



EPISODE 1005

Why Your Body Gets Stuck in Pain & How Movement Heals Faster

With Guest Dr. Tom Walters

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SHAWN STEVENSON: Welcome to the Model Health Show. This is fitness and nutrition expert Shawn Stevenson, and I'm so grateful for you tuning in with me today. Recently, Hall of Fame NFL coach Tony Dungy shared the story of his son Jordan, who was born with a rare genetic condition called congenital insensitivity to pain, where he doesn't feel any pain. At first glance, that might sound amazing to go through life without experiencing all the pain from the bumps and the bruises and the injuries and stubbing your toe. You just brush it off like it's a superpower. Again, at first glance, that might sound amazing. But when Tony and his family received this diagnosis for his son Jordan when he was just a baby, he was also informed that his son would likely not live to make it until the age of five.

And this is because without the ability to experience pain, you don't have the ability to avoid things that are not only dangerous to you, but deadly to you. But just as rare as this condition, Jordan's story is rare because not only has he survived into his mid-20s as of this recording, despite over 70 surgeries, he's living life and he's thriving. And one very powerful lesson that Tony and his family have learned, and that we all need to learn, is that without pain, Jordan did a lotta damage to his body. He did a lotta damage to his life. And sometimes pain is exactly what we need in order to inform ourselves that we need to do something differently.

Pain is an invaluable aspect of this life that we have as a human being here on planet Earth. It's a very powerful guidance system. And with all of that said, there's another end of the spectrum when it comes to pain. Sometimes our body can get stuck in pain patterns that can create an equally distorted experience of life and suffering as well. And so today's episode is incredibly important and valuable for us, yes, to understand the value of pain, but also to understand what pain is trying to tell us. And today you're going to discover that we all have a unique pain recipe, and every single person here on planet Earth has a unique pain recipe that is a compilation of a myriad of different ingredients.

And it's gonna be different from person to person, the amount of each ingredient, but the ingredients themselves are pretty consistent for all of us. Now, with this being said, what our aspirations are to use pain as a guidance system for change, but also have the tools to be able

to turn down the volume on that pain because, again, we can get stuck in these pain patterns to where chronic pain becomes our experience.

And oftentimes, as you're gonna learn today, chronic pain does not have to be a part of our lives. It is, again, informing us on certain things and there to protect us, but within that protection, we start to understand the power of our brain and our nervous system because it truly has evolved and is designed to keep us safe. And sometimes this safety mechanism can be on high alert when it doesn't need to be. And so understanding this and being able to unpack this is how we can transform our lives and get out of chronic pain and get out of even the acute version of that pain so we can get back to doing the things that we truly love.

And so today you're gonna discover what the pain avoidance cycle is and why you need to break this pain loop starting now. You'll also discover why active exercise can be more effective than passive treatments when it comes to pain. You're also gonna learn the most important elements of physical therapy, emphasis on therapy, what those critical elements are, and certain strategies that we all need to employ in our lives. All of this and so much more with our phenomenal special guest, Dr. Tom Walters. Dr. Tom Walters is a board-certified orthopedic physical therapist who specializes in the treatment of pain and movement disorders. He's the founder of Rehab Science and dedicates his time to teaching people about human movement, pain, and how to effectively recover from injury.

Besides running his clinical practice, Dr. Walters served as a full-time undergraduate kinesiology professor for eight years, teaching human biomechanics, therapeutic exercise, and pain science. Let's dive into this conversation with the incredible Dr. Tom Walters. With my guy, Dr. Tom Walters. So good to see you, man.

DR. TOM WALTERS: Thanks for having me back, brother. Good to be here.

SHAWN STEVENSON: Of course. Of course. Man, I'm so excited to talk to you today. What typically happens when we experience pain or an injury is that we start to shut things down. We start to avoid doing certain things. Can you talk a little bit about this phenomenon of this pain avoidance cycle and what we need to be aware of when it comes to this?

DR. TOM WALTERS: Yeah. It's so huge. I'm glad we're starting with this. It's there's actually a fear avoidance belief questionnaire in physical therapy that sometimes clinics will give out, but it's more in research studies. But it's such a huge part of any kind of pain condition. This especially comes up a lot in spine pain, if you imagine low back pain, where people... 'Cause pain can be kinda scary, right? It's like you have pain and most people if you talk to the average person, no matter where pain is at in their body, their initial kinda gut response is to protect the area, which- you know, isn't necessarily bad. Like a little bit of protection for a little while could be okay.

But when people become fearful and then they wanna protect things for too long, then you just start to run into all these other problems. And so we, so much of it is, so much of it revolves around kinda education on pain, about their injury, giving them some direction. I think that's the thing is like a lot of times people just don't know what is this pain? And they have no idea how to navigate it, and so their response is, "I'm just gonna protect this." And then you just... I was just talking to someone yesterday about rotator cuff injuries. So a lot of people, my neighbor just had this. She injured her shoulder. She came over to our house probably within a week or two of it starting hurting, and she was kinda holding it like it was in a sling.

That was her natural response. And so I started talking with her about this progression that we see in a lot of people where if they have shoulder pain, especially rotator cuff injuries, if they protect it too much and are kinda scared of moving it, they can develop frozen shoulder. And frozen shoulder, you know, if we look at the research, can take 18 to 24 months to resolve. It'll usually resolve on its own, but it can last for a long time. And so a lot of it is just education and helping the person understand that it's actually good and okay to start moving in the right ways. Just getting a little bit of mobility going, and there's different types. You've gotta respect your symptoms.

It's not saying just blow through pain. No pain, no gain. You're thinking about your symptoms. But just knowing that this is going to help me, this is okay if I kinda get this moving a little bit, especially those mobility exercises, and then eventually kinda activating it and strengthening it.

That's going to not only help maybe protect me a little bit from getting something, like if it's a shoulder injury, getting frozen shoulder. If it's other areas of the spine, it's just you're not getting so much kinda atrophy and deconditioning, and that's the thing you worry about with people because if they protect something for so long, there's all this deconditioning that happens, and then they're so much more likely to get injured as soon as they go back to whatever they were doing before. I had another guy who had a disc herniation in his back, an L5 S1 disc herniation, and his doctor told him just to rest until it was better. I saw him a month later. A month. He'd been, like, on bed rest for a month. Hadn't done anything. He'd become extremely hypersensitive. He could barely put pressure on his feet.

If he tried to stand up from his bed, he was getting extreme pain. He had just... He'd become extremely deconditioned. His pain system had been, become way more sensitive, and all because he thought just protecting it and resting was the solution. And I think, you know, we used to, that may, used to be maybe more of the advice back in the day, but I think we've really moved past that. And it's really all about just getting moving, the right amount of kinda mobility, getting blood flow back in eventually kinda gradually building strength, so. But yeah, fear's a huge one. Fear is just one of the first things you kind of target with people. And it depends on the person. You know, you kinda gauge it when they come in. But some people are very fearful and scared and hypervigilant and protecting their body. And you know, other people probably could use a little more fear. But so it's a mix.

SHAWN STEVENSON: You know, when you said we've moved past this, you mean you- ... and some of the elite-

DR. TOM WALTERS: Sure.

SHAWN STEVENSON: ... pTs and physicians who are aware of this, you know, from a really comprehensive perspective? Because the science has been there for decades. Of course, but we have this biomedical model that has just been really treating pain and injury in this very specific way, which is, again, to hear somebody this recent, again, the science is there. Do nothing. Bed rest until you feel better. And to hear that now is just w- did you even read a book?

DR. TOM WALTERS: Yeah.

SHAWN STEVENSON: You know what I mean? And it's not that the physician is trying to harm or delay the healing of this individual. It's just, again, this, the practicality, the application is starting to catch up with the science. And this is why I'm grateful to have you here, because one of the worst things that you can do is to do nothing.

DR. TOM WALTERS: For sure.

SHAWN STEVENSON: And of course, there's an acute time where, you know, you just want things to just maybe simmer down a little bit. But sometimes after a certain amount of time our bodies really respond to, and I'll, actually, I want to share this because I looked this up right before I came in because I knew I was gonna be talking to you. If we even think about is there any data on movement accelerating healing, there's a ton of it. And this study was actually done on older adults who have between the age of 55 and 77. This was published in the Journals of Gerontology, Series A. And they had 28 participants who were split into exercise group or a non-exercise group.

The researchers essentially s- they had to inflict a wound, so they essentially stabbed them. But it was a nice stab. It was a friendly stab. And increasingly, the exercise group began... By the way, they started exercising about three weeks prior. Okay? So they already had something kinda going, which is another part of the story. But three times per week for a month prior to the cut, and then continuing to exercise after getting stabbed. And after compiling all the data, and this is what's so shocking, the exercise group healed about 25% faster than the non-exercise and control group. And the question is why? What's going on there? And if you think about things like circulation, I want you to talk about these things. Circulation waste removal, stem cells, myokines. There's so many reasons why it helps you to feel better faster.

DR. TOM WALTERS: Yeah. No, it's so true. I think it, a lot of those things you're mentioning are spot on, and really boil down to blood flow. This is why a lot of surgeons won't take people for s- they won't accept them for surgery if they're smokers, for instance. We know smoking

some of these you know, reduces blood flow to areas. So it's I've not seen that study, but that's really cool to think about a skin injury and seeing how exercise impacts it, 'cause we talk about it all the time in the musculoskeletal system looking at the ability of exercise, increased circulation, all of the good things that brings, oxygen, nutrients immune system molecules, all these things that go in there and clean it up, how much that can speed up healing, but that's a really cool one to see it in the skin.

That's pretty awesome. Yeah, it's what I often tell patients with musculoskeletal injuries, aerobic exercise, you know, so much of physical therapy is focused on mobility and strength training, which are kinda like, you know, they're the foundation of a lot of rehab. But there's so much to be said for aerobic exercise and just boosting blood flow. I think it's one of the best things you can do actually in the initial stages. Maybe once you get out of that really acute window where you're just kinda letting it calm down. But if you can find a ver- a form of aerobic exercise that doesn't stress the healing area. So, if you have an ankle sprain, maybe you're doing swimming where maybe you don't kick a lot or something, you know?

You're finding something where you can still respect that injured body region but get your blood flow up. It just, I see so many people where it expedites their healing process, and we've got some kinda cool studies with blood flow. One I one I've seen is where they looked at people who had neck strains, neck muscle strains, and they compared soft tissue work like massage. They compared the blood flow, increase in blood flow in massage versus aerobic exercise, and they found that soft tissue work, massage, boosted blood flow, it was like two to three times to those healing tissues. Aerobic exercise boosted it six to eight times. So I think- You know, we maybe don't always think about aerobic exercise for injuries and pain, but I do think it is, it has a lot of potential in the kinda rehab space if somebody has an injury.

It's just, you just gotta find the thing. If you are a shoulder injury, you probably wouldn't pick swimming. Maybe you go walk, do incline treadmill walking.

SHAWN STEVENSON: Unless you're walking in the pool.

DR. TOM WALTERS: Yeah, you could walk in the pool. That's true, yes. Yeah. So you just gotta find the thing that doesn't stress those tissues too much. There's the right amount of stress, but you just gotta find the thing that doesn't flare it up, because I think that blood flow, like increased blood flow really can speed up the healing process, and that's a cool study.

SHAWN STEVENSON: Yeah. Now, this leads us to looking at, you know, the much more comprehensive understanding of pain itself, and this is something that is a primary part of the human experience. And yet so little is taught about this, even at the highest levels of university education. That's changing-

DR. TOM WALTERS: Yep.

SHAWN STEVENSON: ... rapidly as well, thank goodness. But having access to someone like yourself and access to a show like this, we can get this education into our hands now and utilize it, because the way that we're taught in a conventional setting is that pain is due to tissue damage specifically, and if you're hurting, then you're injured, which that couldn't be further from the truth. It's only one aspect of it, because pain isn't simply a result of tissue damage. It's a result of many different factors. And if you could, can you kinda break down and share with us what pain really is? What are those factors that can kinda create our pa-experience of pain?

DR. TOM WALTERS: Yeah. It's such a complex experience, and I'm glad you're bringing this up, 'cause most people do have that belief that if they have pain, they think that we'll often talk about hurt versus harm, and people think if something's hurting, it means there's harm there, that there's some disruption to the tissues. They have a muscle tear or a ligament tear, a herniated disc or whatever it is. And we really have been, over the last 10 to 20 years trying to teach people that this isn't actually true, that they're totally different phenomena. You can have tissue injuries and you have no symptoms, and you can have plenty of people who have lots of pain, and you can't... you put them through an MRI, and you can't detect anything.

And other studies where, the ones I often like to highlight, are where they take healthy people, asymptomatic, pain-free people, and put them through MRIs. And you and I have

talked about this before, but MRIs of all, the whole, lots of regions of the body and find things like meniscus tears, labral tears in the hip and shoulder, disc herniations, disc bulges, a-around 40% of the population, and these are people who don't have pain.

So you really have to kinda tease those things apart. And there are, like when you think about pain, there are so many factors that go into it, and you mentioned the biomedical kinda model before, and that was like the old model. Even when I was in physical therapy school, that's what they taught. Sometimes we would call it a postural structural biomechanical model. It's just all about your physical body, about the forces on your body, your tissues, and we would always, when somebody came into the clinic with pain, 'cause that's the number one complaint anyone goes to see their healthcare provider for, is pain And we would search for pain generator.

We'd call it the pain generator. And we would do all these special tests, we call them, to look through and see if we could identify the pain generator in their body. And for people who have more tissue-driven mechanical pain, that can be really useful. You can find some... if you just sprained your ankle, that's gonna be a very tissue-driven... It's obvious, like you hurt the ligaments on your ankle, and we can test it and reproduce the pain. But then you get people who have pain that is almost impossible to reproduce, or sometimes you can get it to turn on and sometimes you can't. It's not a clear-cut mechanical type of presentation. And so in those individuals, you often start to find that there's more that goes into their pain recipe.

It's like they'll have all of these other factors that we know now in the research are tied to pain. Maybe issues with mental health, so they might have anxiety and depression are closely tied to more persistent pain states, lack of sleep, pro-inflammatory nutritional kinda strategies. Like they might or even just even other things that just anything that can kinda boost inflammation. Maybe they don't move a lot. People who are very sedentary have more inflammatory cytokines versus people who exercise more. So there's all of these aspects that tie into your pain system, which is really just kind of a branch of your nervous system.

So you're just looking at what are all the factors that could influence my pain system and cause it to continue being sensitive, and how do I kind of peel back the layers and address

these so that I can make my system more sensitive? I like to compare it to mental health in a lot of ways because I had really bad social anxiety. I don't know if I've told you this before, for 10 years I had really bad social anxiety, and it's similar to that fear avoidance concept you brought up before. Even being in this field, you would think I would know this, but I, my social anxiety was triggered by eye contact. So I would have a I would try to wear sunglasses all the time or meet with people outside so I could have my sunglasses on.

SHAWN STEVENSON: Yeah.

DR. TOM WALTERS: And so it was a fear avoidance type coping strategy. And when I did that, it got more and more sensitive to where I was taking like Xanax. I was taking benzodiazepines all the time just to manage it, like three times a day-

SHAWN STEVENSON: Holy moly

DR. TOM WALTERS: ... for a decade, which now you look at how bad benzodiazepines are.

SHAWN STEVENSON: Right, the benzos. Yeah.

DR. TOM WALTERS: ... but luckily I got off it and basically put myself through a program of graded exposure where I just, I had to not be fearful of the thing that was causing the symptoms, and I had to confront it in small doses. I couldn't just like fully confront... I couldn't go speak at a conference immediately or something. I had to just confront it in small doses. And this is what we do with people in pain. It's like you find all the different factors, try to identify the factors that are contributing to their pain experience, and just slowly see if you can kinda, through graded exposure, challenge their system a little bit.

And if you do that in appropriate doses, the system will desensitize, and that's the same thing that happened with my social anxiety. Now, it's not completely gone I just know how to manage it, it's probably 95% gone. And it's the same, I think, for a lot of people who have chronic pain. It might not be realistic to say this is gonna completely go away, but at least you can get it, you know how to manage it, and then you can go on with the things in your life

that you enjoy or you need to do in a way that, you know, you can still do them and be functional.

SHAWN STEVENSON: Yeah. Man, thank you for sharing that. I had no idea. And also, I kinda giggled a little bit because I was watching the game one of the Eastern Conference NBA finals yesterday, the Knicks and Cavs. And on the courtside seats, you know, it's showing, you know, the celebrities or whatever. There's some guy with super dark sunglasses- sitting on, you know, courtside or whatever, and it just really jumped out to me.

DR. TOM WALTERS: That would've been me.

SHAWN STEVENSON: Yeah. I'm good. I'm chilling. You can't see me. Yeah. It's, that's like in Big Daddy, you know, Adam Sandler-

DR. TOM WALTERS: Exactly.

SHAWN STEVENSON: ... gives him the glasses and you know-

DR. TOM WALTERS: Totally.

SHAWN STEVENSON: .. so you're invisible.

DR. TOM WALTERS: Yeah.

SHAWN STEVENSON: Where'd he go? Where'd he go? But you know, again, that's such a great connective tissue for this experience because that pain was real as well, and that created physical symptoms based on your perception of things.

DR. TOM WALTERS: Yep.

SHAWN STEVENSON: And this is where one, I'm so grateful to have this conversation and to share with people because when you gave the example of a sprained ankle, right? So we initially have some tissue damage there, but over time, maybe this is six months later. They've

gone back to doing their normal stuff, you know, whatever it is, maybe, you know, active in their sports, in the community, whatever they've been doing, but then they'll have a flare-up out of nowhere.

They'll wake up in the morning and just the ankle is in pain like when they sprained it. But there wasn't any actual insult or a trauma that happened in that moment to cause it. Why would this thing flare back up?

DR. TOM WALTERS: Yeah. That's a really tricky one. I like breaking this down for people too because I think- There's differences-- There's different types of pain, right? And so mechanical pains, typically we will say that they heal kind of in that three-month window. If you look at the true definition of going from kind of normal mechanical pain to chronic pain, it's around the three-month window is what's cited, which I think there's some problems in that. You can't look at just time alone because there's plenty...

I know you've probably had some like this. I've had some. There are plenty of mechanical kind of normal tissue pains that you can flare up. You can just re-trigger them. I've got a-- I have an old kinda rotator cuff issue that I have from high school when I did gymnastics. I was doing handstands all the time. Sometimes that thing will get triggered, and still to this day, if I don't have a good warmup or maybe if I do a bunch of handstands, it will kinda trigger it. Now, you could look at it and if you'd only looked at time, you'd be like, "He's had this since 1997. That's chronic pain." But that's just not true.

It just comes back when I stress it. Maybe I don't have the capacity there. Maybe I need to be strengthening it a little bit more. But it's really a mechanical pain pattern that I flare up from time to time, and I think when that happens, there's all this kinda local... These, there's these local physiological changes. Maybe it's inflammation in the tissue. But it's local to that area, and it's more of a mechanical pain pattern because I can test it and stress specific structures and get it to turn on, and then when I stop doing that, it turns off. It has a very clear-cut on/off pattern, which is what we'll see with mechanical pains Chronic pain patterns last longer, but they-- so they have that time component where they've been around for a long time, but they don't have these clear-cut mechanical patterns.

They're more unpredictable, and that's why a lot of people with chronic pain have more fear around it because they don't know when it's gonna come on and they don't know how intense it's gonna be. So they could just... You could have someone who has had chronic low back pain who just bends down to pick up a pencil, and I was just talking to a guy like this, and then had debilitating back pain for, he had it for two weeks, could barely move.

So that response doesn't reflect the stress that's on the tissue, right? It's that's what you often see in chronic pain is it's not clearly localized. It's often kind of vague. It'll spread to other regions in some cases, and the response is totally overblown. And so one of the ways I like to think about it is that if you have a mechanical injury that maybe you've injured it for the first time, and remember you're kind of flaring it up from time to time, that's kind of more of a hardware issue, like your hardware is being challenged different ways, like the physical structure is being challenged. If you have a chronic pain that's been around for a long time and the system has kind of-- there's a mismatch between what's happening in the tissue and how your nervous system is responding, that's more of like a software problem. So that's what we'll talk about with chronic pain. It's really dysfunction in the nervous system-

SHAWN STEVENSON: Right.

DR. TOM WALTERS: and especially the brain and spinal cord. Like we have all of these, we have all these descending... We have all these kind of, systems in our brain and spinal cord that allow us to turn down danger messages. If you have something that's irritated, like you sprain your ankle, and those messages are coming up your leg into your spinal cord to your brain can use things like different neurotransmitters.

There's this whole descending, it's called the descending inhibitory noxious control system. So it can basically send our opioids that we make in our brain, like our brain makes opioids, it can send those down your spinal cord and block some of those danger messages. So but in people with chronic pain, that system doesn't work as well. It's like a dimmer switch, but the dimmer switch doesn't end up working as well, so you're really looking at, well, what are all these other factors that might be that are turning, that are... What other, what are these other

factors that are not allowing that central nervous system kinda dimmer switch to work the way it's supposed to?

And that's all the things we were talking about. A lot of people it is honestly stress, anxiety, depression, poor sleep you know, a lack of movement. It's some of those just basic things. It wouldn't be, with some of those individuals, it wouldn't be... The primary thing I wouldn't be looking at as a physical therapist would be like, "Okay, let's start doing strengthening," like a strengthening program right away. It might, while that might be helpful, it'd probably be more appropriate for me to look at some of these lifestyle factors that are making their system feel threatened, and kinda slowly trying to chip away at those.

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SHAWN STEVENSON: So let's... This is a great segue. Let's talk about the biopsychosocial model of pain because again, specifically let's use this sprained ankle example. Again, six months later there's no recognizable tissue damage, but they've had this experience. Maybe when that sprained ankle happened, it really messed with their sense of identity and safety and maybe they had a lot going on in their life. And again, this is six months later, everything's going great, but there's this pathway that's been created that when it happened, it enabled them to just shut things down. They had... They were forced to shut down. And now maybe something's going on in their life and they have this pain pathway that's been kind of established and inflamed at one time and now it's activated again seemingly out of nowhere.

DR. TOM WALTERS: Yeah. The biopsychosocial model is so great 'cause that's really where we transition from that old biomedical model, like all about the physical body, to this more comprehensive model that really looks at the whole person. So you've got the bio, which are the tissues, and then you've got psychosocial, 'cause we know that your psychology, your thoughts, beliefs, and emotions really tie into your pain experience. And then your social support is huge. Like social support, having a social network of supportive people is another big aspect in just overall health, but also your pain system.

And so yeah, that person, like maybe they had an ankle sprain and it healed, and they still from time to time it flares up and they don't have a real good reason for explaining. It's... Like it doesn't have a good mechanical explanation. It just kind of flares up out of the blue, which you see this in some people.

I mean, there are chronic pain conditions after injuries, traumatic injuries like this. Some people after surgery will develop these chronic pain conditions. And so you're really looking at that whole kind of biopsychosocial model and you're thinking about, well, what's causing... Like you said, you've got this new pathway that's, that you... You know, there's a pathway that sends those messages up from your ankle and then your brain sends these, this pain output back down. So it's this two-way kind of loop. And so once a loop like that... You know, we have loops like that all over our body that just happen normally, right? It's a part, it's a normal part of survival.

Like you wanna have these pain loops. But sometimes the pain loop, if you fire it a lot, it can become easier to fire it. We'll often say, there's this saying that neurons that fire together wire together. And so if you fire a particular- neural loop a lot, it takes a lower level stimulus to fire it again. And so just like you said, maybe that person when they first injured their ankle, maybe they had a bunch of stress. Maybe it was a stressful period in their life, it was stressful at work, maybe the relationship with their partner, like whatever it was, or maybe they had a bunch of fear come in.

Maybe they were a basketball player, and you need your ankle to function at 100% to do your job, or you, there's so many bad things that could happen. So fear could be one. So then all of these things can come in that can tell your nervous system, "This is really scary and bad, and we really need to protect this area." So then it's even easier to fire that pain loop again. And so that's where people can kinda, can sometimes get struck, stuck into these pain loops. I often think, I keep going back to mental health, but it's kinda like people who've had panic attacks. Can you imagine, say you're scared of flying, and you get panic attacks when you fly.

Some, so oftentimes people can recall a specific time when they had their first panic attack, and it's once they, once that thing starts and they have that kinda panic attack wiring there,

they'll often be kinda scared of it. They're scared of flying. And then sometimes if they just even think about flying, they fire that thing and can have a panic attack again.

So chronic pain is a lot like that. Wow. You can have people with back pain who can literally just... There's actually studies on this where people with chronic back pain, one of the first things you do if they're really sensitive and flared up is that you just have them think about things that would make their back hurt because that fires a lot of the same neurons. They're not even moving. They're just thinking about doing a movement that would hurt. Right. And that's like the first step.

SHAWN STEVENSON: That would sound spooky. Right? The, that you can just think of a thing and it changes what your nervous system is doing. But it's so obvious.

DR. TOM WALTERS: Totally.

SHAWN STEVENSON: It is so obvious. And we've had so many scientists over the years saying how the brain can't distinguish between what is real and what is perceived, you know, your thoughts about a thing. And so we're instantly changing our chemistry in sometimes very significant ways based on our perception of things. Not to mention what's happening with our you know, sympathetic nervous system and this kind of fight or flight and that whole cascade of things that can happen with cortisol and adrenaline and all this stuff.

And it's remembering that our body's and our brain's primary function is survival, right? It's wired up to keep us safe and constantly perceiving what is going to be harmful for us and creating systems for us to withdraw and to hide out if need be, you know, based on a perception. And so what's really important to understand also is that, you know, you mentioning the tie-in with mental health. If we're talking about pain, the same parts of the brain are responding to psychological threats as physical pain.

Right? So we got the same parts of the brain that are lighting up based on maybe it's you know, guilt or sadness. And we see the same kind of parts of the brain lighting up when we get a physical injury as well.

And so, just to think of how these things can tie together is just I'm kind of disappointed that it's taken us this long to really normalize this conversation. But then again, you know, we had a certain era, and again, not to say that this was on purpose, it kind of was a little bit, stacklers and all that. But it's really been geared towards, and there was this war on pain, right? And geared towards, you know, these kind of invasive treatments or even, you know, in the case of the opioid epidemic, very dangerous drugs to try to treat these symptoms, which again, doesn't actually resolve 99% of the time what the actual problem is.

And what people found was that, you know, this opioid isn't just, for example, helping with this physical injury, it's helping with my emotional pain as well. And that can be really the sticking point for addiction.

DR. TOM WALTERS: Totally. And I think the kind of cool things about -- a cool thing about the opioid kind of conversation is I don't think a lot of people realize that your brain literally makes opioids, you know? And when you start taking those exogenously from the outside, your brain stops making as many. And when you see people where when they're on the opio-opioids, their pain, maybe it helps it for a little while, but then they often become more sensitive over time as their nervous system stops producing those molecules.

So it is a really dangerous situation. I think what you said there was so great, like the sympathetic and parasympathetic nervous systems. I just think there's so many people who ... Pain can be confusing and hard to navigate when you don't know all this information. That's why podcasts like this are so great, because I think if people can go in and think, even just at a base level "Okay, I just got injured. It's really obvious, and now I have pain, like I sprained my ankle." You know, there are things like that are way more straightforward. You can kind of tie it to something. You got in a car accident or you were deadlifting in the gym and now your back hurts or, you know what I mean? You can find things, like you have those kind of really more straightforward mechanical pains.

They still have all the other factors from the biopsychosocial model, but they lean more towards the fish- the tissue part. And then you can kind of think about these other types of pains that don't have that clear-cut kind of mechanical pattern, where sometimes the best

thing is thinking more about sympathetic and parasympathetic nervous system, because your pain system is all about survival, and your nervous system is gonna wanna output more pain if it thinks you're in danger or you're threatened.

SHAWN STEVENSON: Yeah.

DR. TOM WALTERS: So sometimes the best thing, honestly, is just trying to tap into parasympathetic. Just chill. Try to chill. Do some meditation. Do box breathing. Go for a walk. Sometimes those are way better than some specific physical therapy exercise I'm gonna give someone. So it really is at a base level. You just, you hope that everyone will listen to this and understand that pain involves so many of these other- lifestyle factors that you can start working on right now. Just try to help your nervous system calm down. And I think in the Western world, everyone's so ramped up.

Everybody's just on high alert. You drive down the freeway and it is obvious how many people are in sympathetic states. So it just, I think it's a good reminder for everyone at a very action first step, just try to find some strategies that, for everyone, even if you don't have chronic pain, just try to get yourself, try to encourage some of that parasympathetic, kinda, we call it rest and digest. You know, it's when you're resting and digesting. Try to just kinda find some opportunities to chill and tell your nervous system it's okay.

SHAWN STEVENSON: Yeah. And this is another point that you've been teaching about as well, this missing link between recovery and self-efficacy. Because you just mentioned you can give somebody these therapy exercises or do manual manipulations, but sometimes just going for that walk- can be incredibly healing for them. And so you're really advocating for your patients to really understand their condition so that they can be a co-participant or even a driver of their healing.

DR. TOM WALTERS: Yeah. You want it to be a collaboration, for sure. You know, you don't want ... The worst is when people, I've literally had patients say this to me, and then it requires a bunch of education, but they come in and I'll start telling them about what's going on, and they'll say, "I don't care. Just fix me." And that is the last. You, it, it is so important in

rehab and when you're treating pain to take an active approach. You know, you have to participate in it. As the person suffering from the pain, you might get temporary relief from somebody working on you. You go get a massage or the chiropractor adjusts you or a physical therapist does some kinda hands-on work.

Those interventions can be helpful, but if you look at the research, they tend to be temporary, and the pain usually comes back, like if the person doesn't incorporate some active things on their own. And so you, that self-efficacy is basically teaching people in a way so that they feel empowered, that they can manage their own condition, right?

You don't want the person to feel like they have to be dependent on your interventions as a practitioner. If you- Th- this was one of the reasons I actually got started on social media in the beginning, is that I was so frustrated when patients would come to me and they were told by their practitioners that they would only get better if they kept coming back at certain intervals. That was so frustrating to me 'cause it's not what the research supports, and you're just locking the person into dependency. I mean, I think about when I had that social anxiety, imagine if I had gone to a psychologist that was like, "You can only get better by seeing me, and you have to come here once a week, and that's your only hope."

SHAWN STEVENSON: Yeah.

DR. TOM WALTERS: That would be- that would just deflate you. You know, if you felt like you had no control. And what if that happens if that person was on vacation-

SHAWN STEVENSON: Right

DR. TOM WALTERS: ... or something, you know? Like-

SHAWN STEVENSON: Or they retire.

DR. TOM WALTERS: Totally. So, and it's just not what the research supports. So people get better when they feel like it's a collaboration, and they feel like they have some hope, and they feel empowered, and they have things they can do on their own outside of the

treatment session. So for a lot of pain conditions, it is movement-based things. It's, you know, exercise, movement. It could be the aerobic exercise. It could be just working on your sleep hygiene. It could be trying to clean up your diet. It could be made- meeting with another practitioner. Maybe you meet with a counselor or a psychologist and work on mental health kind of struggles that are maybe a part of your pain experience.

But there... I think maybe the hope, maybe the part that gives people some hope in all this discussion is that most of the things that lead to long-term resolution in pain are things you can do on your own.

SHAWN STEVENSON: Well, this is a good, this is a good point to start talking about actually getting better. So if you could, let's talk about using graded movement to rewire pain and to heal better. And if you could, I wanna talk about, again, progressive exposure. But let's use a certain example. So maybe let's say somebody had a prior disc injury, but, you know, they recovered, and they're doing their thing. This is a couple years later. Maybe they have a onset of some sciatic pain. But maybe it's only bothering them maybe just when they sit or maybe just when they stand up from sitting, they get a little something.

But they don't have pain when they are, we'll say, doing isometric exercises or you know, doing exercise in the pool, whatever the case might be. But yet they're afraid to do those things. Would this be a case where we would introduce those inputs bec- if they're, if they feel safe doing them, if they feel... if they're not causing pain, or do you just completely avoid?

DR. TOM WALTERS: Yeah, no, you wouldn't. You definitely wouldn't completely avoid, and I think that's a way, a area where we've shifted, you know, in how we think about managing pain. Someone like that, you know, you would-- You're kinda looking at if the person has some goals of participating in some kinda exercise, like they wanna do some exercise in the pool, or they wanna maybe they're somebody with they've had that past disc herniation, and maybe they like cycling.

Okay, so say this could tie together. So say they like cycling, and they also sit at a desk, and you said it kinda gets triggered when they sit at a desk. Both of those are flexion positions,

right? You're-- Their symptoms are being exacerbated by being in a prolonged seated position, which we know from a biomechanical standpoint, if you're looking at it that way, it puts the spine in flexion. It puts their hip in flexion. Maybe it has nothing to do with their biomechanics. That's the thing, right? It could be that you'll hear some people where they say, "My back pain only comes on at work when I'm sitting, but not when I sit on the couch at home and I'm watching shows." So then you have to start thinking about the biopsychosocial, stress, all those other factors, so you can't neglect those.

You're always thinking about them. But say you, it comes down to it seems like it's really related to their position and you know, their spine kinda being in that position for long periods. You for sure if you find things that trigger them. Say they're like, "Okay, I really like cycling," and they wanna do that, "but when I do it for a certain amount of time or this intensity, it triggers my back pain again. And you know they didn't have some injury that you couldn't, you could do an MRI on them and there wouldn't be some new physical injury. It'd be very unlikely, 'cause they didn't have a trauma. Right? Most physical injuries require high force, like you have to fall or get hit or something happens. So, you know, in that case, you're really thinking more about their nervous system thinking there's a threat and deciding it's appropriate to output pain.

So you're trying to figure out, how can I expose them to this stressor, but in graded doses so that we can allow their system to tolerate it better? You're trying to make the system less sensitive. So that's kinda the idea. You're, it's that dimmer switch again. You're kinda trying to turn the dimmer switch down. So you might take that person and maybe you just have them... Maybe one of the easiest things initially is you have them, say they wanna get into cycling, maybe they try that activity, but it's just in small time doses. They, a lot of times people don't know how long they can tolerate something, so you're just like, "Okay, let's just start with five minutes and see how that goes," and then you ramp up your time.

You could ramp up the intensity of it in different ways. Maybe they're riding on flat surfaces, and then they go to hills, something like that. You also could look at it from kind of a biomechanical standpoint. A lot of people with low back injuries are flexion sensitive, where it tends to bother them when their back is rounded, so sitting, bending forward to do a

deadlift, something like that. And so if they get it when they're sitting at work, probably one of the first things I would try to tell people to do is have little movement snacks and get up and just move around. You know, that's such a huge part initially with a lot of people, is just introducing more movement to their day. But then after that, you might try to expose their system to flexion in different ways.

You might look at, okay, well, their spine has to tolerate flexion when they're sitting for long periods. Maybe I need to introduce some flexion to their hip joints. We know they need some flexion in their hip to be able to sit. Maybe they've got a restriction there. Or I could work on improving mobility in their hip, and maybe that takes some stress off their spine, and that's kind of more of a biomechanical explanation.

But you can start introducing, you could kinda take a movement. If you have a movement you're sensitive to, you could break it down into component parts at each joint and figure out, well, are there things I could do at this joint that kind of expose me to a piece of that movement and that allows my system to gradually be exposed to it and desensitize over time? If that makes sense.

SHAWN STEVENSON: Yeah. So just to kind of just summarize it a tiny bit. So of course, finding spaces to do the things that we are... And I love that you started off with n- knowing what our goal is. Where we are pain-free And I would imagine, again, if there's like little bits of pain, it's okay as long as there isn't like something that's like a big alarm system goes off. And I think that's that grace period, too, of understanding your body, knowing your condition, you know, yourself being educated about it, and knowing whether this is okay, I'm okay, and it's just my brain is firing this signal, but I'm safe, and just easing into that a little bit as well. Is that-

DR. TOM WALTERS: That's so true. I love everything you said there. It's, there's so much self-awareness that goes into this. You know, you're kind of, you're monitoring all those different aspects, and you're ... And just like you said, when people are tr- when people are going through treating pain, it very rarely does pain just kinda keep getting better in like a linear fashion. People have flare-ups. We call them flare-ups all the time. You just have setbacks. It happens all the time when you're treating pain, especially if you're treating

chronic pain. You know? It just ... And it can be unpredictable sometimes. But I think that mantra you laid out there of, "I'm safe. This is okay."

It's just, you know, my nervous system is feeling b- a bit thres- threatened. Very unlikely that there's any damage in my body. I just need to respect it," it might just mean you back off for a little bit for a day and let it kinda simmer back down. And then you just get back on, and you go back to that kinda process of gradually exposing the system to those stressors.

And I think you also have to give yourself some grace, too. If you wake up one day and you didn't sleep well, and you're noticing you have more pain, well, that might not be the day to try and test it, to test the system more. You just, it's okay to have days where ... Now, it doesn't mean you're just totally bedridden and you don't move. You try to still find some ways to keep moving, 'cause we know that's really helpful for the pain system. But maybe you aren't doing those really specific things that are more likely to be provocative and kinda trigger your symptoms. You're not trying to push that barrier. You might just be like, "Oh, okay, maybe today I didn't sleep as well."

I feel a little bit more just flared up in general. I'm just gonna find something that I can do that tends to feel good to me." It might be, like I often have patients where aquatic kinda exercise, like gentle aquatic exercise, like walking in the pool, just going for a walk outside. Oftentimes things like that are, you know, really helpful to people for just kinda keeping the system moving, but not in a way that, you know, kinda pushes up against that barrier and re-triggers the whole system again.

SHAWN STEVENSON: You know, you mentioned flexion in relationship to the sciatic pain, or back pain, in general. And you were showing my team, actually, when I came in today a nerve flossing technique. Can you talk about that a little bit?

DR. TOM WALTERS: Yeah. That's such a, that's such a useful one for a lot of people, whether they have chronic back pain, have sciatica, have a new flare-up of back pain, or you get back pain from sitting a lot. Yeah, we were talking about, ... He was mentioning that when he bends his neck forward, he gets this kind of tension that goes down his spine, kind of in below

his shoulder blades, kinda in that thoracic region of the mid-back. And the crazy thing about the nervous system is it's all this continuous network, and there's a lot of cool studies where we take cadavers, people who have died and donate their bodies to science, and you can-- There's studies where we put pins in the different nerves, and you can see that when you move the person's body, our nerves actually have to kinda slide.

And so, if you imagine the sciatic nerve, you know, it's coming out of your low back. All these nerve roots come out of your low back. They go down kinda through the buttock region, between the hamstrings to the back of the knee, and then they branch. And so You can move the person's body in a certain way. You can kinda alternate between moving their leg and ankle to moving their head and neck, and you can work on that nerve mobility. And so we call it flossing 'cause it's kinda flossing your teeth where you're sliding the floss back and forth. And I think a lot of people hear this and they think it's really woo-woo, but it really is based on cadaver studies.

And you see it really help desensiti- tize a lot of people. It could be people who have straightforward nerve pain, like they have sciatica. It could also be people who just have general pain, like low back pain. And you can do these. You can implement these nerve glides, these nerve mobilizations, and it will help to desensitize their pain. Hel- it basically, it kinda goes back to blood flow like we talked about before. They've shown in carpal tunnel studies that when people do nerve mobilizations for their median nerve which goes to their carpal tunnel, it improves blood delivery to the median nerve. And so that's one of the you know, physiologically, that's one of the ways it can help desensitize pain.

So we've got these nerve mobilizations all for all the major peripheral nerves that go into our arms and legs, and I cover this a lot online because they help a lot of people reduce pain. You do have to be careful with them because it's a nerve, and if you make a nerve angry, it can suck. So you do have to be careful with it. But they're they're really cool techniques. They're kinda cool exercises that not a lot of people know about.

SHAWN STEVENSON: Can you describe it? We'll put up a video. For everybody who's watching the video version, we'll put up a video of you demonstrating this. Can you describe the nerve flossing-

DR. TOM WALTERS: Yeah.

SHAWN STEVENSON: In this context? Because again, flexion, again, that's something that you would probably try to want to avoid or your body's going to have this kind of alarm go off.

DR. TOM WALTERS: Yep. It, and it's so great for this 'cause we were talking about how can you expose your system to flexion but kinda be working on it. And so the one we were looking at is a good one for this. It's called the slump position. And so basically if you're ... You have to be sitting, so, you could do this sitting at your desk, maybe driving if you're safe. But what you do is you're sitting and you kinda slouch forward. So the person would round their spine and kinda round their shoulders, kinda like that slouch position we are told not to do.

But you're gonna slouch forward, and then you would straighten one leg. So you'd straighten your knee extend your knee. And then what you can do to kinda feel tension on your nervous system, 'cause some people don't know what nerve tension feels like. What you can do first is you kinda pull your ankle back in a dorsiflexion and you put your head down at the same time, like chin to chest. And when you do that, your spine's rounded. You're bringing your chin to your chest and you pull your ankle back. You'll feel ... A lot of times people will say they feel like what they think is a hamstring stretch. But the way you can see that it's nerve is if you keep your head down and then point your ankle.

If your hamstring stretch goes away, your hamstrings don't attach to your ankle. So if that sensation changes, the only thing you're doing is changing neural tension. You know, if my hamstrings attach to my ankle, then of course that would change how my hamstrings feel. But that's a, kind of a cool way for people to see what a nerve feels like versus a muscle. And then what you do is to mobilize the nerve, you alternate between putting tension on the upper end of the nerve and then the bottom end of the nerve. So what we do is we take

people, if they're in that position, they've got their knee straight, they're slouching forward. When they pull their ankle back into dorsiflexion, they'll look up.

They lift their chin up. So what that does is it puts the nerve on tension at the ankle, but it puts it on slack at the neck. So that's helping to pull it towards the foot. And then you alternate, so you point your ankle and then put your chin down to your chest. That pulls the nerve proximally back up towards the neck. And so then pe- just have people alternate back and forth like that, and that's called a nerve flossing mobilization. You're just basically, you're trying to think about tugging the nerve towards the foot and then back up towards the neck, and that sliding movement can help with mobility of the nerve, but also can help with bringing blood flow into the nerve

SHAWN STEVENSON: Incredible. Incredible.

One of the most important nutrients for human health, and this should be of no surprise, it should be written in the sky, it's vitamin C. It has so many benefits, from supporting our immune system function, to supporting our sleep quality, and even supporting our mental health. Vitamin C is believed to be a bonafide stress buster. It reduced stress by supporting the adrenal glands, and allows a person to bounce back more quickly when under stress. In a randomized, double-blind, placebo-controlled trial published in the journal Psychopharmacology, looking at the stress of public speaking and other stressors, scientists found that those who received vitamin C supplements experienced less stage fright, maintained more balanced blood pressure, and had a faster recovery of their cortisol levels.

What don't you do, vitamin C? You're so special. Now, here's the rub, and what most people don't know, this is not written in the sky, is that most vitamin C supplements are made from genetically modified corn syrup and corn starch. These are not ideal sources of vitamin C for our tissues, for our brain, for our biology. And so we wanna make sure that we are sourcing our vitamin C supplements from bonafide science-backed sources. And for that, the vitamin C supplement that I've been using for years is the Essential C formula from Paleovalley. Go to paleovalley.com/model right now, and you're going to get 15% off of their powerful Essential C complex.

Now, it's based on some of the most vitamin C dense real superfoods that have ever been discovered, including acerola cherry, amla berry, and the vitamin C superstar of superstars, camu berry. It's all organic with no binders, no fillers, no synthetic ingredients. Plus it has a 60-day, 100% money back guarantee. So if you aren't absolutely thrilled with it, you'll get your money back, no questions asked. So again, you've got nothing to lose, but better health to gain by utilizing Paleo Valley's Essential C complex. Head over to paleovalley.com/model right now for 15% off. That's P-A-L-E-O-V-A-L-L-E-Y.com/model for 15% off storewide. And now, back to the show.

SHAWN STEVENSON: So just to recap as well with the graded movements to rewire pain and heal better we talked about basically stepwise loading to help to reduce sensitivity, right? So that's one of the things we're getting our brain... Because our, this is the thing, again, just to reiterate this point, your brain is deciding to deliver that pain. It's a decision, you know? And again, it's wildly unconscious, but it's trying to protect us. And so it's just helping as we can, stepwise, to reduce sensitivity, to let our brains know that it's okay. You can trust me. I know I did some stuff, but you can trust me.

DR. TOM WALTERS: That's where mobility exercises are so huge, 'cause you can just do simple low load mobility exercises. That's the best thing to start with for anyone with pain, is just easy. We were even talking about that kind of back pain example, like the cat cow exercise. You just do a little cat cow. If you have an ankle sprain, you can just kind of do an ankle pump and just move it back and forth. It doesn't have to be, you don't want a high load stressful thing right away. You're just trying to find simple, easy mobility exercises. And that not only does it help with blood flow and mobility, but it also helps tell your nervous system, "This is okay. I'm moving this again. It's okay."

SHAWN STEVENSON: Yeah. And then we build the tissue capacity over time, just adding in a little bit at a time. So I wanna take a step back really quickly, because with this biopsychosocial model, that social piece, this can lead into an awareness of our pain symptoms or you used this term earlier, pain recipe. That could be, again we might not even have a mechanical or tissue damage but still have an experience of pain due to, and we've got a lot of data on this now, these ACEs, right? Adverse childhood experiences, for example. And

being far more prone to, and this isn't just what we would call like a you know, a tissue damage from a physical therapy perspective.

But this could be fibromyalgia. This could be migraines. This could be irritable bowel syndrome. But this could also be like a what we would see a physical therapist for types of pain as well. Back pain, neck pain, you know, shoulder pain, whatever the case might be, and it's instigated by things in our social dynamics. H- what? How, again, how is that possible?

DR. TOM WALTERS: Yeah. It's so true. I mean, I, like you said, a lot of times people won't think about those as necessarily physical therapy. Some of them they won't necessarily think about them as conditions you go to physical therapy for. Hopefully this changes over time, 'cause I think physical therapists who are caught up on this information really can act as sort of pain coaches, and there's a huge part of therapy in physical therapy. You know, right? Like it's such a huge part. Like that collaboration rapport you build, people just listening to them, helping validate their symptoms, build self-efficacy, give them hope. I think that's a huge part of treating pain. And you know, if you talk to pain psychologists, emotional pain and physical pain are processed in a lot of the same regions in the brain, just like you and I were talking about.

Like they really are kinda similar in a lot of ways. And a lot of people who've had trauma early in childhood or have PTSD from other events, like those individuals often are more prone to developing chronic pain conditions. And so within that biopsychosocial model, it is so important for people who, especially anyone who has pain, but especially people who have chronic pain, what we see is they over time become more isolated. And then you get into these downward spirals where you become y- they socially withdraw. They become depressed. Depr- depression amplifies the pain system. So, and they all kinda feed on each other. So there is a huge component when treating chronic pain where you're trying to help people kind of find social situations that they can integrate back into again.

And this is where like sometimes pain communities can be really helpful, like chronic pain communities, whether it's online or in person, 'cause then you can talk to other people who can empathize and kinda understand what's going on. I think a lot of people with chronic pain

feel like after a while that their healthcare practitioners and friends get kinda tired of them. They don't believe it's real, that their symptoms are real, they, maybe they're making it up for some gain. So it can be... You can see why they would naturally kinda withdraw. So, but that is such a big part of the healing process- Right? Even when we think about longevity studies, like how important socialization, having good social connections is so important.

Maybe you could argue it's one of the most important things for your overall health. But I think in the pain world, you definitely see that people withdraw when they have chronic pain, and that leads to poor mental health and more pain symptoms. So we wanna find ways to get them into communities where they can kinda integrate and feel safe, and maybe that is like a pain community initially.

So, it's a huge p- there's a huge piece. There's even studies showing that people who have chronic pain laugh less, and so that could be a huge-- I think that's a big part of socialization is just laughing with people. Sometimes that, it just, I think it's another action that kinda tells your system that it, we aren't so threatened. Yeah. If you can laugh a little bit. They've even got studies showing that if people just look at, have joke books and just read jokes and kinda, it lifts their spirit a little, and their pain will be less, so. But I think that is a piece that kinda comes maybe with the social piece and socialization.

SHAWN STEVENSON: That's great. Thank you for sharing that. Again, there, we got so many tools at our disposal, but because of that, and this is one of the things we kinda kicked off the episode talking about, this pain avoidance cycle and just this kinda pain, depression, avoidance, we start to just create this very vicious cycle that we get trapped in. And we can remove ourselves or even start to dim the light on all of the access and resources we do have. Because that can be another thing. When you talk about training in a pool, for example, you know, the environment that I was in I didn't have pool access. You know what I mean? But there are so many other things that I can do.

And one of those things is just being able to just simply walk. You know, going for a walk, being in nature. There's parks that were, you know, driving distance away, very close proximity. Meditation is incredibly valuable, especially today with so many nervous system

stimulants and insults going on, right? So having that tool at our disposal and practicing that. And then community, especially. I mean, this is so... This is a vital part. This is one of the most powerful epigenetic controllers. Right? And then giving our genes, our DNA enriching experiences. We've got some really fascinating...

We'll put the study up for everybody. Th- my studies as of now, but this is also seen in humans as well. But basically, being born with abnormalities with gene expression and kind of a hypersensitivity or disease state due to trauma experienced with the generation before, with the parents. All right?

And then the mice being born and having these mutations or alterations, let's say, put it like that, alterations, providing them enriching experiences helps not only that life experience for that mouse, but then the offspring of that mouse improves. It basically can change things within a lifetime. And so the person who shared this with me, by the way, is my really good friend. She's a neuroscientist at NYU, Dr. Wendy Suzuki, and she's done a lot of research and done studies around aerobic exercise, specifically, and healing and neurological health and all this good stuff. And so what are those enriching things you can do?

So simply, we brought up Big Daddy earlier. You know, like watching funny movies. and things that maybe create a feeling of life is good and maybe nostalgia, but it's just trying to retrain your brain and your nervous system to know that you are okay. One of my favorite sentiments, and even I forget this, man is so transformative and powerful for me. But it was a statement from Albert Einstein that essentially the most important decision that we make is whether we live in a friendly or a hostile universe.

It's the most important fundus- fundamental decision we make as a human being. He's a pretty smart guy. Right? But just remembering that. You know, I live in a friendly universe. Life is for me, not against me.

DR. TOM WALTERS: Yeah.

SHAWN STEVENSON: Because it could seem- when you're in pain, it's just it can absolutely seem the opposite. So just trying to find that bit of light and helping that to grow the capacity- ... you know, grow the exposure of it, stack conditions in your favor.

DR. TOM WALTERS: Yeah, I love that. It's so true, 'cause if you look at things from a, if you look at it as universe sort of friendly versus what was the term you used?

SHAWN STEVENSON: Hostile.

DR. TOM WALTERS: Hostile. You're gonna instantly, if you feel the things as hostile, you're gonna feel defensive and threatened. And then your whole system your, you're telling your system, "We need to be on guard." And so just at a base level, that's such a great, for so many aspects of health, but especially when and when you get into pain, that's such a great. If people can just, yeah, find some enriching experiences, find that little bit of light like you said. Find something that, or just try to practice. I think I know you talk about mindset a lot, but you can train your mindset. Just when you wake up each day think about who's, who is the person that I wanna show up as today, and can I look for some light, some positive things?

It's so easy. There's ... It's so, I think as humans, we survive by identifying threatening, potentially harmful things. And so we focus on the negative, and that's kinda how we got by. But you've also gotta really be intentional about if you're not wired that way, I think we're all wired a little differently, and if you're someone who struggles with identifying the positives, you've gotta maybe intentionally kinda just, you know, just have a practice where you think about identifying those.

Because when you get into pain, it is so easy to get into that vicious cycle you talked about where it hurts. I don't wanna be around other people or do anything. I'm depressed, and now it hurts more, and everything seems negative. So you've gotta find some ways where you can introduce kinda positive, uplifting things that give you some hope and get you excited about life. That, forget all these specific physical therapy exercises. At a base level, you've just gotta try and do that for your system, and that's gonna go a long way at a foundational level for helping you get out of pain.

SHAWN STEVENSON: Yeah. This is when you know somebody's telling the truth, you know? Because your expertise, which you were trained on, which you have books for, programs, is based on primarily these physical therapy exercises. And you're one of the most elevated, elite people in your space. And for you to share you need this other stuff so not even just as much, but even more in some aspects. But I also have these physical therapy exercises for you as well. And so for you, it's really, it's a both/and world. And providing people, because again the tissue exposure, building capacity, helping to reduce the sensitivity. Man your book, by the way, so I went to a physical therapy session. I was taking somebody, and I saw your book there. This is one of those things that's just popping up for physical therapists all over the place as well as a great kinda guided book for helping their patients.

But this is something that we all have access to as well. So Rehab Science, you've recently actually broken it down for people because in the original book, which is beautiful- it's a beautiful book, there's, your, the body parts are basically kind of separated into sections. And so for some people there's, there might be a lot of other stuff, but they just wanna know about, what about my back?

Back and spine. So now you have it broken up to where people can get the specific section of the book. In another beautiful book, by the way, full color, all the things. So you have back and spine, you have shoulder, you have knee, you have ankle and foot, you have... And th- I just have a few of them sitting here, but you have basically all of the predominant places that people experience pain. What are the therapy exercises that can actually help you to feel better and to get back to doing the things that you love?

DR. TOM WALTERS: Yeah, exactly. Yeah, which like, the big book is amazing for having a resource that gives you kinda the whole body, and like you said, a lot of practitioners find it to be really valuable in their practice, and a lot of regular people have it too. But we definitely had people who were like, "I just would like one book that's easy to carry that's just knee programs or just ankle and foot." And so that was kinda the idea with creating these, was to kinda take the trap- the body region chapters from the big book and just break them into smaller, more portable kinda books that are really...

The big book had a lot of pain and injury science. You know, the first 10 chapters were really all the science, a lot of what you and I have talked about today. These books, we kinda cut that out. It's just meant to just get to the protocols. So, 'cause a lot of times that's what people are looking for, is they're looking for what are some exercises I can introduce right away on my own? Because the truth is, most physical therapy conditions can be managed on your own. If you give them time, and you introduce mobility exercises and graded kinda resistance or strength exercises, most conditions get better. You know, of course it's not meant to replace somebody going to see someone. If you have something that doesn't get better or get, is getting worse, then the gold standard is seeing a practitioner who can actually evaluate you and prescribe specific, you know, exercises and interventions for your symptoms. But yeah, you can do so much on your own, so.

SHAWN STEVENSON: Can you talk about some of these exercises? I've got the back and spine book- ... opened up right here. So what's going on here?

DR. TOM WALTERS: Yeah, so, and this is gonna be probably in phase three. So the programs are broken into three phases, and those exercises there are resistance exercises. So phase three of every program focuses on resistance training. And so that one shows a lateral squat walk and a Pallof press, and both of those are a great, You might kind of lump them into kinda core and trunk exercises, which are so important for a lot of people with low back pain. So lateral squat walk is one that challenges the glutes, especially the hip abductors, which help support our pelvis and low back.

And then a Pallof press is a kinda cool anti-rotation exercise where you've got a cable machine or a band, and it's trying to rotate your spine, so you're having to use those rotation muscles to kinda maintain your spine in neutral while doing a press movement. So yeah, it's kinda it's like an isometric. People know planks. A Pallof press is kind of like a rotational isometric.

SHAWN STEVENSON: And so this isn't just about having a superficially strong or functional core.

DR. TOM WALTERS: Yeah.

SHAWN STEVENSON: No. It's like actually-

DR. TOM WALTERS: Yeah. Yeah. Not all aesthetics. You ... I mean, you ... Right? With strengthening you can work towards that. But yeah, it's more about, and I think I try not to use the term corrective when it comes to exercise, and you will hear that with a lot of people. I don't want people ... Exercises that are given physical therapy are not meant to correct something that's wrong with your body. It's really everything we've talked about here.

It's about desensitizing the pain system, and then gradually making the body more resilient. So we really ... You know, most of the time when you go into physical therapy, physical therapists will take you through this kind of approach, and that's what I show in the book is starting out with kinda techniques that are for helping reduce pain, kinda dial that dimmer switch down a little bit.

Then we work on restoring mobility and movement control. That's kinda phase two of a lot of programs. And then phase three is really the strength training where you're making the system more resilient. So even just at a base level if people kinda think about that when they have pain or an injury, calm the pain, restore mobility and control, and then build strength. If you just think about that as your base framework, that will take you a long ways for most injuries and pain issues.

SHAWN STEVENSON: Amazing. So where can people get access to this new library of books?

DR. TOM WALTERS: These are all with major bookstores, so usually Amazon and Barnes & Noble are the easiest. If people just search rehab science or search Tom Walters, they can go to my author page, and you can see all of these are now listed. You'll see each body region book and the main book, which is the big red one, so.

SHAWN STEVENSON: I wanna ask you about one more thing before I let you go. You know, there's something when we're thinking about, like you just mentioned, corrective exercises, you know, that term, which again, there's a context where that makes sense, but it's from corrective exercise to therapeutic exercise.

And we don't have to be injured, by the way, or have, be in pain to do a lot of these exercises. As a matter of fact, I would believe, again, just the name says it all, you know, with rehab science, it's also prehab as well. And so can you talk about the goal of rehab isn't to fix faulty movements, it's to build capacity, reduce sensitivity, the things that we've been talking about?

DR. TOM WALTERS: Yeah. It's such a big one, and it's an area where we've shifted a lot. I mean, I was guilty 18 years ago when I started in PT. I thought a lot more about trying to correct people with specific... 'Cause we were just very biomechanical in our way. We thought all pain and injury was kind of related to faulty biomechanics or faulty posture, and that stuff just hasn't stood up in the research over the last 20 years.

So the problem with it is that people have to be careful 'cause you go on social media, there are still lots of accounts out there that would lead you to believe that you have something wrong with your movement system, something faulty about your biomechanics, and then you need this specific exercise to fix that, almost like you're a car. Like your carburetor's bad, you gotta go in and replace your carburetor. The body just isn't like that. The nervous system is just much more complex. It's, it really is, it really has shifted away from... Because what happens is you see lots of people who have really what look like poor biomechanics who are some of the top performers in the world, right?

One of the examples that gets brought up all the time is if you look at some of the top marathoners, we would have... For a long time, flat feet were kinda demonized. If you had flat feet, overly pronated feet, it's "Ooh, that's really bad. You've gotta fix that. You're gonna have all kinds of dysfunction." There are some of the top marathoners in the world, if you watch them run, they pronate to where their arch goes all the way to the ground, or they're just their arch is flat all the time. That's just how they live and they function at the top of their sport. Paralympic athletes, think about how many biomechanical asymmetries and what would be kind of faults in Paralympic athletes there are, and many of them have no pain.

Usain Bolt, like you look at people who have like scoliosis and perform at the highest level. So we've, we really have to be careful with making people believe that we can look at their body

and see something that's asymmetrical or doesn't fit in kinda the normal box and tell them that's gonna lead to dysfunction, 'cause it just isn't supported in the research. So really, it's shifted more to we just wanna make your system more resilient. And if you have a deficit that limits you in life, like if you can't bend your knee all the way and you need to be able to squat down to do things in your job, well, then that impairment is something we should address because it actually impacts your daily life.

But really a lot of rehab now has shifted towards therapeutic exercise where we're implementing exercises that are therapeutic for the person's unique situations, the symptoms they have or the impairments they have. And really at the end of that, almost every good rehab program will transition to strength training because strength training is really the best type of exercise for making your musculoskeletal system more resilient, right?

Like we have all this research now showing that strength training, not only does it make your muscles stronger, your tendons stronger, your ligaments get stronger, your bone density improves, the discs in your spine thicken. There's all these things that come from putting graded doses of resistance on your musculoskeletal system. So it really is this shift. And even when you're looking at pain, incorporating movement helps to kinda tell your pain system that this is okay and safe. I always joke that I feel like everybody should have to do judo at some point in their life. I did judo in high school, and I think other people throwing you and you enjoying it and thinking "Oh, this is just part of my sport," I feel like it's actually

It ... Maybe it's kinda good for your nervous system, 'cause you're exposing it to something that's kinda threatening in a way, but you're viewing it in a positive light, and that helps to make your nervous system more resilient. So that's my new plan with people in chronic pain is a judo program. We're gonna start graded doses of judo. But yeah, I think yeah it really is. And like you said, those mobility exercise and especially strength exercises really have a prehab kinda side to them. A lot of people think physical therapy exercises are only for when you have pain or an injury, and then as soon as they're done with physical therapy, they stop doing them.

And there are a lot of exercises that you could get rid of. If you have full mobility, you probably don't need to do a bunch of mobility exercises. But I would encourage everybody, when you look at strengthening exercises, to two to three times a week try to have a program that goes through all of your major muscle groups. It's one of the best things. Just having a program that strengthens all the major muscle groups. Try to do each muscle group, if you can, a couple times a week. It will be one of the best things that you can implement for reducing musculoskeletal injury risk.

SHAWN STEVENSON: Boom. There it is. Man, thank you so much for coming to hang out with us today. Where's the best place for people to connect with you and just get more information on all your good stuff?

DR. TOM WALTERS: Yeah. I'm primarily, ... It would be @rehabscience on Instagram and YouTube. People can always DM me. I always say on Instagram I try to always check those DMs. YouTube has videos for kinda like the books for each body region, so there's a playlist for each body region, so you could go to the elbow playlist or the shoulder, and you can find videos for common conditions. And then rehabscience.com is where people can find book, my books. I have an app that people can join if they want like video-based and more direct kind of interactions with me, so.

SHAWN STEVENSON: Amazing. Man, thank you so much. And listen, this is a big part, again, as we started off talking about, a big part of our reality. And you are working in a space that is more needed than ever. And thank you for reminding us that there are solutions, you know? Because pain can be scary. It can be debilitating. It can be all-consuming. And so helping people to really get back to being themselves and just having hope is such a invaluable thing today. And so I appreciate you so much for that, man.

DR. TOM WALTERS: Well, thanks for having me back. And Shawn, I appreciate you having a podcast like this, because- You know, everything we covered today, it, I think it's thing it's discussions like this that help people understand really how many factors can go into pain.

And I think our system does a pretty good job of treating acute pains. But if you look at chronic pain, we know a lot about it, and it's still, it's just a global burden. You know? It's like one in five, 20% of people live with chronic pain. So we know all these things we're talking about today can really help people, but I think people need to hear it a lot of times before they actually start implementing it. You know? It's like there's a lot of information out there, but people have to hear it enough times before they're like, "Okay, I'm gonna actually try to do something about my stress levels or my sleep. I'm gonna try to go to bed earlier." You know, it just, it, unfortunately, most people who have physical pain just think, "I'm just gonna go to physical therapy and do these exercises," and they're, we're...

I think things are shifting and it's getting better, but it takes some, it takes education like this and talking about it enough times for people to be like, "Okay, I'm gonna explore my mental health and see how this go- how this factors into my pain and my sleep and my nutrition." So appreciate you having me back and having discussions like this.

SHAWN STEVENSON: Of course. Yeah. It's my honor. And by the way, really quick side note, pain psychologists, you know, this is a emerging field as well, and just seeing for m- not for everybody, but for a significant number of people, being able to, again, work with their w- mental health and having a resolution of their pain. This is real.

DR. TOM WALTERS: Totally.

SHAWN STEVENSON: And so as you started off this conversation, you have your own pain recipe. So your recipe is not your grandmama's recipe. You know, everybody's recipe is unique. And this is getting us to have some introspection, but also having our tactical things to do outside in the world and exercise and, you know, helping to make our tissues stronger, more resilient, building capacity. We got the whole gamut right here. Rehab science. Dr. Tom Walters, I appreciate you, man.

DR. TOM WALTERS: Thanks, brother.

SHAWN STEVENSON: Of course. The one and only Dr. Tom Walters, everybody.

Thank you so much for tuning into this episode today. I hope that you got a lot of value out of this. If you did, you already know what to do. Share it with somebody that you care about. This conversation around pain is so vital. It's so important. Recently, pain has been advocated to be an additional vital sign for human health because it's such a pervasive part of our experience. But also now, today, it's a very pervasive part of our everyday experience with so many people living in chronic pain.

And it is our mission to provide real science-backed solutions. Our bodies are incredibly intelligent, and being able to truly go within and to navigate that inner terrain, and also to have the help and support and coaching and education out here in the outside world and pairing those together is so important. It's more important than it's ever been. But unfortunately, it's backwards right now, where we have so much external focus, where we're not really tuned in to what's going on with our bodies, and we are more and more torn apart from that social support. And so we can proactively change that. And a big part of that is simply sharing conversations like this.

And so whatever podcast app you're listening on, you can send this directly to somebody that you care about, or take a screenshot of this episode, share it on social media, tag me, I'm @ShawnModel, tag Dr. Tom Walters as well, Rehab Science. And again, just keep this conversation going. Let people know that there are solutions, but we need to get educated about this stuff. And so again, I hope that you enjoyed this. We've got some incredible world-changing guests and powerful masterclasses headed your way very soon. So make sure to stay tuned. Take care, have an amazing day, and I'll talk with you soon