Food & Hormones: Mastering Your Endocrine System Transcript

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Introduction to Nutrition and PCOS

Welcome to this episode of the PCOS SOS Summit. I'm your host, Dr. Felice Gersh. With me for this episode is a good friend of mine, Deanna Minich. I am so excited for this interview because she is so unique.

She is a nutrition scientist. She is an author, educator, lecturer. She has written multiple books, scientific articles over 50 and has authored many book chapters.

She and I have often shared the stage. I have respected and admired her for so many years, and now I get to interview her on this incredibly important topic of the intersection of nutrition, gene and hormones and how it applies to women with PCOS.

So welcome, Deanna. Please share a little bit about your journey into this really incredible science of nutrition, and then we'll talk about how all of this can be applied to women with PCOS.

Beautiful. Well, thank you, Felice. Thank you for having me on this summit. You know, I feel so strongly about women's health, just like you do. And like you mentioned, you and I have traveled in similar circles talking about very related topics.

So how did I get interested in all of this? Well, first and foremost, I've always been into nutrition, and nutrition can be applied as the foundation or bedrock for so many different imbalances, whether we're talking women's health, men's health, kids health, I mean, nutrition is the common denominator that we all share because we all need to make choices to eat.

So when I think about polycystic ovarian syndrome, this is a very interesting connection into a condition which is on the rise. Actually, I think we're seeing more and more women struggling with reproductive health, fertility and sometimes in part that is due to PCOS.

So just recently, you know, I've been doing more with endocrine nutrition, you know, looking at a variety of different topics. They're looking at how do we make hormones, how do we transport them, how do we effectively activate, metabolize and even eliminate them?

So one of the areas that I've been lecturing on for some time, together with Dr. Bland over the years and through the Institute for Functional Medicine and even at a forum with you, is that of metabolic detoxification.

You know, detoxification is essential. It's part of hormone health.

Gut Health, Fiber, and Blood Sugar

And I think that it's one of the things that gets often overlooked, because as people just think about putting in more hormones, that they don't think about how the body is actually treating the hormones and what kinds of metabolites are you getting.

So liver health is essential for women with PCOS and we can talk a little bit more about all of those different steps with nutrients and different ways to eat, especially as it ties into insulin and insulin sensitivity.

Well, absolutely, because as you know, the conventional medical world never tries to actually heal the production of hormones or even really discusses how the body eliminates the old hormone.

So this is, you know, such a novel idea for so many of the health care providers who are also listening in on this talk, because it's just the philosophy of conventional medicine has always been just get rid of the ovaries in some

form or fashion, not necessarily surgically, of course, but in terms of shutting them down through various medications.

And the goal with nutrition science seems to be to actually help repair all these mechanisms. So share with us some of the foods and how they interplay between production, distribution, degradation, elimination of hormones.

Well, let's start in the trenches with the gut, because we know that there is so much of a connection between the gut microbiome with our ability to effectively eliminate and have regular bowel movements.

You know, I know it sounds like such a very basic topic to enter into the discussion with, but it is a fundamental. And for most women, they're not really seeing that there is that gastrointestinal gynecological access.

So in other words, how our gut is is typically how our reproductive organs are. They share the same anatomical space. So if we have leaky gut, we may have leaky ovaries, right?

So we start to see how inflammation can go from the gut and start to permeate through that that anatomical space into other neighboring organs. So I think we have to first start with nutrition for the gut.

How do we get the gut on straight in? One of the most basic things that people can do is to get enough dietary fiber. It sounds simple, but it does sometimes take some effort in order to ensure that we're getting enough fiber and that we're also getting diverse fibers.

Some people are just eating the same foods every day, and they're creating this monoculture in the gut instead of the diverse poly culture of microorganisms that can better strengthen our immune system in our overall systemic health.

So when I think of sources of fiber for women and this can be, you know, any people can pick and choose their favorite fiber sources. But I'm thinking of legumes like black beans and legumes of different types are great sources.

Nuts, seeds, fruits and vegetables, especially non-starchy vegetables. So that dietary fiber will not only help us from the level of eliminating, but also trap things that have been bio transform but deliver and are coming out through the bile will trap them in that fiber matrix and take them out of the body.

We also know, Felice, as you know as well, that a lot of these short chain fatty acids that are produced by way of fermenting these fibers can help to cross-talk and signal systemically to other organs like the brain.

So I think that when we take care of our guts, we reduce leaky gut, which means that we can reduce sleepiness in other organs like leaky ovaries, leaky brain overall, just leaky ness within the cells.

So I think our first line of defense with nutrition really has to come into first just talking about some of the basics. And we also know that fiber will help to smooth out blood sugar.

When people have a lot of these refined carbohydrates, this spikes blood sugar. In this further exacerbates any kind of insulin resistance issues. So fiber can help us with that as well.

Well, I love hearing what you're saying. You know, like, oh, to legumes, because so many people just say, oh, no, they're full of starch. You know, we don't want them.

They're carbs and they're they're what the body needs. So it's like so important and I'm so happy to hear you say that. But what do you say to people who say, oh, I can't eat those things.

They make my blood sugar high. You just sort of touched on that. But maybe you can come back to that because I hear that over and over. The same with fruit.

Yes. Well, fortunately, nature gives us a lot of different fiber sources.

Healthy Fats and Carotenoids for Ovarian Health

So if we feel that we can't deal with fruit or legumes or have some resistance to that, or they're inaccessible to us for some reason, then I would say go with things like non-starchy vegetables, leafy greens, which will give us not only the dietary fiber but also the folate in the magnesium.

Magnesium is also important for women with PCOS, and we know that magnesium plays a role in insulin sensitivity, as well as even helping with the conversion of vitamin D in the body.

So if some people don't like legumes, sometimes what I say is try out different preparations, maybe try hummus, try to soak those legumes and make them into a soup.

And just, you know, I think for so many people, they just think it's like beans in a can. And it's it can be so much more than beans in a can. And if fruit is challenging, what I would say is focus on the low glycemic fruits that have a lot of nutrient density like berries.

Most people have no problem with blueberries or blackberries, which are high in polyphenols, and actually help to better fortify the gut. So I think that there are all kinds of options and inroads there based on personal preferences, and we have lots of choices.

Well, I. Personally do love legumes. I had Navy bean vegetable soup last night. It was fantastic. So. Right, tried different recipes. That was a first for my recipe experience trying that one.

So that is great. It's like music to my ears is talking about having fiber in the diet because so many people are now emphasizing just fats. You know, we need a balance.

Maybe you could bring up the topic of fats and what role does that play? Yes. So my doctoral research was on essential fatty acids. And essential fatty acids are specific types of fatty acids that our body cannot make.

So if we're not getting them in the diet, we can actually have issues with things like fertility as well as things like issues with hair, skin, nails, behavior, mood disorders.

I mean, if you think of it, every single cell in the body has a membrane and that membrane typically has certain fats. And those fats come from whatever we're supplying in the diet.

And also, however, our body makes certain fats. So getting in proper the proportions of certain kinds of fats is really important for women's health overall.

So when I think of omega three fatty acids, omega six fatty acids, those are the two families of essential fats in most people, because they're eating more of a processed diet, they're getting too much of the omega six and not enough of the omega three.

And the omega three are the more anti-inflammatory fats. So when we have a proper balance of those two families of fats, then we don't see so much inflammation.

So we see fats throughout the body. What's really unique about the ovaries is most people aren't aware of this, but whenever I think of the ovaries, I think of the color orange.

That's in part why I'm wearing this color today, because I was thinking I'm going to be talking with Felice about PCOS and ovarian health. And one of the things we think of with plant foods is carotenoids.

So Carotenoids are plant pigments found in nature, typically in orange colored foods. And as it turns out, there was a study in which they identified up to 13 different carotenoids located in the ovary itself.

And it seems as though those carotenoids are important for healthy ovulation and also conversion into things like vitamin A, so certain of those carotenoids like beta carotene actually convert to vitamin A in vitamin A plays a role in that ovulatory process.

So whenever I think of fats, I often think, well, what else is important that's fat soluble? What else should we be getting in the diet together with those omega threes?

And the counterpart to it would be the carotenoids. So having a plant rich diet, so all kinds of plant foods count, but especially for women. Focus on orange mangoes, citrus fruit, persimmons, tangerines, you know, carrots, these kinds of foods.

In fact, for there was another study that basically showed that when women were getting more fruits and in fact, more fruits containing one of those carotenoids by the name of beta, CRP doesn't then which people don't have to remember, but it's just one carotenoid that they had a reduced ovarian decline.

In other words, they kept their ovaries healthier for longer. So whenever you think of good, healthy fats, be thinking of those carotenoids because those carotenoids are fat soluble.

That's why many times people have heard have those carrots that steamed them with a little bit of oil or butter because it needs a little bit of the those carotenoids need some healthy fats in order to be absorbed now with fruits, you don't necessarily need as much of the fat.

It seems to be in a matrix that allows for better bioavailability.

Polyphenols, Phytoestrogens, and the Microbiome

So keep in mind the color orange when it comes to food and ovaries. Well, that is phenomenal information for some people who never think of these ingredients.

These I call them the magic sauce of fruits and vegetables that can add so much to a woman's health, and particularly women with PCOS. But you brought up like the Noid.

So they are part of this magical group that we call Polyphenol. So I thought maybe you could touch on some of the others. You know, there's still beans and, you know, the the ones that come from the isoflavones and so on, maybe just touch on what is the role of of them and what how do they link to phyto estrogens and is that good or bad?

Are we getting estrogens? Is it too much? And and what are the magical, you know, benefits or what should we look out for in terms of not getting too much?

Is that even possible? Wow, there's a lot there. Okay. So in nutrition, many times people focus on protein, carbohydrate and fat. I call them the Three Musketeers.

So those are the caloric portions of foods. So usually when people read a nutrition facts label, they're looking at protein. How many grams am I getting?

We just talked about fats. So those are separate. So we just park those over to the side, then separate from the macronutrient, there are the micronutrients, things like vitamins and minerals.

So when we're talking minerals, we're talking zinc, calcium, copper, iron things of that nature. What you're asking me about is the third tier of nutrition, which refers to phytonutrients and phytonutrients.

That is one of the largest categories of nutrients. There is a plethora of them in the plant kingdom. In fact, I don't even think that we've identified the thousands upon thousands of different phytonutrients, but let's just have some working terms to break them out.

So I just mentioned the carotenoids, so I studied the carotenoids in graduate school at the university of Illinois at Chicago with people who knew so much about carotenoids.

Dr. Phil is fellow in Dr. Maria, Seppo and Sarkis. I mean, I actually did studies on these plant pigments and so the carotenoids are a family of about 700 compounds in nature.

They tend to be red, orange and yellow in even in some cases, a little bit of green. So you know how when it's autumn and then the leaves go from green into their colorful variety, you're actually seeing the carotenoids so many times.

Even if you're eating green leaves like kale or spinach, you're actually getting some of those carotenoids now, which you're asking me about would be a class of polyphenol.

So polyphenols are cousins to the carotenoids, and polyphenols are the largest category of phytochemicals. There are about 8000 types of polyphenols. That's used.

And even within the Polyphenol category, you have different categories. And so what you're asking me is DNA. What can you tell us about these flavonoid still beans, phytoestrogens?

So within polyphenols you have phenolic acids. So simple things like, you know, I'm drinking here a cup of tea and many times you get some coffee like acid chlorogenic acid, just simple polyphenols that you could have in tea or coffee.

But then you have more complex varieties of polyphenols, more than one phenol. So you have the flavonoids, things that modulate the mood and the brain a bit.

Then you have the non flavonoids, things like raspberry trial, which is part of the still being family. So by the way, most people don't realize that resveratrol is actually a fight over estrogen.

So do people need to be afraid of phytoestrogens? Phyto just means plant estrogen obviously refers to the hormone structure, the steroid like structure.

It's not to be feared. In fact, every time we have food, we are getting copious amounts of hormones, neurotransmitters, all kinds of signaling agents from the plant.

And in fact, these tend to be much weaker in amount and also inactivity in our bodies. And in some cases, they can block some of the activity of more.

I would say, aggressive body estrogens and so lots of great benefits. Now, one of the secret sources of phytoestrogens is also to make sure that you have a healthy gut microbiome, because the efficacy of many of these phytoestrogens is dependent on how our gut microbiome actually metabolizes them.

So let's take soy. You know, so many people are on the fence about soy. Do I do soy? Do I not do soy? Well, there's a lot of types of soy foods, differing quality.

But if you have a gut microbiome that can convert some of those isoflavones, which are part of the Polyphenol family into other types of compounds that can help with skin and bone, then you're going to do quite well from the soy.

And that's why it's not that in certain Asian populations that they may have a certain microbiome that helps them to get to more of those better metabolites.

So I think so much depends on the individual, how they metabolize these compounds from plants. So I think we just need to think about the whole food matrix.

You know, if we're talking about isolated soy isoflavones, that might be a little bit different for the individual. But when we're talking food, food is comprised of thousands upon thousands of compounds, some of which we don't even know.

Not to mention the microbes biome of the food itself. Yeah, it's really overwhelming, but I think the takeaway is very powerful that you should work on your gut microbiome so that it will actually utilize the foods properly.

I've heard the same thing regarding pomegranates that you need to have the right, the right microbiome. And you know, so it works. You don't get what you ideally should get if you don't have the right microbiome.

Liver Detoxification and Estrogen Metabolism

And maybe tell us also in terms of getting rid of bad old estrogen, because we want to be able to get rid of old and then make new. How does the gut microbiome play into that in the liver stages of detoxification and what can we do to after we understand it, how can we actually improve our situation so that we can actually deal with our old estrogen better?

Yeah. So now let's move from the gut to the liver delivers like the general of the army. And the liver calls out the alert, kind of organizes fats in the body.

The liver organizes toxins and toxin removal. And what's interesting is that hormones are actually treated like toxins. So they go through the same phases and the same enzymes that something that would be toxic in the environment would go through.

So how do we keep our livers healthy, whether we have PCOS or we have endometriosis, we are in perimenopause. So much of our health is determined by the health of our liver.

So some of the foods to help us with the liver and processing our estrogens would be things like cruciferous vegetables. So things like broccoli, Brussels sprouts, kale, cauliflower, a lot of the stinky sulfur containing vegetables.

Now, a very simple tip here just to steam those vegetables just ever so slightly so that you inactivate certain things that you don't necessarily want, like going Trojans or other kind of compounds that could interfere with some of the activity.

So I would say just a little bit of steaming until those cruciferous vegetables become brightly colored, those would be really good for the liver. The other thing that's very good for the liver would be things like you mentioned, actually pomegranate.

Pomegranate is what is called a bi functional modulator. So it works on phase one phase to the liver, you know, anything that's going to be moving things through.

And you know, actually, Felicia, I'd like to hear your take on caffeine, because caffeine is also something that reds certain of those liver enzymes. But we all respond differently.

Each of us have different genes that can lead to different function of those particular enzymes. So for certain women, they make certain kinds of estrogen that are actually more carcinogenic.

So by helping to modulate those estrogens and having more of those things like grapes, polyphenols, resveratrol, we can help to bring the metabolism a bit better in check.

So I think it's good for people to work with the health care practitioner to understand your genetics so that you can understand how you are. Detoxifying Yeah, it's really very, very complex and we know that many women with PCOS do have liver problems.

They have like non alcoholic fatty liver disease and they also have a lot of problems with their gut and different motility problems. Sometimes they have constipation, sometimes diarrhea and so on.

So in terms of just looking at an overview, they should eat cruciferous vegetables and, you know, not eat too many raw ones. Any other suggestions for helping with detoxification of the different phases and and just kind of helping just balance how all this can work together with the production?

Yes. My my basic mantra for helping with liver health and detoxification is protein plus plants, the two P's. So I don't want to forget protein from this conversation.

Protein is a very hot topic right now because so many people think about skeletal muscle mass and resistance training. Making sure we have enough protein and protein can help to better balance blood sugar as well.

So protein is necessary for detoxification, at least the second phase of detoxification, where we have things like sulfur compounds and other compounds that are involved and complex to that that hormone and then carry it out of the body through bile or even through the urine.

So I think it's really important to make sure that people are getting protein with every meal that will help detoxification. The site of plants is key.

And I do think that walking people through the rainbow of plants is essential. I already talked about orange. You know, anything that is nutrient dense high in antioxidants will be helping with detoxification.

It'll be imparting fiber, vitamins, minerals, all of which will be important for that process. So when I think of the Red Foods, I think of things like anything from cherries to raspberries to watermelon to beets.

Beets are excellent for detoxification, actually. There are certain compounds within beets that can help the body with nitric oxide production. There are nitrates within the beet green as well as in the beet root, which is good for the heart and just overall health.

Orange we've already talked about with yellow. Yellow is important for detoxification as well. So here's where I think about lemon bio flavonoid I think about Ginger.

You mentioned that for women with PCOS many times they have motility issues, so that could denote that there can be issues with Neurotrauma smears or just overall gut microbiome.

There could be so many things there. So with Ginger, a yellow food ginger has some role with motility and can help with just moving things through. So I think that that might be something to consider in the way of yellow.

Also bringing in yellow foods with proteolytic enzymes to help with digestion. So things like pineapple when it's in season, you know, all of these different foods, bringing the rainbow together in green is really a big, big one for detoxification because green gives us folate.

And folate as a B vitamin helps with what is called methylation. And methylation is a very important process within detoxification. So when we think of green, we think of cleansing, of chlorophyl, we think of the folate, we think of even vitamin K, vitamin K one.

And I think vitamin K is like the next vitamin D because it's important in bone, it's important for cardiovascular health and coagulation. And then, of course, I think blue purple foods are important for detox.

So that would be things like berries, blueberries, concord, grapes, paying attention to what is in season can also be important. And, you know, just to back up, I also think of things like dandelion, you know, we can be bringing in teas, herbal teas that can help with liver detox vacation as well.

In fact, just today I posted on my Instagram detoxification approaches throughout the body systems and I spoke to

the get the kidney, the liver, the skin and the lungs.

And what I want women to think about while they're thinking about what will help to fuel the cleansing process physically, is that there are also emotional connections into these organs.

So when we're moving things through the liver, I often think, at least in traditional Chinese medicine, there's a connection or connection to a lot of emotions that could come up.

I'm married to an acupuncturist, so we have a lot of these conversations about, you know, when we work on our physical body, we may have an emotional release.

So I want to acknowledge that because through nutritional detoxification, what I have seen in the clinic is that people will change their lives when they go through a detoxification, even if it's for 21 days, they'll start.

Endocrine Balance, Fertility, and Circadian Rhythm

Their mind will become clearer. They will be sleeping better, they will be living better. They'll get clear on their purpose. I've seen people quit their jobs, have babies, moved to different locations and relationships all connected into a metabolic detoxification program.

And I wasn't even focusing on those things. I was just getting their body clear with the proper nutrients, with the protein, with the phytonutrients, healthy fats to enable their body to work better so that mentally and emotionally they're in a different place.

Well, you mentioned making babies. And, of course, the most common cause of infertility for women actually is PCOS. So in terms of utilizing nutrition to improve not just detoxification but ovarian function, which you already touched on quite a bit, but in terms of helping women to ovulate more regularly to lower their testosterone or other androgen levels which are so destructive to their quality of life as well as their health.

So how can these magical ingredients in plants and other food sources help to improve ovary and function? Is there also relating to the the access? Is that really where it's at or is it there more to it?

And maybe you could help us to understand how we can use food as medicine to improve fertility and ovarian function. Yeah. So let's let's talk about that endocrine circuit because in functional medicine, this is referred to as a communication highway.

So it's not just the adrenals. We also have the hypothalamus pituitary, the pineal, the thyroid, we have the pancreas which gets left out of the endocrine, but it's truly part of the endocrine and exocrine.

Then we have the ovaries in women and testes in men, and then the adrenals, the skin is even endocrine. So any kind of skin issue we have could be connected to an endocrine dysfunction.

So this entire circuit of communication within us determines so much. It determines our feelings, our behavior, our mood state, our ovarian function. So when a woman is struggling with menstrual health and fertility, one of the first places to be looking at is her cortisol rhythm, her circadian rhythm.

How is this communication circuit within her communicating? Because for some women, they feel the effects of stress at the level of their ovaries. For other women, they feel it at their thyroid.

For other women, it's more of a gut issue. They they you know, for every woman, I think we have to stress in a very personalized way. For some people, they can't sleep.

You know, they kind of get the monkey mind. They have a lot of worry for other people. They feel it in their gut. So then they get constipation and diarrhea and alternating.

So for every woman, it's going to look very different. But I do think that supporting this endocrine access and looking at nutrition is key because how we support that endocrine access with healthy protein, carbohydrate and fat as the building blocks and then leveling up from that, looking at the different cofactors that we need to actually run the pathway is connected to proper hormone signaling.

So we're thinking of the vitamins A, D, E and K. The fat soluble ones like I mentioned with vitamin K are particularly important for the ovaries and then and also the thyroid.

And then we look at the water soluble ones like vitamin C and the B vitamins which get deplete seeded with stress in the adrenals, the phytonutrients in plants.

But you're speaking to we can start to lean on the adaptogenic effects of plants. So the beauty of plants in our environment and when we take them into our bodies is that they enable us to adapt better.

So in when we take them in, whether it's rhodiola ashwagandha maca, you know, there are so many different adaptogens plants that we need to also tailor them to the individual because they can have different responses.

But essentially what plants are enabling us to do is at the cellular level respond a little bit differently to help us to buffer from the effects of that stress.

So if we are working on cortisol as the stress hormone, that is going to better balance things like insulin and glucose, if we could think of that like a triangle.

So if we can help with cortisol, so we're balancing any kind of insulin issues, right? Insulin resistance, if we modify the diet to have more fiber in less processed carbohydrate, we're changing insulin, we're changing glucose, which can help to modify cortisol.

So I think that plants are helping us because they're really smart, they're intelligent, and their wisdom comes into our bodies to help us adapt better.

So that's why working with a health care practitioner who can work with tailored products, more therapeutic products to actually figure out, okay, how can we give you a plant product to better regulate and modulate your endocrine communication?

How can we help your pituitary talk better in a metaphorical way with your adrenals, with your ovaries? Because sometimes there's a communication gap.

So that's what plants can help us to do, is to repair and I would say rejuvenate that that circuit. And Felice, you talk a lot too about in fact, I was listening Dr.

Altshuler was talking today in a great webinar talking about adaptogens. And circadian rhythm is a big thing. So many women are working late at night, they're on the computer.

They don't have enough darkness. They're not going to sleep at a proper time. They're on their phones scrolling. They have all this artificial light which is not enabling their pineal gland to produce melatonin.

And if melatonin is off, cortisol will be off. So now we have another triangle to consider, the melatonin, cortisol and even magnesium triangle of sleep.

Right? So once we start to throw that off and I often like to tell people that sunlight is too vitamin D as darkness is to melatonin. And many of us have a darkness deficiency, just like we heard about during the pandemic, with everybody thinking, Oh my gosh, I need to get into the sun.

Vitamin D or vitamin D is important, as we know, for ovarian health and immune health. But so is the counterpart of melatonin, which is more than a hormone, just like vitamin D is more than a vitamin.

So I do think that we need to be attentive to circadian rhythm in order to better fuel our endocrine communication, because how we sleep will be how eat the next day, how we eat translates into how we sleep that night.

So it's like a never ending cycle if we don't break the cycle at one point or another, then we don't actually create the healing. Yeah, that is so critically important information and most people don't know that there are melatonin receptors on ovary.

So yes, definitely it's related to fertility and ovulation menstrual cycle function and so on. So all critically important information. So you really hone in on food is really part of the therapeutic process for women with PCOS along with all the other lifestyle issues and start with the gut, start with nutrition for people who really don't know how to use food and enjoy it.

Do you have any suggestions? Like, do you say like go online, find recipe books or for people who don't cook like and they really don't even know all of these different vegetables.

Like you can throw out all these colors and like you said, they usually eat the same four or five things everyday. Yes. So where do you start with this group?

It's a lot of people here who don't really have familiarity with all these different colorful fruits and vegetables, have no clue how to cook them, how to enjoy them or anything.

So where do you start for people who are like really at ground zero for how to work with food as medicine? That's a great question. This is like the that were the tire hits the road, right?

Like how do I put this into action? I moved out of seeing people one on one years ago because I felt that I was challenged in some way in terms of working with spouses, partners, families, making sure that that person that I was working with was actually able to put a lot of this into action.

I then moved to groups, so I began doing a lot of community groups.

Getting Started with Food as Medicine

I did an online group and now we have the advantage of joining online groups for people who can support good, healthy behaviors. And there are so many different groups out there that people can join, but everybody learns in a different way.

So what I would say is if you're a person who likes recipes, then yes, a book would be a great place to start. You know, Dr. Mark, there are so many great cookbooks and different things out there.

I am not a recipe person, believe it or not. I actually like to use my intuition and I kind of like to use my creativity and see what I have and then just start experimenting.

And I would say that for for women with PCOS, as you know, how do we as women move into our creativity? One of the ways that we can do that with food.

So I give some simple tips. One is try one new food every week. Now, that might be a food that you haven't had in a long time. So in as an example, like leeks, when was the last time you had a leak right there?

Usually in season at certain times of the year, depending on where you live. So go with something that's a little bit more seasonal, go to a different market or grocery store if you can, and look at their produce just pick one thing that you haven't had in a while and look it up online and get some ideas as to like, Oh, how I can prepare this.

I recently made a raw carrot cake and I had never tried this recipe, but it was really fun to make it because I had a lot of carrots and I was thinking, I need to do something with all these carrots.

So, you know, just try certain things, you know, you'll learn in the process. The second thing that I encourage people to do when starting to make these changes is to use spices.

Now, spices are pretty much in everybody's kitchen. Even if it's two spices there, you still have a spice, I'm sure, even if it's cinnamon. You know, the thing about cinnamon is that it creates more insulin sensitivity.

A lot of these spices are incredible. They're concentrated in phytonutrients, they're inexpensive, and they're are accessible to many people and they make food tastes good.

So what I would say is aim to try five unique spices throughout the week. And then the third thing that I focus on is while I do talk about eating the rainbow as much as you can, just to have fun.

But then the other part of it is also variety. It was back to what you and I spoke about where, you know, sometimes I think I often observe people in multiple respects.

So they'll tell me that they eat the same food over and over again. And I'll also look at their life like they're in a life rut. They need to change things.

They need to get out of those old habits, trying new foods, getting variety. So one of the things that we learn from the American Gut Project was that if you can get to 30, 30 diverse plant foods in seven days, that's actually a good benchmark for gut health.

So if you can just get to 30 and I did this within one of my online groups where we tried to get to at least 50 unique plant foods in seven days and people could do that.

It was it wasn't too difficult. So when you go to the grocery store, instead of buying a bag of apples, you know, you pick different kinds of apples because every type of apple has a different phytonutrient profile.

So that I would say those are the tips, you know, color, creativity and diversity. If you can just remember those three things. You know, for some people, you know, they need a diet.

They need a little bit more support. Join a community, hire a coach. Just like if you wanted to get into fitness, you might hire a personal trainer. Sometimes we just need somebody to keep us accountable.

Hire a health coach, hire a nutritionist who can help you along the way, but keep it basic because, you know, diets are a little bit tricky if you go a diet many times, you're going to come off that diet.

So try to make this a way of life. And as you just said about food is medicine, you know, treat food with that reverence that whatever you're taking in is becoming a part of you and can help you in terms of the next generation that you might be creating.

It sounds like it could be a fun adventure, right? Yes. There's the market. I know I'm in a very area. We're very spoiled because I'm in Southern California where we have amazing farmers markets.

But I did kind of like what you said. I would just go wrong through the farmer's market and go and look at fruits and vegetables. I didn't even know the names of them and I would just ask the vendor like, what is this?

You know, and how do you recommend I cook it or eat it, you know, and you get at least the name of it and some ideas and then, you know, you go and try it.

I mean, it's like amazing what what you will like and hopefully it'll be a lot of things that you like and then they'll be incorporated. And of course, like you mentioned, these are going to be new tastes.

So you got to maybe, you know, experiment with the first one, especially bitter things, right? Yeah. Yeah. And bitter would be better, especially for the ovaries and insulin sensitivity.

So yeah. And you know what counts as bitter, even a cup of green tea. You know, right now I've been drinking this green tea and I let it steep a long time so that I'm getting a lot of those polyphenols which actually do help with metabolism, which actually do help with insulin sensitive.

So don't underestimate even a cup of tea and what that could provide you in the way of phytochemicals. So not everything has to be expensive or sophisticated.

I think just making very small shifts in the direction of more color, creativity and diversity will ultimately help you to get to where you want to be.

Oh, and I know that for many people they're going to say, I want to maybe be in one of your courses. I want to read some of your books. So how can they find out more about what you have to offer and and about your books and and all the different projects that you've been involved with and will continue to be involved with.

The best is my website, which is deannaminich.com. So it's deannaminich.com and I want to let everybody know that there is a tab up above on the website.

It says resources and under resources. If you click that, you'll see downloads. So I love to educate and I just like to make beautiful materials to educate.

So I like a lot of color and graphics. So I even have one on endocrine nutrition that people can download code. So you can actually see what we've been talking about today, plus a lot more on those handouts.

So take that to your health care practitioner and work with them and say, I've downloaded these materials. I'm interested in getting my endocrine system in check so that I have happy hormones.

You know, I also have an eat the Rainbow kit on the website. It's very easy. You could do this for the whole family where it's just like rainbow bingo, but for food.

So that's fun. So take whatever you would like and and have fun with it. I think that's the key. People need to have more fun with food. I love that. I love models.

We're all going to take away the last thought of fun with Food for Health, Fertility Longevity. Thank you so much. This has been such a great interview.

I think everyone needs to go back and listen to it a few times and then go to your website and learn much more. So it's so important. Everyone out there with PCOS or caring for women with PCOS needs to know this, all of this information.

So I can't thank you enough for joining me and I look forward to running into you, hopefully not too long from now at one of our joint conferences. Sounds great.

Thank you for having me. As part of this summit.