Introduction and Speaker Background

Hello everyone. Welcome back to reversing Hashimoto's and Thyroid Disorders Summit. I'm your show host, Doctor Anshul Gupta, and I'm really excited for today's discussion because we are introducing a great speaker, who has years and years of experience in integrative medicine, in functional medicine, and has helped countless number of patients, you know, heal their Hashimoto's and hormonal imbalances.

So this today is all about hormones. So please stick together. But let me introduce my speaker first before we delve into the discussion. So Doctor Gersh is a multi award winning physician with dual board certifications in Ob-Gyn and integrative medicine.

She's a founder and director of the Integrative Medical Group of Irwin, a practice that provides comprehensive health care for women by combining the best evidence based therapies from conventional naturopathic and holistic medicine.

For 12 years, she taught Ob-Gyn at Keck USC School of Medicine as an assistant clinical professor, and now she serves as an affiliate faculty member at the Fellowship in Integrative Medicine through the University of Arizona School of Medicine.

She's a prolific writer and lecturer who speaks worldwide on women's health and regularly publishes in peer reviewed medical journals. She's a bestselling author of the PCOS S. O. S series, and her latest book, menopause 50 Things You Need to Know.

Doctor Gersh, welcome over here. Well, I'm thrilled to be joining you for your wonderful summit. Absolutely. You know, like, you know, I really admire the work that you have been doing, especially as majority of this work is science based and research based.

And a lot of us are labeled that, you know, things that we are doing do not have any research backing. So people like you are publishing more and more research studies of how we can handle Hashimoto's, PCOS, menopause in a more natural way.

So thank you for doing that. And just before the interview, actually, we came to know that, you know, you yourself and Hashimoto's disease. So why don't we start with your story, your personal journey in dealing with your health struggles?

Well, like so many physicians, our interests often lay in sort of, coherence with what we have dealing with in terms of ourselves or our family members.

For myself, I ultimately self-diagnosed my, PCOS condition and then had to look for my own holistic and natural ways to deal with it because nobody was there to help me.

And everyone just said, go on birth control pills, which did not agree with me, even though at that point I didn't realize all the negative things associated with them, particularly for women with PCOS.

But I know my body did not like them when I put them into my body. And then I found out years later that I actually had Hashimoto's. And the way that came about was, I have a cousin, a first cousin who was diagnosed with very severe celiac disease, which is gluten autoimmunity.

And so I learned a lot more about that and then recognized, say, if you have a first or second degree relative with

that condition, then those relatives should be tested.

And I was a second degree relative. So I said, okay, I'll just get my gluten antibodies tested through the standard celiac panel through quest, and oh my thyroid.

Rather, I started with my my gluten antibodies. Trans gluten minuses were way elevated. So I realized that I was on the road to potentially developing celiac disease.

So I immediately went gluten free and watched over time as my antibodies to the gluten particles went away. And that's what supposed to happen.

Personal Journey with PCOS and Hashimoto's

If you go gluten free, then the antibodies will disappear from your system because your immune system isn't being stimulated by that antigen. Well, then I learned about the connection to Hashimoto's.

So I said, okay, I feel fine, but I'm going to test my thyroid antibodies because nobody ever tested them. You know, that's that wasn't and still isn't typically standard of care, which is of course not what I agree with.

So I had my antibodies tested and they were very high. They were over 1000 for both my anti TPO and my thyroid globulin antibodies like oh no, I have Hashimoto's.

And I saw that my thyroid hormone levels were in the very bottom of the reference range. And so I watched it and it didn't take long before I fell below the reference range.

And it's like, okay, I need to take matters into my own hands. I had to go on a little bit of thyroid supplementation, and then I went out to the the functional medicine integrative medicine arena to look for solutions to reverse my Hoshi Modos and I not only had been gluten free, but I then went on a very strict plant based diet.

I didn't. I eliminated every processed food I did and all the things that I talk about in my books. Okay, you know, all the lifestyle things because, you know, many doctors don't quite, live the, the hype that they put out, you know, like, they're not always the role models for what they tell their patients to do.

But I became the role model for what I actually tell my patients to do and advise, you know, all the time. And yes, I'm very proud to announce that not only did I get rid of my gluten antibodies, but my thyroid antibodies completely resolved as well.

So it it's really apparent that these are conditions that especially in the earlier stages, they are actually treatable and even reversible. So that's why I was so thrilled to be on your summit here.

Because these are this is information that is not getting out. No one is talking about screening. No one in the conventional world is talking about reversal.

So that's that's really a very key issue. And in terms of women. And we'll talk about more with polycystic ovary syndrome, the most common endocrine disorder of reproductive age.

Women, the most common cause of infertility for women is very associated with a higher incidence, much higher than in the general population of having auto immune, thyroid, of having autoimmune thyroid condition.

Absolutely. First of all, I just want listeners to again pay attention that there is a possibility of reversing your disease. Remember, like, you know, not a Doctor Hirsch.

Like, you know, her antibody levels are more than 1000 and she was able to come back to normal levels. Yes. You have to put in the effort and do the right things for make it happen.

But it is a possibility. So very important. Like any points you put up that, you know, first of all, testing that, you know, not most people are not getting their antibody levels checked.

They missed the diagnosis. The diagnosis is delayed for a lot of reasons. And then in the end, they are told that nothing can be done to lower these antibodies.

So these are issues which are still happening with the regular doctors and even endocrine doctors. So I'm glad that we're talking about, you know, females today so that they can help to lower these antibodies.

But first let's talk about this connection between PCOS and Hashimoto's, because you said that, you know, females with PCOS as higher chances of getting Hashimoto's.

What is the connection? Well, the condition PCOS, polycystic ovary syndrome is not well understood. So just as a quick overview, poly cystic ovary syndrome is really a condition of estradiol.

That's the estrogen made by the ovaries insufficiency and testosterone excess. So what's going on is in the ovaries you have the production of certain hormones.

The most key one is estradiol. Now the preliminary step to producing estradiol is for the ovaries to make testosterone. So all estradiol, known as E2, the estrogen of the ovaries comes from derived from testosterone.

So there are certain cells in the ovary that make testosterone. Then it goes down like the assembly line and to a different group of cells and to the action of an enzyme called aromatase.

Testes is converted into estradiol. We now know that women with PCOS genetically. So it's probably inherited kind of a trait, have a little insufficiency or less ability to activate that enzyme to convert the testosterone into estradiol.

But fast forward to now to the present, that little defect, which was probably of no great significance and probably a benefit in the past by slightly higher levels of testosterone, making women stronger and bolder and braver and maybe slightly, but just slightly less fertile.

Why PCOS and Hashimoto's Are Connected

So they had a little built in birth control because pregnancy is a dangerous state, especially thousands of years ago. But now, because of our change in our diet, our lifestyle, and those what we call ubiquitous endocrine disruptors, chemicals that interfere with the normal function of our hormones.

And in this case, the most researched one is bisphenol A, BPA that is in every body. It's a question of how much, and it's what's in hard plastics, cash register receipts, canned liners.

It used to be in baby bottles, but it's in all the hard plastics and everyone has some in them. It's just a question of how much, and it turns out that it concentrates in the fetus.

So the levels in the mother are significantly less than the levels in the fetus. So it's a real problem because that's during, you know, fetal hood is when the endocrine system is developing.

So women with PCOS may have a little bit lesser ability to eliminate their elimination pathways. They may be not as proficient as other women. And they bio accumulate more of these endocrine disruptors.

And so what happens is that women with PCOS have an even greater difficulty of converting testosterone into estradiol, which relates to the hormones, the called, the genetic chokepoints, that come from the pituitary.

So they tend to have high levels of luteinizing hormone. That's the pituitary hormone based on the instructions from the brain that triggers the production of testosterone.

But they have too little of follicle stimulating hormone, FSH, which triggers the conversion from testosterone into estradiol. So they the brain says, which has sensors, hey, ovaries make more estradiol.

But the the preliminary step is making more testosterone. So it's like an assembly line where you have a little glitch here. So you end up with too much testosterone and not enough estradiol.

Well, the testosterone creates its own set of havoc in the body, which will sit on the sidelines for the moment. Interrupt because in terms of Hashimoto's.

But it turns out that the lower levels of estradiol lead to a whole host of metabolic dysfunctions in the body involving the immune system. Every immune cell in the body has estrogen receptors, so the immune system becomes more pro-inflammatory because estradiol controls the on and the off switch for inflammation.

So you want to have inflammation. If you're in an injury accident or you have an infection like pathogens, viruses, bacteria, fungi coming into your body, the inflammatory response is your immune system acting to protect you.

But when you don't have the right amount of estrogen, which is what women with PCOS are, you know, having to deal with, then the immune system doesn't have the right on off switch, and it goes into a more on switch pro-inflammatory.

And that leads to a lot of issues increasing the risk of overactivity. And autoimmune development. Now, in addition, back in 2015, the first research came out of China that showed that women with PCOS have an altered gut microbiome.

And I bet that's been touched on because the gut microbiome is critical for affecting the immune system, because 70 or so or more percent of the immune system lives around the intestine, around the gut.

They call that the gut associated lymphoid tissue, the gault. So when you have an impaired gut barrier because of not having the right bacteria, which we call dysbiosis, the you don't have the right production of this protective mucus coating that protects the lining cells.

So toxins from the gut get right up to those lining cells, degrading the little fibers that hold these cells together. They drift apart, which we then call leaky gut.

And these toxins, which include viruses and bacteria, get into the body itself, where the immune system is sitting. And the immune cells react with, whoa, like lots of inflammatory cytokines, creating total body inflammation and also producing antibodies to the bacteria and virus, getting in as if it's a chronic infection.

So it's the same kind of a thing. And over time those antibodies can cross react with our own tissue. The most common being thyroid because of similarities in the nuclear structure, like the nucleotides, because all living things on the planet have the same basic underlying, you know, structures that they build cells and DNA and RNA from.

So that's called molecular mimicry. So women with PCOS, they inherently because of not having enough estradiol, we know that estrogen hormones, including testosterone have a big impact on the gut microbiome.

So these hormone imbalances of women with PCOS lead to this problem, which is exacerbated by what's called the standard American diet, all the chemicals in our food, and the lack of proper fiber and nutrients.

So it's like the perfect storm for getting this impaired gut barrier, dysbiosis, leaky gut. And then the immune system is modified in a bad way in women with PCOS to become more reactive or more inflammatory.

So you have the once again, the perfect storm for creating autoimmunity, the most common being Hashimoto's thyroiditis. So women with PCOS must be tested.

And they're not they're really not routinely tested for this condition. And the incidence is enormously higher. And

then on top of that, we have the issues that we could talk about regarding the role of estradiol on thyroid products.

Because the thyroid gland has thyroid, the thyroid gland has estrogen receptors and also thyroid hormone receptors, which are not working properly in an absence of adequate amounts of estradiol.

So it's a and then these endocrine disruptors that are so ubiquitous can not only affect estrogen but also thyroid. So it's like you know like everything that can potentially go wrong seems to potentially go wrong in women with PCOS to create low thyroid production, thyroid receptor malfunction and autoimmunity.

So it's a huge deal for women with PCOS to have this evaluated so you can identify it. And then I always say the first step in solving a problem is to identify and understand the problem.

And that's where we must start with our patients with PCOS. Absolutely. I mean, most people will not even understand the pathophysiology of what PCOS is and what is the underlying issue, because everybody's talking about access testosterone, but also as their dial deficiency is a huge, huge problem.

So thank you for clearing that. And also you know like explaining it so beautifully of like how the estradiol is linked to thyroid autoimmunity as well as thyroid hormone production.

So it kind of hopefully kind of gives a good overview to people of how these two conditions, PCOS and thyroid is interconnected and like how everything in your body, like, you know, the gut microbiome, the gut permeability, you know, like the xeno estrogens, you know, as well as the food that you eat, how it all comes together to impact the PCOS and the Hashimoto's.

So as you were talking about the testing, so use it. What you felt was that, that any PCOS patients should also be tested for thyroid autoimmunity through the antibodies.

Is that correct? Absolutely, absolutely. It's, you can't know unless you test. Absolutely. No, that is so correct. Because a lot of people, when we talk about thyroid testing and when they go to the providers, they will only get a TSH maximum or maybe a T3.

And for nobody will ever check the antibody. So make sure what Doctor Gersh is talking about is actually thyroid antibodies that you check those, you know, obviously, along with your hormonal panels so that, you know, in early stages if you have Hashimoto's or not, because, you know, as she was talking about, the earlier you get to know, the easier it is to reverse it. Right?

Absolutely. And another really key thing with everyone, what in particular with women with PCOS, because they have alterations in their gut microbiome.

And that study out of China was replicated multiple times over. So there's no dispute about this. But because they can have problems as well with gut motility, because it turns out that the autonomic nervous system that controls all the things in our body that we never think about, which includes things like our temperature, our pulse, whether our arteries are contracted, open or relaxed, and our motility of our gut called the enteric nervous system, the neurologic system of the intestinal tract is regulated by the autonomic nervous system, which is actually basically regulated by estradiol.

Testing and Lab Work to Catch Thyroid Issues Early

The neurotransmitters of the autonomic nervous system are really modulated or controlled in many ways by estradiol. So women with PCOS have problems with proper regulation of their autonomic nervous system, which translates into changes in gut motility, which can cause things like Sibo, C flow, you know, small intestinal bacterial overgrowth of bacteria or fungi or just irritable bowel syndrome with this is all like documented, that women have these gut problems when much higher incidents with PCOS.

And that can translate into problems with digestion and absorption of vital nutrients that are required for both the

production of thyroid hormone and the conversion of T4 to its active form, T3.

So if you have these nutritional insufficiency, then on top of everything else having PCOS, you can also have an inability to optimally produce thyroid hormone because you don't have all the building blocks to make thyroid hormone or converted from T4 to T3.

So these are added problems for women with PCOS. So in addition to testing for the thyroid antibodies, you don't want to just test for TSH thyroid stimulating hormone.

You want to test for free T4, which is like the storage form of deployed, and then the active form, the free T3. Because the feedback loop to the brain for the TSA, which is T4, not T3, so you can have actually adequate amounts of T4 and have a so-called normal TSH and have suboptimal or even really low amounts of of T3.

So you won't know. Once again, you can't know this intuitively. You have to test. And so that's these are very very important things. In addition we know that there's a very important link between stress and thyroid.

And that when you have high levels of stress you tend to convert T4 to T3 less because the body goes into that stress state, which is like prepare for famine.

You know that there's only one stress state, and that involves reducing your metabolism, your rate of producing energy. So which is like burning fat. So the body wants to be thrifty and conserve energy so that, you know, assuming you're going into a famine.

So you if you have a lot of stress, it can lower your conversion of T4 to T3. Women with PCOS, because of their autonomic dysregulation tend to have more activation of the stress part of the autonomic nervous system called the sympathetic.

So I say S is not about sympathy. Like, oh, I'm so sympathetic. It's about stress. Think of sympathetic. As for stress. And that increases the adrenergic part of the stress response which is adrenal adrenergic, adrenal.

So you produce more cortisol. And then high cortisol, which has now been studied and documented in women with PCOS, leads to a reduction of the conversion of T4 to T3 and also aggravate leaky gut as well.

So you can see how complex this really is and how there are a multitude of reasons why women with PCOS will have suboptimal thyroid levels. Production function, and autoimmunity.

Absolutely. So there is no doubt, and I think anybody's mind right now that these two connect, these two conditions are connected, the PCOS and thyroid.

And the way forward or getting better is actually addressing both of them because, you know, they are similar root causes or things which are affecting each other.

So I think now people want to know what they can do because, you know, it's such a complex situation and condition and obviously they want to feel better.

So obviously they sometimes they need help with a practitioner like you or me to kind of get out of this whole mess.

Gut Health, Diet, and Hormone Support Strategies

But what can people do right now that can at least get them on this healing journey of reversing all of this issue for them? Well, definitely. There's a lot that women can do for themselves.

The first thing you know, you got to start somewhere and there's so many ways that you can start. But I usually start, which is where many people in our profession start is the gut.

Right. So we're going to work on trying to restore the gut integrity and the microbiome of the gut by nurturing and feeding the gut microbiome. So it turns out that the food that these microbes love is fiber.

And they also love polyphenols. That's like the special sauce that comes in different plants. And they actually dance with each other and they work with each other because the gut microbiome is like the biggest factory system ever.

To discover that the gut microbes actually make neurotransmitters and hormones and vitamins, but they can't do it unless they're properly fed and nurtured.

So I recommend my PCOS patients if they're willing to go on a high plant based vegan diet for about six months. I'm not into long term vegan, but for six months because they do not metabolize animal protein properly and they can make actual carcinogens and toxins to the cardiovascular system like tmao and other bad like nitrogen products.

So it's best to either limit to like no more than three ounces a day of a healthy type of plant, a rather animal protein, or best just for six months to go vegan.

And lots of plants, all kinds of plants. Like, we talk about the colors of the rainbow, because every kind of color of a vegetable or fruit has different magical polyphenols, many of which are phyto estrogens.

It turns out that many of the so-called, you know, superfoods are really phyto estrogen foods and high fiber foods. So you have like from the the legume family, you have isoflavones, which are actually fertility, polyphenols.

We know that when you have organic soy and soy has been so maligned, but when you have processed soy, it's bad. But when you have, like whole organic edamame or tofu or miso or tempeh, those are actually fertility foods.

And they have a lot of these isoflavones, but so do all the other beans. And if you look at one bean, that's great for the gut microbiome. It's like garbanzo beans also known as chickpeas.

They are fantastic. So you have that whole group, you know, lentils which are wonderful. I hope everyone has a favorite recipe for like lentil soup. It's so delicious.

So, you know, try these foods. And if you have a wrong gut microbiome and that you say they make you gassy, go little by little because you have to reconfigure your gut microbial population and then look at seeds like seeds and nuts.

They have what are called lignans. The most famous is flax seeds. And in fact, taking two tablespoons of flax seeds a day and grinding it up and mixing it in with, like, cereals or like, you know, ancient whole grains, which also can have, the, the lignans and you grind it up or I like to sprinkle it on a salad.

These are actually also known to be fertility foods. It's actually published articles that adding flaxseed improves fertility. These are full of lignans.

These phyto estrogens. And then you have, you know, various fruits and vegetables like apples, onions and garlic have quercetin, which stabilizes inflammatory immune cells like mast cells.

And you have red grapes, which has the still being family. Those are like resveratrol. And there's a lot of data that resveratrol is really wonderful.

For women with PCOS, it can actually lower testosterone. It's a phyto estrogen. And in addition you have pomegranate, which is a source of ellagic acid, which can be turned in in some people, but not too many.

They don't have the right gut microbiome into your life in a which is a mitochondrial rejuvenate. And that's very critical because women with PCOS, their mitochondria, that's what controls the production of energy like burning

fat.

And 80% of women with PCOS are severely overweight and obese because they're not good at burning fat. And that's a function of the mitochondria. And that's also under the purview of estradiol.

And your and a which is a phyto estrogen can rejuvenate and enable mitochondria to work better. So we can use food as medicine for women with PCOS, eating all these foods and eating more in the morning.

It turns out that when you have all this inflammation in the body, it increases insulin resistance. And most women with PCOS do have two higher than insulin, and they cannot regulate their glucose level properly.

That's called insulin resistance. In fact, women with PCOS by age 40 have seven times the incidence of diabetes as the average population. Because of this, inflammation driving insulin resistance.

And as well estradiol is critical for the glucose, the glucose transport system in the body. So we have additional complicate kinds of factors that come into play.

So it's really important to try to eat most of the food for women with PCOS in the first half of the day, because everything in the body is on the clock, the circadian rhythm and our immune system is different in the morning, our motility of our gut is different.

In the morning, our insulin resistance is different. And in terms of food intake, motility and gut function is better. Digestion is better in the first half of the day, and our insulin works better in the first half of the day.

So you'll have less rises of insulin and of glucose and insulin, which is essential for life, is also the hormone that is behind producing and storing fat.

So you cannot multitask, you cannot lose weight. And gain weight at the same time. So if you have too high of an insulin, you will be storing and producing fat, not burning fat.

It's that don't you? So you can't easily lose weight at all when you have high insulin. So there was a study done in Israel a number of years ago with women with PCOS, where and this was a study.

So I know it's really hard to do this, but in that study, they had the women eat two thirds of their food for like a late breakfast. And one third for like a late lunch or early dinner.

Okay. And in just a very few weeks, their testosterone dropped by 50%. They're insulin dropped by 50%, which is amazing. And they started having regular cycles.

It's this is just from changing the time that you eat. So we call that in the 24 hour time restricted eating and trying to have at least a at least a 13 hour fast from dinner to breakfast.

Okay. So and then as time goes by, as your gut gets better, you can even include fasting mimicking diet. So like, you know, like the the what was developed at the University of Southern California longevity Institute where you eat food for five days, but your body thinks you're fasting.

So those, you know, more advanced levels. So that's that's where like, food is so pivotal, the time you eat and what you eat is so, so important. And when you eat at the right time, you help to promote proper appetite signals and controls.

Because women with PCOS have because estradiol is key for appetite regulation in the hypothalamus, the signals and also GLP one, you know, like all these people are getting the shots like, well, go and and that found in all well estradiol is key to the production of this peptide GLP one and also GIP.

So by adding in the phyto estrogens you're actually and eating fiber, you're increasing your natural production of

GLP one which helps regulate appetite.

Because women with PCOS have high incidence of binge eating disorder, which has actually been shown to be treatable by an extra dial patch. So estradiol is key for regulating appetite.

And then you want to add in all the other things for lifestyle. You know, you want to add in steps and exercise and work on sleep hygiene and work on stress.

Right. And avoidance of chemicals. Get plastic as much as possible out of your life. So you want to include all and every lifestyle piece to optimize health.

And then and this does this is not a self-help thing. This is requires, you know, a physician or someone who is a prescriber. I actually now instead of giving birth control pills, which have a whole host of other problems in terms of it actually does not improve gut microbiome, it's actually pro-inflammatory.

It increases blood clots because it is pro-inflammatory, which women with PCOS already are. They don't need more inflammation in their bodies. And there are some advantages, because birth control pills will lower testosterone production from the ovary and increase sex hormone binding globulin, which holds tight, which binds up testosterone.

But there are other ways to do that, too. And when you give bioidentical estradiol and progesterone, which they're not making progesterone, women with PCOS don't make progesterone if they're not ovulating and not having cycles.

And progesterone down regulates testosterone receptors and estrogen increases sex hormone binding globulin, which lowers the amount of free or available testosterone to cause acne and facial hair and hair thinning.

All the things women with PCOS suffer from and change the quality of their life for the worse in, you know, horrible ways. So by giving bioidentical estradiol and progesterone instead of the fake hormones from birth control pills, I can improve fertility and I can improve all these other aspects of the female body.

If women with PCOS that they're dealing with, which are a multitude of things, and we touched on a lot. But there's even more, you know, because estradiol, I always say over and over, is the hormone of life.

It's the hormone of metabolic homeostasis. And remember, metabolism, which we talk about a lot with thyroid metabolism, is the production, storage, utilization and distribution of energy and estradiol and thyroid hormone.

They work in synergy together to manage metabolism. And when you give back the vital estradiol, this hormone of life, you can help manage your thyroid much better.

Bioidentical Hormones, Lifestyle, and Closing Advice

The gut microbiome. And then you add in all the lifestyle pieces, focusing first on the diet and you can actually tremendously well. I don't say cure, but you can reverse almost everything that we're dealing with with PCOS and improve fertility, improve cycles, improve health in every aspect.

That is awesome. I think that was one of the best kind of step wise plan that I've heard for a long time, where you touched in so much detail, especially about the different dietary aspects.

You know, how different foods will be useful, how to include, you know, like fasting, you know, in your, you know, daily routine as well as, you know, how the calorie distribution should be happening, where you are eating two thirds of your calories or majority of the food during the day, not in the night.

And then obviously other little factors of exercising, stress management and sleeping. And then obviously this part, you know, I was actually going to talk about the birth control pills, which you already answered, that those are the

synthetic hormones, but you have the option of doing the bioidentical hormones, which are completely safe and great.

So that was a complete guide in terms of people knowing what they can do today to get this condition better. So thank you for sharing that. I think we can keep going on and on.

But, you know, with the context of time, you know, and effort, I think people still will have to listen to this talk multiple times to get all the great information that you shared.

Anything else that, you know, that you have any kind of parting tips or anything else that you want to share with people? Well, I want every woman out there who has PCOS to know that the goal is to reverse the PCOS of today.

Back to the PCOS of your ancestors, that those women who had that slight increase in testosterone and not any really dramatic decrease in estrogen that had any major impact.

They were the leaders of their tribe. They were the dominant women who were the the bravest, boldest, the, you know, fearless. So that's who's inside of you.

We just need to have that woman be reborn and come out by just doing all the things that we discussed. And inside of you is the most amazing person that ever could be imagined.

And this is who you are. Absolutely. Those are great words. Where can people find you and where can they find more information about working with you?

Or even kind of knowing the work that you're doing? Well, I'm a practicing doctor, so I have an office in Southern California in Irvine called the Integrative Medical Group of Irvine, where I see patients all the time work one on one, and I can often do telemedicine as well.

And in addition, I have a pretty active Instagram Live, and I have a YouTube channel and I have my PCOS books, which I'm so proud to say, our number one Amazon bestsellers.

My first one, which is like I would say, the Bible of PCOS, it's the book is PCOS, SOS, and then the secondary one, which is PCOS. S. O. S Fertility Fast Track, which is a week by week guide on how to really optimize and get fertile fast.

Okay, so you can get that baby. And even if you ultimately do need to have IVF, which does happen, sometimes you will have a much greater success rate because PCOS women have the highest failure rate of all groups of women undergoing IVF.

So even if that's necessary, we want to get you success. So my books are out there. And then if you are in the older age strata, which everyone, every woman gets older, then I have my menopause.

50 Things You Need to Know, which was rated, a couple of years ago by Good Housekeeping magazine as the number one best menopause book on the market. So I'm here to help.

And, if you go to my, my, website, which I guess you'll post to all these things, you can sign up and I send out newsletters and anything new that comes up and lots of information.

So I'm about getting lots of information out, whether you're my patient or not. Absolutely. And we are going to share all of this great information in the description.

So please check it out. Follow her on Instagram. And obviously the great information she's sharing. So doctor girls, thank you so much for coming over here today.

My pleasure. All right guys this is it for today. Great information. Please listen to it one more time if you can. And

this is it for my site today. Thank you so much. You. Bye.