Root Causes Of Hormone Imbalances (Including Thyroid Hormone) Transcript

(Transcripts are generated by AI and may contain errors)

Introduction to thyroid health and the podcast

Hi, I'm doctor Kelly Halderman. I'm a former medical physician and author of The Thyroid Debacle. I'm now devoting my life to education, research and biotech because I realize we need educated people to bring us cutting edge information, especially when we find ourselves with a diagnosis such as hypothyroidism.

When I was practicing allopathic medicine, I myself became very sick, bedridden with what would be diagnosed as Lyme and mold infections. Along my health journey, I was also diagnosed with Hashimoto's thyroiditis, a condition I was told that could only be managed with medication.

Well, I'm here to tell you that there is more than medication to help you, as you will learn through my powerful interviews with several functional medicine practitioners.

There are tools that will help empower you to take charge of your health. Join me today as I interview leading doctors, naturopathic specialists to uncover the most useful health insights for you.

This podcast has been launched in collaboration with Doctor Talks. Visit them today at Doctor talks.com. Backslash Calendar to learn more about their upcoming summits.

Hi everyone. This is Doctor Kelly. Welcome back to Doctor Talks. We're continuing our series on thyroid health. And we have a very special guest today.

Her name is Jacqueline Downs. We're going to be talking about root causes of hormone imbalance and infertility because she is an expert in this welcome, Jacqueline.

Thanks so much. I am really happy to be here. Yeah. And I, you know, I followed your work. We've known each other for for years and years, it seems through, our mutual connection with the methyl genetic Neutrogena Genetic Institute.

And we both studied there, with with Bob Miller, and, you know, you have so much to bring to the table today because a lot of people who are struggling with thyroid, they're also having infertility issues and fertility, is something that's it's dropping.

It's a problem.

Jacqueline Downs' background and path into functional fertility

And so I'm excited to hear about, some of the, the root causes that, that you discuss in your new book. And we'll talk about that. But, also, let's just start off by telling the audience about about yourself and your practice.

Okay. Thanks. I started out, just as a health coach. My dad, actually was a nutritional biochemist, so I grew up always having, outside of the box nutrition.

And I talk about that in my book about how I was likely the only kid in junior high that knew what a probiotic was in the 90s and how, you know, before the Atkins diet, I was like, well, my dad says bagels make you fat.

And, like, I didn't understand the mechanism in elementary school, you know? But, so I had my dad as the person that allowed me to know that there's deeper nutrition there than what was currently being taught.

And I didn't go to college for nutrition because they didn't have any nutrition programs in college that I thought were adequate. They were just all your USDA kind of, you know, you know, your hydrogenated oils and whatever.

And so I had to go. Exactly. Yeah. And so, I got a psychology degree instead. And I talk about in my book how like that I did learn about psycho neuro immunology and that that sort of bridged the gap between physical and emotional health.

And so I became a health coach, and, my former career was in birth work as a doula and prenatal yoga instructor and all that. And then I wanted to do something more.

So I became a research assistant for Bob Miller, probably, I don't know, about over ten years ago, when it was he hired me just to research me for. And we both know like that quickly just, you know, turned into every other gene and pathway.

And so I sort of merged my, my new knowledge with neutral genomics, with my former career in birth, birth work. I had apprenticed with a midwife, and she, I had no idea that infertility was so prevalent when I was in my early 20s.

It just wasn't talked about. But when I was working with her, there were numerous women that would come in with infertility challenges or miscarriages.

And it really it made sense to me as far as, like what I saw was lacking or what was going on with them. And so it really brought everything full circle as far as merging the nutrition and the reproductive health aspect.

And that that leads me to the title of your book, so everybody can go buy it where they buy books or an Amazon functional, neutral genomic consultant.

That's a two hour. And it's called enhancing fertility through, through functional medicine, using neutral genomics to spot to solve unexplained infertility.

So I'm sure and I we went through the chapters on this book, you know, really again, there's there's common but there's lesser known root causes. There's a few that you want to take us through.

Yeah. So, a lot of people think that hormone imbalances are the root cause of fertility issues, but hormones are merely chemical messengers. And conventional medicine focuses on forcing hormones to be in specific ranges.

But that doesn't address the root cause of why the hormones are in the levels that they are. We need to find out what's going on that the body feels the need to temporarily shut off mating ability.

So we need to get to the root cause of the hormone imbalance as well as poor egg health. So, oxidative stress is really what's at the heart of it all.

And for people that may not know what that is, that's cellular damage. That's damage to the physical structure of the cell. And also the information that the cell contains.

And each chapter in my book discusses, a different aspect of, of some of the cause of oxidative stress or related to oxidative stress that can cause hormone imbalances and fertility challenges.

So. Okay. Yeah. Do you want me to go into a couple that would. That's exactly what I'd like you to do. Okay. So common but lesser known. So these things, the more that they are on my radar, the more I am seeing them happen.

Like, I know mold is a really hot topic in functional medicine right now. A lot more people are talking about mold and the mycotoxins and toxins it produces, but a lot of people that are in the fertility space are not even considering that as a factor for hormone problems and fertility challenges.

But the more people that I test and work with, the more there's more people that have issues with that than not. So mold and mycotoxins is a chapter. Histamine intolerance is a chapter.

Root causes of hormone imbalance and infertility

Histamine has its fingers in a lot of parts in the body and absolutely affects our hormone levels because histamine and estrogen feed each other. And so if you have an issue with one, you're likely going to have an issue with other with the other.

Also, I talk about poor fatty acid utilization. Cholesterol is the precursor to all of our sex and stress hormones. And so if you're not properly using the fact that you're eating, then your hormones aren't going to be able to be made and being adequate levels.

I know you've talked about blood sugar, eye blood sugar dysregulation as one of the last chapters of my book, because if you go through and address a lot of the other causes of oxidative stress, then there's a better chance that your blood sugar is is not going to be something that you really need to outright target.

It should sort of take care of itself, your blood sugar, sort of a downstream effect of a lot of this other causes of oxidative stress. And I know you you're you are the, phase two and phase 2.5 detox Queen.

And I actually talk about that in my book as well, and how you need to take a bottoms up approach rather than just going and trying to target the liver.

We need to to work and how that that bile flow is so, so critical for so many things, especially hormone balance. Okay. So let's pick apart, starting from mold toxicity.

So for mold we know that there's this there's about 25% of the population, maybe 20% that have HLA genes where they have antigen presenting problems and they when they get exposed to mold, they'll end up with what's known as serious chronic inflammatory response syndrome.

And so, are you looking at it that there's infertility outside of that 25%? Are you saying that even people who have normal HLA genes that don't have that predisposition, kind of the work of Shoemaker and Heyman, even those people who are not genetically susceptible because you are genetic expert, would those people to would could that just being in the mold could that cause infertility, problems.

Do you see that? Absolutely. Yeah. I mean, like only about a quarter of the population has those HLA variants that predispose you to it. So really, regardless of what you're I see the having the genetic variant just adds weight to the side of the scale for things to be more problematic.

So, you know, genetic variants and still have issues, because of maybe prolonged exposure or maybe you had Lyme earlier or, you know, EBV or something else that's just going to weaken your immune system.

Or maybe you had more toxic exposures. And so your bucket is more full, and that makes you more, more susceptible to having, worse problems with mold and mycotoxins.

But mycotoxins themselves especially, is a little known. CTA is, the biggest hormone disruptor and hormone mimica. And so, definitely knowing the type of mycotoxins that you have in your body and often, you know, testing your environment because they're usually has a correlation with if you have current exposure, that's what's going to show up in your urine.

But absolutely. And also, even if the mycotoxins isn't an outright endocrine disruptor or hormone mimic, or by causing oxidative stress by damaging your cells in other areas or affecting your liver, that's going to throw off your hormone levels and cause inflammation and oxidative stress.

Nonetheless. Okay, so for a person who who thinks, well, maybe, maybe that could be me. I have, infertility issues are hormone issues and that could be me.

I'm sure that seeking out a practitioner who is well versed in, testing for mold is important. So if they do find that

person, if they go to you, what kind of testing are you doing for mold, both in the person and in the home?

And then I'll ask a following question after that. Okay. So as far as, testing the body, I really like, the real time urinary, I really I've also started to use the fiber wellness mycotoxins.

And then I do know great Plains is a popular one as well. I personally prefer the real time and the vibrant wellness. And then as far as environmental testing goes, I tell my clients there's not one definitive answer.

Yeah, there's not one test that's going to be the the end all.

Mold toxicity and mycotoxins

Usually you need a couple different forms of testing, but, the petri dishes can be great, especially for, what's kind of floating around in the air. But they're not going to pick up things like, stacking batteries, which is a really sticky mold.

So in that case, coupling that with an Emma test to, to test for mycotoxins rather than just mold, because not all mold is toxic. So that I would recommend that or I recommend people go to the ISC, I dawg website because they're just a wealth of information and they have a lot of resources, and they have blogs and they have doctors and, they have, inspectors and mediators and all of those things on their website.

Okay. And then the next, question I have is that you mentioned histamine and estrogens and feeding off of each other. Dig a little deeper on that. For people who, you know, want a little bit more information on how those are linked together.

Okay. So mast cells, what release they release dozens of different types of chemicals, one of which is histamine and mold and mycotoxins stimulate the mast cells to release histamine.

So oftentimes when you have a mold issue, you have a histamine issue. And then histamine and, estrogen definitely feed each other. So one one way to kind of tell if histamine might be an issue for you if you're a woman is if you feel worse around ovulation when your estrogen is at its highest right before ovulation and then, it's, it's pretty high.

It rises again about a week before menstruation. And so if you're having migraines or nausea or even vomiting, around those times, then you might want to look into if histamine is an issue.

And I think of histamine again, it's, it's one of those, things that we definitely we just don't want to take a bunch of antihistamines. That's that's not the point. Right.

Like Jacqueline said, it's like find the root cause. So that could be mold. That could be a lot of different things causing that high history. But certainly stabilizing the mast cells if you're having those issues is a good idea.

While finding like the root cause of of what's going on. But, you know, I think we could talk we could do an entire seminar on, mast cells and histamine.

But I think that's great that you're looking at that. And I would bet that part of that workup then is to do some sort of, hormone testing. Tell us about the type of hormone testing that you prefer.

What, before I go into that one clinical pearl that I want to mention is you had said, she, I'm having a mind blank right now. Oh, about the histamines.

How you don't just want to take any histamines all the time. People think that antihistamines degrade your histamine, but they don't. They just shuffle it around the body.

So it's going somewhere else in the body and not actually getting degraded. So there are things you can do to help

encourage histamine degradation as far as like diamine oxidase or something like that.

But yeah, stabling the mast, the mast cells stabilizing the mast cells is a huge part of it. And then also lowering the amount of histamine that's coming in through the diet is is another, proactive approach to keep histamine levels low.

Now, as far as hormone testing goes, the Dutch test, I just can't speak highly enough of it. I'm sure that's a lot of your listeners are familiar with that.

And that's, that stands for Drive Urine Testing for Comprehensive Hormone. So it's a urinary test because then you can see the hormone metabolites. Most blood tests only measure your estradiol.

And, and and you're not seeing how that's metabolizing. If that's metabolizing down the beneficial, two hydroxy pathway. And if it's getting methylated, or if it's going down before hydroxy pathway.

So it's really all about estrogen metabolism, not just your estrogen levels. That's right. And do you do then an initial and then you're doing all of your work and then you're doing a follow up?

I don't yeah. Unless somebody is really been there. They're very motivated and very educated and they already have, you know, all of the the plastics and, you know, all of they're doing all the things already with diet and lifestyle.

I don't usually start with a hormone test aside from those people, because there's so many things that we can talk about and there's so many factors that are affecting hormones.

So I like to address those like, hey, let's get the plastics out, let's not touch the receipts. Let's, you know, start getting or buying organic, all of these things, and addressing stress.

And then I like to do a baseline Dutch test and see what's going on with the hormones. Nice. Yeah, I like to. I used to like to do it that way, too. It's like we know we're not doing our best when you when you walk in the door.

So let's do our best and then let's see where we're at. I think that's a really good approach to you mentioned Jacqueline phase two and 2.5 liver detox.

And I know that, your research, Bob Miller's research really helped me understand, the importance of liver detoxification, what to do, what not to do.

Histamine intolerance and estrogen interplay

And so talk to us about when you're looking at someone and they're struggling with infertility, you're looking I'm sure you're running a genetic panel.

Can you give us any insights on what you're looking for? You know, if you don't have to go to high level because we don't have, like, this, the snips and, you know, report in front of us, but, like, just in general.

And then, because it's personalized. So talk to us about that. Okay. So, a lot of people talk about methylation and that is very important. But a lot of people think your hormones are completely just dependent on methylation.

And you need methylation to clear hormones. But a lot of people forget that your hormones need to be sulfate. And the glucagon addition pathway is a really, really important one for all of your endogenous substances.

So that's all of the things that, our body produces. So we need the glucagon pathway to be working and not clogged, in order for our estrogens and other hormones to be, metabolized also for histamine to be metabolized and for bilirubin to be metabolized.

So a lot of people forget about these other phase two liver detox pathways. And so, the, the software that I use for genomic interpretation, looks at each of these phase two pathways and we can get an idea for what your genetic predispositions are.

And also what your exposures are when we talk and go over your intake form. So if somebody, for instance, has had mold exposure or lived in a moldy apartment or, you know, their, their office or whatever, then their blood run pathway is going to be overwhelmed to begin with, regardless of what their genetics are, because the glucagon pathway is responsible for clearing the most diverse amount of mycotoxins.

And so, those that you definitely want to support the granulation pathway if you have any hormone imbalance and or mold exposure. So but again, you know, the salvation pathway is super important.

And also nobody talks about acetylation. And so in methylation and far just get the spotlight. And I almost jokingly titled my book MT as a gateway gene.

Because so many people place so much emphasis on MT and they blame their poor detoxification or they blame their miscarriages on this one gene. And I'm not discounting the importance of that gene, but that's just a lot of weight to place on a single gene.

Yeah, we're very reductionistic, aren't we? I mean, humans just want one pill to solve everything and one gene to blame, you know, to make it easy on ourselves.

But it's so much more nuanced, right? That's why I love that you talked about the selfish glue on a Dacian. I mean, that acetylation, I mean, that's that's where if I wouldn't have been for Bob Miller's work in your work, I wouldn't have taken that seriously.

And that has a lot to do with all the detoxification pathways that they have to be running smoothly in order to have good hormone health. I mean, really, we have to look at those and they do in concert with each other.

But but going back to the whole reductionistic like no one gene works in isolation. So it was, you know, when when I learned about what, what other genes like when it started with me for I learned about the methylation pathway.

And there's genes that affect me far. And there are genes and pathways that I'm for effects. And so, we can't just treat the snip. That's just, that's that's outdated. We can't do that.

And if somebody is doing that, which a lot of the genetic reports these days are just providing canned responses and they're saying, oh, well, you have this genetic variant, so take this supplement and avoid this.

And then ten pages later they're saying, well, you have this genetic variant. So take this supplement and avoid that one, which directly contradicts what they had said ten pages before.

That's right. That's right. Yeah. We've seen a lot of bad actors have read a lot along the way. And it isn't it is is not as simple as it seems. It's not.

You have this genetic defect.

Hormone testing and Dutch test approach

You need this again. It's like even people I mean, sure, you've seen homozygous FA like some of them don't need any methylation support like you have to like actually look at those levels and some of my next question is what do you look at in the serum then when you're looking at detoxification, I'm sure you're looking at subjective assessment.

It's just very powerful. A good intake is very, extremely powerful. But is there any are there any blood tests then you're looking to kind of add to the clues of the liver is probably a little congested and not working as well.

Oh yeah. All the liver enzymes, the dgt, the AST, the Alt, the said ray. And then just general markers, for inflammation, you know, like the shoemaker talks about, those, those ones, and then even even ferritin.

I know the conventional range for ferritin is something like 50 to 200 or something outrageously broad like that, where, that's an acute phase reactive.

So it goes up with inflammation. So I want to see it no higher than 80, you know, maybe maybe 100. But if it's above 100 you got some inflammation going on.

You've got some iron dysregulation going on. So all of those can be indicators of liver stress and detoxification issues for sure. So let's dig in a little bit more on iron dysregulation because this is a hot button topic.

We have the Morelli Robinsons of the world. And you know, there's just a lot of debate and iron deficiency anemia and, and and so on and so forth. And I think that there are some really good strategies that we can use.

And I will quote the, the root cause protocol for, for giving us some of those strategies. So you're looking at labs obviously to, to and inflammation will cause all kinds of iron dysregulation.

But give us your thoughts on on that topic. Well, most people think that iron issues solely are an issue of iron deficiency anemia. And that's that's pretty antiquated.

Just the fact that doctors are still saying, oh, your iron's low. Here, take ferrous fumarate or ferrous sulfate, especially when the entire food source that we get on a soapbox here, we're inundated with iron is the number one element on the earth, or I mean, it's it's up there in terms of how much iron we're actually getting.

And I find it funny as, as well for, for well-educated practitioners to say, well, you have iron deficiency anemia. It's like, you ever see that Cheerios YouTube where they grind it up and with the shards of it and there.

So continue on because we're on the same page. Yeah. For sure. So, it's again, it's it's the whole pathway. And, you know, Bob Miller was is really into the Fenton reaction.

There's a whole entire genetic profile for the Fenton reaction, which for your listeners that don't know that, when, when, copper and iron are improperly used, they create free radicals called hydroxyl radicals.

And so we want to make sure it's not like you said, it's not an iron acquisition issue. Iron is the most abundant mineral on Earth. And especially if you're eating meat, then it's fortified in a lot of foods that are processed.

So it's it's not that we're not getting enough iron. It's an iron utilizing an issue. And so you need, and this is Morley Robbins is work, but we need a plasmid, which is a copper binding protein to make sure that our copper is properly bound so that our iron regulation stands a chance.

And, you know, we can do that with things like, retinol rather than beta carotene, which we can see what your genetic predisposition for, beta carotene to retinol conversion is.

But yeah, it's more than just the and there's, there's a lot of other, genes in that pathway as well. But it really comes down to is it being properly used and if not like where is it getting stuck?

Detox pathways, genetics, and liver support

Is it getting stuck in your tissues and cells. And it likely is. And that's why it's nice to a lot of practitioners recommend doing, an TMA so that you can measure what's in the tissue and measure what's in the blood.

And you can kind of see if, you know, if your blood looks deficient, but it's in excess in the tissues. And what can we do to help coax it out of the tissue so that it can be properly used and not not oxidizing and causing damage to the tissue and TMA here?

Tissue mineral analysis for anybody who doesn't know that that acronym. Yeah I think that's a that's a great approach. That being said, are you a fan of, organ eating organs or, ancestral eating as, as like as far as even glandular go I am.

Yes, I am for sure. Okay. And for infertility commonly see, you know, issues with again the we're having a little connection issue, which is not not getting really the nutrients.

And I think that's the, the organ meats. And if you can't stand organ meat, I know that when I was pregnant, I could probably not handle eating any organ meats, but there are, capsules for people like, I take my liver capsules every day.

Professional health Products has a really nice liver powder. Tastes like chocolate and cinnamon. And so I, I really think that people, of course, doing nutritional assessments, doing micro nutrient assessments, I'm sure that's very important because it kind of gets swept under the rug.

Again, it's these are the these are the nutrients that drive our biochemistry, that drive hormone production and regulation. And so if we're if we're lacking on those, that's a problem.

Can you comment from your standpoint of being a practitioner. What are some of the top micronutrient deficiencies you see. Yeah. So just to piggyback off that, just to understand how the genes work, all of the genes in our body code for making an enzyme, and those enzymes require nutritional cofactors or helpers in order to work.

So if you are deficient in those nutritional cofactors, it's as if you have a genetic variant there anyway. And then if you throw a genetic variant on top of it, that can make the situation even worse.

So nutrients, you know, magnesium and zinc are really, really big ones. If you look up any kind of biochemical pathway cofactors, you'll see that they're they're really big and abundant, as well as a lot of the B vitamins.

I would say those are the top ones that you see that are nutritional cofactors that are needed for things. But, you know, manganese is needed for, superoxide dismutase.

And your amino acids are needed for good of iron. And so really it does come down to the food that we eat. And we and we need to make sure that our body is able to digest it and use it.

And sometimes we have issues transporting nutrients. And so that's where knowing your genes can really help, where you might need additional support. It's not going to be a diagnostic thing, and it's not going to allow you to just eat crap and just supplement your way out of it.

It's really, you know, understanding where the weak links are so that you can support them. But yeah, so I would say magnesium is is a huge one and B vitamins are my another favorite of mine.

And like I said, zinc. But but I know of a single mineral trace mineral that I commonly recommend, especially for any of my clients that are having like wonky periods or period issues.

Is chromium poly nicotinic which which helps assist the glucose to be shuttled into the cell so you don't get the rollercoaster. And just something as simple as a really inexpensive trace.

Minerals that can really help to keep your hormones balanced, support your, cortisol levels and have healthy cycles. Great. And what about inositol Mayo and Arsenal?

Are you a fan of those? I am, I actually just started taking that again and I hadn't taken it for years and it just it benefits numerous things in the body.

And so I am a fan. I don't, I don't have PCOS. A lot of my clients do. And I do know that it is super beneficial for PCOS, and it helps with blood sugar regulation, just like that chromium.

Whenever I think of chromium, I think of the inositol and really trying to it just helps support blood sugar and other pathways. And then what about, I've been hearing a lot on social media about black seed oil for people with infertility.

Are you a fan of that? Yes. I'm, that's the perilla seed. Is that the, or the black human seed? The the black human seed? Okay. Yeah. Yeah. I, I'm hearing that it has benefits for pretty much the panacea.

You know, I haven't looked at the studies myself. But, I have, I think it's kind of like functional medicines. New little darling. Yeah. Because it it can help so many things.

And it has a pretty, low risk, low side effect. Right. And, and my colleague, Doctor Eric Volkow, is the coauthor of the thyroid debacle. He has this brilliant term of, calling calling this the greenwashing of medicine.

Iron dysregulation and micronutrient support

So it's here, don't take this cholesterol, stat, and take this red yeast rice. And and that's not the point of what we do, right? That's not the point.

So I bring these supplements up not because they're they are the go to Whole Foods or order them on Amazon and I'll be I'll we'll certainly never order any supplements on Amazon.

Right. 100%. Don't do that. But what we're saying is they're supportive. And and if you go to a practitioner like Jacqueline, she'll know when to use specific nutrients, which is nice because I find that a lot of the people who are struggling with thyroid, struggling with symptoms, you know, they're tired, brain fog, waking, they're just grasping at so many different, nutraceuticals.

And it's just a it just needs to be cleaned up. And and it's not green washed again. So it's not don't take these seven medications. Take these, you know, 17 to 18 supplements.

And that's where to Jacqueline, I know you'll agree. Is that when we're doing the, the, the genetics, that really helps too, because you you mentioned the bqml gene of converting beta carotene to to the active form retinol in your body.

And so there's a lot of people who just knowing this information, you know, for the layperson who's listening, you don't have to understand any of this, but really having a practitioner who can understand that be very personalized.

And that's what I really love about your approach, is it's very personalized. And I also love that you give hope to people who are struggling, who just been told that they have to go to IVF.

And that's, I think, part of the message in your book is that there are these underlying root causes, which we just covered, some of them, and that when we're addressing them, we're taking their foot off the brake of the body saying, no, we're not going to reproduce here.

And it's for a good reason. Right? So when you're taking your foot off the braking, you're letting hormones correct themselves naturally instead of manipulating, manipulating your biochemistry.

I just feel like that's that's a way to go. And again, you know, in medicine we say do no harm. And so much of what Jacqueline's practice and what she's doing, you're not going to get anything but more healthy, right?

That's that's that's the goal, right? We're not doing anything at all. That's not going to bring you, you know, in a better direction in life. Long to I love practitioners that, like you who teach people lifelong skills and that they understand then a little bit more about how their bodies working so they can make better choices instead of just being told what to do.

You're very empowering. And in the way that in the way that, you practice and again, let's, let's give the title of your

book if you want to give the title of your book again so people can, preorder it on Amazon.

Enhancing fertility through functional medicine, using neutral genomics to solve unexplained infertility. And I wrote the book for two demographics. Actually, I was originally going to make two books.

I was going to write one for the layperson, the the motivated layperson that has been, you know, educating themselves for some time. So they know what glutathione is.

And, you know, they know that it's just more than, well, it's IVF or nothing, right. But but there's a lot of biochemical and genetic information placed in the appendices.

Supplements, personalized care, and fertility hope

So it can be a guidebook or a handbook for practitioners as well, so that they can have more tools in their toolkit or more rocks to look under when it comes to working with their, their clients and patients.

That's awesome. That is great. Where else can people find you? Jacqueline. My website, Jacqueline downs.com. Jaclyn the US and forcing myself to be a bit more active on social media, my Instagram handles at Functional Fertility Solutions and you do a fantastic job of, of of yours, your social media.

I, I, I've just started following you, but I think it's really good solid content. And again, I think, I hope that you one day create a practitioner course out of your, out of your book and a layperson's course.

It's, it's how much time we have in the day. But I think that, when people get their hands on this, it's just really the reason why Doctor Eric and I wrote the thyroid debacle is we wanted people to be empowered, and we wanted them to know that, you know, that they're that their fate is is under their control.

There's a lot of what's under our control. And that when we need to reach out to practitioners, are are people who are here just like, you who will take their hand and walk them through it and you'll leave no stone unturned.

That's what I really was impressed with, the table of contents. And you sent it over. I'm like, she she did it all. She took all the the issues. And again, it's like, maybe molds not your problem, but maybe oxalates and histamine are your your problem.

And so, I'm excited to read the book. I'm I'm certainly very thankful to you, Jacqueline, for your time today. We really appreciate it here at Doctor Talks, having just a wealth of knowledge.

And we haven't covered anything on fertility yet. So thank you so much for your time today. Oh, I'm honored to be here. Thank you so much. All right. Take care.

Thanks. You too. Thank you for joining me, doctor Kelly Hagerman on the thyroid series for the Doctor Talks podcast. I hope you found this episode informative and engaging.

And if you did, make sure to subscribe to our podcast so you don't miss out on future launches. Don't forget to follow doctor talks on social media platforms, including TikTok, LinkedIn, Twitter and Instagram to stay informed about our latest updates and events.

For more information on thyroid conditions and other health topics, visit our blog at Doctor talks.com backslash blog, where you'll find a wealth of in-depth articles and resources to help you manage your health effectively.

If you want to learn more about the latest medical breakthroughs or how to prevent, treat and reverse chronic conditions, sign up for one of our free summits at Doctor talks.com.

Backslash calendar. You'll find that Doctor Talks Summits features some of the leading health experts in the world, and they're a great way to stay up to date on the latest research and protocols.

Thanks again for tuning in. We look forward to bringing you more valuable insights in our next episode. We'll see you next time on the Doctor Talks podcast.