Introduction and Dr. Kelly's Background

Hi there. It's Dr. Jen. Welcome back. So I have a Dr. Kelly Halderman here. She's a former physician turned biotech expert. So really excited to talk to her about all the things biochemically that the thyroid is going through.

And she is also a Hashimoto's survivor. So we have that in common. She is so fun to talk to. So, Dr. Kelly, welcome. Tell us about yourself and your education.

Yeah, thanks. Dr. Jen and we meet again. I definitely had a great time interviewing you on a different podcast for Thyroid because like you said, we have this in common.

Not only are we knowledgeable about it, but our our actual physiology biochemistry has had issues with this. And so it makes it personal for us. And you have my story in a nutshell is is that I was practicing telepathic medicine.

Everything was going along well until I myself became sick, even like bedridden, very, very ill I a pathetic medicine, as wonderful as it was. I just didn't have the tools and the tool kit to really help myself.

And I know that from your training as well, we basically had mirror image of each other is that we're not really taught from that model to go after root causes.

And we know that if you want to get to the bottom of your chronic illness, you have to under cover the root illnesses and the root causes to the illness.

And that's why I am so passionate about what I'm doing and how I've shifted, you know, from clinical practice over to more of education and research. You had on the coauthor of the new book, The Thyroid Debacle.

Dr. Erin Brockovich, to talk all about cellular hyper hypothyroidism. And so education, again, is really work. My passion is, you know, we really need people on the ground, in the trenches who are digging into the literature, translating it.

I see myself as a translational scientist because you don't have time when you're a full time practicing clinician, you don't time. You just have to follow the guidelines.

And the guidelines are antiquated.

Root Causes, Education, and Translational Science

And so, you know, having the brain that I do in education that I do, I have a traditional naturopathic medical degree. I have a degree, a doctorate degree in clinical nutrition.

And I want to bring some of this the cutting edge, like, what are we supposed to do when we have hypothyroidism and it's evidence based? It's not something you read on Twitter or, you know, like social media, like a lot of these things.

And I know you talked with a different guest about good origins and, you know, debunk that fake news there. So a really excited doctors tend to get into about the nutritional aspects because we have to eat two or three times a day.

So let's do it right for Hashimoto's. Absolutely. And I love how you kind of said that doctors, allopathic doctors, conventional doctors, they might not have time to keep up on the research.

And that's true. And clinical research and moving it to actual guidelines and endocrine guidelines that these endocrinologists follow. It takes a decade, maybe sometimes two.

So, you know, that is frustrating because you're you're coming to your doctor and they're just like, I don't have experienced this because they don't know.

They they don't have time to read. You know, they're going to their job 95 and they might not be super passionate about it, like Dr. Kelly and I and reading for 3 hours after the kids go to bed.

That's what I do. Right? Right. So so that's what you want to do and that's why we are passionate about it. And you will find that allopathic doctors that are super passionate about this stuff, they usually have been through it and they've been through the trenches with conventional medicine.

It hasn't work. So. So can you tell us about your story with Hashimoto's and as I don't think I knew that, I don't think I knew the Mars part with you.

So how did you reverse those diseases? Right. I think it was definitely a lengthy process. You know, people asking like old are and how did you how did you get over the you know, that those very serious diagnosis is and I will say is that step one is really figure out what's the cause.

So mine was uncovered to be lying and mold illness which can do all kinds of things in the body. And so once I had a handle on what was actually causing this pathology, I was able to take control of that, do multiple things.

But, you know, a cornerstone of healing from a lot of these chronic illnesses in Hashimoto's as well that came along with the diagnosis that I had is, is, is using food, food as medicine. And Brian Walsh, who's a brilliant naturopathy doctor, he says that there is no just biochemistry, it's all nutritional biochemistry.

And that's so true. Some of the things we're going to talk about today there absolute be essential for your machinery to run properly. Whether you don't have a disease or not.

You have to supply yourself with these nutrients. They're critical. They're like the gas for your car. If you don't have them, it's not going to work.

So you think especially when you have a diagnosis such as Hashimoto's, you really need to pay attention, you really need to optimize all the biochemical pathways.

And then, you know, that's again, that was one of my my questions is, was diet, nutrition, getting those getting those cofactors in. I mean, you just look at the rates of of deficiencies, magnesium coli.

I mean, they're just they're like in the seventies. I mean, they're so high in the general public. And I mean, our food is depleted from nutrients. You know, we you know, I heard Dr.

Jill Carnahan doctors say in a podcast last week, I heard her say that autoimmunity doesn't start in the body, it starts in the soil. And I was like, oh, that is so good.

Right? It wasn't. God is great. It starts in the soil. So she was like, Now I have become an advocate for farming and all of that. So because you really want to prevent, you really have to make sure that you're getting the nutrients.

So, you know, we're not going to get them all through our food sources or if we're really skilled at it and we, you know, we can you know, we can eat Brazil nuts for selenium that things are there's really strategic ways.

But, you know, I'm very, very picky about the supplementation. You know, use you supplement a healthy diet.

Genetics, Polymorphisms, and Thyroid Function

You don't have 27 bottles of supplements on your counter and try to make up for your crappy lifestyle and you're stressed and you know, your diets are often off the mark and all of that.

So really and that kind of ties in with the formulation in that I've done I've done formulation for the NFL Hall of Fame. My formulations are literally in the NFL Hall of Famers, and they work and they're powerful.

So I know what I'm doing. And I was a former player of the year 2019. And so you have to be strategic because my point and my point is, is that there's a lot of bad information out there as well.

And it's good to go to the next level and do micronutrient testing to which we can kind of get into you know, you really don't want to you don't want to guess, you want to test and we'll go down the list.

But, you know, especially you guys for vitamin D, I mean, don't mess around, right? You you have to get your blood levels. You have to get the 25 and the 125 because that's so that's so important.

And that would be a very important nutrient to get right with with autoimmune disease, with Hashimoto's. Right, vitamin D. Talk about misinformation on social media.

I mean, there is accounts out there saying, oh, you don't supplement and it's toxic, it's rat poison. And, you know, the dose is what makes the poison.

So we have to test. So I think that this is why we have this summit. This is why Dr. Kelly and I educate and we do talks because there's a lot of misinformation out there and it can be so frustrating to someone that is just trying to find any good information on how to heal their body.

And, you know, I think the first step for me is to tell patients, you can heal, but there is a but for me, it takes work. I mean, it really I think people need to know that no matter what you're doing, preparing the food, you know, you're going to talk about genetic snips and all of this, how to, you know, biohacking it all.

But you do have to actually put in some work. But it's so worth it. It's it's really worth it. So tell us, how did genes what did genes have to do with our thyroid health?

Is it is it important to know like or is it. Nope, just take a pill, right? Like we're told. Okay. So it's a little bit of a esoteric question even even for me, Doctor Jen, because the literature is not 100% clear.

I will say this right off the bat. You know, there's a paper that states that having the presence of ad2 now let's back up what's ad2. So that's a D Ivy's enzyme, right?

So those enzymes are they can either activate or inactivate thyroid hormone. So there's a couple of different polymorphisms of that. There's there's there's d one, D two, G three.

So let's talk about D two because it's your most important. So remember, so D two will convert D 4 to 3 so you can activate il activate. Right? So the point of this paper says that polymorphisms of this so genetic abnormalities differ, you know, different from the wild type may play a pivotal role in a better definition and customized therapeutic approach of patients with hypothyroidism, suggesting that these patients should be screened for D two calling more physicians.

But they go on to say that we're just we're just not there yet. Weitz says further research should be done. So again. So if you have a do you yourself are experiencing Hashimoto's that are great itis first of all, no single gene has been identified as a root cause of any any thyroid problem.

Right. Not that that is a that's a statement you can take to the bank. But if you have some of these these snips like in your D to where your T4 is, you're inactive and then you're pushing it to your T through your active.

And there's that enzyme that tries that reaction. If you have an enzyme that doesn't work as well, you know that

that might definitely be something where it could be predictive.

So you could you could tease that out, maybe when you're younger and see if you're going to have a predisposition. So you'd want to keep an eye on your labs.

I mean, labs really are everything. And when doctors read highs and lows, it makes you want to just like vomit because there's appropriate levels, there's inappropriate highs and lows.

And Dr. Eric Malkovich, if you go and listen to that discussion, he gets really into that. But so when you talk about other different genes that can be involved there, you can have some of HLA issues.

So the D R you can have some t, g, so that's thyroid globulin where your thyroid gland, once a backbone of all of your thyroid hormones, that can be a little bit off.

But you know, I think that the main point, again, is that there are some genes that can cause what's known as congenital hypothyroidism, where this is serious and you have disrupted growth of your thyroid.

It's called this horrible genesis. But those are like, you know, medicines like black and white, you know. Right. Like you you either have cancer or you don't.

Right. But, you know, there's a middle gray zone. Right. So some of the polymorphisms this is where we're going to do the debunking here is that they are pertaining to people who who have serious hypothyroidism where, you know, their mental status is impaired and, you know, their thyroid gland is not.

Right. So when I see that on the Internet where it's people who have Hashimoto's, they're searching for these esoteric genes and it's like, that's such bad information.

So just be aware of that. Is that again, you kind of go back to that there's no one single gene out there now. Again, there's D, you know, X, too, which has to do with your ability to generate hydrogen peroxide and you need hydrogen peroxide.

You have better in thyroid hormone production. But I want to just kind of go back because again, it's like, what are your labs doing? Like, what are what, what are? You know?

And in a lot of these times, it's like you're kind of stuck with the polymorphisms you have. So you can be heterozygous. You just like empty your car, you can be heterozygous.

You have like a 33% decrease in your function or you can have homozygous where you have like a lesser functioning, but you still have control. That's called epigenetics.

You have control over this. You know, whether you have that polymorphism or not, you can still do your best to optimize it. Right? So I always I always explain the polymorphisms like Legos because you and I have little kids, right?

So when, when you have instructions to build a Lego car, right? So know I have my perfect instructions. This is my DNA and I build this perfect little car and it races along the road.

So that's a person who has no genetic polymorphism. Nothing in this DNA is causing any sort of instruction error to make this little car perfect now handy and instructions that where you have a polymorphism, either it's going to be heterozygous.

So you have one copy from Mom, one copy from Dad's. So one of the copies doesn't code to make the Lego cargo. So then when you make the little Lego car, it, it doesn't go it doesn't go massively. Genetics play out.

So if you have a snip in your diagnosis where you're not converting it or not rubber meets the road where your labs

are like where? Where are those at?

Where are they going? And have you done the work? Have you put in all the time? Like you said, Dr. Dent, like this is something you and I probably do daily.

We are we're doing we're committing to staying healthy by doing multiple things. So epi genetics wise, you still need to do everything you need to do.

At the end of the day, you still need to do everything you need to do. Like all of the we Eric and I called fitness factors optimizing diets, sleep detoxification, dental health, GI health.

You have to optimize all of those in order for you to get the most out of any genetic polymorphisms you may have. Yes. And I like what you said. It's the daily things. It's the things you do every day.

You know, and I like the 8020 rule, especially with nutrition. You know, if if everyone 80% of the time really watched what they ate eight towards the for their genetics, for their thyroid health, you'd be in a really good place.

And then you could go out and enjoy a meal for Valentine's Day or something like that. So I think we need to look at that. And also when we're looking at lab work, when you're looking at traditional lab work, for me there's optimal and then there's high and low.

So Dr. Kelly touched on that a little bit. We're we don't want extremes, right? That would be like we don't want to fail a class. We don't want to be on that low. And, you know, we don't want to be too high.

We want to be nice in the middle. We want to be optimal. So you want to make sure you're going to a doctor that doesn't just look at the ranges that are given to them by the laboratory, which thyroid, stimulating hormone or age used to be more narrow of a range and they widened it out, which did a huge disservice to thyroid patients.

So you really want to make sure that you're looking at at optimal with that. So when we talk about snips, I think it could be a little overwhelming and I like how you explained it with the Lego car, but I feel like this is an overwhelming topic for patients.

So so what? What like where do they start? I mean, what if someone's like, okay, I'm living a healthy lifestyle, I'm doing all the healthy habits, my thyroid still a little off.

I want to know if I have some snips or what should I ask for or we'll look for. Yeah. And I think that again, the literature is not black and white, except for the cases when you have congenital hypothyroidism where I mean really there that's a completely different issue.

Like that's like a very serious medical issue where your thyroid is not developing appropriately. So then kind of put those aside.

Key Nutrients for Hashimoto's and Thyroid Support

So let's just say, like you said, let's say that you're doing everything you can. You're wondering, could I have some sort of polymorphism that's holding me back so you can go?

Like some insurance companies will cover a more in-depth assessment of some of these thyroid genes, thyroid related genes that I that I kind of went through and some won't.

So then kind of you're a little bit stuck. So some some genetic software like that, functional medicine providers will use they'll have some of the polymorphisms in there off the top of my head.

I think Max Gem Labs actually has some some thyroid snips in there. And you can always look up different genetic genetic reports and you can email them and ask them, you know, do you survey for some of these polymorphisms

with with hypothyroidism and you can look and see, okay, indeed, I have issues with this.

And then it's kind of like and now what? Right. Because I think we're used to in the past like five years, maybe more, we're used to people saying, omg, I have anti fr, I can't methylation at all.

I have to take copious amounts of methyl foley, methyl whatever. Right. Well, that gets us into big trouble because you're making the assumption that just because your machinery is a little bit, you know, the end product is a little bit slower, a little bit different.

You're making the assumption that everything you're doing for epigenetic, wise, diet, sleep, stress, lifestyle, everything you're doing isn't already making up for that.

Okay. So it leads me down the path of again, it's like you have to look sort of like empty chair bar. You have to get a doctor's data panel, you have to look and see what what's going on with these nutrients, you know, like you.

And let's go circle back again to to that to the nutrients that are important for thyroid in a minute. But you can't just make an assumption. So I like that people would like take the next level to go in and look at their genetics.

Do I think it's absolutely imperative if you're stuck, if you have done everything you can and you think something is just really, really off, you know, definitely more knowledge is knowledge is power.

You can really make adjustments. But from the little if I put my old allopathic hat on and Dr. Jen this is your world is that traditionally a doctor doesn't really care because they'll just keep upping your dose of thyroid medicine to try and normalize your blood levels.

They don't care like what if you have a polymorphism or not because they don't know what to do with it? They don't. It's like, okay, well, and you know, I can't blame them because what they're treating, they just don't they just don't have any additional resources.

But I you know, I will say that our cofactors are a go back to the cofactors. You have to have the cofactors in place for any of those production of those and proteins and you know, your thyroid globulin, you know, your, your is just big.

All the things that make your thyroid metabolism herbalism work no matter if you have genetics, sex or not, you have to get those. Well, the nutrients optimize selenium.

We've all heard selenium is good for thyroid but don't over under do any of these things right. Like we really have to be judicious with this. So me, I was involved in all this lentil proteins.

It's the backbone. So that's your glutathione oxidase. So anything that irons and oxidase assiduously so yes of course millenniums great nutrient you can get it from food.

I am again in a very much a fan of getting selenium levels tested, but it can be a game changer for fatigue and hair loss for sure. And from a clinical nutrition standpoint, the dose around 80 to 200 micrograms per day is about right for for selenium.

And then you know, I don't do you have any more thoughts on that or is that kind of like what would you like to see in patients about? Yes, I and especially just make sure they're not eating like Brazil nuts and supplementing.

And then I also really like it with postpartum. I want to make sure they're getting 200 micrograms postpartum to decrease the incidence of plushie motos.

But yeah, what you were saying about the lab work, they just a lot of doctors just go buy thyroid stimulating hormone age. They just try to treat that level.

And to me, that's very inappropriate. You're missing so many things by not getting a free T4 and a free T three. So really, if you're struggling with your dosing, you want to get at least those three too to be like, Oh, what should we change here?

And the thing is, I've seen it with patients. They have changed their diet and their medication doses change. That's right. And that's a great thing. Yeah.

So I don't think patients are told anything about this. And like you said, it's no one's fault. It's just medicine is evolving at a really fast pace. We know that we can reverse diseases if we know what we're doing with it.

Like you said, you had mold. That was one of the root causes. So we can really change things. So what you talked about selenium, what other nutrients are helpful for some of these common snips associated with thyroid and Hashimoto's?

I think a lot of people think about iodine and I think there's a lot of issues with the way we think about iodine, you know, really iodine deficiency used to be a problem before 1950, but for all of us, you know, after 1959, access is actually recognized as a risk factor for developing Hashimoto's.

So it's because of the hydrogen peroxide can cause oxidative damage to the thyroid gland. So, you know, all these super therapeutic doses of iodine, I just don't see the research.

I really like to look at clinical outcomes, research, study, evidence based medicine. I think that there's just like a lot of cancers of iodine, like tons of iodine I'll be or you know, lower HDI. Dr.

Christensen No iodine. So, you know, I'm just really careful with that. I like to do urinary I used to do urinary testing for iodine. I think that there's a lot of different dosing protocols that work really well for people and so everybody's very different when it comes to that.

And I was listening to a podcast and a nutritionist actually, he's a medical doctor and he said, choose two sheets of the of the seaweed that you can get at Costco.

Two little sheets have enough iodine for four one day. And to me I believe he said the RDA, which is really early days, were created. This is a good stuff.

Soap box moment RDA is were created so that you stay out of the Cascades, right? I mean, like they're so they're so low. So yeah, I think iodine is one where it's like I just don't see this super therapeutic dosing as a, as a very good idea.

Some people will swear by it, but please let me know your thoughts. Doctor then I agree with that. I iodine is just it's kind of difficult because you have two extremes on that.

And I like to be more conservative about things. So I will test iodine which even testing iodine, urine versus blood. I mean, there really is no perfect way to test either.

So I agree. I think, you know, don't overdo it don't over supplement that could actually cause some problems but just give us support you know maybe a little bit over the recommended daily amount would be fine but not super therapeutic dosing and you do get it in your diet.

So part of me, you know, if someone's only doing like bread men real salt and Himalayan salt, they're not getting that iodine from the salt. So make sure they're on a multivitamin or having some seaweed.

But okay, I will say Costco's has seed oil in it. It's yeah. Sunflower oil. Yes. So there's better choices out there that are olive oil. So so we do those.

But but yeah, I'll I'll eat a whole pack of that and then I'm like, okay, I'm not going to eat another pack for a couple of

days here or a week, you know, because.

Yeah, but I love that just like to a day you could set it by your Brazil nut I guess. But you do have to look at like everything you're taking. So are you taking a thyroid supplement that might have iodine in it?

So you're doing that check that with your multivitamin. But yeah, I agree. I agree. And it's one of those you know, we're all just talking about it. We're all creating our own thoughts and hypothesis.

And that's what scientists and doctors do, is we ask questions. So I just love that it's being talked about more as we kind of sort through everything and really interesting.

I'll go on a little tangent about iodine. I did a podcast with the owner of Redman Salt and he went into the whole history of iodine and why it was added to salt for, for iodine.

And it's, it's really interesting and it's kind of like they, they added it in the salt to just stop goiter and stop thyroid problems. But yeah, you know, are we overdoing it?

So it's it's very interesting. So I love I love you brought up iodine what what other so yeah. We got zinc so zinc is definitely crucial for our conversion 34 to 83 can definitely help with skin issues, gut issues.

I'm really picky about copper and zinc ratios. So I'd like to test not gas and make sure that we're not throwing off that ratio. I think that our diet nowadays is very deficient in bioavailable copper, so I love bee pollen.

So I think that if you were going to supplement with zinc, I think it's a really good strategy to have some sort of source of of copper, like a bioavailable copper, like a whole foods base and you get B vitamins with your B pollen as well.

So that that's you know, that's kind of my summary of zinc. And then I love that I didn't know bee pollen had a good amount of zinc. Tell me more about this copper. Sorry, copper.

So it's the. Copper. Yeah, sorry, copper. You did say copper. Yeah. So it gives it that copper. But you put like a tablespoon on top of your smoothie bowl copper. Yeah.

And then you're really boujee because you have like all know your, you have your AC assignable or whatever and you have your, your B pollen on there and you're getting all these fantastic nutrients and that's it gives it that color is that is the copper.

Well the the company that makes the silver. They now actually have a copper hydrate sol as well now two that I haven't checked out that but that's probably a good option too.

And the thing with bee pollen is whenever I go to the farmer's market, I buy like a couple jars at once in the beginning of the season because I feel like we don't get as much as they do the honey.

So get that and then also get propolis is good. You can make your own tincture alcohol so I bees are so cool. I know I love the copper part so so yeah.

So like Dr. Kelly said, you could have a boogie, a sable, or you could put it on salad, you can put it in your smoothie if you don't want that. But it kind of tastes like it's kind of nutty all about it.

Yeah, yeah. You will like it. Everyone out there needs to, like, go buy some bee pollen. Yeah, no, I don't. I totally. If the bees are awesome that so I guess the next one that has been a game changer personally for me is Diamond.

I really never respected Bee one. I thought it was just another one of the the B vitamins but you know thiamin is really correlated to brain function and it's helping with fatigue and low blood pressure, little appetite, the thyroid.

A pharmacist is still Isabella when she has a really great blog post on it and you know her using it and surveying of hundreds of people after that and then seeing that it just really help with that mental clarity.

And I know sometimes when I have a little flare of Hashimoto's, my brain's stock like it's really stuck. So I've been using benzodiazepine, which is a type of B one at a higher dose.

And again, check this out with your doctor with your health care practitioner. But it seems to be and I've always had historically low blood pressure, so it's kind of like some of these things that we are living with.

And they're they're all they can be help with nutrition with these nutritional supplementation. So B one is something I really come to respect and love in the past year.

That's awesome. B So B one thiamin, if anyone out there, any nurses, doctors, techs, anything worked in the E. R. at all. So we, there's something called Wernicke's encephalitis and stuff.

Allopathy And we worry about that with chronic alcoholics. They come in and they're confused and they don't know where they're at. And what we do, we give them a banana bag with thiamin in it.

So that kind of really makes sense.

Sleep, Hydration, and Daily Health Foundations

So not that anyone's at that point, but yeah, if you're having deficiency in vitamins and minerals, your body tends to give us clues. But but yeah, in the, in the emergency world that it happens it's happened a few times in my residency when I worked in the inner city.

So alcoholics tend to be depleted of nutrients and minerals. So you know, Hashimoto patients, you're probably depleted also. So, you know, just think about that.

We're we're maybe not. Another thing is you might not be absorbing it. So when we talk about gut health in other talks, you know, if you're not absorbing it, you could take as many supplements as you want.

So so it's it's all connected. So. All right. So thiamin and the last one on that one is that a lot of people who have autoimmunity Hashimoto's will be on a gluten free diet and that actually exacerbates deficiency in one.

So it's like, okay, time to time to pay attention to that. Gluten is no going off or or Hashimoto's the next one, just easy peasy magnesium and magnesium.

Magnesium, magnesium. Right. It just get a billboard out. It's just so helpful for stress or sleep, you know, constipation. You just don't want to overdo it or even do it.

Maybe if you have any sort of diarrhea, it just is going to make it worse depending on the the type. You know, there's all kinds of different types. Now, I can help with energy three and eight with brain function.

I really like magnesium citrate and people with oxalate issues. I think when people try and get into a healthy diet, sometimes they what they do is they tend to start eating a lot of foods high in oxalate which is just a naturally occurring compound is some healthy foods, a lot of healthy foods like kale and you know, some of the ones that are really nutrient dense, right?

So you start eating those and then these little crystals and interfere with gut absorption of calcium. They can precipitate your kidneys, cause kidney stones, get your brain caused brain fog, interrupt normal gut function.

So I kind of went way off on a tangent babesia but you know, like bring it back is that if you're going to, if you have any issues with oxalate, if you've worked with a practitioner and they told you maybe see obstetrics probably the way to go.

Yeah. Papa had kidney stones. That's what I tell my patients with high oxalate. They're like, You want me to have a spinach smoothie? And I'm like, No, no, you're not.

You're not doing a spinach smoothie. But yeah, so magnesium saturating, calcium citrate, they can bind up those oxalate and help to eliminate them. Everyone's going to look up oxalate now.

But yeah, I mean that's Candida can exacerbate oxalate. So our body is such a well-run machine. So we get these little hang ups and if we provide our body with the right cofactors, a lot of the times it can navigate through the snips and other things.

That's right. That's 100% right. And I will say my go to for a low oxalate nitric oxide for, you know, bumping up food is our regular arugula is perfect.

It's like a food that doesn't hurt. If you have an oxalate problem, it boosts your nitric oxide levels. Nitric Oxide levels have everything to do with everything.

I mean, you really need to to have healthy nitric oxide levels for blood pressure, blood flow, brain function, sexual function, etc., etc.. That's what that's what Viagra is.

It really helps increase your nitric oxide levels. So I just eat aerogel almost every other day and I use test strips that you can get on Amazon to test my nitric oxide levels.

There's supplements out there that you can get to boost your nitric oxide levels, but nitric oxide, the nitrates are actually found in like beets, which are a little bit high oxide, the greens, but arugula is high on higher nitric oxide and low.

Excellent. So there's one thing to add to your diet that I would suggest that would be. A lot of everyone out there is going to buy up all the regular at the grocery store.

Yeah, I would give it to every everyone before we're sure. First, Ursula, like, you know, we could all use a little arugula, especially, you know, today's actually is Love Day, Valentine's Day.

So I hope they don't they'll buy it all up because I mean, I'm probably going to grow it in my backyard this summer because I'm so, so addicted. It's just is fantastic. It really is. Yeah.

Yeah. It's a great taste. So that's great using using for this medicine. I really I love that. And I. And you feel better too. So you know, all of these things, knowledge is power.

So when you're at the grocery store, you know, you can make better choices. So so if there is, you know, the biggest thing that you could pick, like what?

Or a couple of things. What has the biggest impact on our genetic health? Like, what are the things that can impact that the most? So number one and number tied with number one, sleep and diet, right?

I mean, we could go off on a tangent and talk all day about sleep, but sleep sets the stage for your blood sugar, sugar regulation, you know, for your hormonal balance.

So doing everything in your power to optimize your sleep. I mean, I were in Aurora and I'm obsessed with the data because when I tweet anything, I'm looking at the objective data, I'm not gassy.

I'm like, okay, I'm going to try this melatonin or I'm going to try, you know, this nitric oxide or supplement or anything. I'm always looking at like, what objective data is it changing?

So I don't drive myself crazy trying to figure out what's best for me. It's like this is like my own doctor around night, around my finger, you know, as far as like monitoring health wise and interventions, lifestyle interventions.

So I use that my ordering will also tell me if i happen to eat the wrong foods, my h.r. Will drop my heart rate will go up in my sleep, will my sleep markers go down.

So it's really helpful for for that as well if I eat too close to bed. But again, I think that just a global view, it's anything that you can do to track objective data on your cells.

Like, that's great, that's like free information. And when you do that, you know yourself, you start to get to know your body and your body's needs. You start getting your body the proper nutrients that it needs to run your machinery, whether you have genetic sex or not.

You may be surprised how good you feel. You may be really surprised. So don't you know, I think like people want to go off and do the really sexy things, like I'm going to go do stem cells or I'm going to go do ten hyperbaric, you know, treatments.

Those are fine. But like, don't forget, like this little stuff, especially hydration. Please don't forget how important hydration is. That's why I work for the company I work for.

Now we know is that we take ordinary water and we transform it into having properties that have like tackle insulin, inflammation, inflammation, new words that tackle oxidative stress, the root cause of all disease.

So, you know, hydration of itself, it's important for your brain function, your digestive, your skin, everything, right. That will move the needle. So that's kind of like where I start with people is is doing all that.

And then you can, you know, start there and then you can work with people like Dr. Jen. You can go and dig into those micronutrient levels, you can get magnesium RBC levels, you can get your B12 levels, you can get all that dialed in, but you have to do the work first.

Like she's not going to come in and cook for you and optimize your diet and everything, right? So I just think the more that we can do foundationally, then when we add in a practitioner, they just have so little work to do.

You know, they're really going to be specific because we took care of all the again, the foundations. Yeah, absolutely. You have to have your pillars of health down pat and just sleep.

Sleep is so important. Like think about how you feel like after you don't get a good night's sleep, you know, your whole day is kind of turned. I still working at air, so I still work some night shifts because of the nature of gal.

And I just the next day I look at my face. It just doesn't look as vibrant, you know? And I'm like, this is. This is crazy. So you want to get back to it quickly and yeah, I word or a ring, I'm probably going to start wearing it again.

But it's it gives you so much information and you can really buckle down and change things. So when you look at your health, you have to look at, yes, this might seem expensive to do this now, but you're preventing disease later.

And I think that's kind of hard for people to understand that insurance using our insurance for our health, it's more just for emergencies. That's what we use it for.

It's not for prevention. So that's that's one thing. So anything else that you want to share with us about genetic health with thyroid? Yeah, I just think it can be very overwhelming even for doctors like Jen.

And I think it can be overwhelming trying to get through it all.

Stress Management and Where to Find Dr. Kelly

But don't, you know, don't get lost in goop, doctor google. Okay, like like don't go searching for a magical snip that you're going to give it a magical pill and then it's all going to be okay.

But it just doesn't work that way. Right? It just that's just not the way our biochemistry works. You have so much you can do whether you have those snips or not.

No. Again, I don't I don't think there's anything wrong with going and seeking out more information. So, like, go and look for those those panels and things.

But you have so much that you can do, you should feel empowered because you have everything under your control and epigenetics, how your genes are expressed.

So, you know, every every day I just join a kind of like meditation group. And they say, you know, don't think about like, what can I do for self-care?

Like this weekend or tonight? Think about like in this moment, what can you do for self care? Can you take a deep breath? Can you text someone and just tell them that you appreciate them right now?

Like, can you just get up from your desk and just stretch a little? So I'm just like, in this moment, like, what can you do just for yourself? Just little, tiny moments.

And it's really it's it's helping to just kind of moderate my stress level because stress will take you down. That is like you can have the best diet, the best sleep, everything, but you are just so much stress that you can't handle it.

Your body's just going to revolt. So I love that. I love being in the moment. That's so beautiful. And if you look at kids, they do that all the time, right?

They take moments for themselves. They do. And and as adults, we don't. And we're so stressed out about stuff. So yeah, and I think I'm a recovering type A personality.

That's what I say. Yeah. Right. So I think that it takes it's not going to be overnight, but gradually you'll see the changes. So I love that advice. It's amazing.

So, Dr. Kelly, tell us where we can find you at, how people can get a hold of you if you have a website, Instagram, anything like that. Sure, I have it all. So I'm at drkellyhalderman.com.

I am on Instagram at Dr. Kelly Halderman I'm on Facebook. I have a pretty big following and I'd like ten, 12,000 people on Facebook that follow me. And I just try and put out really good translational science content, not medical advice.

Go see Dr. Jen for that, but really just trying to help empower people get really good information and not information that can lead them. Awesome. Well, thank you so much for joining us today.

I love the talk. Yeah, me too. Thank you. Take care.