Antioxidants and infertility

animal tissues, including humans, have antioxidants in the tissue. But a good percentage of the people have problems with their antioxidant pathways. That is a really big driver of infertility.

And if you address those kinds of pathways, there are things like catalase and superoxide and CoQ10 and glutathione, and there's a lot of different antioxidate pathways involved.

If you know which ones are going kind of a little haywire, in that particular woman, and then you address them with a targeted way, you can kind of have an anti-aging of their eggs and you'll actually see their anti mullerian hormone levels get better.

Welcome to the genomics discussion

Hi, welcome back to the Healthy by Dr. Jenn podcast. Today we're going to be talking about genomics and why we should be paying attention to genomic when it comes to women's health.

today we have Dr Sharon Hausman Cohen and she got her master's in her medical degree from Harvard University and She has been in clinical work and research And she decided to start a company on genomics called Intellix DNA.

She resides now in Austin, Texas, and she does go up to the East Coast to visit her son and daughter and grandchildren. So welcome. So excited to have you here.

Glad to be here with you. Yeah. And I'm so impressed that you left. Well, you were doing having your practice, your clinical practice and you started a company at, can we ask what age you This was my second clinical practice.

What happened is I had a large practice, it was myself and five other practitioners, a few physicians and nurse practitioners. And it had 7,000 patients and I wanted to do something smaller.

Why the company was founded

So I want to to a much more personalized medicine practice and as part of that, because of my background and research, I wanna to use people's DNA to help them understand what was going on, how to prevent cognitive decline, depression, anxiety, heart disease, whatever was in their family.

And so at the time I was about 50, 50 years old, 51. And what happened is we started testing out all the different options out there for genomic reports and they really were either geared at pharmacogenomics, which is choosing what drugs, not what my patients wanted.

They wanted to understand what was going on. or they were looking at nutrigenomics and why looking nutrients is fine. I mean, the other important, it didn't give enough information for me as a physician.

We didn' set out, my co-founder and I, we didn''t set to build a genomics company. we were trying to solve the problem of what are we going to do to help practice precision medicine.

And then we built it because there was no tool out there. And it just kept growing. We started with things like, again, cognitive decline and mold-related illness and a lot of topics that my patients were concerned about.

Then at conferences, I would meet people that were involved in autism or women's health or whatever, and we just keep expanding. Yeah, it's been 10 years.

I think it is really important because our genomics They're different for everyone. We all have different combinations when you look at a report, but also we can influence our genomics, and that's epigenetics, by supplements, lifestyle.

And I think what's nice is when it comes to personalized precision medicine, sometimes we need to actually know what we to hone in on. because otherwise it's like we're just doing everything.

Absolutely. And I think that was one of the big, there were two big problems that I saw in the integrative medicine and functional medicine space. One was they were still following the pattern of algorithm driven medicine.

So if you think about if somebody has, again, cognitive decline or depression or hypertension, you go to a doctor and like, well, this is first line, This is second line.

This third line But if the cause, the root cause for you relates to the third line, then you're going to go through a year or two of trial and error before you ever find something that works.

Or maybe you have an unusual cause and you'll never find that something works for and they're very much into labeling. So the first issue we wanted to address was, instead of labeling people, so there's so many children labeled with ADHD, for example.

Instead of labelling them, let's look at the root cause. For some of them it's nutrient transporters. And for some it has to do with increasing their brain connectivity.

In other people it had to with converting their dopamine into norepinephrine.

Root-cause medicine over trial and error

Once you understand the cause, you can help them get well. And I know that that's how you practice medicine as well. And the other big problem was people would come to us and they'd been to, again, an integrative or functional medicine practitioner, and then a list like this.

Well, I've been told to do 20 different things. Which ones are working? And so when you understand the root cause, you can get much tighter with what someone does.

Because if you pick the five or six things to with diet, lifestyle and supplements in a very targeted way, You can the outcomes you're desiring without overwhelming them with so many different Yeah, and overwhelm can be a thing.

People can get overwhelmed with all the supplements. And it's interesting because like you said, if your genetics are a certain way, you can't just slather on a bunch of supplements, like, You really need to get to that specific genomic problem that's happening.

And so what like for you mentioned with ADH, what would that look like in the report that maybe they change something in their diet or eliminate something or add on a specific supplement?

Absolutely. So there was a study showing that if you give children like all comers, no genomics with ADHD zinc, you can often lower the amount of Adderall and stimulants used by 30%. But if you take the group of children that have problems absorbing zinc, that becomes a much bigger impact.

But, if there is a child where their issue is more that they can't make some, again, norepinephrine, well, then you might be giving them vitamin C and exercise and some of the, like, spore-based probiotics, which you can even grow in yogurt so that you're not overwhelming the children with lots of different supplements.

And that might what's ideal for them. If it's someone with brain connectivity, you can actually take that child for biofeedback or different sort, different forms of neurofeed back and you could grow new neuronal connections.

You can also use supplements like Citicoline or other things that increase neurona growth factors. So it becomes a very personalized thing. And the reason that that topic, so pediatrics is one topic that I feel passionate about as a mother and grandmother, is we know that being on stimulants for a long time, and some of these kids, there's even a gene that increases your risk of ADHD starting at age seven or more, that's one of the ones that relates to connectivity and dopamine and things, it increases the risk at Parkinson's later on.

And we know that the number of neurodegenerative diseases is going up. So if we can help children not be labeled, not having to go to a psychiatrist to get stimulants or even a primary care, and not putting themselves at risk for using an addictive drug that can have negative side effects, then you're giving that child opportunities for their whole life.

I agree. It's crazy. The last pediatrician that we went to in Ohio, when you would call in to hear a doctor, they would have press one, press two.

Personalized ADHD and neurodivergence care

One of the press Words that they would say, you know what they say is if you are having to get a refill on your stimulant medication or your ADHD medication is what?

They said press 3 and I'm like they put that many people have any kids those many kids on stimulants and it is it's You know one thing too, though. I found that Some mothers, some parents, and mothers are who drives the healthcare and kids, but they'll just give up.

They're like, I've tried everything, so they're just going on a stimulant. But they haven't tried genomics. So they are just shotgunning it. And of course, they were frustrated when it's not working because it is not Precision, it's not precision.

It's like if I tried to shoot a hawk in my yard, you know, like me versus my husband. He is gonna get that hawks so it doesn't eat another chicken. Actually, It is illegal to shot a Hawk in Tennessee.

So they're just going down. They're going out. But for these parents, I think that they need to know if you haven't looked at genomics, You probably should.

Yeah. And the same thing, and I know we're gonna talk about women's health. That's the thing because the people worry about Women's Health do worry their kids.

We don't have to talk about kids if we're talking about women. That's right. But the other thing is it doesn't just work in children and it does work just in ADHD.

It also is a great tool when you have a child who's neurodivergent. And so if you think about autism, autism went from one out of every 1,000 children to one of out every 35 boys.

Actually, one in every 32 boys and is doing so, so well. Genomics has transformed the field. We have, amongst our IntelliX DNA users, hundreds and hundreds of recoveries and thousands of children getting dramatic improvements.

So definitely think about the root cause when you're thinking about your child's health. That's good you started this company, you know, in your fifth decade of life.

Let's talk about women. Now there's two different categories, I would say genomics for women, is fertility, looking at fertility and then looking like perimenopause, menopausal.

So let's talk about fertility in why genomics help with those women suffering from infertility. Absolutely. Right now, a lot of women are having problems with fertility.

And doctors will often say, it's just your age. Oh, well, you're in your 30s. You're cooked, as my kids would say. Sorry. Yeah. Except we know that Those drivers of aging are things like oxidative stress, and for our listeners who are going like, wait, that's a word I didn't learn, think about an apple.

And as an Apple, when you slice it in half and it turns brown, Well, humans, as well as any animals, you can take a piece of chicken or meat and put it on the counter, and it's not gonna spoil in that way.

And that's because animal tissues, including humans have antioxidants in the tissue. But a good percentage of the people have problems with their antioxidant pathways.

That is a really big driver of infertility. And if you address those kinds of pathways, there are things like catalase and superoxide and CoQ10 and glutathione.

There's a lot of different antioxidant pathways involved. If you know which ones are going kind of a little haywire in that particular woman, and then you would address them with a targeted way, you can kind have an anti-aging of their eggs and you'll actually see their anti Mullerian hormone levels get better.

Which is unheard of, by the way. Except there's lots of heard of in our practice and in people who are using the genomics. And so we have all these cases.

The reason we started our Women's Health and Fertility Report is just using a report that we were using for our overall health optimization where we still looked at oxidative stress and inflammation and coagulation.

All of a sudden, we had a woman who was 40 years old, had been trying to have a baby for eight years, and had her first child at 41. because we were able to identify things.

Another woman who had tried to have a child for a number of years then had gone to IVF because her anti-mularean hormone wasn't good.

Genomics for fertility and egg health

So she did IVS, failed IVs, and even after failing IV, she actually hired a surrogate. Surrogates got pregnant. But while the surrogate was pregnant after optimizing her genomics, working with her diet, with supplements, lifestyle, she got pregnant.

Surrogates actually miscarried. She now has three healthy children and so, and they all had different causes. So I mentioned oxidative stress, but you can't go, well, then why can I just take antioxidants?

That'll work if those are your problems, but you'd have to know which one. But that first person I talked about, she had a problem with sticky platelets.

So platelet is part of you cut your skin and you want to kind of make that, you don't want it to bleed out of your cut. Platelets are part that. First responders to help with the clotting.

Well for sticky platelets, aspirin is the solution. I was gonna say she kept miscarried. She just, well, never got pregnant. So she also couldn't make CoQ10, which is an oxidation one, and had a few other things, you know, just one or two other thing that we addressed.

But the other woman, the woman that had the three, now has the 3 babies, her issues were more about inflammation. You can have SNPs that were, SNP is a little change in your DNA.

There's SNPs with detox, there's snips with inflammation, and there are SNPS with how you implant. Do you make that kind of comfy lining for the baby to implant?

And the women who don't make the comfy linings, you can know that and you give them progesterone. So there is

so many components. And even once somebody decides they want to do IVF, Genomics can be super helpful because there's some decision trees of, do we do it with one hormone or two?

One hormone is called FSH, follicle stimulating hormone, and the other is luteinizing hormone. And whether you do with with 1 or 2, depending on your genomics can triple the take-home baby weight because women who naturally have overactive luteinizing hormone receptors, you don't want to use the LH.

That can lower their fertility. Whereas women, who have underactive, do want use it. So I love precision medicine because it just lets us treat the patient instead of guessing.

I, the problem with IVF that I see is that if we're not using precision medicine, well, first of all, if were, we wouldn't even have to do a lot of IVS number one and IV F we are putting hormones in someone that.

Already their body is not primed to be pregnant, you know, so should we be doing this? so first it's affecting the health of that person and Then second IVF is affecting.

The health. Of babies Yeah I think it does affect the Health of the woman because there are some studies showing that when you're getting all that hyper You know some women will get overstimulated That can contribute to their risk of ovarian cancer down the line and to other problems, but exactly you're taking a woman who is again body may not be ready.

And so people think I'm going to go to IVF and I am going have a baby. But what they don't realize is that if you dont prime and optimize your body beforehand, the take-home baby rate, you can ask your doctor if your doing IVS but most IVD doctors their take home baby is still only about 35 to 40 percent.

So then you're going through that trauma of having you spent tens of thousand dollars and maybe insurance covered part of it, but you still having the trauma, of getting your hopes up for having a baby and having miscarriage when if you'd optimized your health beforehand, it would make a lot more sense and you have a higher rate and a high likelihood of carrying that baby.

So much emotional trauma and I know our body keeps that score and and that is really hard. Well, now let's move on to women that are maybe perimenopause menopausal they're done having babies and what I think is so important I talk about so much I talked about this in my book is estrogen metabolism.

And we can break down our estrogen into a good, a bad, or an ugly pathway. And that ugly path way can lead to DNA damage and problems. So how is genomics with intellect's DNA?

How is that different from like the urine, the dried urine test, metabolite urine? Yeah, because anytime you do a blood test or a urine test, you're getting a snapshot in time.

And so the nice thing about the genomics is those women that create that what we call 4-hydroxy estrogen, which is that ugly one that's not good for you, it can increase the risk of breast cancer.

It also relates the same pathway that causes it. also affects how we metabolize a lot of other toxins. Well, the thing is you can know which those women are and it's an overactive pathway.

So just because you have a gene variant doesn't mean that the pathway is bad or underactive. In this case, it is over active and is making it more toxic and that causes more what we call DNA adducts and problems that cause DNA damage.

And so If you know that, you can use things like resveratrol, which is from red grapes. It's also red, purple sweet potatoes, blueberries. There's other supplements as well.

there's one from tangerines, Neurinogen. You can obviously use foods and you slow it down so that you control that overactivity naturally. And that's really important because first of all, you know that that your genetics because

when I'm looking at someone times these estrogen metabolism.

It's like, yes, it's a snapshot. You tend to go down that pathway more and then we adjust versus genomics. We can really pinpoint. Yes, we know you are made this way.

And that's what we have to pivot from. And I think that, again, if it was as simple, so when you measure urine tests, you can measure estrogen metabolites, but when talk about your hormones going wonky, which a lot of times women will come in and they always think it's their hormones, and of course there's a lots of other things that can be their mitochondria, hormones is the first thing that comes to mind.

Even with hormones there are so many things with your hormone that could make you feel off. So, sometimes it is that metabolism of estrogen, other times it's the receptor.

So think of a receptor as a docking station. If your estrogen dockings station is overactive, you might be prone to more endometriosis or fibroids or things like that pre-menopausal or heavier periods, but post- menopause that same overactive receptor turns on a whole different set of genes and you're prone to more active inflammation.

Well, if you know that, again, we can slow down that inflammation either with estrogen or with some other selective estrogen modulators like Riloxafen or by addressing the downstream inflammatory pathways that get turned on.

And those are just, again, some of the examples because also how you convert testosterone into estrogen can affect so much of how go through menopause as well and how experience hormones.

So good. Another complaint that people have when going through the transition to menoppause is that histamine release, right? But they don't know it's histamines release.

They just are starting to wake up at night or they're itchy. And what genes can look at that pathway? Yeah, and so part of that relates to the inflammatory regulators.

There's a whole number of genes that relate to how we turn on our mast cells, our allergy cells and histamine releasing cells.

Menopause, estrogen, and hormone pathways

Some of the waking up at night is histamines, but part is also that same gene that we talked turns the estrogen into the kind of ugly is part the responsibility for metabolizing melatonin.

So you start to If you over break down, if you're breaking down your melatonin too fast, that can affect sleep. And then part of the mood stuff is the estrogen pathways interact with serotonin pathways.

So when your estrogen gets low, you also synthesize, make less seratonine, which is that wonderful chemical that we release when we're holding a baby or holding puppy or experiencing nature.

Hmm, that's interesting. So all of these things and the fun thing about genomics is you can have four different women going through menopause and one might be like, I don't even know.

I didn't know I went through Menopaus because they had no symptoms and maybe they have a hysterectomy so they didn' know when their change had happened.

Another woman has that hot flashes and another woman had the skin changes and insomnia and mood swings. There's so many different components and again, There's so many things you can do.

I mean, everything from pomegranate juice to prescription medicines. But if you understand what's going on, you give one an advice with much more precision.

Yeah. Well, even the melatonin thing, if there's immediate release, melotonin and sustain release. So if someone can't, if they're metabolizing that so fast, they might need the sustain release.

So that's helpful. And I'm sure the melatonin receptor with like breast cancer with antioxidants, I am sure that is playing a role in everything too. What about vitamin D, who I know your genomic testing specifically looks at?

those like VDR. Yeah. So we look at over with the panel that most people buy, which is like an executive report, except if they're in the fertility, there's a separate report for fertility and autism is a separately report.

But that kind of executive reports which covers everything body and everything brain, we don't look just at the vitamin D receptors. We look everything from how your body can make vitamin d from the skin to how it can carry it through the blood to get converted to the active form.

And one of the gene variants that's really useful to know about is called GC, and it's a binding protein for vitamin D, because if your vitamin d isn't bound to this protein, it gets rapidly degraded.

So those people that don't have enough of this protectant or binding they tend to need, instead of just like 2,000 a day, they need more like five to 7, 000 a days.

And if they're not getting about 50, 00 a week, their levels go low, which can increase osteoporosis, cataracts, heart disease, autoimmune, everything, because of the vitamin D receptors.

So we also look at the combinations. Vitamin D receptor's job is to turn things off. If you have problems with your vitamin d receptors, It's one gene for vitamin BDR.

But genes are like, I don't know if you're listeners how old they are, but you know those ribbon candies that look like they're folded? They're making it back.

Retro candy is back, yeah. Well the genes, are kind of like that. They are this big folded protein. And over here, it might interact with the bones. And, over, here it may interact your blood cells.

Over here with your kidneys, and over with here the brain. So, you can have a change in one location of the vitamin D receptor and its effect will be that you cannot stop bone remodeling which can give you osteoporosis.

Another part of it can't stop your immune system so you can get autoimmunity. And a third part might interact with cancer cells and contribute to cancer stuff.

So we also look at the VDRs because how your vitamin D interacts with VTRs can be modulated. There's things you could do. If you don't make enough VPR, there's different things like sulforaphane and estrogen helps you make more V DRs.

That's part the anti-aging because, again, stopping some of the aging processes. Mm-hmm. Lots of fun things. Well, and just someone might feel, well, I'm getting the vitamin D blood work, you know, but it's a snapshot in time where the genomics, know you are prone to that and it is going to be a problem.

I feel like, you know, because just the snapshot, it's not giving a bigger picture. And some, I agree. I think some vitamins that becomes even more important with, so vitamin D it is important because your levels though don't vary quite as much as with some of those water soluble vitamins.

Yeah. So like B12, You can have completely normal vitamin d levels in your blood or B6. but not in your brain because if you have copies, two copies of the variant, it's a separate transporter that transports things into the brain.

So that's why genomics is so much fun because you can see this one person that is having frailty as they're going through menopause or maybe they are having a little bit more pain.

There's so many different components, and this allows you to go, oh, do they need CoQ10? But yeah, so there's different ways of being able to say, okay, for your fatigue, your pain, or your menopausal symptoms, what's going to help you?

Not who you watched a video with online. And it's a different concept of medicine. And my co-founder, her name is Carol and I, Carol I founded this company because our goal was to change the way medicines practice to look at the root cause.

That hasn't been how medicines practiced. I think we really are so excited to be able to do that from the time someone's little baby all the up through the times that they're a senior and dealing with diseases of aging.

And your genetics don't change. So if you get one kit and one test, you're good. Well, so how does your genomics testing differ from the ones on the internet that they're getting ads on to order without a doctor or, when 23andMe was a big thing, how is yours different?

That's a great question. So, we are a separate category. We're what's called a clinical decision support tool, which means what we have can only be ordered by a clinician, a licensed healthcare provider, an MD, D. O., a naturopath doctor, farm D who is advanced training, nurse practitioner, P. A., etc.

And the reason for that is by limiting it to people who have medical training, we are legally allowed to give so much more information. So every sentence is referenced, everything is evidence-based, but we can even say in the literature, here is the dosing, and here's the information, We can also give information about how a medicine interacts with a gene.

We give diet, lifestyle supplements and medications But when I've looked at the ones that are sold direct to consumer, you might have a gene associated with diabetes, and you may have three different genes associated diabetes.

And it kind of gives the same answer for everything. Eat less sugar, eat less carbs, exercise. It's like, well, I don't need DNA to tell me to do that.

Whereas when you're looking at IntelliX DNA, if you have gene that causes, contributes to diabetes that's in a mitochondrial pathway, it's gonna talk about you know, alpha-lipoic acid and things that work on that mitochondrial pathway.

If you have one that contributes to incretin, which is kind of like GLPs, and it's gonna talk about what natural foods like whey protein can increase that.

Those people have low insulin. What can increased that increten production and help you make the insulin? Things like acromensia, things like terzepotide or the GLP-1 drugs.

And then the third category might be somebody, again, who has problems with more of the classic insulin resistance, where it's more berberine and different medications.

And we do that a thousand times over, whether you're talking about brain health or metabolic health, or cardiac health.

Vitamin D, fatigue, and broader health markers

With a general direct-to-consumer product, you are going to get less about interventions, less specificity about how the gene works, and less how it relates to real, true health And you're also not going to get the breadth of information that relates to true disease states.

So we do all that nutrigenomics. But if you are helping someone that has depression or you help someone with cognitive decline, you need to go deeper into those genes that contribute to those root causes.

And we that. It's real different. Yeah, and it's great because you also do not shy away from saying what medications might and can work. So it really gives the full pictures.

It's a wealth of it. Like a lot. Information overload in a way, so it is good when you work with a practitioner to go through it, this is what actually matters with your clinical picture right now in your kid's life because I've ordered a few pediatric ones and they're just so good.

So thank you so much for just clarifying everything, what genomics is, how it can help with women and children. I would love to ask you a few fire round questions to put you on the spot, even though you're always so poised and you are such a great speaker.

So tell me, What is your favorite biohack that actually works? My favorite Biohac, okay. You know, I think I'm not going to the fire round questions because, because there's so many different things, but I don't have one favorite because my favorite for me is Ashwagandha because I am a high adrenaline person and Ashvaganda lowers that kind of fight or flight cycle, the cortisol, my favorite for another person would be different.

So if it would include me, Ashwagandha, I would say, you know how some people are like, don't take my estrogen away? They would rather practically like give up their dog than give their estrogen.

For me it's like don t take me ashwagonha away. Don't hide it. If you want to make you mad, like hide your ash. Right. That's great. if you could eliminate one toxin from the world right now, what would you pick?

I think that I wouldn't go with the persistent chemicals, all the microplastics and all We don't really know how to get them out of people's systems very well.

Yeah, it's not easy. It's expensive to give microplastics out, like total plasma body exchange. And so many of these things can contribute to hormone interruption in our whole body for years.

Even, you know, there's a lot of concern to me. There's animal studies where if you put turtles with all these different toxins in an environment, they try to switch their gender.

So we're not seeing that at all nowadays. And so there's a lot of stuff going on in our world and how is it affecting people? It's so sad. People who get exposed to different toxins and it creates mental health concerns.

So I don't have any favorite, but again, the persistent ones are particularly important. Yeah. Can we just get rid of plastic water bottles? Yes. Yeah, but I just see like I see a guy to gym like with his plastic water bottles and I'm like Why like?

How clinical genomics differs from consumer tests

I actually like a mess around with people with that that I know I like why are you drinking out of plastic? Water my kids to tease me They'll crunch it because I told them that increases microplastics and they'll be like look mom only my teenager does that my boy.

And he's like, look, mom, I'm drinking out of a plastic water bottle. Yeah. Styrofoam as well. I mean, there's so many, and you see, again, everything, you know, people were traveling internationally and then it's just filling up landfills.

But I think that the health effects for me as a physician are really concerning. Just do the best you can. That's the thing. I love our glass. We break a lot of glass in my house, but we use a lotta glass for everything.

And glass containers, I think that if people are kind of like, okay, can't get rid of every plastic in life, do not put your hot leftovers into a plastic container.

Get some glass containers. You can get it from Costco or wherever. Yes. And use glass for the things whenever

you have anything warm. Do not put a warm drink into plastic.

Right. Take the lid off of your coffee if you're drinking from a cup. That's an easy way. Yeah, I love all those. Last question. What is one word you want to leave with our audience tonight?

So resilient and humans are resilient when Carol and I formed our first practice, we called it resilient health. And I think that over the years studying integrative medicine, um, I've realized how much regenerative potential the human body has.

So don't feel like you've been diagnosed with fibromyalgia or your child's been with autism or ADHD, or you're just not happy that you can't change that.

understand the root cause and know that we humans have a lot of resilience. Yes, we do. I love that. Thank you so much. And please, would you tell the audience where to find you and your company?

Fire round and closing thoughts

So to order an Intellix DNA reporter to learn more, go to the Intellex DNA website. and it's spelled I-N-T-E-L-X-S DNA and you can click for find a provider in your state and its an intelligent approach to DNA.

That's why there's two L's and then two X's because the co-founder and I are both women, so two x chromosomes. So that should help you and there should be plenty at this point.

We've been around for 10 years and we have, and if you have an integrative or functional medicine doctor that you love working with, don't go to the website and find the doctor.

there is a handout you can bring to your doctor and we will give them free training, free mentoring and get them started so that you work with the person you feel comfortable with.

So we're always happy to train people. And I can order them if you're in my state and I would love to run more of them because they are so fun to read.

Yes, obviously if are here in Tennessee, you know who to go to. Or some other states. What other States do you do? Michigan, Ohio, Florida, soon to be, and Texas.

So I'm working on them all. That's great. So thank you so much. Appreciate it. Glad to be here. Thank you.