Introduction to Biological vs Chronological Age

Welcome. Dr. Z, I'm so excited to have you here and I'm so excited to dove into this topic that I think is just so vital and important in understanding and reframing fertility and coming from a different perspective.

And that is the question of age. So I know that traditionally fertility is so like kind of pigeonholed into this idea of like, Oh, you're older. So that's why your fertility is not have any or that's why you can't get pregnant.

So I really love that you're bringing this different perspective, which is the idea of biological age versus just sort of like chronological age. So can you share a little bit about what that means and what that has to do with fertility? Yes.

So chronological age is the age we are based on our birthday. How many times we've been alive, gone around the sun and we know that age matters and for instance, in fertility and in infertility.

But what we're finding now is that instead of your chronological age being the most important factor, we actually now have a marker called biological age, which is the age of your cells or the age that your DNA is saying that you are, which is different than your chronological age.

So biological age is actually a measure of cellular health. And this was something that I was seeing in practice. And I'm assuming you were seeing in practice that like even women who were late thirties, early forties, when they did the right things to get healthier, that we would see success, that they could get pregnant or they could hold a pregnancy and have a healthy baby.

And so I had already, you know, being in practice had this frame that it's more about health than it is about just age. And then when this biological age marker came on the market, I first started testing it in my practice of like, you know, is this the measure of age that we're actually looking at for fertility and took it out and did it on myself as well.

And that's a that's a story we could get into if you want to. But and went into the research and was like, well, does this does this biological age marker like theoretically it's what we're seeing in practice that the healthier the cell, the younger the biological age, the better the fertility outcome does.

That is that what the science actually says? And the the truth is. Yes. So I was able to find a paper showing that women who had advanced biological age, meaning that their cells were saying they were older than their birth, they were saying they were had had poorer outcomes on egg freezing.

So they got fewer eggs, fewer embryos, poorer quality embryos and fewer life births. But but what's crazy is this is true even for women who were chronologically younger.

So if we had a woman who was 30, we would think she'd she'd be able to get a good amount of eggs if she's freezing.

How Biological Age Is Measured

Her eggs are going through IVF for whatever reason. But if that biological age was older, she got poorer results. So we're basically the short of it is we have these two different markers.

Yes, age matters for fertility. But what we're seeing is biological age is, in my opinion, more important than chronological age when it comes to fertility, to a point, of course, we still have menopause.

Yeah, yeah, absolutely. I think that and we also know that menopause even happens for different people at

different ages. So there's not like a specific age that can be the cutoff because everyone's bodies are different.

Yep. So I feel like that's where this really becomes useful is how do we frame this in the context of the person that we're working with or or like have sitting in front of us?

And what is it like? There are all of these things that are influencing what we know as fertility. Like we know that toxins influence our fertility. We know that food and the lifestyle and the amount of alcohol we consumed in college is affecting our fertility in some way.

So really being able to measure biological age, would you say that those things are some of the factors that have influenced biological age. 100%? And it is it's the same things that we see in the fertility world that improve fertility at any age are the same things that rewind that biological clock.

So yes, I am saying it is possible to rewind that biological age. So so again, difference is here you can't rewind that chronological age, you can rewind that biological age and that does result in better outcomes.

And yes, the things that help rewind that clock, I broke them down into what I call the fast framework just so I can remember them. Food fasting, fitness associated conditions, sleep stress supplementation, toxins and trauma.

And there's a few others that like float in there. Like sometimes I add in faith because spirituality for some women is a very large component of of their journey.

And there's interesting research on faith based communities, not necessarily a specific religion, but faith based communities living longer and therefore having younger biological ages and cellular ages. So so yeah.

So those are, you know, all the lifestyle categories that I, you know, would look at with any fertility couple. We look at both from that biological age perspective, which therefore is for fertility as well.

Yeah. Yeah. Awesome. So I know you kind of hinted at this, but how are we testing biological age and like what is it testing just for the geeky side of us.

Yeah. So they're right now on the market, there's a couple of different types of tests out there. So what we want to look for is obviously the most accurate and the way to do that is through blood.

So there's also urine and saliva on the market, but those results can change based on hydration and different things. So we want to look at blood and what we're looking at in blood.

We're looking at a specific immune cell in the blood. So it's usually collected just via finger prick. And what we're looking at within that cell is the DNA, and we're actually looking at epigenetics.

And so specifically we're looking at methyl markers on the DNA. So we've got like our double helix and then it's all like compacted into different shapes to make it fit into the nucleus of the cell.

And we have these I like to think of them as like little balloons that like attach onto the DNA and they act as a switch or or like a volume knob that turns a gene on or off, essentially, and they can land in different places.

Methylation, Fertility, and Epigenetics

And there are some places where we want more of these methyl groups, and there's some places where we don't want more of these muscle groups. And so what we're looking at when we're looking at biological age is we're collecting data at about 900,000 points on the DNA, at least with this particular test.

And then we're running that data through an algorithm that's maybe not using those 900,000 points. It's using a smaller number that that this particular algorithm is what predicts what gives you that biological age based on what sites are methylated?

To what degree does that make sense? Yeah, totally. Okay. Absolutely. Yeah. And I know that this question comes up a lot when I talk to people. So what is methylation in your work and what does it have to do with fertility?

Yeah, I mean, and I think there's a few different ways we're looking at methylation in the fertility world. So one aspect is how these methyl groups are turning genes on and off, and that's telling us what genes are being expressed.

And some of that information does get passed down to our children. So that's you know, giving our children either the best chance at health or not the best chance at health for their entire lives.

And there's other uses of these methyl groups in the body. So we have the methylation cycle, which works with a number of genes that code for enzymes that work a lot with a marker called homocysteine and with different forms of B12 and folate.

And so if we have issues in these genetic pathways and our enzymes aren't working very well, we can basically it can create more inflammation in the body by raising this homocysteine.

Or you can have like a functional deficiency because you're not able to make enough of the right form of folate, which we know that is so important for fertility, also important for combating our toxin exposures that we're all exposed to.

And if that methylation cycle is off either through a functional deficiency or just because because those enzymes, those genetic snips aren't working well enough, that then affects the age of your genes and how your body can turn genes on and off and how that gets passed down to babies.

So what I see is when people have like an empty EGFR mutation, for example, is one that most people have heard of. We often so one I'm checking homocysteine and I'm checking those methylation pathways and giving them the right nutrients.

But we also see that impact biological age and how the body can regulate those genes and turn those genes on and off. So that's one of the things that I see accelerate the biological clock.

That was one of the things that accelerated the biological clock in myself is that I you know, I have an MD, EGFR and my TR mutation in a serum, but different, different body, different, different episode.

And, and I wasn't like take like, you know, I'm an naturopathic doctor. I thought I was doing everything right except taking my supplements regularly.

You know. That's one component where I was like, so when I took my test initially I thought I was going to come back at 28. I was 33 at the time. I came back four years older than I was, and it was a reality check of like, Oh no, I'm not actually doing everything that I should be doing.

And if I want to have a baby like I was, you know, single in L. A., mid-thirties, you know, loved my career, but wanted the family but didn't have the partner yet.

And this was my reality check of like, oh, if I don't really get on top of this now, I'm going to have trouble in four years because my body already thinks I'm 40 years older than I am.

And so that was my inspiration. I mean, it really took me seeing that and knowing like, no, I absolutely want to be able to have my baby on my own when I when I can on my timeline.

And so I like got on top of my supplements. I also did fasting for the second time in my life. I did it the first time in medical school and was like, I'm never doing this again.

That was the thing I was most resistant to. And it's also very controversial in the fertility world. And it's not

something I recommend if somebody is actively trying to conceive but can be very effective for like resetting that cellular health and rewinding that biological age very quickly.

So I faced my fears and worked through some food issues and did that and and personally was able to rewind my clock by a full two years and eight weeks and then over the next year rewound it more so when when I came when I was 35, I actually came back almost four years younger.

So I went from about four years older to about four years younger and a year, year and a quarter, which is fairly impressive. And and so that's what I helped, you know, help my couples in my mom do these days.

And yeah. Yeah. So what are some of the things that people can do to realign their biological age? Yeah. So if we work through the fast framework, it's our, you know, food, fasting and fitness.

Personal Age Reversal Story

So with food quality first nutrient dense, you know, I think there's a lot of individuality, but we definitely want to get in all those, you know, high folate nutrients we want to get in.

I'm a fan of of like grass fed organ meats in moderation and for the right people. I know some people, you know, couples who are vegan and do great. And I have couples who are, you know, more on the carnivore side of things.

And and, you know, I'm bringing a little, little more balance on some some sides, but like quality, high density nutrients, organic, because you got to keep the toxins out.

And then also looking at things like blood sugar. So if somebody is having low blood sugars, that signals stress in the bodies. We're also using food to send the right signals to the nervous system, that there's plenty of food in the environment, that everybody's safe and food is information.

So, again, getting all those nutrients in fasting, which, you know, is just timing when you're eating. And I'm typically a fan of of the 1212 so not eating, you know, from let's say 7 p.m.

to 7 a.m. for some women, doing a little bit longer works, but not for everybody. But the 12 hours is a nice gut rest doesn't quite get you into that autophagy stage, which is where we're cleaning out that like, you know, old cells, cellular debris, etc. But you know, it's a great place to start.

And then kind of again figuring out like an individualized place from there. So if I have somebody who's trying to conceive in the next three months, we're not really doing any fasting other than a 1212, which is not really fasting.

But if I have somebody who will give me three plus months before they're going to start trying officially, then I do recommend either doing something like the prolonged fasting mimicking diet, which is a nice way to get in the benefits of like autophagy and getting in like a pretty intense fast with not as much suffering.

So I say we've got like 80% of the benefits of a water fast with only 20% of the suffering. So doable. Totally doable as how I how I would say it sometimes a water fasts like 2 to 3 days water fast timed with the cycle.

So we don't want to be doing anything that's going to mess with progesterone in that luteal phase. We also don't want to mess with ovulation, so making sure that, you know, if we are fasting, we're doing something more intensely that, you know, it's time to I like day like 2 to 10 keep it in that window maybe a little bit right it after ovulation but nothing crazy and again not while trying and then fitness we want to find that sweet spot.

So not too much not too little. I usually recommend moving every moving every day. So if that's a 30 minute walk, that's great with a little bit of intensity like sprinkled in there.

So maybe that's, you know, 1 to 2 days of heavier strength. Maybe that's one day of like in high intensity intervals timed at the right time of your cycle that week.

So again, it's going to be like individualized. I think most of my patients air on the not enough movement and exercise side. But occasionally we you know, I have like some athletes who, you know, maybe need to back it down a little bit and can actually be creating more stress and more inflammation in the body if there is too much exercise.

So that's are food fasting and fitness associated conditions would be like the MPH, our mutation or other methylation defects, blood sugar dysregulation issues.

So either low blood sugars or high blood sugars. High blood sugars might go along with like a PCOS picture. So sometimes hormonal imbalances will go in this category.

So this is really more of the like you're seeing a practitioner for some sort of like specific health issue that is impacting aging, impacting fertility.

So this is kind of like our our catch, all other things kind of category and then our asses sleep. Sleep is so important. Our circadian rhythms then help regulate our larger bio rhythms.

It's where we repair. It's where, you know, our hormones learn like how to, how much and when and how to secrete. So sleep is super important and so important for the nervous system and mental health as well, which is a huge component when we stress.

So what's interesting in a lot of the biological age studies where they're showing age reversal is I think there's only one that I think only Dr. Claire Fitzgerald has incorporate rated like a specific like mind body technique.

And in one of the studies they gave, I think it was just 20 minutes a day.

FAST Framework for Rewinding Biological Age

And I think it could either be ten and ten or 20 at one time, but it was like a non specific like meditation, like it could be a breathing exercise, it could be like listen to a meditation recording.

It didn't give any more like specific instructions, at least not in the published paper about exactly, you know, if that had to be anything. And they had really good age reversal across their whole group.

And that was one component of it. It was a whole lifestyle protocol that's based on a lot of what we do. Not your path like medicine actually. So you know we're seeing this works across the board but even just 20 minutes a day like without changing the boss or the partner or like any of the stress inducing situations, just giving yourself that time to kind of counterbalance anything else that might have been going on in the day was found to be very effective.

And literally every study I've ever read, published on meditation, just has all of the wonderful benefits like we see improvement in inflammatory markers, we see improvement in gene regulation like gene expression, like blood sugar, you know, subjective measures like, you know, perceived stress and whatnot, cortisol levels.

So literally, there's no reason not to do it. Yeah. Yeah. And I usually start there in the mind body section because, you know, a lot of our stress is internal and how we how we think about life stories, we make up about ourselves and other people.

And I think sometimes we don't realize we have more control over our state than we actually do. And it's very normal to believe our thoughts and very normal to, you know, and I'm a big proponent of feeling our feelings. And but sometimes we have these like underlying patterns that and this also kind of relates back to the trauma piece.

Sometimes we have these, like whether you want to call it subconscious belief, subconscious programing or even conscious beliefs in programing that are creating like re triggering this stress loop every day.

And if we can identify that and go back and heal that, and then we're no longer reacting to this same stimulus every day, that I think frees up a lot of life force, a lot of vitality and a lot of space in the nervous system and helps us get into that parasympathetic, which is rest, digestion, reproduce.

And that's where the biggest changes happen when we can get into that parasympathetic, whether it's through the 20 minutes a day of breathing or whether it's through clearing some limiting belief that's making you think every day that like I'm running out of time, whether it's work or biological clock, but feeling that like time pressure.

Yeah. So working with that and supplementation and this is, you know, I think fairly individualized. But I'm really excited for your new line to come out because I'm just I can't wait to see ingredients and how you formulated and yeah so excited to explore that aspect of.

Like I completely wholeheartedly agree with you in terms of supplements being personalized that's actually like one of the founding principles of the line that we're launching.

So amazing. Amazing, amazing. Yeah. So supplements important. And also like if you don't do all the other foundational things, you know, you can spend a lot of money talking a lot of capsules and you're not going to see a shift.

So but an important part of part of the whole plan. So sleep, stress, supplementation and then toxins and trauma. So toxins and this is also something I test a lot for because we know that one toxin exposure accelerates the biological clock.

But two, specifically to fertility. A lot of these toxin exposures both in mom and dad increased time to conception by up to 30%, which, you know, if you're trying for a few months and it's not happening, like there could be something wrong.

It could just be there's a lot of toxins and so you can like it. They increase time to conception. They decrease success with egg freezing, with IVF, with embryo quality, but they also affect epigenetics in our genes that we pass down.

So in some in there's the mom's exposure that's getting passed down because baby's actually inside of her. But what's crazy is some of these toxin exposures in Dad.

So Dad's exposures, preconception affect that can affect that child's health down the line. So some of these toxins like they lates for example when dad was exposed pre-conception there were two specific phthalates.

It showed up in their son's at seven years old, they were able to track like increased behavioral issues in the group of boys born to these fathers who had exposure before these boys work.

And like. It's crazy, crazy to me. That's totally absurd. And I mean, not to mention like the toxin exposure that for these boys are probably also experiencing like that we're all experiencing.

And no wonder the health is what it is right now. But that's a different story kind of so toxins both for mom and dad and then trauma. And, you know, this kind of this goes back both to the stress piece, but also to like if your body doesn't feel safe, it can make it harder to conceive.

And I know this isn't true across the board because, you know, there's plenty of stories of, you know, conception happening in situations where women didn't feel safe necessarily in that acute moment and I also think that with the like the overall burden of toxins and stress and modern day life, that that that trauma piece is playing a bigger role right now.

And if and also on the kind of more metaphysical, spiritual side of things, you know, I, I believe in babies souls. And I think that that these souls are wanting to come in with the least amount of baggage as possible, both biochemical and psychological.

And we do know that in the lineage through epigenetics, that there are markers we can track that trauma gets passed down through the lineage, and that can show up as anxiety and depression for unknown reasons from something that may have happened to grandma or great grandma or great great grandfather generations down the line, there's actually markers for PTSD in on our genes.

When we're looking at these methyl markers, it's kind of crazy. So and there's things we can do to heal that. So so in terms of the trauma, like what?

There's no real test for trauma, but just like asking people and seeing if they've experienced a lot of trauma and then using some kind of therapy or technique to help remove that trauma from their bodies.

Yeah. Yeah. So, so especially if they're aware of it. I mean, that's the one you can actually work with.

Mind-Body Connection and Stress Reduction

And so using things like EMDR, different tapping modalities, body talk, things where you're working with the energetics system, the neurological system, the emotional system to help release or clear the trauma out of the body.

Sometimes it's more somatic. You got to get into like the tissues and the fascia. And I think there's different things that work for different people.

And sometimes that also takes like coming out of whatever the trauma response was. So if it was a freeze response that that was in like incited in that incident, then, you know, sometimes first coming out of freeze needs to happen before we can do that EMDR or the tapping or something like that.

Not always, but you know, it's important to have a practitioner that you trust who has experience with trauma, who is trauma informed, because there needs to be a strong therapeutic alliance in relationship in order to do this properly, because it it can be done improperly in that can cause more trauma for people.

So I so yeah, so starting with like trauma that you're aware of and I'm a big fan of some addicts and identifying where do you feel it in your body and what are you noticing and, and starting there and having lots of tools and having a good practitioner also.

So these are these are amazing. There's a lot of tools and I love that you shared. It's pretty comprehensive, right? Like doing something like this is is working through all the layers that are impacting your biological age.

Is there one that you feel like is the like the super mega, you know, like must have in this plan? Yes. Yeah. And that's the mind body connection. And I and I almost always start there with like my patients and, you know, anytime I make recommendations because the mind and the body that that connection is so powerful.

And I truly believe our cells are listening to what we're telling them consciously or subconsciously. And I had a mentor who used to say that the body is a faithful puppy dog to the mind.

And so if we're if the story that's running in our head is like the clock is ticking, then the clock is ticking and you're going to feel the stress of the clock ticking, and that's going to actually accelerate your age, whereas if you choose a more empowered story and you can do that through mantra, you can do that through breath.

You can however you want to shift that story. I Can you hear me? Yeah. Are you. Are you frozen? I can hear you fine. Oh, my. The cord fell out of my microphone.

You know. I got excited with my hands. Sorry. So we're talking with the mind body connection. So to the body of the faithful, puppy dog to the mind are cells are hearing everything that our mind is saying to them.

And so just by taking the pressure off of whatever pressure we're putting on ourselves automatically is like a relief.

And then all of our cells can work better because they're under like less tension, less stress, and then the nutrition absorbs better and we detoxify better.

So I truly think starting with that mind body component is, is number one. I mean, I don't say magic, but if I had to pick one, that was my favorite. It's definitely mind body.

So stress technically would I put it in the stress category, but I like mind body because stress is stressful. So yeah, and like the mind body, when thinking about it as a connection, it's also more empowering because now you're actively doing something rather than like, Oh, I'm so stressed out, you can only do so much about your stress. And, and like some, so many people are like, Please don't make me quit my job.

It is not my job to make you quit your job. Like, that's not what we do here. It's not going to magically fix your infertility either. It's really like, what?

How is this actively playing out in your body, in your cells? And you have the power to, like, change the dynamic and you have the story that you're telling about your boss or your job or whatever the situation is, just as well as quitting the job.

So there are all options. Yeah, well, and I think it's the shift from victim to creator of like you actually do have a choice and that choice could be reframe or that choice could be like maybe you actually do need to leave your job, but that's your choice.

Yeah. Like you get to decide how you want to, how you want to create your life. I actually had a patient maybe six years ago. She had seen like a psychic medium before she saw me and the medium told her she needed to quit her job.

So she did. And we started working together maybe like a month after she had, you know, been home all day and she was not happy. She was. Miserable. She's like, I loved working.

So I'm like, Well, why don't you go. Back to work then? And she's like, So she did. And she ended up getting pregnant. Not that it was like the work or the not work necessarily.

I mean, maybe, maybe she did need the month off for for stress or sleep, you know, or whatever. But like a reset or. Yeah. Oh, like actually I enjoy my work even though it's stressing me out.

So again, like that little like mindset shift is going to give us more value than the actual like result of that under percent. Yeah. Yeah, yeah. And then of course she like went back to work and then it got pregnant within like two or three weeks of like being back at work and then and she's like, well, I guess I'm going to plan for maternity leave now. So love that.

Toxins, Trauma, and Hidden Saboteurs

So I know that this the biological age versus chronological age and kind of you've been testing this out in your practice for some time. What results are you seeing in people that maybe start with older than chronological biological age?

I don't know if I said that correctly, but yeah, like they're actually older. They're older in their biology than their actual age. So in reversing that, what are you finding?

So on average, we're seeing about a four year biological age reversal in anywhere from six months to a year of of either following like an individualized protocol, if they're a one on one client with me or if they're in our like group cohort or or following on their own, but like actually doing the steps and then retesting.

And that's across all age groups. A lot of the women we're working with with this testing right now, some are trying to actively conceive and others are more planning for the future.

So I don't have really good statistics on like I wish I could say like, you know, 80% or 100% were able to conceive easily. It is not everybody's trying, but we are seeing improvements, you know, and sometimes, you know, that still takes some time and whatnot.

But what we are seeing improvements in bloodwork, so inflammatory markers are better, hormone levels are better, stress markers are better. So, you know, everything that we can track objectively up to this point, we're seeing improvements and we're also seeing subjective reports of like women are feeling better and men are feeling better and like more energy in lost weight.

And so a lot of that is great to see and great to hear. And and what I would expect when we're improving cellular health. So, you know, what I will say is, though, sometimes we do find someone who because if you miss something in one of these categories, like there's some like stealth things that I've had to discover can be kind of like biological age sabotages. And one of those is mold, which has been a really interesting like I never wanted to deal with mold.

And then all of a sudden some of my fertility couples were like, that was the thing. And we both like read what is happening with the mold. So that's like a toxin that sometimes gets missed and sometimes it gets missed because testing for it is can be costly.

And then there's like a whole rabbit hole you got to go down with dealing with it. So that's something that I've definitely seen sabotage, biological age reversal, stealth infections like Epstein-Barr virus, virus, Lyme.

I've seen that really accelerate the biological clock. And sometimes those are a little bit harder to get, as much of a rewind on just because there's a lot going on with the immune system, and it doesn't mean we can't get people there.

It's just oftentimes not as much of a rewind in as short of amount of time. Sure. And and like maybe deserves more personalization, but not in those cases.

Yeah, for sure. For sure. Yeah. Any other tidbits that you'd like to share about this? Amazing. Like, I feel like it's incredible because 15 years ago when I started doing fertility and everything based on age, that was literally the conversation that every person would come in with.

And it's still there. The kind of it's kind of still the case, right? Like people are it's getting younger. It's like 33 year olds are now being told, oh, you're not getting pregnant because of your age.

And I'm like, in 2033, you need to hold that very good view. Yeah. So I feel like this is so exciting and it really opens the door, opens up our, our own mindsets and also like hopefully all of fertility world to be like, oh, you don't have to just rely on this one thing that has to do with our physical age.

Absolutely. And I think there's two things I want to share. One is that what I think the reason we're seeing issues younger, younger and calling it age related.

So, you know, with age, it's it's again, it's not that somebody, you know, maybe four years older than somebody else, but they've had four more years of talks and exposure and stress.

Sure. And and so and I think we're seeing more toxins and more stress like the social norms of. Younger and younger age. Yes. Yes. Yeah. And it's starting at 12, 13 years old as opposed to like, you know, I can't I think I got social media, like senior year of high school maybe, you know, so.

Like, oh, you're like I think I started after graduate school forever.

Fertility Predictability and the Future of Testing

Good for you. And then the other thing is, well, I'll share what I see is the future of fertility and what we're doing with

Clockwize Clockwize with a Z because I'm Dr. Z and this is my company where we are making this biological age testing with toxin testing available for women and couples everywhere is that we're actually working towards creating what's called a Fertility, Predictability, algorithm.

which means that at some point in the near future you can take a finger print test. And we're still looking at those 900,000 points on your DNA. But now we've done enough research and gotten enough data to know which of those points at what methylation values for both you and your partner are going to predict your outcomes and what are your outcomes going to be.

So our hope is that using AI, deep computer learning will be able to say, based on your epigenetics, in this moment of you and your partner, it looks like you guys have a 85% chance of getting four or more great embryos if you do IVF right.

Or it looks like it'll take you guys six months of trying naturally before you'll conceive on your own, or it looks like you have a 12% chance of getting four or more grade-A embryos if you try right now.

But here are some things that we know can improve that. So then we can take somebody from a 12% to an 85%, which is a, you know, huge improvement in odds.

If you're going to go spend $50,000 and pump, you know, do the hormones and do the whole thing. And like the emotional investment is is a lot as well.

So we're looking to create something that will be first line testing in the conventional fertility world, that will then allow doctors to offer an intervention that will actually help.

Yeah. That that we can test before and after to show an improvement before moving forward with a more invasive procedure. Yeah. Yeah. Awesome. That's like this is like the crystal ball that everyone literally keeps asking me about.

We're working on, like, every every single couple. That's like, should I do IVF or should I how long? How many cycles should I wait to naturally try? And I'm like, I wish I had a crystal ball, too.

We're working on this. Ready to go? Yeah, totally. Everybody wants to know. And so we're we're working on it. We're doing the best we can. We're applying for NIH funding.

We're looking for more research partners. So so it's in it's in process. Yeah. Yeah, it's super exciting. I think that this is I hope that this happens in our lifetime because this is so it's so needed.

And like the number of couples that are struggling with fertility, I heard somewhere I don't know if this is officially published anywhere, but someone that I was speaking to said it's not like one in six couples anymore.

It's probably closer to like one in three, which is it's getting pretty scary. Like if we go the way we're going, Men may not have sperm in 20 years or something like that.

And like female fertility is declining. There's so many factors that are happening all around us that like this could potentially be one of the game changers that like propels us forward into a new age totally.

And like hopefully makes fertility like one of the indicators of overall health. Because this is not just fertility, it's not whether or not you can have a child.

It's literally like affecting every layer because if you are have low fertility or poor fertility, you probably have poor states of health. And it's an early predictor of anything else breaking down in your body.

Then cardiovascular disease or heart disease, diabetes, whatever, like all of those are going to come later. But fertility is probably a really early sign of whether or not a person is truly vitally healthy.

100%. And the Buck Institute, a consortium for reproductive longevity, is looking at that. A lot of that connection between like age of menopause and then how long and how healthy, like health span and lifespan connected to that, which is really interesting, really interesting research.

But I totally agree. Fertility is absolutely a a marker of health and vitality and potential predictor of of lifespan and health span. Yeah, well, thank you for the amazing work that you're doing in the world and all that you're contributing to this world and field of fertility.

I appreciate you for your time today. Thank you so much for being here. Oh, thank you so much, Dr. Aumatma. Always a pleasure.