out there don't know what that means. You had touched on, you know, the overgrowth in the small bowel, so maybe you could just touch on what does SIBO mean just so that they know what those letters stand for.

And it stands for a small intestinal bacterial overgrowth. And if you look at it based on measurements of bacteria, the number of bugs or bacteria in the upper GI tract in the area, particularly immediate you have to stomach is very, very limited number.

I mean the literature suggests that ten to the power of three that's like a thousand number. Whereas as we approach to the colon, that number goes ten to the power of 13.

And you know, so there's an exponential increase in the bacterial load in the small intestine as we get closer to the colon. However, if this system backs up and things are backing up, then that becomes a overgrowth of bacteria.

You can start to stimulate the immune system, have systemic manifestations, and at the same time it can add to the ferment and problem gas, bloating, you know, flatulence.

A variety of motility related issues is start to chicken because of this alteration of the microbiome in the upper GI tract. Right. And now what, if any, relationship does that have with that sort of catch all term irritable bowel syndrome that is so prevalent in women with PCOS that you sort of touched on your diarrhea, constipation.

So what is irritable bowel syndrome is that the same as SIBO? Is it different? Is there a relationship? Well, the word irritable bowel syndrome, I mean, it's a constellation of symptoms which they have a specific criteria like ROM criteria that it says, okay, what is what's greater?

You need to consider that IBS. But I mean, most physicians and patients alike, they would know what an IBS type symptom would look like. It could be abdominal cramping, pain, pain, relief with defecation, diarrhea and diarrhea associated with pain and again, pain relief.

But these symptoms are kind of intermittent. They come maybe for a while and then they go away and they may be

associated with the stress factors. But the key is that for at least until a few years ago, there was no evidence of, quote, pathology.

Like, I don't see anything. It just looks good. But they have all these symptoms under stress. So it's probably look like an IBS type problem in our practice.

I don't see true IBS anymore. There's always pathology and we find things.

IBS, Root Causes, and Environmental Exposures

We find bugs, parasites, fungi. So it is reasonable to consider that these findings are contributing to the I. B. is type symptoms as opposed to calling somebody having a typical IBS.

SIBO has been shown to be a major, you know, association or contributor to the IBS. And the data now suggest that if you treat this label, you may get rid of a lot of the IBS symptoms that were present too.

So that is really the main, you know, train of thoughts that is as has come to them, you know, our science in the last few years. Well, this is really important that that sort of grab bag label of IBS really is being better defined.

Now, it's not just a constellation of symptoms, but you're really getting to the root causes, which is so heartwarming because we always try to get to root causes.

So getting back to root causes, let's delve into that a little bit more. You mentioned that there's environmental toxicities. Maybe there are some specific ones that you're thinking about.

So our watchers or viewers can actually try to avoid them just to understand, like, what are we talking about? Things in the water, in the air, in the food, or what are you thinking about?

Great question. Okay. And what I'm going to say is basically is based on our observations, I mean, there is some literature to support this if you look carefully, but, you know, you distill paucity or lack of adequate literature to say, oh, yes, this particular, you know, chemical or compound that we saw showing up in the body is causing this.

So but what we are seeing is a lot of association and it has been such a common scenario now in the last few years in our practice that we have now written a protocol that it is now approved by the Research Board to be able to study and see what type of symptoms patient come in.

What is the diagnosis based on our ICD ten diagnosis, coding and what type of chemicals or, you know, metals show up in the urine? I mean, just, you know, it just shows you what comes up in the urine.

What is your diagnosis? It was the clinical presentation, and that's going to require a very detailed statistical analysis once the data is collected there.

But we we're not there yet. So until then, we're going to go with what we are observing and sharing that observation. First of all, when we talk about altered microbiome or Sebou, I think we should also touch base briefly on the role of C4, which is small intestinal fungal overgrowth or intestinal overgrowth and I actually think we need to give a lot more credit to the C for that to the sea wall.

And although until recently, this has not gotten a lot of attention at the academic level, I heard a beautiful talk by Dr. Satish Raul in the Microbiome Conference about this, and I just received a podcast from Stanford on Fungal Overgrowth of the Small Intestine.

So obviously the academics are picking up on this concept that is there and is reality. Now, part of the reason it hasn't been receiving too much attention almost the classical books don't really have much about this as yet it is because the diagnostic testing of this is not so easy and it's not.

You can just do a test. It makes it easy for physicians to correlate a clinical finding with a diagnosis. One has to know the clinical picture. You need to know the story.

And this story is more important than anything else. So that's important to talk to patients in detail and look at the potential risk factors that may allow fungal overgrowth in this small bowel or the into bowel in general.

Now, having said that, why is it that important? Well, the fungi, they can have two different shapes. Some fungi are in a yeast form and they're always in the yeast format.

And we may use them in, you know, culinary, you know, science, for example, making bread or yogurt or other things that and but it the the fungi can also change shape into hyphae.

And hyphae is filamentous. It has arms and legs. And this type of structure change can actually disrupt the mechanical surface of the gut. So it is not just what I would like to have.

Bugs is sticking together, producing a biofilm. No, I have a jackhammer there now producing post in the in the wall, cracking the wall and creating crevices that actually may allow bacteria to sit there.

So many times. You may see a seaboard patients who is very abnormal or doesn't respond to the treatment or is recurrent. And that is a scenario that one has to think that there may be a collaborator in there, and that's the presence of Franklin.

So one needs to enhance on the skills on diagnosis, both historically and from a clinical picture and from diagnostic point of view, to be able to identify the presence of fungi in the gut.

Well, if we believe that is the case, and I do have is is small a picture that I share with a lot of my patients that it is possible maybe at one point to share the screen.

I can demonstrate what I found in the literature. I can show how the fungi interact. We did it with the intestinal lining. If there are cracks in the wall and the fungi are filamentous with arms and legs penetrating into the wall, that is going to aggravate the immune system significantly.

And one of those effector cells that are sitting right underneath the lining are the mast cells, so the masses become activated. You one is going to have release of a lot of chemicals called cytokines.

That is going to elevate the inflammatory pathway and at the same time it can affect the tryptophan pathways, which has something to do with our mood, with our serotonin production.

So suddenly we could start to have psychiatric illness in the form of unexplained anxiety, insomnia, demographics and aggravation of skin problems because of the origin of inflammation in the gut.

So if we trace this back to the fungi with or without the bacteria being associated it, then the question is how did it get to this point? Why did the fungi get a chance to, you know, start to develop a microbiome that is beyond its normal boundaries?

And obviously, this is a question the jury's still out on that. But I can tell you what we have seen in our practice. I mean, obviously, the common ones that everybody would think about, it would be alcohol, stress, lack of sleep, sugars and late eating and medications, antibiotics, birth control pills in the form of synthetic form.

So these can tend to contribute to the fungal overgrowth. But what we have seen, which is fascinating, is the presence of chemicals. And if you look at chemicals in metals, in environments, whether we like it or not, we are constantly exposed and me and my family and other people around us are not necessarily recruited from this exposure.

Fungal Overgrowth and Immune Effects

The type of chemicals that we generally check in the urine are corpses of mold, which is very common. If somebody has been exposed to a water damage building, it could be chemicals that are used in our agriculture, such as atrazine and also glyphosate, which is do roundup and stuff that they use as an air beside, you know, commonly driveways, parks, you know, golf courses, as, you know, back in your day.

And, you know, we can come across this by inhalation, through the skin, maybe to our exposure by eating it and so, like people say, well, look, I live in an affluent area, you know, how do I get this coming in my system in high number?

And I said, well, if you look as you search online is how much glyphosate, for example, is being thrown into the US land every year. I did find an article, it was published in 2016 or 17.

It was something like £300 million was sprayed every year when you were going to get it. And the question then, how is that going to affect us? Well, glyphosate is interesting because it now has an ICD ten code.

And if you search on your EMR, you will see glyphosate obsessively coming up. The other ones won't come up yet, but eventually they will. They will have another called exposure to potentially harmful entity and then you have to list them.

But other thing we have seen is BPA and atrazine and a variety of other chemicals that have very long names and please do not ask them to see that view.

But all of that is available on resources online. The party resource will be fascinating to me is the exposure to the mold, toxins, the fungi have a tendency to produce chemicals.

These chemicals are divided into two categories the primary compounds that they call them parts of the organic acids and is basically the shedding off of the these fungi that they will give you a telltale that these are present in your body.

It could be a small intestine, it could be colon and some sophisticated labs. They check these organic acids that you can get this says, hey, I do see some fungal markers present again.

And the other part is the chemicals that are actually toxic. And some of the research on some of these toxic chemicals suggests it's really an you know, and a variety of other mycotoxins they go back to the 1960s, I found the articles going back.

It's not a very new subject. You just as not completely brought into our mainstream that, hey, when we actually deal with patients, you know, we need to understand how did we get to this point?

And I think these chemicals, particularly the Mycotoxins, they have a major effect in disrupting the microbiome and also promoting the growth of fungi is almost like a camaraderie of friendship.

One fungi can grow their mycotoxins from another one can actually suppress the immune system and allow it to grow. And if you think about it, the gut is a perfect environment, nice and warm and sweet along too.

And once it overcomes the body's immunity and the barrier system, they start to take over fungi. They usually involve about 0.5% of the microbiome, and when this increases to 2 to 3%, it might be enough to start to produce fermentation syndrome and disease and immune provocation.

Thank you for that, because I think the role of fungi as pathogens is really under underappreciated. Many women out there with PCOS who are hearing this, maybe thinking maybe this has something to do with my chronic vaginal yeast infections.

And when you think about the environment, it's warm and you know, you can put a lot of toxins in the vagina, unfortunately, with, you know, chemically laden tampons.

And and, you know, you can use different lubricants and so on and all the sugar that people are consuming and and so on. And also adding in the oral contraceptives and their effect, I kind of see how everything ties together that many women with PCOS have chronic vaginal yeast and I'm sure it's been undiagnosed, but many of them also have the CFO, the undiagnosed and untreated overgrowth of fungi in their intestinal tract.

So this is like really eye opening. You know, seeing the connections and how, you know, the really critical role that yeast plays. And of course, any of these microbes when they're in an imbalance situation, how that affects everything.

One thing that you had touched on just in passing, which I want to just come back to, is the role of stress. So women with PCOS as and like you said, it sort of sounds bidirectional because when you have the wrong gut microbiome, it can create various effects on emotions, you know, and then as well, emotions can affect the gut.

It's, you know, bidirectional and that involves the autonomic nervous system. And so that's also related to hormones. So women with PCOS have a lot of dysregulation of their mood.

So and that ties into the gut. Maybe you could tell us a little bit about that link and how the autonomic nervous system plays into it. With the imbalance of the autonomic nervous system.

We see it quite frequently, and I actually believe it's probably another manifestation of inflammatory processes. When you look at the mast cells and what they release and you know, masses are underneath the skin, they're in the gut, but they're everywhere.

And when they activated too, it is possible to create some inflammatory change around the nerves. And now you have a wire that is not completely working properly.

We're going to have, you know, this to know meal because of the conduction issue that is going to come forward in the challenges that of course, that we can really see the anterior to nervous system is not easy to test for it.

So you almost have to make some of the clinical decisions based on inference and based on clinical experience, but it is very commonly involved in what we see.

And I think part of the, you know, constipation and the motor function abnormalities that we see, it may be actually coming from this phenomenon and of course, through the beautiful work of our colleague, Dr.

Mark Pimentel, who demonstrated that the damage of food poisoning from a prior event can have an effect on the interstitial cells as a whole, and that can affect the neurotransmission at the cellular level.

And they start to produce motility related issues in. Walking about like the entire nervous system, some out there may not know what that means. And so maybe just define what is the enteric nervous system.

Is parts of our basically central nervous system and autonomic nervous system and the brain connects to the enteric system through the vagus nerve. And then all those wires that they come, we call them the pre ganglion.

Stress, Autonomic Dysfunction, and the Gut-Brain Link

It means that there's a first set of wires, then you have a little relay station and you have the post and bionic neurons. But as it gets further out, they become smaller fibers and they are a little coating, you know, on there.

So they're more vulnerable to that, to damage. And in some cases, as you know, they do a skin biopsy to look for evidence of small fiber in property. But in brief, it is continuation of a vagus nerve, which, you know, controls the majority of the gut function.

And from there it goes to a smaller fiber system and it connects itself to the gut. But inside the wall of the intestine, there's a still communication going on, and that is the part that didn't get to damage from prior food poisoning yet.

And those cells that they conveyed, the electrical, you know, force of electrical energy to create motility, they get affected by a prior food poisoning.

And I think there may be other matters that would do the same. It just hasn't fully been showed that way. Now, you mentioned like different cell types, so there's been a lot of focus on issues involving weight control.

And some of these little hormones are a peptides that would be one to phrase them like JLP one. So my understanding is the gut has some specialized cells within it that are actually like endocrine cells.

Maybe you could touch on the role of the gut that goes beyond even digestion, the role of the gut as an endocrine organ. I mean, the gut tends to produce a series of, you know, hormones or chemicals called in Gretchen's and the GOP.

One is one of those that works in conjunction with insulin. And we learned that to use something that would mimic that, you can actually help to reduce weight appetite and also somehow affected motility.

And it slowed down the stomach movement. So kind of curbs your appetite, if you will. I must really defer this part to the endocrinologist or perhaps somebody, because that's it. But I mean, obviously we do consider the GOP one net agonist or supports it as part of our long piece is not only to control the blood sugar, but also to promote weight loss.

I guess it just shows how complicated the gut is. And I just want to touch on a neighboring organ, the liver. So many women with PCOS develop nonalcoholic fatty liver disease.

I know they're talking about even changing the name and so on, but what's the connection between the gut and the liver and why are women having this problem?

Is that related to their diet, to chemicals, to to their gut or what do you think is going on with all this fatty liver disease? This definitely it has some correlation with the gut microbiome.

I think we are seeing more and more applications coming out and this and we know that our eating habits have something to do with it. Don't think we always need to have obesity as part of this.

But the exact causation, how we have got into this is, is still the jury's still out on that, too. But I know there's publications correlating glyphosate with nonalcoholic fatty liver disease.

And what we see is that presence of the glyphosate in it can change the microbiome in an unfavorable way. We see it commonly be associated not only with Siebel, but we see for the fungal overgrowth there.

One has to question whether these things are connected or not because the fungal overgrowth and one of the things we see is craving for sweets. It is almost like it almost feeds itself.

And we get stuck into this, you know, vicious cycle. The key question is that if we correct it, the fungal or the fungal overgrowth, would that correct the problem?

And I don't think the answer to that is known as or is just something that could be reversed by following one pathway, or does it require a multidisciplinary approach in different ways?

Yeah. Wow. That is so fascinating to think that the fungi could be creating binge sugar eating. That's like incredible. Now, this is a lot of information.

It could seem overwhelming. The bell is such a complicated topic. Are there some like will say pearls or tips you can give to people like who haven't come and seen someone like you will get into that.

How do we ever find someone like you or how do we find you? But before we get to that, like, are there any like tips

that you could give to people to try to lower their risk of developing gut problems and developing, you know, CFO Sebo, Gerd, gastric ulcers, irritable bowel syndrome and all of these unfortunate and extraordinarily common concerns, health problems that women with, with PCOS and without PCOS are facing these days.

So any takeaways that people could start like today, what can they do?

Gut Hormones, Fatty Liver, and Prevention Tips

Well, there are two questions. How do I prevent this? You know what they have growing in life? I mean, what can I do to not fall into this scenario? Because, I mean, PCOS doesn't always have to be overweight.

I mean, how do I prevent this? How do I save my jewel, which is my microbiome? You know, that's really my precious, valuable thing that I take care of everything else, precious in my life.

I do. I take care of this one, too. And so by doing this, you know, we hope that we don't end up into these path where your PCOS or other metabolic abnormalities.

And I think that has a lot to do with the way we probably live our life and also recognizing what could be detrimental in our environment. I think our knowledge about environment has to increase and that may require that the question eventually go to more.

The authority is at the higher level to make public policies that we are not so much exposed to these things here. But until then, I believe we start with our life at home to living a tranquil life, to be able to deal with this stress in a way that it's not so stress provoking.

And we're able to handle the problem and focus on the problem without taking it personally and changing it to to avoid that stress response. Because the high cortisone level then is going to in the fight and flight mode, it is going to promote fungi, just like taking steroids.

And we see people who have been under a lot of stress, they have more chance of developing fungal clinical picture. And the I think the word that I always try to share with my patients is equanimity.

And I hope I pronounce it correctly, is to be able to handle problems in a peaceful manner, focusing on that and not allowing it to internalize in a way that is going to affect our endocrine system.

And the other thing is good quality sleep, not eating before going to bed. I mean, this is something is not discussed often, but when we eat late, within 2 hours of sleep, if you will, it can significantly change the microbiome.

It can suppress the housekeeper function. And that's going to be a set up for a bathtub that is not draining. And bugs are just going to grow by stagnation, if you will, and to limit the amount of sugary stuff that is in our food.

I think we're doing too much of that and also have good eating habits to eat too slowly to true. Well, you know, to pay attention and to be an on phone, read a book or talk to five different people while we're eating that, we learn to use our five senses by becoming more sensual.

But that is the ability to enjoy the five senses that we have. Of course, never forgets about our sixth sense because that's going to guide us what the right things to do and to eat organic as much as is possible, and to have a balanced diet, not to go to one extreme.

I mean, I mean, sometimes patients may be vegan or vegetarian or somebody may be carnivorous. I mean, some of these might be, you know, to the extreme.

And I think we need to factor in, okay, if I'm going this way, what else do I need to do to keep a balanced diet for myself and and also perhaps to take some nutrients in the form of a multivitamins to make sure that we're not missing or be in contact with our physician to periodically check our basic values to ensure metabolically that we're

remaining intact.

If you ask me, I think one of the best indicators of health is energy, and one has to really focus on it. Calling me with the energy. And if the energy is affected, something is not right.

Okay. Well, hope everyone goes back and listens to all that wonderful lifestyle advice because that is critical to gut health and quality of life. Now, many of the people out there are saying, I want to do all of that, but right now I have a lot of really bad symptoms.

So they need a doctor just like you. So maybe you could tell our our viewers first how they could find you because you are unique, like a snowflake. You know, there aren't that anywhere near doctors like you that look at the whole person when they when it comes to when it comes to GI issues.

So first, how can they find you? Second, is there any way to find someone like you if they live very far away? I mean, I'm hoping to see more gastroenterologist will endorse the idea of connecting with what we need to know about the impact of environmental factors and how it interacts with the body and our ability to be able to look at every aspects of the person.

I just should be focused on one system, and that's something that it needs to think. It needs knowledge, it needs skills and practice, but it also requires time in a lot of our visits, for example, are long.

I mean, we meet our new patients. Sometimes it's, you know, 2 hours, you know, and it is a lot of questioning going on.

Finding Integrative Care and Closing Remarks

You know, with that, you understand how somebody might have evolved into lifestyle to that point. And I'm not sure that this is always possible to do.

If somebody sees, you know, 2 hours, you may end up seeing four or five patients a day may not be adequate to cover the entire country's health care system.

So how do we need to create that is going to require public policy, but it is helpful to bring this integrative and holistic model into the mindset of practitioners.

And I can see that this is already going that way and it is quite active. So whether we to do or not is going to happen. I think that's just the way of the future.

Well, I think like what you're saying is that probably if we can have health care policy that creates like integrative teams so that you can have. Yes.

The highest skilled individual like, you know, not necessarily taking all the history, but getting a synopsis and then focusing on the key areas. I know it's very difficult from a time economy, you know, point of view, how to do all of this and really serve our patients needs.

In my practice, I also have very long appointments because you just can't rush through these. You know, people are so complex and their histories are quite involved, but I am just so thrilled that you're not far from me.

You're just down the freeway in L. A. and I'm in Orange County and you're open for business so people can come and see you if they can get to California.

Great place for vacation. So I cannot thank you enough. This was such a wealth of information that everyone needs to know how the GI tract is working.

And you know just that little focus on the role of fungi. It's such an undiscovered and talked about area that is so

critically important for our health.

So thank you so much for sharing all of this. And once again, thank you again for taking your time to share your wealth of knowledge with our viewers.

Thank you, Dr. Gersh. I really feel humble and appreciative of the opportunity that I was able to have this session with you. Thank you.