Introduction and Guest Background

This is doctor talks. Real talk from real doctors. Only issues that matter to you most. Welcome back to the Super Fertility Summit. I'm your host, Doctor Cleopatra, and I'm joined today by Doctor Paul Turek.

He's husband, father and longboard surfer, as well as a board certified urologist and micro surgeon internationally recognized as the authority on male fertility and sexual health.

Doctor Turek, you're the founder and director of the Beverly Hills and San Francisco based Turek Clinic, and you're former endowed chair professor at the University of California, San Francisco and inventor of sperm mapping for the treatment of severe male infertility.

While a professor at UCSF, you published over 200 papers, many of which described surgical and other clinical innovations in male fertility. A master clinician for three decades.

Your signature care involves a practical, high tech approach suffused with wisdom and knowledge. Your remarkable track record of pregnancy success has granted countless couples the gift of parenthood.

I am so excited to have you here today. Thank you so much for joining us. Who are you talking about, doctor? I know I feel the same way when people read my bio.

It's kind of like, wow, when you're in it doing the work, you forget and then you hear it all listed out. And of course, that was a very modest summary of your accomplishments.

We share some some institutions in common. So it's really, exciting to have you here today. And, I would love for you to start out today. We're going to talk about male infertility and fertility challenges and how under-served men are in the fertility space.

And I'm so excited to have this conversation. I would love for you to start from the end and think about if there were one thing you hope that the people listening to us today would take away from this conversation, what would that one thing be?

Doctor Turek, if you're talking about infertility in humans, I would say my after 30 years of work and research, I would say that it's very clear that sperm matter, correlate to that is fertility is a team sport.

So don't ignore the male. That's right. I love that so much. Don't ignore the male. It's a team sport.

Why Male Fertility Is Overlooked

And I think I think that this is very much related to the first question I want to dive into into with you, which is why men are so overlooked in the fertility space.

But I think that the cultural discourse just by default, moves in the direction of the woman. So when, couple is starting to think about getting pregnant, the focus typically is on the woman when a couple is trying for a baby and it's not happening.

I think the first person who gets looked at as is the woman. So talk to us about how men became so overlooked in this area, and what are some things that we can do about it to really spread this message that fertility is a team sport and sperm really matter.

You know, the big question I would have to say that the one fact in America that emphasizes your point is that the

richest man in America lives six, six years less long than the poorest woman.

Yes. So that that's the big problem. And the problem with fertility is, you know, it's a species issue, the provider mentality of men versus the caring and nurturing mentality of things.

So most male care. So most male care comes from partnerships. And the other stunning fact is that the that longevity difference between women and men in America is, is a raised.

If men are coupled that's that is a troubled man. It can be a male couple or you know, it can be same sex or not, or cysts or whatever. But if you're coupled that, that, that longevity difference goes away.

So, so that's the problem. And we can have a million cultural associations reasons for it. But you know, I take care of young men for a living who are infertile.

And, you know, you know, age 65 and, and then really are like wild animals, you get one shot at them and then and then they're gone. And if they're not in pain or the life is threatened, they rarely come in for care.

That's not generally true. I mean, California, I'm very impressed with the way men take care of themselves and other, probably other urban places, but, it's it's definitely a problem.

And I think there's a lack of awareness of, of that issue. That's exactly right. So their research is very clear, like you said, that there is an incredible benefit to men for being married, including health and wealth and numerous other things.

We it's called the marriage benefit imbalance. Right. And sometimes we talk about the fact that it is at least stereotypically, culturally, it may be, more of a female desire to think about getting married, but then that the males are the ones who are, benefiting the most from marriage and and the place that that shows up the most is in the area of health.

And so when people are coming to you for help, is it is it usually that like, let's say it's a heterosexual relationship? And I, I don't say that to exclude anyone from the conversation, but mainly because the data are often focused on, a person who can provide sperm and a person who can provide an egg.

So when, when a couple or a man comes to you, is it typically the the female partner who has done the research found you and set the appointment for them to come there?

It can be. Yeah. I've noticed a lot of sort of sexual independence and, sexual health being taken care of by men lately, which is good. Maybe Covid turned the tide.

Maybe it's generational. Maybe it's because we're trying to get the word out. Men's sexual health is a canary in the coal mine for overall health. And so I'm really excited that I spent a couple, maybe a decade in academics, trying to prove or understand the concept that the biomarker concept that a man's fertility potential is a reflection of his health.

I gave a lecture at Google at the metroplex, probably 2011, so maybe 13 years ago. You can watch it on YouTube or Google lecture. And I talked about the fact that sexual health for men is being thought of as a planet or a moon orbiting the Earth of health and I was trying to introduce the concept that it is actually not a moon orbiting anything.

It is intimate part and parcel of overall health.

Sperm as a Marker of Overall Health

And that was based on research in which we showed that infertile men, severely infertile men, have molecular mechanisms that are faulty, that lead to cancer later in life.

So that was published in major medical journals. And since then, a lot of others have supported. And now there's NIH grant money to understand the biomarker concept that fertility may be the first sign of a larger issue.

And it makes sense to me in a very ontological way, which is why would we, if we're put on this earth to eat, sleep, and reproduce and we're having trouble reproducing, that's kind of important.

So what's going on? And some of it we realize is genetic and some of it is environmental, but it matters. And so it started out with that concept and ended up now being leading to infertile men.

Severely infertile men can have, genetic issues. They can also they're also more likely to have more diseases at the time of diagnosis. We call it comorbidity burden.

So there's sicker not not sicker illness. You know, that's bad. But they have more illnesses and conditions, when they're infertile and they get more conditions and illnesses when they get older, including cancers, you know, it's still a lot of epidemiology and it still needs a lot of factual and reaffirmation.

So when does therapy become fact? You know, you say something. When does it become true? That's always a rolling question. But, it it looks like it's becoming true and it's becoming widely accepted.

Now, I like that because when I see someone in their 20s, whoever brings them in the door, because of a fertility problem, I have a golden opportunity.

For the first time ever, I had my foot in the door. And I can say to them, you know, we got to look at some things here. And I have this global planetary view of what can affect their fertility.

There's a cardiovascular health corner. There's a stress and sleep corner. There's a metabolic corner. There's a hormonal, aspect of it. And they look at it and they get this, oh, my, this is this is there's a lot going on here.

And that's my point is a lot going on here. So you can actually take better care of men. It's our first opportunity in history to take care of men because they are underserved.

I love this, and it very much parallels what we see in women. Women who have stronger fertility have tend to live longer. Women who stay fertile longer tend to live longer.

Women who have healthier cycles have a lower risk of premature death and dying before the age of 70. So I think this is becoming much more widely accepted that our fertility is a marker for our overall health potential and longevity potential as females.

And it sounds like you're seeing the exact same thing in males, which is really, really exciting to me. And so in that a little differently and say that most of the data on women's fertility and longevity and co-morbidity comes from this finding, because that's when the age started going after it and having study sections and saying, what's going on with this?

But it's actually by PCOS. Polycystic ovarian syndrome is one of the things that people started looking at more carefully as a health issue. We knew, you know, and what was the classic marker?

It's the classic marker for women, as you know. It's a it's a system. And the system is a system disease, right? It's not just the fertility problem. But yeah, that most of that research got its, urging from the male from biomarker data in men.

Thank you very much for that. And I, I would say that fertility challenges in general are a systems problem and that the fertility and pregnancy system is a complex network that isn't just made up of what we typically think of as the reproductive organs.

And you already alluded to this. We're looking at cardio metabolic health and so many other aspects of our health

to understand what are the root causes of the fertility challenges that people are facing.

And this comes down to the basic evaluation when a man is sitting in front of me and he has a low sperm count. And my first question to myself is why?

Because if you leave it alone and he's healthy, it should run hard. Thousand sperm, a heartbeat. It should run hard. Why is it running hard? So I, you know, I'm trying to get the feel to look at it this way, which is don't just say, oh, you know, it's too bad or look for a reason and you'll probably find it.

What do you see? I was actually just going to ask you about sperm count, so I love that you in there.

Causes of Low Sperm Count and Poor Sperm Quality

What do you see as being the primary reasons for low sperm count or other issues with with sperm quality specifically, and maybe also with DNA fragmentation and sperm?

Can you talk a little bit about that? Yeah, I wrote a blog called Reading Your Cards, which, you know, Turek on Men's health.com reading your cards. And I looked at the same analysis as a poker hand.

And each card has a value and its own inherent value. If it's a count, motility, morphology, shape. And then they have a look. And if you put them together, is it a royal flush or is a, you know, is a triple, you know, whatever.

They have different looks, and different values. And if it looks and looks like the same interpretation. So I would say when I see, you know, depends on the look.

But I can basically diagnose the jack to predict obstruction from a scene analysis, I can it's not usually considered a diagnosis is usually considered a sign or a symptom.

And you look at the whole picture. But there's some that are very characteristic. So for example low sperm, low sperm volume is always something you're going to figure out.

Some of the volume is low on the semen. Either is missing a tube or he's got a blockage, or he's got a low testosterone, or there's there's about five things that cause and it'll be one of those five, and some of them are treatable, and some of them are.

If the count's low, I look at, you know, that's a production issue. Why isn't the engine running hard? The most common reason? There's a barrier to seal, which are dilated veins and the scroll.

And they occur in athletic kids at puberty. And you may not know you have one. It feels like a bag of worms. And it's very subtle. It doesn't really hurt or cause other symptoms, but it's a disease of standing up as a species where the only ones that get it.

So we used to be on all fours, blood drained sideways now, or I'm standing up. It drains uphill against gravity, and it goes back down from the body into the testicle, heats up the testicle.

I think number three would be recreational lifestyle lifestyle choices. So recreational drugs, hot beverages, things like that tend to be attached to those very sensitive to heat.

I published a hot tub paper, or we just took men out of hot bats and their sperm counts went up 600%. Very sensitive to fevers, etc.. So I think and then lifestyle choices, you know, how will you take care of yourself?

Obesity is a risk factor. Diabetes is a risk factor, metabolic syndrome, etc. things aren't running efficiently. And that comes out in a very finely tuned process called sperm production.

So general health is number one. And then there's medications and there's recreational drugs and things like that I

can kick in. Infections are sort of rare less than 5%.

So that's you know, that's it rounds out that usually out if it's a low count issue probably 90 some of it's genetic. Right. So if it's about a below a certain level it can be genetic.

You may say, well every one of my family is fertile. It's not really all Mendelian inherited genetics, which it's can be de novo genetics, meaning you're the first one to see it.

And the Y chromosome is a classic example. There's 50 mutations a year coming into the species. And they occur they occur developmentally in line with the Y chromosome.

And so you're the first one in the family to ever have the problem. And it's that's just the way evolution works. Motility effect motility is movement.

The motility as well I tend to based on the blog. And when I talk about I tend to look at a sort of light toxin, something maybe temporary, like a fever for a couple days or a hot bath or, you know, smoking pot.

Tobacco are not good. They not only affect the motility and shape, but they affect sperm, DNA fragmentation. So the DNA quality and also pot is exceptionally bad because, you know, you take it however you do, and it has an effect that goes away, you feel and then it sits in your fat because it's a water source, fat soluble, and then it circulates for another month or so.

So it's a much more persistent effect than what you feel. I didn't I did not know that it's fat soluble. That's really interesting. When you find someone who has low testosterone and they want to have a baby, what do you do?

Because you don't want to give them testosterone. Do you use HCG? What? What's your. So your men are symptomatic. Say, you know, a lot of men who are trying to conceive may have issues with low libido, erections, things like that.

Situational issues. That's not usually indicative of that's a stress issue normally. And so for that we can give them pills to help out or stress reduction is great.

But that's also hard stress reduction for men. It's also cause of secondary hypogonadism or low testosterone. And that's the most common cause. Infertile age men because stress of any kind financial travel physical emotional is your nervous system saying let's get out of here.

We're being chased by a wooly mammoth. You want an erection when you're dreaming chased by a wooly mammoth. You want cortisol and you want fight or flight.

And our systems people don't realize this, but our nervous systems are just like a cat or a dog. We react to everything even though we don't feel it. Our system is reacting to everything.

Every email we get, every notification we get. It's maybe a little alarming to the body. The body is very primitive. It doesn't really know whether it's an email or if it's a wooly mammoth and ends up reacting a lot, and that's a cortisol based drive.

And so fertility is not spared. So you do that frantically, and you're going to have a load to start from because you don't want the software one on one mobile in Manas you want cortisol and quick energy.

What happens when you when you end up behind the rock eating berries and falling asleep? And when you're safe, then your testosterone rises to build the muscle so you can do it again.

So we're very primitively built. So stress is the most common cause of low testosterone. Doesn't cause low sperm counts to get it to soft or low enough to drop sperm count has to go quite low.

Another big one is intermittent fasting and rapid weight loss. Rapid weight loss. Some whatever mechanism, sort of more than a pound and a half a week is catabolic.

So your body's saying to you maybe lightly, you don't know, you think you're doing great, but it's saying to you, hey, you're starving. We can't meet fertility.

We need to we need to figure out why we're starving. You get out of this mode.

Treating Low Testosterone Without Hurting Fertility

So it's a it's like a, you know, a high lectin mode, you know, and that's really and, you know, some women, female marathon runners don't cycle well because that's too much physical stress.

I have a blog about and you need to fit to be fertile. So yes, you can be too much exercise, too much running for Lily. Man. This is a stress response and you will have.

So that is by far the most common and you do not need testosterone for that. So that's called treating the young hyper gonadal male. And that is gone with bean.

So you basically want to the pituitary is being turned off to a turn. Sends the gas to the engine to the testicles, which is AlexNet to make sperm and hormone.

And you need normal sperm in our home to make them know normal hormones, to make normal sperm production. So it's all linked to the pituitary. So you have to turn the pituitary on and you can do it very naturally with the selective estrogen receptor modulators i.e.

Clomid marks, affinity, etc.. And you can do it with LH injections, which just basically tell the testicle to turn on sperm production to turn a hormone.

And that's called HCG human, not human chorionic and out of trouble. So LH injections so injections and pills and they're you know, I hand them out like candy.

They're really safe. They're not FDA approved for. Well they stated you have FDA approved for men, but Clomid is an FDA approved drug for women for fertility in America and other countries.

It's approved for men, but it's very safe and it's very natural. And it doesn't turn things off. Because if you start on testosterone supplements of any kind, you're going to turn off your native production, which is required for sperm, and you're going to turn off your pituitary signaling.

So that's the wrong way to go. So I do spend a lot of my time in the blog. It's called getting all the juice, getting men from anabolic steroids or or testosterone supplements down to fertility.

I can usually succeed, but there can be instances in which it was so long and so hard that we can't recover the testis. And, well, it's a gland that's turned off too long.

That's really interesting. And I think I think this is becoming more and more common that people feel like they're doing a good thing for their health when they're overtraining.

And maybe men are using testosterone to build up muscle, and they don't realize that this can really be having a negative impact on their fertility. So I'm, it's important that we're talking about these things.

And by the way, women are doing these things more and more as well. And we need to be talking about that, too. Doctor Turek, you are recognized as the inventor of sperm mapping.

Could you walk us through what sperm mapping entails and tell us a little bit about the successes that you've

observed in using the sperm mapping, or some sperm mapping is a way to find sperm mapping.

I would call the GB's of the testis. I maybe 25 years ago I had a lot of patients who are cancer survivors. Maybe they were children with cancer and they could bank sperm and they were surviving because 80% of them survive childhood cancers, and they're sterile because of the chemotherapy or whatever treatment they receive.

And, that means there's no sperm and there's semen and they're infertile. So I think people now realize the second thing young people think about after being cured of cancer is fertility.

In some sense, yes. It's not like you're 70 and you have cancer and you just want to stay alive. I mean, they've got a life ahead of them and they didn't see it for a while.

Now they do. And so they're very motivated. So a lot of we used to, we used to do testis biopsies in men and sometimes find areas of the test as well with sperm in them.

So the other fact is you don't you make more sperm in your testicle than you ejaculate. So that's a phenomenon that we sort of figured out too, is you can have pockets of sperm in the testicle that can be used to have babies.

And that only became possible in the 90s. So I entered the field right when that technology came out, which is IVF test tube baby technology in which you do a single sperm injection, you can actually take a single sperm injected into an egg.

It's called Icsi and just cytoplasmic sperm injection. And you can use any sperm for that. So that led us right to the reproductive tract because you don't need ejaculated sperm for that.

And that was in 92 and entered the field in 93. So, so the groundwork was laid for this to happen. And then we sort of published early on that if you if you try to look for a permanent testicle that has nothing in the ejaculate because it's it's been hit hard with something, then you can often miss because it's not everywhere.

So it's islands or pockets, and then you have to figure out ways to find these pockets. So two methods came out. One was called micro dissection, which is to which is kind of a brutal approach.

Sperm Mapping and Testicular Sperm Retrieval

You go under anesthesia, you open the testicle like a book, and you search for a whole testicle for sperm pockets, and then you put the book back together again.

So it's a it's a very invasive procedure. It's not fun. I mean, it's not a good recovery. And you may find sperm or you might not, I, I was with a different group in California and New York, approached to the California pouch.

I was with a bunch of Swedish people who stick needles and everything, and they said, you know, I see your problem. You should try this and stick needles in because you can get it's very benign.

It doesn't hurt. You need stage a little bit of local, but you can. They said what we do and at UCSF where I was, is, Doctor Brigham Young, who was one of the pioneers of that, said, when a little child comes in with the eye cancer or retinoblastoma, we have to make a diagnosis.

What we do is and we stick a needle into the IV and sample the tumor and then leave it in place and treat in situ. So treat it without taking the eye out everyone else is taking the eye out and saying, yeah, that's retinoblastoma.

So that taught me how noninvasive this approach works because like, wow, that's a really different approach. You know, organ preserving approach to things.

So we started putting needles in testicles, which sounds awful, but it's actually a lot better than slicing them open and we started doing mapping when enough, we could realize we could do a lot of needles and we can find a lot of

pockets.

So if you want, I'll show you what one of these looks like. But I would love to see you on needles again. This year. So this is what a map looks like.

This is. They're not numbered, but this is where the needles go. And they're all organized. They're done in a templated way on each side, and it's done at a local.

Takes about an hour, and then you go home and it's. Then it gets red for for sperm. And these are for maps from four men. And there's sperm. And the man on the upper left with there's three pockets.

Experiment is testicle. The man on the right, upper right had one pocket. And he was a cancer survivor with a bone marrow transplant. And I don't think anyone had ever seen fertility in that situation ever.

And I published it in a bone marrow transplant literature because it never happened before. And then you can see we got the sperm at a second procedure.

So this is a a diagnostic procedure that tells you what's going on. And then you go ahead and do a sperm retrieval afterwards, to find the sperm. So that's kind of how it works.

And now we've done 3000 cases and it's super safe. We don't have complications. And it's it's a fair warning system. It tells you if you have sperm there, then you're wrong.

And then you can be bad about that. That's incredible. So let's hope you're. Well we talking about yeah. Situations who've had scrotal trauma. Patients who have chemotherapy.

Patients who have genetic infertility. And it's you know it's not only the mapping it's but that fact that we can use testicular sperm with IVF. And it works really well.

I mean, everyone would say, well, what about the cancer patient? What's that sperm like? I mean, it's been exposed to chemotherapy and chemotherapy because of the DNA.

And it messes things up. Is that are those healthy kids? And actually the editor of that journal said, are these kids okay? And it's amazing. But I learned also a lot about sperm.

If you can make a sperm with a tail, it's been through hell and back and it's usually pretty good. And there aren't problems like that. And that confirms our data with cancer survivors that do have natural fertility have sperm in their jackets.

There's no higher rate of birth defects with kids. That's wonderful. So it's gone very well. This is an incredible thing that you have spearheaded and a solution that you've given to people who have otherwise been told that it's not going to be possible for them to be biological. Father.

So thank you so much for what you do, Doctor Turek, if you've said, it doesn't work for everybody. So there are patients who you have to say, you know, there is just no opportunity, naturally.

But I'm not stopping there because in the evenings I think about making sperm from skin. And we have grants for that and money for that. And then some company called Cel Arts, Dot bio and interested parties can sign up and get a secure site.

If you're interested in the technology called cel art, stop bio and we're trying to inform patients about where we are with it. But we are starting the research and, it's going to be in a lot of others art too.

I knew everyone in the field working on it, but it's been my passion for about a decade, and it's not easy. But it's possible. And with the concept of the, you know, Crispr technology where you can do a gene that you can change

cells, we can make stem cells out of regular cells.

And mRNA technology, which both got Nobel prizes recently. Now people start to realize it's possible we've known it all along. It's just that we have to we have to wait for everyone to realize it.

Best is incredible. I'm so excited to see the evolution of this and to follow this work. Thank you. I am not stopping. I am not wait. Tell me how you became so passionate about this topic.

I don't know. I kind of fell into what I'd say the when I started out, I was going to go into medicine at Stanford when I was in medical school, and I had a lot of mentors who were, you know, great medicine doctors.

And I was also interested in religion, and was almost thinking about going to divinity school. College. And I found medicine to be a nice combination of sort of science and divinity.

And then the most sort of ethically challenged area in medicine's fertility medicine. And so that drew me in. But also when I was a resident, I, I, I'm, I was told that I have a gift and I can operate, I can do I'm very good with my hands.

And that comes from my father, who was a craftsman who was a black blacksmith in Czechoslovakia. And he taught me to be a craftsman. So I feel I'm a craftsman, and I feel I'm a bit of a pastor, and I feel I'm, you know, a bit of a surgeon.

And then I then one field that has all of these, it's fertility medicine, but also the vasectomy reversals I love. And there's lots of complex microsurgery that come pretty easily to me.

And then I into the field and after fellowship and realized that it's wide open. And then I had this concept of like, whoa, that we don't know much about this.

We don't know much about fertility. We assume this, but that may not be correct. The first thing I did as a faculty member was hire Rene Rayo Para, who invented the Y chromosome deletion, who discovered it at MIT.

And she had, you know, she broke open the field of genetic infertility, which is a pretty big field now. And, you know, we're just. And then I realized ten years into that that, you know, there are a lot of there aren't a lot of gene mutations we're finding.

So something else must be going on. And now I'm really excited about the epigenome field. So now we're learning that epigenetics is probably driving a lot of infertility as well as cancers as well as autoimmunity and other systemic diseases.

Future Fertility Research and Male Aging

So it's really moving quickly. And what's super exciting about fertility medicine, at least in the male, is when it happens in sperm. It happens in the next generation.

So I'm also interested in maternal age issues, what happens to offspring and for the fathers of older fathers and what is going on. And so that's really important to me.

And then finally I would say having all that under my belt, I realize that the more we know about genetics and epigenetics and transcriptomics and metabolomics and proteomics and in infertility, the more I realize that lifestyle and diet matter a ton.

So yeah, it's all about how you take care of yourselves. I'm circling back on this huge mega Wagnerian ring from, basic, you know, from from 30,000ft view to down in the ditches and down on the ground back to 30,000.

But you realizing that health and matter, a lot healthier. Lifestyle choices matter a lot for fertility. Absolutely. And I think it's really interesting because there are still places where people are told it doesn't really matter what you eat.

It doesn't really matter how you're living. And yet we know it have such a profound impact. I mean, it has a profound impact on longevity. It has a profound impact on reproductive longevity when when we talk so much about the role of age in female fertility and yet the role of age in male fertility is often overlooked.

And you you touched on this a little bit. Can you tell us about the differences in the younger versus the older patients that you're seeing who are coming in, concerned about being able to have children?

Sure. And father's age and fertility, it's a it's a relatively new topic. And the reason why is because we never lived old enough to be older, paternal age fathers.

So 1950 really even about 60, 65 years on average now in late 70s in terms of average age at death. And so this problem of what's happening with sperm in offspring because of fathers age alone is brand new to the species.

For the first time in our existence, we're living long enough to have this problem. And so that's that's a blog I wrote a while ago because I realized, wow.

I mean, no wonder it's also new because we never really lived long enough. I mean, there are people who live 90 years, 90, you know, 100 years ago, etc., but but the average Joe isn't living that long.

I think in 1910 we're living about 45, maybe 50. Okay. That's right. Yeah. So, it's a new to the species in the last 50 to 75 years. And we also know that things like autism and spectrum disorders are increasing in, in the, in society.

And, you know, the question is that that's representative of what we call psychiatric morbidity, dyslexia and bipolar disorders, schizoaffective diseases, etc., and that's representative of developmental, you know, psychiatric developmental issues.

And we so we ascribed it to urbanization. Big cities have it to maybe IVF. But that's not a lot of that's only 1 or 2% of babies and etc.. Or is it or are the increase in those psychiatric diseases are those ascribed to the better diagnoses?

Right. Also, we've got a name for it we know how to call it. And we're seeing so it's a combination. But what's also clear is that the epigenome, the epigenome, the marks of the DNA, not the DNA, it's not the DNA sequence, it's the marks on the sequence.

And the epigenome of sperm are probably the biggest defined cause of increased, but in the spectrum disorders and psychiatric morbidity that's occurring right now.

So it's the fingerprint that's been defined by Mike Skinner and it looks like it's epigenetic. And it you know, the sperm, the sperm, the genes in the sperm have marks on them that change with paternal age.

And they don't change in a random fashion. They change in this area of psychiatric morbidity. So it's really interesting. And then you have to ask the question that.

So what what what does this mean? I mean does that mean we're getting worse or we're evolving in the wrong direction? The answer is, you know, as a religious man who is an ethicist who, has thought about this a lot, I would say we have to ask the question of whether this is the way we're evolving, whether we're our systems are getting so much better with information.

We're closing off almost everything and trying to stay focused. And one thing I noticed a lot of the unexpected, kids, they seem to be socially, not as in-tune.

But if you find their strong point, it's unbelievable what you find. Right? And so dialed in the rabbit hole and you find the brilliance. It's like it's like magnified the intensity of it.

And it's really interesting how maybe it's an adaptive mechanism in revolution. So we can, we can shut things off

again and not be so bombarded. I don't know what an interesting theory I it's fascinating, but I, I really think that we have to be having the conversation about age and male fertility more than we are having.

Doctor Turek, if you if you could only if you had to pick just one thing that you would hope someone would do to take care of their fertility and to take care of the health of their their future baby, their future super baby, as we call them.

What would that one thing be? I don't know, a couple, a male, a couple. I would say a person is always you can, so to your body, like a temple, it is your most valuable asset in so many ways.

More than anything else. And first, some things it's always around. Realize that we're made for periods of acute stress, but we're not made for chronic stress.

So, like, you go to sleep at night, turn off the lights, turn off the chronic, get off and go to dark room and get sleep. This is what we're it's really important.

So, you know, lifestyle all the way all throughout you know state. And if you can stay lean and mean stress reduction for men is really that's done with physical activity exercise, yoga, acupuncture, massage where we get on the phone for two hours of moms, they're fine.

It's different. We have to get it out. So I think, you know, the idea. I remember Covid hit and everyone started drinking at 5:00 and gaining weight, and it's like half the men did that and half the men said, I'm going to get a peloton.

I'm going to exercise. Yes, people are scared to go outside, etc.. Right? It's like the whole world's like the Ethereum. It's all infected. And then about six months later, I was so proud of the ones who went to the drinking and said, you know, this isn't working for you and gaining weight, and I don't feel very good.

I'm going to start exercising. So, so was naive as a bravo. Yes, on that one. You have no control over this universe. What's happening to you? Just accept it.

You do have control over your health. That's right. I love that so much. Your body is your temple. It's your most valuable asset. Not just for making your family, but for raising your family and everything else that you want to do in life. Yeah.

The other thing I would say is a fertility purposes. Get him. See if you're having trouble conceiving. And it's been a year, it's not acceptable to just get a similar analysis.

Right. It's he needs to be seen, listened to and looked at by a specialist or urologist or somebody who knows what they're doing.

Lifestyle, Stress, and Final Advice

That's kind of really important, because a third of the problem with fertility is male and it's cost effective. It's one visit with me. It's cheaper, far cheaper for one third of the problem than than doing much work.

A woman getting a $5,000 evaluation of hormone and ultrasounds and all that. And it's often curable. And it's it's the foot in the door to their health.

It's it's got so many benefits. This is wonderful. Thank you so much, Doctor Turek. Last question. When you think of the term super baby, what does what does it mean to you?

What does it feel like to you? Super, baby. I'm not sure what it means to me. Super baby. I've never used the term, okay I don't, I don't I'm not a big fan of premium babies.

I'm not a big fan of of because of all the effort, money, time and surgery gone into making a baby to make them premium babies. Often I'm not. I'm not sure that's healthy.

For the baby, be treated like, you know, they're otherworldly. I mean, all babies should be treated that way, but, they can be a little, I know, I'm not sure.

So I don't know if I like the term. Okay, that's fair enough. That sounds great. We will. That it's not referring to premium babies, but I understand it can be interpreted that way, so fair enough.

Doctor Turek, it's been so wonderful to have you here today. Thank you for the contributions. Your, your scholarship, your clinical contributions, and most of all, what you do every day that helps people bring home the babies that they're dreaming of having.

Thank you so much. So nothing fires me up. It's just so. Yes, every every single one. There's such a thrill. I feel the same way. I completely understand I've gotten 12 Pulitzer Prizes, which is babies named after me.

That's the vast prize. Ever got nothing happens and everything is great. Congratulations. So beautiful. Thank you for being here with us at the super Fertility Summit.

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