Podcast Introduction and Guest Overview

the data showed us. Some of the old data really has been recontested and reconsidered, if you will. You need hormones for memory, mobility, and function.

There's a lot of data now to show that especially if start hormones, we'll talk about women and then we can definitely talk men too. But if we start hormones in the perimenopause, which is when women start this hormonal dance per se, to early menopaus, the earlier we started the hormones, that better the beneficial effect that they will reap from the hormone.

Welcome to the TBD Fit Podcast on Dr. Talks. I'm your host, Daniel Keeley, and I will be guiding you through this wellness journey in terms of optimizing health and longevity, where we unpack the science, the dos, and everything in between.

Come join us. Look forward to see you inside. Welcome back to another episode of the TBD fit podcast where we explore the science systems and strategies behind optimizing health and human performance.

I'm your host, Daniel Thiele. Today's episode is one I am particularly excited about because we're diving into a topic that sits at the core of nearly every physiological process in the body.

hormones. Our guest today is Dr. Zahar Swiden, who I absolutely love. And she is a nationally and internationally recognized expert in pain management, hormone replacement therapy, and personalized medicine.

Dr Swidan is the pharmacist by training, a researcher, educator, author and CEO of Neurofarm. She spent decades bridging clinical research with real world patient outcomes.

So today's conversation is going to be highlighting her new book, as well as a conversation in the master regulator. And we'll explore hormones and why hormones are not just about aging or menopause, but about metabolism, pain, muscle, cognition, and long-term resilience.

Welcome to the show. Thanks, Dan, for having me. Good to see you here. You as well, interesting, because we always connect in person. So now I have the pleasure of interviewing you, which I'm excited about.

Yeah, exactly. For a change, we're seeing each other on Zoom versus physically at the various meetings we've been meeting at lately. Well, I am sure we'll dissect part of that in today's conversation.

But needless to say, i love opening every conversation by providing the origin story. Giving you the microphone to share why you do what you. How you got into doing what.

What was your origin? Yeah, so it's interesting, you know, God always takes you on interesting paths, right? So, I was going to medical school. I took the MCAT.

So I'm going medical and then my friend whose wife was in pharmacy school, he's like, You need to go talk to the Dean and just kind of see, that might be another avenue.

There's a lot of great research, development, academia, retail, clinical, there's lot a different avenues. Anyways, IT is like they drug me. Next thing I know is I'm tearing down my admission to the medical school and going to pharmacy school.

I think whatever, God, higher powers, whatever you believe in always has a different route for us per se. Anyways, then I was going a pharmacy. Obviously, I went to The University of Michigan.

And then I loved research and academia, so I really connected with one of my mentors. Then she fell in love with a French man, literally during my initial, I just got off the boat, just graduated.

We had $20 million in grants, you know, and here she goes, hey, You manage all of this." And I'm like, well, this is a little intimidating for a 20-year-old.

I just got off the boat. Anyways, but long story short, then I had to go to Europe a lot to review the clinical trials we were doing, the studies, analysis, statistics, all that stuff.

And then that opened up my whole world to this really systems biology approach, whole body medicine like they do in Europe.

Hormones as Master Regulators

They were much more into lifestyle, supplements and vitamins that were really regulated like drugs in this country through the German Commission E and she was in Germany.

So I got to visit and learn a lot about the Germany Commission and just They had a lot of supplements, medications. Even over the counter, the pharmacist had big roles.

I was like, wow. Then I thought, well, what is this probiotics they have at the checkout counters? Literally like we have gums and candy. Why didn't they teach us any of this in school?

I called it band-aid medicine, symptom drug or symptom surgery, basically. Anyways, long story short, that really opened up my eyes and I became really interested in root cause medicine, what I called logical and physiological medicine.

When I came back here, finished my fellowship, I did a postdoc fellowship in biopharmaceutics and gastroenterology and started to dive into these probiotics, brain-gut connection, leaky brain, We were never taught that.

I started rounding with the team of neurology. It was a migraine inpatient for really chronic pain and migraines, and I loved it. Definitely, that was not the path like, oh, let me go into pain management.

But I really loved that because they were doing so many unique things and have always been a rebel as I called it, so I was like I call them and said, hi, I'm really interested in rounding you.

You know, what you're doing is really interesting. And so part of that, you know, clinical orientation learning, obviously we started to learn more also, catamenial migraines, caramenal headaches, cardamomial seizures.

So I was like, wow, these hormones must be a lot more important than the two hours they give us about them in school, basically. Like, here's some birth control, there's estrogen, testosterone, bi, right?

Basically very short really education that we get on hormones, endocrine system in general, besides like Addison's, you know, and things like that, the cushionoid and then, hormones.

So anyways, then I started to. Really deep dive. So I said, I had to become a hormone expert, not by choice, but by force, because I needed to try to help these men and women, especially women with like the cannabinoid migraines, cause I was the clinical pharmacist for an inpatient head pain unit.

And there was so much hormonal connection to the headaches and migraines that I started to learn. And then interesting, totally aging myself now, 28 years ago, I was lecturing at a Michigan medical meeting and one of the core faculty at A4M who was just starting this fellowship, Dr.

Pam Smith, she's like, wow, you're a great speaker. Where did you learn about all these kind of weeds and seeds,

as I called it back in the days? hormones, pharmaceuticals, you know, non-pharmaceuticals.

You know herbal supplements. And I said, oh my God, I did this in Germany. I'm fascinated with this and I really want to kind of bring East and West medicine together.

That's where the real magic happened. So that's kind really how this whole weird concocted pathway led me to this. so I've been part of the core faculty with the A4M.

know, 28 years, which is the American Academy of Anti-Aging and Regenerative Medicine. And where I met Dan, you know where we really teach, I would say, logical, physiological medicine and, and you really a systems biology approach to medicine.

and I've been hooked since. So I was always in high level academia also. I love teaching and gabbing and as I'm sure you'll notice. So I've always loved to kind of bring really East and West medicine, did a lot of clinical trials, research, publications, books, book chapters, you know, articles, clinical studies in teaching, which is really my huge passion.

How do we bring East in West Medicine? Because that's what really the magic happened. We really need to, obviously, whatever the great education we all get and whatever school we go to in addition, add these additional tools to our armatarium and toolbox and really patients get so much better when we do that.

So now I'm pain expert, a migraine expert and a hormone expert as I tease by force but not by choice. But now, I love it and I am really looking forward to this conversation because as you know hormones were vilified for such a long time, right?

And now It's kind of like they've come a long way, baby, as I tease like the Virginia Slims commercial back in the day. So very different way that we approach hormones now than really even just a very short time, even a couple years ago in mainstream, obviously.

That's our connection indeed. So as I kind of walking through the fellowship with A4M and I have referred all my colleagues only because to me, this is kind the cutting edge.

What you have elegantly expressed is that ancestral wisdom, right? Eastern based medicine is largely been forgotten here in the U S versus this Western based pharmaceutical, every pill for every ill.

And it's interesting to hear you kind of speak, not necessarily negatively or against it. There's certainly a time and place for everything, but the predicates upon the advancements in.

ancestral wisdom paired with modern science. So we love to love, to use natural nutrients, natural medicine, holistic care. That's why people find us now.

And that's kind of how I've evolved within my practice over time. Again, there certainly is a time and place for allopathic care and Sometimes symptom-based care, but ultimately the question becomes, what is the root cause or colloquially now known as that?

The underlying drivers is I like to pair it, that's driving modern illness or disease or dysfunction, right? As we as functional medicine practitioners, quote unquote, practice.

And so in terms of the advancements in hormone replacement or better yet no bioidentical hormone replacement. What's interesting is the black box label warning has finally been uplifted.

So we largely understand now the foundation that hormones play and every kind of this impacts on almost every biological system in the body. Hormones are signaling molecules and they have such a degree of influence.

How do you talk to your patients or suggest your patience to better become acquaintance? So there isn't this gap in

knowledge or fear based around hormones.

Well, you know, honestly, I think right now we need like two parallel paths of education. We need to educate the clinicians and make them comfortable with hormones because, 25 years ago, we scared the living dickens out of patients and providers with the women health initiative trials and the aftermath of that, like the hurricane that basically the tsunami that struck.

the hormone and medical world back in 25 years ago, and then we need to educate the patients. I think that's really important because education and knowledge is power.

The interesting thing is, I always like to start, hormones are a signaling molecule. Every single cell in your body has receptors for the hormones. Men and women have the same hormones, men and woman have estrogen and testosterone, Progesterone, cortisol, insulin, glucose, and many others, right?

But right now we'll focus on the sex hormones, you know, as we refer to them. And definitely we can talk about the symphony also, like, your adrenals and the stress hormones matter.

Insulin and sugar regulation matter, in many other obviously. that will go beyond the scope of this. But I think it's important to start there. We're not giving people, as I know you heard me speak, we're now giving hormones to people in the perimenopause, menopausal, and men go through the same thing.

It's called andropause over time.

Hormone Safety, Timing, and the Menopause Window

Were not given them these hormones in their 50s and 60s to make them fertile myrtles as ITs. But, you know, it's very important to maintain memory mobility and function, like I said, because literally every single system has hormone receptors.

This is why, as we grow older, the hand is not long enough when we're reading, right? And you start to need cheaters, Now sometimes when you go back on hormone replacement, oh my God, you know you got like, Oh, that's weird.

My eyesight is better. You know, my joints are not as achy. It's easier for me to build muscle. the menopause 15 pounds that I gained through that journey and things like that.

That's very important to understand that these are physiological signaling molecules. In general, everybody goes, well, are they safe? Should I be using them?

Is it going to cause me breast cancer? These are the most common questions that we see. Everybody is scared of hormones because of some of the clinical trials and now really the damage of that that were trying to repair.

and re-educate with the more recent data. What has the data showed us? Some of the old data really has been recontested and reconsidered, if you will.

Again, you need hormones for memory, mobility, and function, like I said. There's a lot of data now to show that especially if start hormones, we'll talk about women and then we can definitely talk men too.

But if we start hormones in the perimenopause, which is when women start this hormonal dance per se, to early menopaus, the earlier we started the hormones, that better the beneficial effect that they will reap from the hormone.

So the earlier the better in the menopausal journey. So, the studies kind of started showing like, oh, maybe the hormones were not as bad, but then they started saying, well, may be the hormone are not bad but if you start them earlier, you know, in a cascade of the perimenopause to menopsause, and then, we have this 10-year

magical window, so start the hormones within the 10 years of early peri-menopase to manopose, We really don't know what happens after the 10 years.

So when we started to see those clinical studies, the most common question from clinicians and patients was like, oh my God, I feel great. My bone structure is better.

I'm sleeping better, heart health. There's a lot of benefits to hormones that were shown, right? Better bone health, better heart Cognition also, there is definitely a little bit of debate on that, right?

Some studies say, oh my God, hormones make you demented. Other studies go, no, they definitely prevent and improve it. But to me, again, I always go back to God's textbook of medical physiology is ITs.

People in general are less de-mented when they have hormones, Right? I mean, you're less demanded. In your younger years than in your latter years. And obviously that's multifactorial.

It's not just hormones. So in general, I would think again, if we start hormones as early as possible, they can also have the beneficial effect, just like they have it on your heart, on you bones, also on brain, right?

Because estrogen actually helps something and it helps build what we call brain derived nootrophic factor, basically what that does is it just makes your brain bigger and fatter.

And that's the only part that you want to continue to gain weight in as you get older is actually your You know, that means all the highways are connecting better.

They're still robust. Things are, a lot of things are going on there and you're not shriveling and shrinking like our ovaries or testes over time as you get older.

So I think that's very important. Most of the clinical trials have shown that the benefit, the beneficial effects that were on bone, you know heart and cognition probably are.

The benefits outweigh the risks if the hormones are started within this magical 10 year window. Now a study came out, you know, and this came up a few years ago.

And when that came, I fell my chair. It came from the NIH. I literally emailed one of the key authors right away because it was a It's a Medicare study in women ages 65 and older, so then obviously logically by default, these people have been in menopause at least 15 years.

The average age of menoppause in this country is about 50. This was a study that was done in a medicare population, age 65, and above that looked at hormones and it looked to all cause mortality, meaning any cause of death.

And what they've shown in the study, and this was in a seven million women study. So it was a huge number. What the studies showed that we saw a 19% reduction in all cause mortality, meaning whatever, any was reduced by 19% in women in this Medicare older population that were using hormones.

Some for 10, 15 years and some for 40 years because they had 90 years old in the study showed an all cause reduction. So then everybody started scratching their head going up.

Maybe we don't have to stop the hormones of this magical 10-year mark as long as we continue to monitor and make sure that the benefits to heart health and people are not clogging, if you will, at a faster rate.

The brain and cognition is still intact and hopefully improving if we do a lot of the lifestyle things like sleep better, eat better stress less, and all the good pillars of good health that we all should be doing.

So that really then shifted the whole dynamic of hormone replacement therapy, right? So now clinicians felt much

more comfortable using hormone-replacement therapy again in this magical window and now probably with the right stratification for heart disease in older women because of the study that was published in the NIH.

It was a 7 million women study and then they'll republish further data in 10 million woman cohort. Now moving to your question. Okay. Well, the FDA, when was it like last month, month and a half now, I guess, you know, they came out and they go, Oh, we're taking the black box warning of hormone replacement therapy products.

So go at it. You know what did that do? So first of all, think people need to also understand clinicians and patients that we continue to clump hormones, all hormones as a class effect, meaning if they're bioidentical versus synthetic, if their oral versus topical or vaginal, If they are natural micronized progesterone versus synthetic projestins.

So that drives me up the wall every minute of my life. To this day, we still treat all these hormones as one big fat class with the same efficacy or benefits and the risk factor.

And there's nothing further from the truth when you really dive into the clinical trials and data, how different they are and how they work in your body and what beneficial effects or detrimental effects they cause.

how risky or unrisky they are depending on the dosage form, how we apply it, and a bunch of other factors that are not considered. When that came out, I think it was a good move to make them less scary and take like the voodoo hormones don't touch away.

But I do think huge education continues to be needed to make everybody understand clinicians and patients the differences in why some potentially black box warning or even just warnings.

For example, we know oral estrogen products and oral birth control pills still carry the risk of increasing blood clotting, right? That did not go away.

Even though we removed the black box warning, oral estrogens continue to have that potential increased risk of clot, where transdermal patches or creams or gels have not been shown to that same risk.

I never say never zero risk, but they're definitely way lower in their potential to cause blood clots as compared to oral. So that's where, again, the continued education and nuances, just because we took black box warning out, we still need to understand the differences between these hormones, their dose.

How you administer them and how they're used extremely affects their efficacy, how it works, and the risk factors that are associated with it. I love that you mentioned oral estrogen because that's such a contentious topic, especially with birth control and we see the ubiquity in prescriptions.

Are you ever a proponent of that? Are ever suggesting that, what is your kind of philosophy around oral contraception in terms of birth-control pill with our young females?

Yeah. Well, I mean, you know, it's very interesting. So let's go back to the scary topics with hormones, right? So what are things that we need to be careful of?

Blood clotting risks potential. Right? estrogens can increase the risk of blood clotting. Now, what are the studies shown for breast cancer? So please remember that the number one killer of women is heart disease, not breast.

I think that's really important to keep front and center. Heart disease in women, is very different than heart diseases in men. Most women are not going to present to the ER going, oh my God, I got this crushing chest pain that is radiating down my left arm and up my jaw.

Heart disease and presenting heart attack symptoms in women are very different. So it could be like, oh my God, I just feel off. I feel nauseous. I feel like I'm in a faint, right?

So I think it's very important to know because everybody goes, Oh my god, hormones are, is it going to cause breast cancer? Well, please note that the number one killer of women is heart disease.

In the cancers, it's actually lung cancer. It's not even breast cancer, so I think that's really important. Now, what did the study show with breast-cancer?

Again, that is a whole complicated topic and we need hours on that alone in a podcast. But most of the studies have shown hormones that may potentially increase the risk of breast cancers have been synthetic estrogens.

But mostly it was the synthetic progestins. So we have a drug class called projestogens. And this is why it's so important for clinicians and patients when they're reading this.

Many times they are not telling you the type of hormone they were using in the clinical trials.

Birth Control, Bioidentical Hormones, and Progesterone

Is it oral or topical? Is its synthetic or bioidentical?" I literally harass these people all day long in the clinical trials and ask them, hey, what did you actually use or what do you study?

But when it comes to the breast cancer, with the studies have shown, it was estrogen with this synthetic progestin that actually increased the risk of breast cancers.

Studies that looked at estrogen bioidentical with natural micronized progesterone, we saw actually a nullified effect on breast cancer risk, and in some studies showed actually reduction in breast risk.

And then you're going, well, why are you telling us this? I asked you about birth control. Well, I think it's important because what are birth controls?

The majority of them, it is ethanol estradiol or some kind of synthetic estrogen with a synthetic progestin. Now, we're seeing an explosion of breast cancer.

I think we are seeing explosion cancers in general. And again, cancer is very multifactorial. But is this one thing that we could do? So, my opinion on oral birth control pills is the following.

First, they can increase the risk of blood clotting. Yes, you're younger and yes, your less likely to have blood clots. And if you are a smoker, heavier weight, genetic factors of clotting, You increase your risk factors.

But as far as I'm concerned, any female before she goes on birth controls, they should do the genetic test at least a factor five lydin to make sure you don't have a pensity for cloting.

B is any hormone synthetic or? Bioidentical, so natural people, and we'll talk a little bit about that too, because that drives me crazy. I want natural stuff.

Well, there's nothing natural about these, whether it's bioidentic or synthetic, we will talk about it. But bio identical and synthetic. Any type of hormones cause a B vitamin deficiency.

Why is that important? Because B vitamins are very important for the methylation and other reactions that kind of clean these hormones out of your body.

So any patient, young or old, on any type of hormone replacement or birth control should be on a B vitamin supplement to supplement them. Especially if you have a poor diet, which we call the sad or the standard American diet which is very devoid of vegetables and fruit.

And fries do not count as vegetable people, okay? I know sometimes with college kids and things like that, that's like the vegetable that they get. So, very important.

I am a much bigger fan, honestly, of the IUD, but not the progestin-impregnated Iud's or the copper Iuds. They all have their problems, right? I mean, the oral birth control pills have these issues with the synthetic projestins.

It can potentially increase the risk of blood clots. That can cause these B vitamin deficiencies. The Morenas of the world, or Skyla, and those progestin-impregnated IUDs, if you're going to have an Iud inserted, please ask your Obigens to use the lowest pro-gest-in I-U-D, because guess what?

They don't just stay in the uterus, despite popular belief. These projestins leak out through and go to the circulation. Again, remember those in the clinical trials, estrogen with a progesterone is what we saw either increase potentially the risk of breast cancer.

So I'm much fan of local barrier methods or the copper IUD that's not impregnated. You know, none of them are perfect, right? They all come with their pros and cons, you know?

And that's why I think the subject of birth control is always a, a tough topic with women because, they do need birth controls. And yes, can still get pregnant at 45 or 47 if you're still cycling.

Yes, less likelihood, but you can get still pregnant, Right? Are you ever suggesting IUDs then? I know you mentioned, you know, copper may be better still, but in what context are you a proponent?

I mean, I prefer that to be honest, rather than oral, just because of all the risks. So we know oral estrogens, yes, they increase the risk of clotting, but sometimes they can also cause lipid dysregulation.

They can increase gallbladder risk, gallstones and gall bladder issues and stuff. I'm not a huge fan because again, because they come with a little bit of baggage, IUDs like local IODs with progestins.

I prefer if you're going to do that, again, use the lowest dose because you don't want these pro-gestin, which work very different pharmacokinetically and even pharmacodynamically on your receptors.

They don' act like pro testosterone with your ovaries. you know, when you ovulate an egg, the corpus luteum, it's very different. Progesterone has very physical effects on your body as compared to the progestins that are in the IUD.

That's why I prefer the copper Iud, just because it doesn't have drugs, but it is not a free bag either. There is some side effects to copper iud. But honestly, I'd prefer insertion of those, if you will, versus the oral because of the potential multitude of side effects that you can get from the oral birth control pills.

In terms of natural, unnatural, bioidentical, synthetic, how do you make that distinction? Yeah, so that's an important, you know, I think question because a lot of times people come in, like to functional medicine docs or to compounding pharmacies.

Like I don't want any of that stuff that I can get from the local pharmancies. I want natural stuff. So hormones come either from soy or yams. Literally, that's how we get our hormones.

So obviously when you see your patch or cream or pill, it doesn't look like a soy or a yam, right? Obviously. There's a lot of chemical reactions that these soy beans and yams undergo for us to extract these hormonal elements from them and make the powders that the FDA manufactures, that are manufactured FDA products, like the estrogen patches, the Vivelles of the world, or the Estrogel cream and even mist and all of those, and the raw powters that your compounding pharmacies use, right?

So there is nothing really natural about those. They all undergo huge chemical reactions to make final product. You know, whether it ends up being an FDA approved product that you get from your local CVS and Walgreens or what have you, or from you're compounding pharmacies that compound, Whether it's a bias cream, a gel, you know a trochee or whatever.

The more important thing is what the clinical studies have shown, including the NIH 10 million women study is when we use bioidentical estradiol low to medium doses and progesterone that people tended to have much better outcomes and less side effects.

So what's important for people, what basically most of the clinical trials, including this large trial showed that transdermal estradiol, low to media doses.

Remember trans dermal, way less risk for clotting. Low to medium doses, which are physiological doses. We don't need to overdose hormones and bioidentical progesterone.

people fared better. Now, the only chance where it showed the progestin was maybe slightly more effective is for shedding the endometrial lining, because it is a bit stronger if people have dysfunctional uterine bleeding, what we call, or a lot of irregular bleeds.

Sometimes people may use that pro gestin for like one or two cycles to really shed the lining and then get people back on track. So the recommendation is always to use transdermal estrogens, low to medium doses with oral micronized progesterone.

Now you should always use pro-gest-er-one with or without a uterus. most of the continued practice out there that we only need progesterone to shed the endometrial lining, which is the lining that your uterus makes every month.

And then you shed that and you have a period. Progesteron has over 300 functions in the body. So whether you a uterus or not, I think it's very important to replace estrogen.

and progesterone because of the other functions in the body. Now, if you have a uterus, it is dangerous to take estrogen alone without pro-gesteron because you're not going to have this endometrial protection for the lining and the uterus to shed because, you don't want that to build and get really thick because that may cause overgrowth of endomitrial lining, and some issues down the line.

What the studies have shown, you definitely need progesterone, at least 200 milligrams, about 12 to 14 days per month. Some studies show 10 to 12 days, but basically the consensus is you need 200 mg, 10-14 days or 100 mg every night at bedtime that you would take.

Um, for the really breast protection, endometrial protection. But also brain protection progesterone is very calming to the brain. So I always tease a lot of time when, you know, women in the perimenopause, they can't sleep.

They're on edge. There's a of anxiety, sometimes depression. And I was teased sometimes they they're placed on. sleep aids or benzodiazepines like Xanax or Prozac.

And I always tease like, I swear to you, it's not a ProZac deficiency. It's usually a progesterone deficiency Progesterone is very calming to the brain.

It's very neuroprotective, what we call. So it's really protective to brain and it really helps with the insomnia that usually most women experience in the perimenopause to menopausal stage.

Pro testosterone is also very common to man. If you have men in Neanderthal pause stage, sometimes they need a little progesteron for sleep, anxiety, and those kind of things also.

But obviously the dose for men is way lower, usually make about probably three to five milligrams if you're going to replace it transdermally or about 15 milligrams orally for men.

Obviously, they make a lot less than women with the progesterone, but very helpful for sleep and calmness and brain protection in that zen that pro gesterones will give you as you lose it through perimenopause and menopausal.

Sometimes we've suggested progesterone topically to temples when someone goes through a migraine and we can obviously have a whole podcast on migraines and hormones and hormonal imbalances.

But that's one that we use with a high degree of efficacy is what both men and women just kind of gently rub it into the temples for quick. Yeah, absolutely.

I mean, I think a point on that, you know, in the old days, because really most of the newer data shows that really cannabinoid migraine, it's an imbalance between estrogen and progesterone for sure, but it is probably a pro-gesteron deficiency, right?

So in olden days they used to slap, literally, cause we used do it, that was the data, is they would slap an estrogen patch, a Vivell patch. 0.1 million.

We would put like two in three patches sometimes because people thought the drop off that caused that, you know, that period headache was an estrogen deficiency.

But then more of the recent data showed it was really an imbalance or a progesterone deficiency, but that's your points. Then we switched and we started giving women with migraines, pro-gesture on like day 16 through day one or two of their cycle.

And that really helped not have that drop in that migraine headache that sometimes would disable them three to five days around their periods. Transdermally, we've done that also like what you just mentioned.

But please remember, especially in your younger fertile days, if you use progesterone, its job is to pro-gestate, as I tease. It can increase fertility.

This is how we also treat a lot of times with what we call a luteal phase defect in fertility issues. We actually give women progesterone during that time and that really can help with some of the fertility issues or early miscarriages too.

Stress, Inflammation, and Hormone Imbalance

So again, if this is not the time to pro-gestate, just be careful. It may increase your fertility when you take oral pro gesterones. Rubbing it on the temples like that, that's a good idea just because it's much lower dose that you would use.

And it is also a little bit more for local action per se. We've seen infertility patients in our clinic, interestingly, and that's one support that we were adding in progesterone in the luteal phase to enhance fertility outcomes.

Which hormone imbalances do you see now, particularly with our modern environment or evolution? Which ones do see that are driving chronic symptoms or which ones that you've see are kind of out of balance the most?

I know you mentioned at the beginning, you know, sex steroid hormones, but if we're looking at full picture, What's driving so much modern disease? Yeah, yeah.

You know, it's funny, right? Disease is dis-ease. Well, nobody is easing, you know? Everybody's going, I call it like, we have the dis, but we don't have to ease, so that's the problem.

I mean, everybody's running 24-7, So everybody is cortisol and epinephrine. The saber-toothed tiger is chasing us 24-7. Stress is good, right? You need stress, you need the epinephrine to jump up and do things once in a while, but it's just you don't need it 24 seven, and we're a 24 7 environment.

So cortisol and eponephrin. Remember, why are skyrocketing rates of infertility? When you're running away from the tiger, the last thing on your mind is procreation.

The last things on the body's mind are procreations, right? Because you are running from something dangerous. It's funny, that's why I always tease. Why do you think people get pregnant on vacations most of the time?

When they go, I've been trying for years and it didn't work. You give them a little support, a vacation and boom, they get pregnancy. cortisol levels, epinephrine levels that are usually much lower.

Because remember, we have these loop. So this stress loop that we call the HPA axis, We have a stress that goes to the testicles. HPG, gonads, HPO, ovaries, HPT, thyroid.

To me, the hypothalamus is the master regulator of all this stuff, which is kind of one level up. When you're stress level and stress circuit is in high drive, you're going to affect ovaries, gonads, thyroid, pancreas, insulin.

So that's the number one cause I think of all this, well, at least one of the one number causes of a lot of craziness and chronic stuff that we see, right?

Because it drives so many other systems out of whack. When people are stressed, guess what? Their sugar control is not great. right? Glucose levels go up.

People eat crappier when we're stressed, right, because we were trying to make it up, we are trying make ourselves feel better. And what do we reach for?

Well, it's not broccoli usually, you know, and it is not, broccoli and Brussels sprouts. It is usually chocolate and processed food and junk, which further increases the inflammation in people's body and they continue to feel worse and worse because they are more and more inflamed.

So that is number one. When people glucose levels are out of whack, It causes more inflammation. We call it metaflamation, right? Metabolic inflammation, so that continues to cause sugar dysregulation.

That's why we're seeing so much pre-diabetes and type 1 diabetes is more of an autoimmune, which is also caused by chronic stress, mitochondrial function.

The toxins in our environment, we are bathing all day long in toxins. whether it's the food and the pesticides and herbicides that are on the foods, the processed junk that people are eating, water they're drinking, and water that they are bathing in.

Nobody pays attention. What's our largest absorbed surface in our body? It's skin, right? So we absorb so much junk and chemicals through the skin too.

So look at your showers. Put filters on your shower. Eat clean and organic and lean and green and clean as much as possible. Don't use Teflon coated pans.

Use stainless steel pans, anything that lowers the inflammatory hit to your body. You lower your cortisol, do a meditation, yoga, whatever is your happy place, I call it.

Yoga stressed me out, so it wasn't for me, because I go a million miles an hour. But find your Happy Zone to shut down. Go for a walk every day. You know, I think all these, and a lot of times people will go, God, on vacation, you know I wasn't half flashing as much.

I was sleeping great. You it's like my ovaries and testes came back to life. And yes, exactly. Cause that can happen because that cortisol loop, the toxin, your ovary, testis, brain, thyroid, it doesn't tell you like, oh my God the tiger is going to eat you any minute is lower.

So think, yes. Start to work a little better. Your cells work lot better, So this is where you have to take a multimodal approach. And I've always been into this like East, East meet West medicine, longevity medicine.

Right? We teach that because we want to give you the best chances of expanding your years on this earth, but also like healthy years, right? You know, if you're like crippled in a chair, because you know disease and inflammation and things like that, you, we wanna always optimize our health to, give us the, best, chances, of living longer and living healthier.

So it's really important to look All that stuff. We should sleep better and get your eight hours of sleep as much as possible. Quality sleep. Everybody sleeps with their boyfriends or girlfriends, how I call it.

They're screens, right? Nobody talks to each other anymore. Blue light, like you're not making melatonin. You're now making all these good… Melatonins is a very anti-inflammatory hormone, it's one that we don't talk a lot about.

But definitely we can measure your melatonin levels and see if you need a little help there also. Sleep better, eat better. Stress less. Get hormones if your an appropriate candidate.

It's definitely one of the pillars that will help your body. be younger and healthier because there's cellular messengers to every cell in your body, herbals and supplements.

If you can't get it through your food, then yes, you may need to supplement some things if you're not getting all the nutrients in the food. And it's really hard to get all of our nutrients and food now, unfortunately, because even if your eating really healthy diet, The nutritional density of an orange now versus an Orange 50 years ago is very different because of our agricultural processes now.

So, get hormones, you know, nutrients, supplements, herbs, do all the good stuff that you should be doing. You may need next level up, peptides, IV nutritionals, and IV therapies.

That's why you want to see clinicians that have been trained in this to really help you on the journey of health and longevity. Gizmos and gadgets at home sometimes like red light therapy might help with inflammation and cellular rejuvenation, some other gizmo and gadget that we can talk about a lot.

You know very important for us to continue to educate but hormones are definitely a very Important pillar in this whole person systems biology approach to your health Yeah, that was a beautiful expression of what I say is that, well, one, hormones should be foundational, not supplemental.

And you have to look at why, you know, are hormones out of balance. My foundation five is you got to eat right, sleep right move right talk right poop right.

I love that you kind of discussed all of those and especially to me sleep is the foundational component and looking at something as simple as maltona, which every single cell organism on the planet.

creates, it is so foundational as well, but in our modern lifestyle because we're constantly pressing go, because were suppressed with blue light and LEDs into the evening, we were not producing as much melatonin.

Their oxidative burden is extremely high, which is chewed up. So something as simple as replacing with something so safe to me is necessary. But in the interim, trying to adjust for lifestyle medicine and making sure what healthy eating looks like or water or sleep movement, just even the mental component.

our society or community, our relationships, all that plays into, into the conversation. And interestingly in your book, well, one of your books, Mastering Chronic Pain, because often I find people will take voice when pain begins to manifest.

But as, as you said, and I think you set it best at A4M is we need all become in phlegmologists or kind of this underpin of inflammation driving modern disease.

Well, the four components that you outline is repairing the body systems or kind of this notion of resilience. So one is calming the nervous system. As you said earlier, it's just we're bathing ourselves in cortisol and what happens

when our gas tank is as empty, we caffeinate to go even further.

Press harder, press faster, right? Go, go, and we can only heal the speed of our nervous systems. I know offline we were talking about how we need to be bathing in L-theanine, or especially if there's sugar cravings and if we're reaching for the poor nutritional habits.

The second is regulating hormones. And what's interesting to me, when I help a patient heal, I think of hormones as layer five. First, like focus on circulation, perfusion, making sure that the body is well oxygenated.

That's critical for mitochondria. Second is glucose or fuel delivery. So making what we are taking in is kind of the right fuel, putting in the gas in a gas tank.

Third and fourth go together, which is gut and immune, as we know now 70, maybe upwards of 90% of our immune function is at the level of the gut. That fifth level is hormones.

So if we clean out layers one through four very effectively as we do, we improve fertility. We improve erectile dysfunction, We improved pain. we improved people that are coming with hormonal dysfunction because of the preceding factors.

And so in your for the you comment here, so calming the nervous system, regulating hormones, reducing inflammation. and then strengthening energy system kind of that plays exactly into how we look at unlocking and reversing pain.

And so how, I guess I want to highlight that book, your other book in terms of how hormones play into this notion of pain and pain signaling. Yeah, so I mean, you know, very important.

Again, like I mentioned, the hormones are literally cellular messengers to every single cell in your body. And when you're inflamed, You can call it whatever disease you want or dis-ease, as we call, it, but as I tease, there's only one medical specialty left, inflammatory, right?

You know heart disease is inflammation, cancer is the inflammation. This is one of the big components of it. Neurodegenerative disease's inflammation skin disorders is inflammation, infertility is information, endometriosis is an inflammation and the list goes on and on, right?

So, you know, I've been in pain management for many moons now and really we know that when we Look, because chronic pain is multifactorial. It's no longer where it just hurts right there.

You know, there's a lot of people like, you know they have chronic, pain you can CAT scan them, your MRI them you image them. And the initial injury or whatever we go, well there is nothing there that doesn't mean they don't hurt.

That's the problem. They hurt because now they're pain processing centers. have been dysregulated. They have basically been in this fight system for 10, 20, 30 years, some of them.

So really, to also address chronic pain, we have to rewrite the story and rewire the system. There is something in pain called wind-up phenomena, basically.

We wind up pain literally through these loops, just like the cortisol loops. Our bodies are all on pulleys and levers, I call it. You always pay Paul and steal from Peter or vice versa.

There's levers and pullies, and your body is smarter than the smartest physicians, right?

Pain, Medications, and Terrain Optimization

If we give our bodies the tools that it needs, most of the time it really knows how to fix things probably a lot better

than all of us. You know, so I think it's important in chronic pain patients to absolutely, we know when we decrease inflammation, you're going to hurt less.

If you keep eating the wrong stuff that are causing inflammation in your body, your pain is going to be amplified and it's going hurt a lot worse. We know when your cortisol and you didn't sleep good because of the pain, we know, when people are more stressed, more cortisol, or more sugar dysregulation, their pain gets worse, you know.

The energy system, your mitochondria, and when you're running on fumes, it is very important to replenish these because then the pains improves also. So a lots of these hormones are very immunomodulatory.

A lot of times, women during pregnancy, when they have like lupus and migraines and pain this and that, a lot times it goes away during the pregnancy.

Because hormones, especially at sometimes the higher levels, they're immunomodulatory. They really rebalance the immune system. And then when the give birth, you know, sometimes The immune system or the pain kind of rages on, the migraines come back and things like that.

So we know hormones are definitely anti-inflammatory and immunomodulatory. Testosterone in men is very immunodilatory, and what we call cardioprotective or heart protective also.

Again, very important in chronic pain people that we address the stress system. the inflammation and nutrition system, the energy system the hormonal systems the sleep systems if you will and also I think very important like what we feed our body but also what feed your brain what are the thoughts that are going in our brains what do we hearing all day long are we telling our you know our body like oh my god i can't move you suck you failed me i'm never going to be able to do anything versus placebo effect right people 35 percent in clinical trials so get up every morning it doesn't matter what disease you have and you will have many You just get up in the morning and go, God, today is going to be a wonderful day.

Even though you can't even move a muscle, you hurt so bad. It's very important to give our body positive reaffirmations. Dr. Richard Bruce Lipton, great data on that, right?

your body keeps score that's a great book too you know so definitely I think feeding our body and mind moving also pain patients when they're in pain you don't want to move and god we understand that like I tell my fibro patients I want you to just go in a warm water pool and just don't move, just sit there.

Because even if you don' move just the water pressure is gonna push that lactic acid out and you're gonna feel better. That warm in the pool, it's gonna just loosen the muscles a little bit, even you just do very little movement.

Bathtub, even in the bathtub, just a little movement, you'll be surprised on how much that will also improve chronic pain. So yes, we're not asking people to go do marathons.

We're just asking them to move like in a tub, pool, or just gentle, cha-chong movements, you know, just simple up and down movements will really help, again, feed the system and the muscles to say, it's okay to move again.

You're not gonna, we're gonna continue to hurt. We're going to lower the stress. we are going lower to the inflammation, We are gonna lower of the gut inflammation.

80% of your immune system lines the GI track. So very important for any patient and not just pain patients, Hey, track your food and see. Sometimes people have food intolerances, whether it's eggs maybe for some people and gluten and wheat and corn or dairy, some of the junk food.

Because sometimes, see how you feel. two to three days after eating X, Y, or Z. And sometimes that may give you some clues like, oh, wow, I really get achy after I eat X.

Then you take that out of your diet and see, because again, it's not necessarily the food, but your body is reacting

the foods and it is amping your immune system to spew off all these angry hormones and cytokines and inflammatory stuff that is really upsetting the body.

that also will propagate the pain and make the paint feel a lot worse. So there's a lots of additional tools. And then when you need to go nuclear, you know, hey, I'm a pharmacist, do you?

I have no problems also going nuclear as I tease. When you Surgery, of course, these are amazing tools that we have at our disposal also, but you always want to start with the lifestyle, supplements, vitamins, find the root causes if you can and fix those.

And then, you know, by all means, if, done all these things, all of these great things. You need to go nuclear as ITs go, but also know that we've trained a lot of great healthcare providers all day long.

We give them a lots of additional tools, whether it's herbal supplements, lifestyle, gizmos, gadgets, IV therapies, peptides, regenerative therapies and so on.

you know, just to kind of, you keep your hope up. There's so much research and education, but also every day we get breakthroughs in clinical trials coming out, teaching us more and more.

When you're in medicine, it's lifelong learning. You don't stop learning, right? Because there's always science, technology evolvement that always gives us additional tools to continue to heal and hopefully help even the toughest of patients that we see.

Sahar, I'm a student of life and I think that's why you see me more than my partner does. And so that the biggest complaint at home, you know, how am I being a partner?

How am being father? And there's a balance to that because again, we're complicit. Sometimes we want, or we are ambitious. We have a lot of drive. We want to provide the best outcome for our patients so that the prudence is upon us to stay current, stay relevant.

That's why I'm continuously educating myself. But that too comes at a cost physically. I know when you said when we were just the last at A4M's biggest conference in Las Vegas, and you feel so crappy kind of living from there because of the context of that environment, right?

We're literally locked in all day under the blue light. We have to, I was joking with some of my colleagues, like we're at health conference, but yet we didn't see the sun.

Yeah, for four days. For at least four nights, yeah. Exactly. I think it's a balance. With our personal lives, your kids, wives, husbands, whatever, moms, dads, brothers, sisters, and the usual stuff, but also to help our patients.

And I always say like, you know, everybody always asks me like Sahar, how do you balance it? It's crazy. You know? You're always traveling, lecturing, writing, publishing, teaching.

I do a million projects a minute. And, it's a balance. So I would say, and I said, I don't know if I'd do it. Well, at all, definitely will plead the fifth on that.

But it was always like I steal Paul, like when I'm full on like just crazy for three or four weeks, work. You know, teaching traveling education, just like when I'm home, I really try to be just home.

Like my phone is away. I am not in front. Paying my full attention to my kids and husband as much as possible. And, you know. not be gone so much. But I think we're all also just work in progress, even as clinicians, right?

We're always trying to improve our habits, our ways of living. As we learn, every time I come back, I was like, oh, that sounds good. I should try this supplement or, ooh, look at this drug.

Look at these data. That's so interesting. A new gizmo comes out in our shows that I see. Like I have so many gismos and gadgets, and it's a matter of time.

How do you incorporate all of this stuff? I think we're all works in progress, whether you're the provider and the healer versus the patient. I read Jim Cleary's book, Atomic Habits, at least once a year, because it just reminds you, and his thing is, if you just improve 1% a day, Well, that's 365% improvement theoretically in a year, right?

And then sometimes it's even more than that because it accumulative. So let's say like you never exercise and yeah, you're not going to go to the gym or run a 26 mile marathon on day one, but even if you just walk like today, five minutes.

tomorrow you walk 1% above the five minutes, so 5.01 minutes and you go on. So then it's 10 minutes in 15 minutes. And then by the end of the year, maybe you're walking half hour every day or five days a week or whatever.

Or if it to spend time more with your kids or spouse or wherever that 1%. that you need to improve on. I think the majority of us, it's not going to be, oh, let me spend 1% more time at work, because I we're all very guilty of that.

But it is very interesting. Because we know New Year resolutions never stick, right? Everybody's in the gym in January and February, that's it. It drops off and it downhill after the end of the year.

What can we do 1 percent better every day? Hey, can I eat two more broccolis today? You know, and every day I will commit to eating two spirit, you know two things of broccoli or more vegetables or 1% more veggies or, you know, 1 percent more movement or one percent, more sleep or you whatever that is for you.

I think that's a really realistic goal or like, and when people they don't feel good, whether it's perimenopause, they feel themselves, or they lost the pep in their step or now they have hormones and they're trying to get back into the swing of things or a chronic pain patient that doesn't like yes, cooking three healthy meals a day, I just say, Hey, like, if you eat all white, just introduce one color of food a week.

Like, I don't care. You pick. So you can't give them these big goals like I want you to go pescatarian, vegan, paleo, and go get some red dirt from Mars while you're at it, too, right?

We can also complicate these things for our patients. We have to make it as easy as possible and as incorporable, as that's a word, in your daily life, because we struggle with that, I mean, you know, I have my caliolic powder right in front of me every day because I keep forgetting to take it.

Like sometimes it's so busy. I can't even put that in my mouth and it is right front me, right? You know? So, you know, we always like, I try to figure out habits for me that work for my and my family and how can I teach you how to do it better as the patient, so I think the goal of just improving life and things 1% every day is doable and relatable, right?

I we all have something to improve every year. Progress over perfection, that's what I suggest for my patients all the time. That's literally how I voice it to them is one percent better.

And when they provide that kind of context, like imagine feeling 90% better in 90 days, 100% of my patience will take that, right? Because they've been stuck for so long or plateaued for long.

So I'm just a guide on their healing journey to help accelerate that process. And so I think when you're looking at all the things, right, as you alluded to, it all matters, but that's how quickly you move that 1%. And, so, I don't know for those that were watching on film, like I'm doing a nasal spray, taking a couple of supplements, because I, just like you, is I am back to back with patients.

I forget, we prioritize ourselves a lot. Caregiving syndrome is real. That's why practitioners burn out. That's why a lot of us, you know, exit the practice at some point in time is because we feel the burden of trying to help everybody

at the cost of ourselves last or our family last.

We're still right. People that love us the most, we need to show up the. And yet, unfortunately, sometimes that doesn't become the priority. So finding, as you said, balance is key, but I think it's a, it.

predicate upon what we prioritize above all else. In terms of segueing now into medications and pain, how does medications kind of worsen the symptoms?

Cause I know we've talked about hormones, the impact of hormones. The foundation of how important hormones are. And to me is when you administer hormones that allows someone to feel super humor again.

It gives them their quality of life. But when you mentioned peptides, that to me is the fastest way to get people out of pain. I cannot make this up. after two injections, pain from 178 to less than 10. I mean, peptides really, really move the needle very quickly and improving the, not only the pain scale, but the quality of life.

But in terms of medications, I know Jim talks about this a lot, are drug-induced or nutrient Yeah, and when we were doing the spectrum mineral and vitamin and nutrient test long ago, I remember having a sheet here in our office that I would blow up and say, okay, what medications are you on?

Here are the drug-induced nutrient depletions. But people are not talking about that or were still the microbiome-induced depleations from specific administrations and medications, just like when you mentioned hormones, that not everything is identical.

So it's not fair to lump everything. And that's one of the biggest disservices. We have so many patients that are referred to us in terms of hormone mismanagement that we see all the time.

I think going through your course, your teachings, and your clinical pearls, it helped reframe our paradigm and what's the proper order of operations.

Yeah, and you always have to fix the terrain, I call it. You know, can't be a hormone slapper either, because if you put hormones in the wrong body, they're actually not helpful at all.

Practical Health Habits and Final Takeaways

Actually, patients feel worse. That's why it's important. Like, you've got to fixed gut health. You know, hormones are metabolized in the gut also. So, if you give people hormones and they have atrocious guts and gut health, you really have to fix that.

You have fix the terrain. All hormones, all toxins is in the liver. So if your liver is bad shape and it's not supported to metabolize the junk out or the medicines or hormones people feel worse.

This is like a clinical pearl. If people give you a hormone then you feel worst. Guess what? Your terrain is bad. You need to fix the soil first. And same thing, like medications, absolutely.

We need medications at certain times. They're life-saving, right? But yes, medications can cause drug-induced nutrient depletion. So you can Google that, whatever medication you're on, and say, hey, what is the nutrient depletion that your medicine causes?

And then you definitely want to supplement that with food or a supplement, because that will make also the medicine work better for you. And you could have less side effects.

from it when you replace the nutrient that it's depletion. But it is like anything. Everything is pros and cons. Yes, medications do have side effects.

Aspirin is over the counter. We get GI bleeds from them all the time. But again, it's like anything, what's the pros

and what the cons or what is the risk and benefit of any treatment, whether it is medications, peptides, or whether its nutraceutical supplements and vitamins, gizmos and gadgets.

That's why it very important to go to people that are educated Obviously in their field of expertise, discuss your specific, it's called personalized medicine, right?

What is going on with you specifically? what's your genetic makeup? medications, you know, treatments, surgeries, whatever. When you fix the terrain and inflammation, everything works better too.

So it's very important as a chronic pain patient, and sometimes we need drugs along with all the stuff that we do. And so it is very, important again to just know that there are so many tools available and always look for root cause, always fix the terrain, Always support your body first, and then definitely we go to the other options after that.

Also, if you're on medications, please know, doing all this stuff also will make your medicines work so much better. Just because like if your fighting an inferno for migraines, for example, And you're on a CGRP antagonist, for example.

You know what? When your body's less inflamed, your hormones are regulated, Your gut is fixed. Your medicine is going to work so much better for your migraine or for you fibro or your chronic back pain.

When we decrease inflammation, decrease the infernos, Decrease the stress, the gut dysregulation, all that stuff. Even when you are on treatments, they will make your treatments work So much Better.

And I think it's very important. You know, again, we add all these things we talked about here to medication treatments. They're not in lieu of, you know?

And sometimes you go, well, I'm medicines. I don't need to do any of this stuff. Not true at all. That will make things work so much better for you. Yeah, this is the reason why metabolic and hormonal pathways need to be optimized for regenerative therapies to succeed 110%. So many people that come to us, they feel worse on hormones when vice versa should hold true.

I remember this 10 years ago from one of my mentors and they, I told me, Daniel, if you have a very, very heavy set over individual, we were treating, you know, TRT with men and you're giving them hormones, they're going to just aromatize their T to E and make them worse.

Like the first thing you need to do is improve their metabolic profile. but I have so many patients that are referred in that regard who need, they don't understand that.

Like you go to some of these men's health clinics and literally low T automatically will replete. Okay, well, what's the context here? Not so fast, right?

A lot of patients who are getting worse, that's a problem, or their liver is backed up. They're not processing their toxins appropriately. It's stored in fat.

You're releasing that and now you feel worse similarly. So there's definitely an order of operations. I appreciate kind of, the breadth and depth of what you've been providing for us clinicians as tools to learn from in terms of clinical pearls, patient education takeaways.

Cause I know we're approaching on time and I want to be mindful of your time. Yeah. Any practical takeaways for clinicians and patients. Yes, definitely.

Like I said, I always say I start from head to toe, really. Work from the hypothalamus down. You work on that stress response, work the diet, on the sleep, fix the terrain as much as possible.

Decrease your inflammatory load, your oxidative stress, and give your body the best fuel sources that you can so

your mitochondria which is your cellular mess, which your powerhouses in every cell in your body work better.

Hormones are definitely one of the tools, but there's so many other tools that we could provide. This was the reason I published many books, articles, clinical trials, things like that.

I love researching and teaching as I call it. In our last book, Mastering Chronic Pain, what you can find on Amazon and in any other bookstores also. You can go to our website called NoCViva.com, where we also have a lot of education blogs on chronic pain and how you can heal better and help your body.

Give your bodies the tools to decrease your pain level, to increase your inflammation, decrease the rate of stress. Because when you do that, you're really going to help any disease state.

Any chronic disease, whether it's chronic or not, will be helped with this. So definitely thank you, Daniel, for the opportunity. to come on your podcast and teach your audience.

I love teaching. There's so many, well, segues that we could go as you know. Obviously, we're usually together for 24 hours learning and teaching, but it's great, right?

There is so much knowledge to share with providers and patients and just really arm everybody with additional knowledge and tools to continue to help the providers continue help their patients and for the patients to empower them with more knowledge in tools that they could also use to their health journey.

We've only scratched the surface. I have a plethora of questions, so we'll definitely have to do a round two, but this has been absolutely tremendous.

So I genuinely appreciate your time. Above that, I appreciate everything that you're providing in terms of staying current with where medicine has evolved.

educating clinicians and practitioners about pain hormones and true root cause medicine. I mean, what you guys do at A4N is really, I feel as if the most cutting edge science and showcasing that in a very evidence-based approach for us practitioners to improve the health outcomes of our patients and those that we love the more.

So I want to thank you for your time today, but then just your depth of knowledge and everything that you contributed into the realm of science and medicine.

So I appreciate that. Last question that I love to end every episode is, if you could have one superpower, what would it be? Superpower, I think healing.

I was born to be like a healer. You know, like I, love making, just improving people's lives and whatever, which way they need improvement. My son asked me that once and I was, I don't know, he said, would you want to portal?

And I said yes. You know like to just go other places and portal into because I'm always going so fast. I love that, but that's kind of a supernatural power he wants me to have.

He's like, wouldn't it be fun if you didn't have to fly to these places? You can just portal quickly and port back. But I love teaching and healing, as I call it.

So I would say that would be one superpower that I I'd love to have. You are definitely a healer and a mentor. So, again, I very much appreciate you. You already plugged the website.

Where can people follow you, tune in, buy all your books, any other books that you want to plug? I know that we still have it. There's a lot of publications and books.

But, you know, the easiest place to find me is at sahar.world. That's my website, so Sahar world. So I just kind of put my world under one website, so it's easier.

You know, me, my, world and I. Yeah, it is definitely in our book, Mastering Chronic Pain. We'd love all of you guys to join us and get the book. Not really just to buy the books, but we're really trying to teach these additional tools.

Basically, we have above 70 million people in chronic pain in this country alone and almost 2 billion people globally that live with chronic. And remember, pain really bridges every medical specialty, right?

Every medical speciality has its algae and dynias, as we call like pain syndromes, you know? So we just really want people to kind of, learn these additional tools as ways to help them deal with their chronic pain and manage it.

So definitely check it out. And Danielle, always a pleasure. Thank you again for having me here. and look forward to doing some other ones for a lot of other fun topics that we can definitely dive into.

The alges and diniums, as you referenced, to me, in this modern era, I am putting myself out there when I say this, and I recognize it, but I said pain is a choice.

And so too is getting out of pain. We have now the tools at our disposal as science continues to evolve. Yes. A lot of it is centered around lifestyle medicine that we conversed about today, balancing hormones, reducing inflammation, understanding that a lot our health outcomes are driven by our priorities, by daily choices.

It's that one percent rule. The UL again suggested as well. So this has been tremendously fun. I'm sure we'll do a round two here at some point in the new year and years to come as information continues to evolve.

But I encourage everyone to check out your work. follow you, everything that you're doing, because it's definitely helping so many people get out of pain and restore resilience.

So thank you again for everyone tuning in. Please like, review, subscribe, share this with someone who can benefit, who needs the help, can get it out pain, and can improve their quality of life.

And until next time, stay healthy, Thank you for tuning in to the TBD Fit Podcast on Dr. Talks, where we unpack all things health and longevity. If you enjoy the show, like, review, and subscribe.

This allows us to have a greater reach and help others on their health & wellness journey.