Introduction to PCOS and Chronic Inflammation

Welcome to this episode of the PCOS SOS Summit. I'm your host, Dr. Felice Gersh. With me for this episode is Dr. Tom O'Bryan, who is expert in so many different things.

Wait till you hear all that we're going to discuss. He is known as the Sherlock Holmes of chronic disease. Welcome, Tom. Thank you so much for joining us.

Tell us a little bit about yourself, your journey, and then we're going to do a deep dove into PCOS. Oh, well, thank you. It's a pleasure to be with you.

A little about myself. Okay. When I was an intern 40 years ago, my ex and I could not get pregnant. And I called the seven most famous holistic doctors I'd ever heard of and asked what do you do for fertility?

And they all told me what they do. And I was writing it down, and I put a protocol together. We were pregnant six weeks. My neighbors, we lived in married housing at the time.

My neighbors had been through artificial insemination and nothing had worked for them. And they asked if I would work with them. And I said, Well, you know, I don't really know what I'm doing, but I don't think it's going to hurt you.

They were pregnant in three months. And so we're now four months pregnant and just happy, as can be telling all of our friends and our friends. Sister in Wisconsin.

We were in Chicago. I was in school in Chicago. Our friend, sister, Wisconsin, who had had three miscarriages, drove down. And I was treating people out of my dormitory room.

Usually you're not supposed to do that. But I was doing that and we helped a lot of people with infertility and many, many different reproductive types of problems.

And there's not much in medicine, that's all or every. But this was every every couple that had a problem with fertility of any type. A component of what was contributing to their problem was that they were eating foods they did not know were a problem for them.

They didn't know because they didn't feel bad when they ate pizza or whatever it was. They didn't feel bad because they didn't have gut symptoms. But we now know for every one person that has a sensitivity to wheat, as an example, that has gut symptoms, there are eight people that don't.

The ratio is 8 to 1. They've got brain symptoms and they've got foggy brain, or they have seizures or they have depression or anxiety. They've got joint symptoms and they've got rheumatoid arthritis.

They've got skin symptoms and they've got psoriasis or eczema. They don't have gut symptoms. And so they don't know that when they eat this food wheat as an example, when they eat this food that they're causing inflammatuion in their body.

Look, here's a bottom line. The National Institute of Health tells us said 14 of the 15 top causes of death in the world today are chronic inflammatory diseases.

Everything except unintentional injuries and accidents in the 15 top causes of death are chronic inflammatory diseases.

Inflammation, Genetics, and Environmental Triggers

Well, everything you said, Tom, seems incredibly relevant to women with PCOS, since they have generalized systemic inflammation and it is the number one cause of female infertility in the United States, probably in many places in the world.

So how would you connect all that you were saying to the overview of women with PCOS, their inflammation, their food issues and so on? Give us a little bit of a deep dove into what's going on with PCOS.

Yeah, yeah. Oh, it it really doesn't matter if you're talking about PCOS or multiple sclerosis, rheumatoid arthritis or psoriasis. It really doesn't matter because the overlying the big kahuna picture that we all have to begin with is, okay, inflammation is the trigger and my symptoms are PCOS.

Why? Where's that coming from? You know, if you pull it a chain, it always breaks it. The weakest link, always. It's going to be at one end, the middle, the other end.

It's your heart, your brain, your liver, your reproductive system doesn't matter. The weak link is determined by two things your genetics and what's called your antecedents, which is a Greek word that just means how you live your life.

You know, if you eat tuna fish two or three times a week, you'll likely have mercury toxicity because almost all the tuna has mercury in it. Right. That's an antecedent. Right.

So the weak link is determined by genetics and how you've lived your life so far. You live in a moldy house. Your lungs and your brain are likely having a lot of inflammation from mold.

It's just lifestyle. The pull on the chain is inflammation. So you're not going to do much about strengthening the weak link in your chain. There's some things you can do that help, but if you keep pulling on the chain so hard, you know, it's it's it's not going to get the results you want.

So it doesn't matter what the condition is. One of the primary things you have to do to begin with is how do I reduce the pull on the chain? How do I reduce the amount of inflammation in my body?

That's a critically important concept, and it's foreign to most of us because we've grown up and we've been trained to believe, what do I take for this?

What do I take for that? Well, wait a minute. What do I take for PCOS? Do I need more hormones or should I take hormones? Well, the answer is maybe if you have a hormone insufficiency, but you have to reduce the inflammation.

Well, how do I reduce the inflammation? You have to identify the aspects of your lifestyle that are causing the inflammation. Is it gasoline or kerosene?

You just have to identify what are the triggers of inflammation? I'd say just but it's not that easy, you know, because never before in history have humans been exposed to as many toxins as we are now.

Our ancestors didn't have any of this. We have no genetic defense against bisphenol A or high levels of lead or mercury. We don't have any defense. Our immune systems, which are the armed forces in the body, they're there to protect you.

The different branches of the immune system. It's Army, Navy, Air Force, Marines, Coast Guard, we call them IGA, IGG, IGE IGM cytokines. They're different branches of the immune system designed to protect you.

What's it trying to protect you from our ancestors. The only things that we're a threat to them in general that required an immune response were bugs, parasites, viruses, mold, fungus and bacteria.

That was it. Well, what about trick or sand? That's in hand. Soap? Nope. What about Mercury? Nope. What about

diesel fuel and the particulate matter in the air if you live near a freeway?

No, we have no defense against any of the things of modern living. What about the phthalates, the chemicals and plastic that are all over your house in the air?

Well, what do you mean? You've got plastic blinds on the windows? They're outgassing pellets into the air. Well, I don't smell anything. You're not going to smell it.

But when you see the sunlight coming through the window at a particular angle, you see kind of the dust in the air. That's what you're breathing. And when you look to see what's in that dust, if you were to evaluate it, you see there's phthalates, there's formaldehyde from the carpeting on the floor.

And if you have pressed board furniture instead of solid wood, it's soaked in formaldehyde. Your kitchen cabinets, they're out outgassing all the time.

All of these different things that we're exposed to are the environment triggers that activate the immune system trying to protect you. But the only thing the immune system can do is fight bugs, parasites, virus, mold, fungus or bacteria.

So it creates inflammation to kill the bug. That's its job. And so when we understand this is a Ph. D. level concept, I know it's but if you get the big picture of this, the goal is to reduce the amount of invader mental triggers that you are exposed to that are causing the inflammation that's pulling on your chain, pulling on that weak link manifest as PCOS.

So that's the first goal in dealing with PCOS is how do I identify the triggers of inflammation in my body? And the most common source of inflammation is what's on the end of your fork.

You know, there's so much more, but that's the most common source, is what we put in our bodies in the food that we eat. Well, that's one of the things we actually have the most control over.

So that's another good thing. And and yes, everything is just resonating with me because there's been limited data, of course, and the research specific to women with PCOS.

The Gut Microbiome and Leaky Gut

But some of the things that we do know is that if you take follicular fluid from around where their egg is in their ovaries, it actually shows a higher infiltration of these inflammatory cells.

They actually have inflammation surrounding their eggs. And of course, that leads to no good. And as well, the one of the limited areas that they've researched in PCOS women is BPA Bisphenol-A and they've done studies showing as a generality they carry a higher body load of BPA than the average woman.

Maybe they're exposed to more, or maybe they can't get it out as well. But in any case, we have definite data showing all of this to be so relevant. So let's do a little deep dove into women and food about over a ten years ago, I guess about 11, 12, 13 years ago, the Chinese came out with the first study on women with PCOS and gut dysbiosis that showed that they actually had a different abnormal gut microbiome, a toxic kind of, you know, bad, bad news, you know, not the right guys that are living in there.

So if all of this is happening in women with PCOS and we start with food and an understanding what is the microbiome, the gut barrier, maybe you could tell us, you know, like overview one or one of what's going on in there.

You bet. You bet. These are concepts. When I'm on stage talking to doctors, I often say one of the goals is that when you go to bed tonight or in the next couple of weeks and you lay down that, you think about some of these concepts and you go, Wow, that that just when you wrestle with some of these concepts, you start to shift your

paradigm, you shift the way you think.

And that's what I'm hoping. This talk today with you and I will do for our listeners is begin to change the way you think because it's critically important, because if you keep living your life the way you have been, if your lifestyle stays the same and you're just going to take something or take a couple of things because I got PCOS and they said, this will help, but you keep doing the lifestyle that's causing the inflammation.

You know, it's like you see these, you know, sometimes you see a dog chasing its tail that, you know, we're we're just chasing the symptoms and you can't get the results that you want.

So that's an important concept. So from that perspective, this is a very advanced concept that maybe tonight you wo well, we are born 99% human. We die if we get to old age 90% bacteria, meaning there's ten times more cells of bacteria in our adult body than there are human cells.

But at birth, we're almost completely human cells, almost completely. And then it's the innocuous patient of the baby, first through the birth canal coming coming out into the world.

Babies covered in all of this flying. Well, that slime is actually so beneficial for baby because it's mom's microbiome in the reproductive tract which changes during the time of pregnancy in the in the last month to two months of pregnancy, it changes dramatically because baby's about to come down the canal and get smothered with all of this that goes in the eyes and the nose and the mouth and down into the gut.

But they're the messengers that say, okay, this is the blueprint of the food that you're about to get from mom. So let's get your digestive enzymes working to break down this food and many, many, many more messages.

But it's that microbiome. That baby begins with 99% human. And our lives, our entire life is being exposed to this bacteria every day in the world around us.

And for adults, we are 90% bacteria. There's ten times more cells of bacteria in our body than there are human cells. Now, you just think about that. So who's running the show?

You know, we like to think we are. But wait a minute. What's the influence on how you respond to a particular stimulus? What's the influence on your brain pattern when someone comes to you and says, Dad, dad, dad, if it reminds you of something, do you get like a little upset or whatever the response is where that coming from?

Well, the control center is 90% bacteria in adults. Professor Alessio Fasano at Harvard. Now, this guy, a professor of medicine, Harvard Medical School, professor of nutrition, Harvard School of Public Health, the chief of pediatric gastroenterology, mass general at Harvard.

The Director of the Celiac Research Center at Harvard. The Director of the Mucosal Immunology Center. That's the lining of the lungs. The lining of the gut, the lining of the brain.

At Harvard, this guy has five titles. Any one title is a lifelong dream for doctors at the top of their game. He's got five. We think he's going to win a Nobel Prize someday.

We truly do because he and his team are the ones that identified this thing that many of you have heard of called leaky gut. They identified it in 1997 and they've been publishing on it now for over 20 years, 25 years.

And Professor Fasano, he's always so careful about what he says. So he's not misquoted. But listen to the title of the article that he published a couple of years ago.

All disease begins in the leaky gut. The Role of the protein. Xinyu Lin in the development of chronic inflammatory diseases. Now 14 of the 15 top causes of death are chronic inflammatory diseases and here we have Professor Fasano at Harvard saying all disease begins in the gut.

What about rheumatoid? All disease begins in the gut. What about PCOS? All disease begins in the gut. What about depression? All disease begins in the gut.

And this is what they're teaching at Harvard Medical School right now, that the most critically important organ that was just discovered in the last 20 years is the microbiome in your gut.

It produces hormones, it produces neurotransmitters. Know it was Michael Gerson at Princeton in 1999 that wrote the book The Second Brain. And in that book, he told us that it's a great book to read for the general public.

And that book told us that one message from the brain going down, telling the gut what to do. There are nine messages from the gut going up, telling the brain what to do, that it's actually the microbiome in your gut that determine it's the ratio of the nerve hormones you produce called neurotransmitters.

They're not hormones. But for our discussion, neurotransmitters and it's the neurotransmitter imbalances that set you up for depression or anxiety or schizophrenia or attention deficit.

So it's the messages from the gut that create the environment of how your brain works. As an example, all disease begins in the gut. What about PCOS? All disease begins in the gut.

So a component and in my opinion, a primary component. What every person needs to do who is addressing PCOS is to address a building, a balanced, diverse microbiome of the good guys, get more good guys, not so many bad guys.

Now, here's the next point about all of this. Professor Yehuda Schonfeld at Tel Aviv University in Israel. This guy last time I interviewed him, 26 of the PhD MDs in immunology who received their Ph. D.

from him. There are many, many more, but 26 of them Chair Departments of Immunology in med schools and hospitals around the world. They're his students. This is The Godfather.

Prof. Schonfeld published a paper a couple of years ago that says 36% of all the small molecules in healthy blood are the exhaust. The metabolites of the microbiome.

You know, to give you a sense of what that means, if I exercise too hard and the next day my muscles are sore, we all know it's lactic acid that the muscle cells make lactic acid.

It's the exhaust of muscle cells. What are the bacteria in your gut have exhaust? It's called metabolites. And those metabolites make up 36% of all the small molecules in your bloodstream. Why?

Because the gut, the exhaust of the bacteria in your gut and the geek term is modulate, which means has its hands on the steering wheel of where your body is going.

It's the exhaust of the bacteria in your gut that are the messengers with their hands on the steering wheel. Now drive down the road and just turn the steering wheel five degrees in 100 yards.

Why Probiotics Alone Are Not Enough

You're off the road when you have an imbalance in your gut. The bad guys, too many bad guys in the gut, the exhaust, our message is of inflammation. This is how you tie this all together.

Too many bad guys, the exhaust of the bad guys in the gut. It's greater inflammation throughout the body. The more good guys you have. They trigger the genes to put the fire out, the fire extinguishers throughout your body.

The anti inflammatory messages. So you want to build a healthy, diverse microbiome so that the messages going out into the bloodstream are messages of on down.

Everything's okay. Take a breath, take two breaths. Just calm down. And what that does reduces the inflammation or PCOS is an inflammatory disease and there's a number of things you have to do.

But the first thing you have to do is stop throwing gasoline on the fire. Well, absolutely. That is exactly the approach that we take in my office with every patient who comes in the door.

We always say, also start with the gut. It doesn't mean we ignore fitness and sleep and stress. You got to deal with all of them. But gut, right? You've got to start somewhere.

And it's overwhelming to people to start with everything. Yes. Now, one of the things that I know is very confusing to people, but very, you know, enticing, is that they think, well, all I have to do is take a probiotic.

Right. Is that a solution? Can you just take a probiotic? And what is a probiotic? And what does it do to the other gut microbes? And, you know, is that useful?

There are hundreds and hundreds of studies that have shown when you take the good guys, the probiotics, when you take the good guys, they help. They help with asthma.

They help with lots of brain function, depression, schizophrenia. They help. Absolutely, they help. But you can't live on a supplement of probiotic. You have to change the lifestyle and what you're putting down that tube called eating.

What you're putting down there has the direct master control, all of the environment of the gut. You throw inflammatory foods down there, you can take a bottle of probiotics.

It's not going to work very well because there's too much inflammation going on. You have to change the environment of the gut. Taking a probiotic supplement is a ancillary tool.

We usually recommend it to our patients for the first 3 to 6 months, but you have to change the lifestyle so that you're feeding the good guys in your gut every single day with the foods that you're choosing.

And what are the foods you choose? You choose the foods that grow on the planet, that there is not a list of 15 ingredients in it and you don't know what 13 of those are.

There's some long chemical terms you don't. Everybody's heard the definition of crazy is doing the same thing, but expecting a different result. Well, if you keep living the same lifestyle that caused the problem, but now you're going to take a probiotic, but you're living the same lifestyle.

You're not going to get the results you want. So that's why, you know, you want to go to sleep at night. You know, when I see a study that really captures things like what?

What, sometimes I tape the study on the ceiling of my bedroom and when I go to sleep at night, I'm going to say, oh, yeah. Oh, oh, wow. Yeah, that was a study.

And sometimes the middle of the night I'll half wake up and I think about it. Oh, good. I'll break that down in the morning. I never remember it or, you know.

So I got this little thing now with a three by five cards on it, and there's a pattern that goes into it when you pull the pen out, a very soft, gentle light comes on the three by five card so you can write and see a little without blinding yourself in the middle of the night to write things down that we to change your paradigm, you have to think differently.

And the only way that you think differently is if you set yourself up to just kind of ponder some of these things that you hear, you know, say, wow, you know, I really don't understand what he's saying, but it kind of makes sense.

You know, you you when you go for a walk, you all of a sudden you're thinking about this. Oh, well, oh, I see how.

Oh, oh, yeah. I mean that's how you change the paradigm bits and pieces and the primary message here is you can't live the same lifestyle and take a few supplements and think that you're going to get rid of the problem.

You can't do it. You'll get some relief, maybe, you know, by putting a Band-Aid on an Uzi wound. Absolutely. I was hoping I knew that you would go into that, because everyone is still looking for the magic pill and they say, well, this supplement or this probiotic, but it's just not the way it works.

And even like one thing, like I'll I'll just have celery juice every morning and that will solve all my problems. It's it's like we spent, unfortunately, a lifetime without understanding the significance of these trillions of microbes that reside within us.

We were torturing them. We were starving them. We were doing everything to destroy them, not understanding, you know, like you said, like giving like antibacterial toothpaste and mouthwash is killing the bacteria, not understanding that the vast majority are commensal, as are our friends.

So you're starting now we're doing like nurturing the gut microbiome. 101 Okay. So there's no magic one pill or one magic one juice. So what should people do?

All those women with PCOS out there saying, I don't know what to do. I know my gut microbiome is really messed up and I have leaky gut. Where do I start? Tom, help me.

Okay. Okay. There are a number of steps. And if you have pen and paper, you might want to write it down or else you're going to get this to listen to it again and again and again, which I hope is what you do.

The first thing is the rule is test. Don't guess, test, don't guess. So what's the state of my microbiome? Well, I don't know. It's not great. I mean, because you're full of inflammation.

And so the messengers are coming from your gut, creating all that inflammation. We know that. So we know there's too many bad guys there automatically because you have you're in an inflammatory state and so tests don't get so you work with your doctor, you work with your health care practitioner to do a test of your microbiome.

And there are many tests out there, but to get an overview and sometimes you need to take some natural antibacterials if you can because you have too many bad guys and you've got to reduce that number of bad guys.

But to build the good guys, to create the environment that builds the good guys, you take a pill of the good guys, the good bacteria. But if the environment so inflammatory and you're still eating the food that feeds the gas, it's gasoline feeding more inflammation down there.

You can take the pills, but they're not going to get the result you want. Right? So the first step is to identify the foods that are a problem for your body.

Well, I don't have any foods that are a problem. I feel fine when I eat. Okay? Whatever it is, just don't guess. You have to evaluate to see what foods am I sensitive to?

And the most common food in the world is gluten that people are sensitive to. It's most common. And the there are many tests out there that you can do, but the tests that are the current cutting edge technology, they're called zoomers.

Because you zoom in on the problem, there's a wheat zoomer, a dairy zoomer and eggs are a soy zoomer, elected zoomer. There's a number of different zoomers, but any test is going to be helpful.

But I wanted to make sure that people know that that's actually the cutting edge test. So you identify the foods that you're sensitive to, and when you identify that, you stop throwing gasoline on the fire, meaning you stop eating the food.

Well, can I have a cheat day? No, no, you can't. Well, can I do a low gluten diet? No, you can't. There's no such thing, because if you get an exposure, let's take the world of gluten as an example, because I'm an expert on that one.

Rebuilding Gut Health with Food

I've read hundreds and hundreds of studies have been talking about it since 1980 about that. But let's say you're sensitive to gluten. Your immune system is fighting gluten.

You're making antibodies to wheat or other components of wheat gluten. So you go gluten free, you're starting to feel better. You're losing some weight, your energy is up, you're sleeping better within a couple of weeks, you're noticing, Well, this is not bad.

Well, maybe that's your daughter's birthday, so I'll have a piece of her birthday cake. It's not a problem. And you eat the birthday cake. One exposure, inadvertent or conscious, and you have elevated antibodies for 2 to 4 months, creating inflammation in your body.

There's no such thing as a cheat day. You cannot do that not with these foods. You just can't do it. And doctors want to be nice and they sometimes will say, Well, you're doing pretty good, but they're still throwing gasoline on the fire.

And it'll last 2 to 4 months from a single expert. Just read the science. It's really clear. And doctors don't know this. They think it's okay. But no, it's not.

It's not because of the long term complications. Okay. So identify the food you're sensitive to next. This is patient when you go shopping for your fruits and vegetables, always organic.

There are many reasons why, but buy a couple of every root vegetable in the store. Get rutabagas and turnips and parsnips and sweet potatoes and carrots and radishes.

And every day you have you and your family have one root vegetable. Well, I don't know what to do with a rutabaga. Well, neither do I. What I do is I just slice an onion, dice up the root vegetable, peel some garlic, little coconut oil or avocado oil, sauteed up together, throw a little sauce on it and I eat it.

Well, what about turnips? I slice an onion, dice up the turnip, peel some garlic, a little olive oil, coconut oil, avocado oil, cook it till it's soft, put some sauce on it and I eat it.

You don't have to be Julia Child here. You just have to eat the root vegetables because the fiber of the root vegetables feed the good guys in your gut.

It's the food for the good guys to prosper, to reproduce, and they don't feed the bad guys. You know what feeds the bad guys? The whites, white flour, white rice, white sugar, the pasty foods, they feed the bad guys.

So you have one root vegetable every day, then you go on Google and you type in list of prebiotic foods. Now probiotics prebiotics meaning before the good guy bacteria prebiotic and that's what root vegetables are.

They're a prebiotic and you print out list of prebiotic foods, you're going to learn that a banana is a prebiotic in onions, a prebiotic, garlic's a prebiotic.

And you've got this list and every day you eat two foods from the list and one root vegetable every day. Now you're feeding the good guys in your gut every day just a little bit.

You're feeding them a little bit every day. And for a few months we recommend when patients first begin this process because we're taking the foods out that they've become accustomed to that are inflammatory to them, we recommend that they take a prebiotic supplement for a couple of months, not for the rest of their lives, because

they're changing the lifestyle to have a turnip or a rutabaga or I mean, we've all been nice restaurants, expensive restaurants where they slice of raw radish, paper thin, and they put it on the salad raw.

Well, I don't eat raw radishes. Well, yes, you have in your salad and it tasted pretty good. Well, well, that's true. That's true. So, you know, just get get them in one root vegetable a day, two from the list every day next.

When you go shopping, get five different types of fermented vegetables. Five different types get sauerkraut, kimchi, a couple of flavors of kimchi, miso, fermented beets, curry flavored, whatever you like.

And every day the goal is to work up to for an adult, you work up to one tablespoon a day of fermented vegetables, and you might start with just a couple of threads if you don't like them very much, or you can drown them in salad dressing, you don't have to taste them.

You don't have to taste them at all. And some people have what's called a histamine sensitivity, and eating fermented vegetables can activate histamine.

So you start maybe just a little bit of the juice from the sauerkraut jar gets mixed in your salad dressing. You just start wherever you start. But the goal is the vision is I'm going to be eating a tablespoon a day, you know, within three months, six months, a year, doesn't matter how long it takes.

You just stay focused on getting it in because when you get a tablespoon a day of fermented vegetables, you're increasing the good guys inoculation in your diet.

10,000 fold. Just read the science. It's like, what, 10,000 times more of the good guys when you get a tablespoon a day, it's might take you a while to get there, you know?

But you just work me out a little bit and work up workup and for a few months we recommend when you begin all of this, you're taking the supplement of the probiotics.

So a supplement prebiotics supplement of probiotics for a few months, you don't have to live on it, but for a few months we like the spores because the spores increase the diversity of what are called the keystone species.

More of the good guys develop when you take the spore probiotics, but any probiotics that doctors choose are usually good to use. Next, this is patient one cup of organic bone broth per day. Why?

Because when you read Professor Paisanos articles, you understand it's the leaky gut that is the gateway in the development of chronic inflammatory diseases and the leaky gut.

How do you heal a leaky gut will stop throwing gasoline on the fire. That's the first step. Rebuild the good guys in the gut. That's the second step. But when when you've got a leaky gut and it's easy to test for when you have a leaky gut, it's kind of like you're wearing a pair of shorts playing with your toddler kid and you're sliding on the floor on the carpet and you get a carpet burn on your knee.

When you have a carpet burn on your knee, you don't want to put pants on because it hurts. You know, it's irritating. That's a leaky gut because the food that you're eating is going down through the tube with the gut.

And it's irritating when you have bone broth. Bone broth is high what's called gelatin tan eight. And gelatin tanning covers the damaged gut lining and then the foods going by the waist is going by.

It doesn't irritated, so it heals faster. That's one of the benefits to having bone broth. Next, when you go shopping Mrs. Patient, buy 1520 apples organic, always organic.

And when you go home don't peel them at the core out or get rid of the seeds dizem put them in a pot. And if it's this high, the pots this high with apple juice in it, you add water about a third of the height, throw a little cinnamon in there, maybe a couple of raisins, turn it on high in 15 minutes.

You got applesauce, that's all it takes. So you've got applesauce. My wife then puts it in the blender, so it's really smooth. I like it chunky. I don't put it in the blender.

And you have a tablespoon or more of applesauce every day. Fresh applesauce. The commercial stuff doesn't work. Get fresh applesauce every day. Why? Because applesauce is high in pectin.

Pectin is the food for arguably the most important enzyme in your gut called intestinal alkaline phosphatase. IAP. IAP heals leaky gut supports the good guys to grab a hold and colonize inside the gut, kills the bad guys, lowers cholesterol, lowers high triglycerides, stabilizes insulin sensitivity.

So your blood sugar is more stable. All of this comes from intestinal alkaline phosphatase, which over time you're just beating your gut with a couple of tablespoons a day or more of applesauce to increase your levels.

Those basic steps with essential to stop throwing gasoline on the fire. Find out what foods causing the inflammation in your gut that will rebuild a healthy, diverse microbiome in 3 to 6 months.

And then you maintain it because any time you go back and you cheat, you know, you know, I haven't had a Coke and I'm you know, I'm on vacation. I'm on a rum and Coke.

Well, you just set yourself back quite a ways, right, in terms of your gut and the amount of inflammation in your gut. But that's how you rebuild a healthy, diverse microbiome.

And by then, your lifestyle has developed to where you found some great recipes for root vegetables, you know, and you get a little fermented in there every day.

Maybe you're having a little kombucha, low sugar kombucha. The danger with commercial couches is they're so high in sugar there, commercial product, they're not a health product anymore, but maybe you make your own.

It's really easy to do. But your lifestyle has changed too, where you've learned over time how to feed that healthy, diverse microbiome. So it's exhausting when it's working all day, going into your bloodstream is turning on the genes for anti inflammation.

I'll give you one example. And the studies came out in the early nineties. You one cup of blueberries a day organic but one cup of blueberries a day in three years.

Your brain's working as well as it was 13 years earlier. Any test you take, your brain's working as sharp as it was 13 years earlier by having one cup of blueberries a day. Why?

Because the colors in the blueberries blue, they activate the anti inflammatory messages from your microbiome. They go throughout the whole body, say, calm down, calm down, liver, calm down, brain, calm down, kidneys in a well your entire body.

So the key here is developing the lifestyle over time, staying focused over time to feed and build a healthy, diverse microbiome. Well, I hope everyone is going to come back and listen to all of that information at least a couple of times, because that is probably the best summary of how to reboot and regain a healthy gut microbiome that I have ever heard.

And it's just music to my ears because I create these little mottos and like one of them is there are no vacation days from good health habits. And, you know, you basically said that over and over.

It's like you can't just cheat. You know, you set yourself back so much. And then another one is don't be afraid of fruit, you know, because so many people think, oh, fruit will give me diabetes.

I say eating an apple and some berries. That is not the cause of diabetes. And that's what I'd like what you said, like all the side effects of eating these healthy foods are benefits.

Unlike with pharmaceuticals, for example, you've mentioned the wonderful pectin from apples and and apples are high in a polyphenol quercetin, which is so anti-inflammatory and so beneficial to women of many.

And of course with PCOS, especially and you know, the blueberries, all of those are amazing. Like I call them the magical ingredients, you know, the polyphenols in the colors.

So this is such fantastic advice. And just to take one minute so that people understand when you rebuild and reduce the inflammation and get a healthy gut microbiome, how that can translate into lowering these other sort of secondary problems that so many women with PCOS face, like autoimmune conditions and mental health challenges like anxiety and depression and insulin resistance and women with PCOS by age 40 have a seven fold higher risk of developing diabetes and the average woman.

So by health helping to restore this gut microbiome isn't it going to impact all of these other additional problems that women develop who have PCOS? It's the critical foundation of how our bodies function.

The microbiome is the foundation and everything you build. On top of that, if you have a weak foundation, everything can collapse easily. You're going to get diagnosed with something else, right?

But when you have a strong foundation, when your base is solid, when you've got a healthy, diverse microbiome, you're good to go. I mean, you you get in a groove like you could only have dreamt about five years earlier.

PCOS, Insulin Resistance, and Whole-Body Benefits

You get younger, you get more functional, you get more cellular vitality. I guess I would say it that way. Every cell in your body, as you transition your lifestyle to more of an anti-inflammatory lifestyle, critically, critically important.

I can't think of anything more important when someone is suffering, of course, taking the pharmaceuticals or nutraceuticals to reduce your symptoms so you feel a little bit better.

You can function. Very important to do that, but that's not going to fix the problem. To fix the problem, you have to address the lifestyle that set you up for that problem.

And you reference insulin sensitivity and insulin resistance for those who don't quite know what that means. When your insulin, which escorts sugar into the cell, when insulin is working well, your insulin sensitive, it doesn't take too much insulin to get the job done.

When insulin is not working very well, your insulin resistance insulin is not getting the job done any more. So the sugar level is going up in bloodstream because the insulin can't get it into the cell.

So PCOS, if there is one mechanism that has to be addressed in every PCOS patient I've ever seen and that I with my colleagues, I think they all agree.

If there's one mechanism you have to focus on insulin sensitivity, increasing insulin sensitivity so that you have less insulin resistance, meaning your blood sugar stays stable and the insulin is escorting the sugar when it's supposed to inside your cells.

Critically important to do that. Well, how do I do that? Stop eating the simple carbohydrates. The white, you know, white flour, white sugar, white bread, white rice.

Stop it. What bitter taste so good. My wife is a master. She loves baking cakes. She loves baking cakes. And she makes the most incredible, gluten free, multilayered cakes when our friends here, Marcy, bake the cake, they all want to come over.

I'm not exaggerating. You know, we have been talking about, hey, come over for coffee, right? So because they're so good and what does she use? Uses almond flour and Himalayan territory, buckwheat flour.

And so it's high in protein, but it tastes like an elegant cake. There's three layers, two or four layers, and they're just delicious. My my point is, you don't ever need to eat the whites to satisfy your desire for something delicious and elegant.

You just have to learn how to do it or find a resource for it. And that takes time, you know, but you, you, you can do it. And my book, this whole thing about rebuilding the gut microbiome, it's in my second book called You Can Fix Your Brain.

I argued for two weeks with Rodale Press about the title they wanted so different. No, no, no. The message is you can fix your brain. And so that's what the book is about.

But I talk a lot about the microbiome and there in building a healthy, diverse microbiome. So that's all laid out for you. The recipes for the applesauce and all that are in that book.

Oh, that's fantastic. Because I was going to ask you, how can everyone get more information and connect with you? But first, I just have to mention about that buckwheat flour.

So I'm always promoting buckwheat and telling people it's not wheat. Right. It's a tricky word. It's not it's not wheat, it's buckwheat. And it contains this other magical ingredient called Myo-Inositol, which helps the ovary to have healthier eggs into ovulate.

These are all the amazing side benefits, so that all carries carry over from eating these amazing foods. And I definitely want to get that recipe because I want to buy those cakes because, you know, you can eat and enjoy and still be healthy.

And that's such an important resonating piece of information. So getting back, I know everyone out there says, oh my gosh, he is just like a plethora of information.

I want to get more from him. So you mentioned one book. How can they find out more about all this information? Connect with you in terms of, you know, seeing what you're doing, what you're producing, more books.

So like, how can they get more? Thank you. Yeah, our website is thedr.com. thedr.com, just don't spell the word doctor out and there's videos and handouts and all kinds of things you can get there.

And I do a Facebook Live every Tuesday at 4:00 Pacific, 7:00 Eastern every week. And I have a guest most of the time, but sometimes just mean I'm answering questions and there are hundreds and hundreds of people in there and 30, 40 questions, you know, that we try to get through.

Resources, Books, and Final Takeaways

And but I'm just downloading information, helping people to understand how and why they need to shift their paradigm, that if you have a disease, a disease, you need to shift the paradigm as to where it came from.

There's no pill that's going to get rid of it for you. You can reduce some of the symptoms, nutraceuticals or pharmaceuticals, but it's the lifestyle that has set you up for what you've got.

So you need to change the lifestyle. So that's the emphasis in all of the questions that are asked of me in Facebook Live. It's always like, well, let's see.

All right, PCOS, so you need to check insulin resistance. You know how to do that. Okay, well, look, look up homeless score and just start talking and downloading and downloading.

It's a lot of fun. I like it. And sometimes my two year old son comes in the room and I pick him up and then everybody's going, Oh, you know, that's sending little hearts and stuff and it's fun. I like doing Facebook Live and so my books are.

The first book is called The Autoimmune Fix. It won a National Book Award. Every person who has an autoimmune condition should read that book because then you'll understand where it came from and what's it going to take to get it.

I don't care what autoimmune diseases the mechanism is the same. And the second book is You can fix your brain. Well, I think everyone should access and read those books.

It sounds fantastic and so applicable to every woman dealing and facing the issues of women everywhere and internationally dealing with PCOS. And you know, you mentioned your little two year old and you can get kids to love foods.

I bet your little two year old is on board with eating real food. I have a little granddaughter. Her favorite food is kimchi, so. Yeah, exactly. You know, start them young.

You know, if you have yes. Kids, you know, have them eat wonderful real foods like we're right now in summer. You know, this will come out later in fall.

But every season has its beautiful fresh fruits and vegetables and just get started, you know, and enjoy and, you know, then you'll love your life so much more.

Tom, I can't thank you enough for joining me. This amount of information is so critical. Every word that was said is so critical for every woman with PCOS to absorb and then to utilize in their everyday life.

So thank you so much. I'm sure everyone is going to be rushing on to your Facebook lives because I know I am. So thanks so much again. And, you know, just keep doing what you're doing because this is what every woman needs to know.

Every man to would not be not focusing on them, but hopefully everyone out there who has a special man in their life, they have a gut microbiome, too.

So employ all of this information for your whole family. Thanks again, Tom, for joining me. Thank you so much. It's been a pleasure.