THE MODEL HEALTH SHOW

EPISODE 680

How to Heal Faster, Perform Better, & Live Longer

With Guest Jill Miller

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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 into me today. A lot of people are disillusioned about what it takes to actually change their body composition. We think that we need to go to the gym, we need to sweat it out, we need to manipulate, pound the pavement, we need to grind it out, we need to do all these different things to get a notable change in our appearance.

Now yes, work is a requirement for making alterations in our body composition because our bodies adapt to stimulus, our bodies adapt to the conditions that we expose them to. But here's the rub, our bodies are not changing in a positive way when we're in the gym itself. As a matter of fact, we're breaking our bodies down, we're going through the process of lifting those weights, if we're actually really doing some damage, lifting some weights to some viable amount.

And so, with that said, when we are doing this process, it might feel good, it might feel painful for some people. Even our enteroception, as we're going to talk about today, the experience of working out is going to be different from person to person, but that experience is actually breaking our bodies down.

If we were to actually go together, we do a great workout together, we do some training and then we go get some blood work, our stuff's going to look a little messed up. Our catecholamines, there are going to be a little bit higher stress hormone, our blood glucose is going to be a little wonky, our blood pressure, heart rate. All this stuff is going to be a little bit out of sorts. We might be able to get diagnosed with something. We might be able to leave there with a script. Alright?

Now, all we did was just workout. So, what gives? It's the adaptation period after the thing that makes all the difference in the world. It's not the thing that changes our bodies. That breaks our bodies down. It's the recovery period. It's allowing our bodies with that hermetic stressor, a stressor that could potentially... There's a saying that, "What doesn't kill me makes me stronger," but just in micro doses of that, truly making our bodies more resilient.

And essentially the development of a new frame is our body saying, "That stress that you gave me, I'm going to come back better so that that doesn't hit me the same way. I'm going to come back more efficient, more effective to accomplish that goal that I was exposed to, because I want to live. I want to survive."

Our bodies are screaming out a Destiny's Child song, "I'm a survivor." Alright? And so really tuning into that is what this episode is all about today. And we're talking about being able to shift from that sympathetic fight or flight dominant state into a state that accelerates our adaptation, accelerates our recovery so we get fitter, faster, and also accelerates the recovery of our mental and emotional well-being.

Because with not just the workout stressor, for many people, working out is their stress resilience, it's their stress therapy to help to reduce stress, but I'm talking about our overall stress load. And so many people are aware at this point that stress is one of the leading contributors to hospital visits, hospitalizations, and death today.

This according to research published in the Journal of the American Medical Association Internal Medicine, JAMA Internal Medicine, finding that upwards of 80% of physician visits today in our society are for stress-related conditions, stress-related injuries, stress-related illnesses. Stress is hurting us, is breaking us down.

But stress is meant to cause catabolism, cause the breakdown of things, but it's creating the conditions for growth and to become better as well. We need a stress input. Without stress, we die, actually. Because that stress input, even with our immune system, it's gathering up an intelligence, it's gathering up and calling in our immune system to evolve.

We have an innate immune system, but we also have an adaptive immune system. To evolve and become better, to become more intelligent, we need the stress input, but we got to recover.

And so, I'm really excited about this because our guest today is the leader, the premiere person. And talking with some of the smartest people that I know, repeated guest on the show, Dr. Kelly Starrett, for example, we just had on recently Katy Bowman, biomechanist, they look to our special guest for knowledge and insight on helping to down-regulate our body to accelerate recovery.

And to be able to really tap into our musculature, to really working with our fascia and just to create bodies that are healthier, that are more functional. And so yeah, this is a very, very special conversation, full of insights, and I think you're absolutely going to love it.

Now, a few things that go into creating our overall stress load, we've got... Oftentimes, cognitively we'll associate stress with work, for example. That goes into our overall stress load. We've got family/relationship stress, we've got emotional stress, we've got mental stress, we've got environmental stress from all of the excessive inputs that our genes have really never been exposed to until really the last century-ish.

And really, the last few decades, the amount of information that we're exposed to and the lack of environmental exposures to things that are health affirming. Spiritual stress, not feeling on purpose, feeling cut adrift and not really connected. The list goes on and on.

But another growing stress in our society today, unfortunately, is sleep stress. Or should I say sleep deprivation stress. According to the latest data, tens of millions of Americans are regularly sleep deprived, and this is having huge implications on our metabolic health and also the health of our brain and cognitive function.

For example, research that was published in the peer-reviewed journal, The Lancet, took physicians and wanted to find out what happens when they are performing on a simulated operation, when they're well-rested versus when they're sleep deprived. So, they had them come in, take the test, take the simulation, then they sleep-deprived them for just 24 hours, which is not abnormal in that field, and had them to repeat the same exact test.

And here's what happened. After compiling the data, when they were sleep deprived, they made 20% more mistakes. That's not good. 20% more mistakes. And it took them 14% longer to do the same exact thing.

Now, I'm bringing this point up in particular because we often mistake grinding, burning the midnight oil, whatever we want to call it, doing more work for being effective, for being efficient, but we're losing efficiency when we're sleep deprived. We're making it harder for ourselves to actually accomplish the goal.

And so that's just one glaring example, not to mention research from scientists at University of California, Berkeley doing brain imaging and looking at the sleep-deprived brain, what our brain is doing as far as brain activity when we're well-rested versus being sleep deprived, again, for just a short sleep debt, 24 hours, there's a dramatic increase in activity in the amygdala.

This is the part of your brain that's really responsible for our emotional drive to things. When we get an amygdala hijack, we become much more sensitized and more inflamed and irritated to what's happening in our world, because the amygdala is really a part of the brain that's driven towards survival of self.

So, when that part of the brain takes over, you're going to see the world essentially through a different lens, one that is more inflammatory, one that is more irritating, one that is more fearful.

In addition to that, they also found a dramatic reduction in activity of the prefrontal cortex. This is the part of our brain that really makes us human. This is the executive part of the brain responsible for social control. Having the amygdala step in and say, "This person is being rude to me. Let me send back 'per our last email'," just coming back with some...

When we just start to distort things, sometimes accurately we could see things, but we become much more heightened as far as our sensitivity. And so, the prefrontal cortex is there to say, "Hey, calm down. We don't want to lose our job over this, we don't want to lose this relationship, we don't want to... " Whatever, fill in the blank, respond in a way that's going to be detrimental for our long-term well-being.

But now we've got amygdala hijack coupled with a reduction in the prefrontal cortex activity, again, responsible for distinguishing between right and wrong for social control. For forethought, to be able to map out like, "If I do this thing, this will happen." That part of the brain gets shut off.

Because the amygdala is about, "Right now. What's popping now, what's happening right now, that's what I care about. Live for today. Tomorrow doesn't exist. I'm trying to survive out here." That's what the amygdala is doing.

And so, the researchers, again, looking at the brain, saw that this is what's happening when we're sleep-deprived. We've got to make sure that we are cultivating good sleep hygiene.

Now, word on the streets is that there's a great book called, Sleep Smarter. Written by arguably the greatest podcaster. No, I'm just kidding. Sleep Smarter is my first book, and we just actually crossed the anniversary of its publishing. It's now translated in 21 different countries. I believe maybe 22. So, it's in libraries in China, it's in bookstores in France, Slovenia, Russia. We're all over.

So, this message of sleep wellness, to see it take off like it did and really create a shift in our culture since then. Prior to Sleep Smarter coming out, a sleep wellness related book had never really done well as far as its reach and book sales and all those things, and it really created a change of the tide and made this conversation a top of mind, and many other wonderful books have come out since. And so very, very happy about that. So, stack conditions, follow those key principles.

One of the things that I talk about in the book is creating a sleep sanctuary because our brains are always creating a neuro association for the environments that we go into. We tend to just automatically do certain things, and if we don't do those things when we go into those environments, our brain is already firing to do those things, whether we choose to do it or not.

So, what is the messaging that your brain is getting when you go into your bedroom? If your bedroom is a place where you go and you work or you go and you watch TV, when you go in there, your brain is going to be firing, looking for those behaviors. It makes them very difficult to not do them. Greater sense of discomfort.

So, we want to create an atmosphere in our bedroom, I like to call it a sleep sanctuary, that makes relaxation easy to access. And to take it a step further, if we really want to just get luxurious and really create a deliciousness with our sleep, then we look to what we're actually sleeping on. Our bedding matters, our mattress, absolutely yes, but just by upgrading the sheets that we're sleeping on can have some notable improvements in our sleep quality.

A recent randomized trial found that mental alertness during the following day improved by upwards of 25% after sleeping on my favorite sheets from Ettitude. These are organic bamboo lyocell sheets. And also in the study, 94% of people preferred sleeping on Ettitude sheets once they got a chance to sleep on them.

Once you sleep on these sheets, you don't want to sleep on anything else. Other sheets start to feel like an experience of being exposed to some music you don't like. If you're not into like Polka, it's just like, "Oh I'm excited in this Polka," because the Ettitude sheets is slipping into your favorite genre.

It's like slipping into your favorite love song. If you're like with the epic rock, love ballad, shoutout to Journey. Or if it's with some R&B swagger, some Brian McKnight. When you're slipping into these sheets, truly it's like creating a feeling, a sensual feeling of relaxation. And I just... It's one of those things you got to experience.

And this is the cool thing about what Ettitude is doing, they have a 30-night sleep trial. Sleep on them, dream on them, think on them. If you don't love them, you could send them back for a full refund.

Again, organic bamboo lyocell. They are anti-microbial, self-deodorizing, they're breathable, moisture wicking, they're also supportive of thermal regulation, which is one of those improvement aspects with our sleep quality as well.

So, go to ettitude.com/model, that's E-T-T-I-T-U-D-E, dot com/model. Use the code "Model 15" at checkout. You're going to get 15% off your first purchase. I'm telling you it's one of those things you got to experience for yourself. Go to ettitude.com/model. Use the code "Model 15" at checkout, 15% off. And now let's get to the Apple Podcast review of the week.

ITUNES REVIEW: Another five-star review titled “Love It” by True True REI, "Just found this podcast through Tom Bilyeu Show, and wow. Just wow. So happy I did. This guy exudes authenticity and true passion and commitment to what he's doing. Looking forward to listening to all episodes and buying and reading his book. Keep on doing what you do."

SHAWN STEVENSON: I absolutely will. Thank you so much for leaving that review over on Apple Podcast. That hit my heart. I truly do appreciate that. And listen, if you're yet to do so, pop over to Apple Podcast, leave a review for The Model Health Show. And without further ado, let's get to our special guest and topic of the day.

Our guest today is world-renowned therapist and coach, Jill Miller. She's a fascia expert. You're going to really find out about our fascia, this container for so much of our abilities, our muscle, our ability to move. You'll learn a lot about that today. And she has 30 years of corrective movement expertise that forges links between the worlds of massage, athletics, pain management and so much more.

Jill is a former anatomy columnist for Yoga Journal and has been featured in the New York Times, Wall Street Journal, Shape, Women's Health Magazine, O Magazine, The Today Show, and many other major media outlets. She's also the author of several best-selling books, and her latest book, Body by Breath, is one of my favorite books of the year that I keep around me to reference all the time.

Let's dive into this conversation with the amazing Jill Miller.

Alright. Jill Miller, oh my goodness, you've already changed my life.

JILL MILLER: Oh, so fast we change lives.

SHAWN STEVENSON: But just taking the time and enjoying your book the past couple of weeks, it is such a wonderful tool for all of us. It's really like a manual for understanding our bodies at a different level, and it's a beautiful book as well. My team, as soon they saw it, they're just like, "There's something special about this."

JILL MILLER: Oh, thank you.

SHAWN STEVENSON: And so, I want to start off by asking you about this because whether it's from recovering from exercise and getting that beautiful adaptation that we want, or whether it's healing from an injury, you share in the book that that process is really dependent upon our ability to shift over to our parasympathetic nervous system. That's where the healing really hits lightning speed.

JILL MILLER: Yes.

SHAWN STEVENSON: Can you talk about that a little bit?

JILL MILLER: Yes. I think our bodies are extremely good at going from zero to 60 and like maintaining there. I'm a high-stress person. I love, just go, go, go. But we're not as good at going from 60 to zero without actually having a breakdown. A lot of people, they just crash. They're so exhausted, they fall on the couch with the TV on and pass out. And that's not really recovery. Right?

So how can we improve our recovery endurance? How can we tolerate being in relaxation states that do help with tissue turnover with the correct hormone balance, with tissue repair, all of that? What can we do for ourselves that isn't just being left for dead all the time after we've burnt ourselves to a crisp?

So, what the book really does is it tries to amplify novel ways that you can increase your parasympathetic tolerance. And so, there are four main tools that I focus on, breathe, roll, which is self-massage, move, and then non-sleep deep rest or Yoga Nidra.

And this is like a compound pharmacy that truly makes you feel a massive difference, body-wide difference that will end up actually making you even better at your sympathetic output.

Yeah. And all of this is tied to better outcomes with obviously our performance, but also surprisingly with our mental health, our emotional well-being. We'll talk about all that stuff, of course. But I want to share this direct quote from your book.

JILL MILLER: Okay.

SHAWN STEVENSON: You say that "Our bodies come wired with an exquisite relaxation response." And that's kind of counterculture or counter-paradigm. Like you just said, we're really good at going zero to 100 or zero to 60.

JILL MILLER: Sure. 120.

SHAWN STEVENSON: But going the reverse is a lot more difficult. But it's not supposed to be like that. Your body actually has a system built in to reverse-engineer that stress.

So, I want to ask you about this, you say that our breath is our built-in reset button. When I think of a reset button, I think of the first Nintendo. Super Mario Brothers just came out as of

this recording, and there was like two buttons, power, reset. But we have a built-in reset button for all of this stuff, and it's our breath. Why is that?

JILL MILLER: Your breath will breathe for you, whether you pay it any mind or not. It's amazing. It is this completely automatic thing that's happening up to 22,000, 24,000 times a day, depending on who you're citing. But if we are able to consciously control the rhythm of our breath and cadence of our breath and how we're breathing, you can change your brain. You can change state. And it happens within just a few moments.

So, there's wonderful research by, I highlight in the book, by Jack Feldman, who's actually a local neuroscientist. He's at UCLA. He's literally just over the hill.

Anyway, so Jack Feldman discovered in the brainstem the two different places that generate inhales and exhales. They didn't know where these were located until 1991, or they didn't know where inhale was coming. They knew it was coming from the brain, but they didn't know exactly where in the brainstem. So, he found this location called the pre-Bötzinger complex.

But one of the things that he found was that the initiation for inhale is coming from there, but that initiation doesn't just go to the nerve that directs the diaphragm to contract. So, the diaphragm contracts because a nerve called the phrenic nerve is telling it to contract, the diaphragm, which is your main breathing muscle. Like any skeletal muscle, it needs a nerve to say, "Alright, contract now."

So, when this pre-Bötzinger complex or when the nerves within that tell the phrenic nerve to contract, they're also sending signals to lots of different parts of your brain. They're sending signals into areas that control emotion. They're sending signals that are also involved with the olfaction system, which makes a lot of sense, right? Our olfactory bulb. So, they're going to many, many places throughout the brain, and they're also generating brain waves.

Breathing has its own brain wave oscillation that's happening all the time. So, it's not just affecting your ability to breathe in and out. Those brain waves are doing things to different parts of our brain that right now nobody really knows what those things are, but it seems pretty important that for some reason it's kicking off these waves that are happening all over the place globally.

But one of the things that we know is if you change the rates of inhales and exhales, and there are a number of studies that have looked at them, but not like... We still need a lot more breath science and I think we're in the new age of a burgeoning time of breath science to be able to learn more and more what are the ideal patterns that help certain individuals, and obviously there's never one thing that works for everybody.

But you can change your moment-to-moment experience by adjusting how it is you're breathing. And that's really, really powerful. But I don't want you to get lost in your head about breathing, because breathing is a body-wide experience, which is why I wrote the book, Body by Breath, not brain by breath. I mean the brain is super important, but breathing is really a body-wide experience that affects literally every system and structure of your body.

SHAWN STEVENSON: Alright, so there's a couple of things here. Number one, when you mentioned that research and I, it stuck right out to me, in effectively finding the breathing pacemaker, is what you refer to it as in the book.

JILL MILLER: Yeah. He wouldn't call it a pacemaker. That like he's, it's really interesting...

SHAWN STEVENSON: But that's kind of what it is.

JILL MILLER: It seems like it's a pacemaker, but a pacemaker is bum, bum, bum, bum, bum, bum, bum. Breathing is more erratic than that. Because it's not only our, is it happening because it's happening, but it's also responding to the environment outside of you and to the environment inside of you. So, it's very labile. It's changing, it's very mercurial.

SHAWN STEVENSON: It's a pacemaker that we're setting at different places.

JILL MILLER: Yes. It's setting itself 'cause it's happening unconsciously. You start walking and then all of a sudden you hear a screech of car tires and your breathing changes suddenly. It is so responsive and reactive. You don't even have to make that happen, that's happening for you. Right? So, it is a, I guess it's a facile pacemaker that is constantly variable.

SHAWN STEVENSON: Yeah. And what's unique about this system and this access to this reset button essentially, is that being this part of the autonomic nervous system that's just doing this, whether you're paying attention to it or not, we can sort of jump in and grab the steering wheel.

JILL MILLER: Beautiful.

SHAWN STEVENSON: Right? And start to drive the system to a different place. But I don't think a lot of us have been given access or given the awareness that we have this access, it's innate to us. Just being human and having consciousness that we have this ability to instantly shift how we are feeling.

What's happening, you just said this also, body, it's body wide. One of the things that I experienced, and I'm still, even when you were speaking, the exercise that you took me through before we got started today. What I'm experiencing right now, when you mention the olfactory thing, like my sinuses, like sometimes they'll switch lanes.

JILL MILLER: Yes.

SHAWN STEVENSON: Right? You got one side, it's kind of wide open. The other one's just kind of, it's a toll booth over there. But I got double, I got double holes going right now, like big time.

JILL MILLER: So, he is talking about nasal laterality. So, what's this really weird thing about the human body is depending on your body, but every 90 minutes to four hours we switch nasal dominance. And so, but right now he is broadly open on both sides of the sinuses.

But we didn't do anything directly for his nose. What I taught him was something to decompress his low back and to exercise his diaphragm within the low back. And all of a sudden, your face and the channels of breathing are more open. That's amazing.

SHAWN STEVENSON: That is bananas and pajamas for real. And that this particular exercise on page 67 in the book, you actually cited a couple of times because it's so remarkable. And you also make sure that it's an easy on-ramp for people, can use stuff around the house to kind of position this. And the cues that you gave me were just so awesome. And the cues, these cues are throughout the book as well.

That's what's so special about this book is that you're giving us this insight into our anatomy, but also these mental cues that really makes it sticky, you know?

And so, I want to ask you about this because this is very likely the most important muscle that we don't train, the most important muscle that we are not really informed on. This might be the most important muscle. And you said it already, the diaphragm. Alright? So please give us a masterclass understanding on the diaphragm as a muscle?

JILL MILLER: The respiratory diaphragm is, in my opinion, the most significant skeletal muscle in the human body. It is the hub around which all of your body orchestrates itself. It's this odd shape, trampoline-like semi-circle locked into your ribcage. And if you've ever eaten skirt steak, by the way, you've eaten cow diaphragm.

So that might be a reference point for some people if, you know, if they're meat eaters. Right? Skirt steak, it looks like a skirt, looks like a big hoop. And you have a right-sided and a left-sided

diaphragm. You have right-side ribcage, left-side ribcage. So, we have a little bit of difference on the right and left side just to accommodate the shape of a liver.

On top of your respiratory diaphragm is your heart. Your heart sits directly onto what's known as the central tendon of the diaphragm. So, as you breathe, your heart is always going along for a ride with the diaphragm.

The diaphragm also attaches to your lumbar spine. And so, a lot of people with low back pain, one of the very conservative and smart things to start doing is to do deep breathing because of that relationship. But the diaphragm is attached to so many different tissues, both above and below, that are instrumental in generating core strength, postural integrity.

The diaphragm itself is a passageway, I mean "diaphragm" actually means "partition". And so, it's a passageway that allows for the input of food to be able to go down into this sort of, I don't want to say dirty, nasty area, but you don't want all this stuff coming up and getting into your lungs. So, the diaphragm acts as a partition and a passageway to separate lungs and heart from visceral organs.

The diaphragm is also a pump. It is constantly moving down and up as you breathe. And this pump action that the diaphragm has, it's like bouncing your organs below it. By the way, if your diaphragm weren't there, your organs would just kind of float up into your throat and out your eyeballs. It would be a mess. So, the diaphragm acts as a gatekeeper to make sure that your organs stay where they need to be.

And of course, if anybody is listening has a hiatal hernia, you know how problematic it is when your organs start to float up within the diaphragm, your stomach pooches up in this miserable condition.

So, oh my goodness. I'm doing a laundry list of things as they're popping into my brain right now. So, the diaphragm helps to generate force for pushing matter out. Right? So, we use it to bear down to have our bowel movements. We use it to urinate. We use it to cough, to get things out of our lungs.

So, it's moving stuff that's in the visceral region out into the toilet, but it's, or a baby out into the world. Right? Or it's generating forces that can help move fluid out of the lungs. And obviously the diaphragm became very important in the last three years when people were having this insane amount of lung infection due to the pandemic.

So, one of the really cool things about the diaphragm, I think that everybody should probably know is related to aging. So, your diaphragm is equipped with some of the most special muscle

fibers known to the human body. I mean, your diaphragm is the one skeletal muscle that will go on contracting even if you're passed out drunk. Even if you fall asleep. It has to keep contracting in order for you to stay alive.

There's no other skeletal muscle you have that's going to do that for you. So, it has these very specialized fiber types that are so enduring. But it also has fast twitch muscle fiber types that help for generating tremendous force. For example, in the case of childbirth. I mean, we always think of the uterus, but you know what's upstairs of the uterus. The diaphragm is contracting like crazy to help push the baby out.

But you can't feel it. That's the thing about the diaphragm. It is devoid of sensory receptors. In fact, there's only about six of them and they're located in the cauda, the parts that connect to your lumbar spine.

So, you can't sit here right now, Shawn, and tell me where your diaphragm is. You can tell me where your bicep is. You can take your mind and you could crawl it to your biceps and you're like, "I know where my bicep is. I can tell how much; how short it is. I can tell how long it is."

But you can't sit there and sense the location of your diaphragm. You were created in such a way that you don't have to worry about the 22,000 reps a day that your respiratory diaphragm does.

And that could be problematic because if your diaphragm is not... Well, this is where I'm going to get a little bit on the body by breath, your diaphragm may not necessarily be optimally being used in your body, because of injury, because of the habit of posture or because of our own emotional stuff. We may be short training our diaphragm from full range of motion.

Our diaphragm can be better optimized, I'd say. I mean, culture has kept our bodies in chairs and in front of computers. And we are more in a C-shape now than we are in an S-shape for the most part. And your diaphragm, I mean, you can breathe around that. Your airway will adapt to any shape.

That's the amazing thing about this castor within your ribcage, it can accommodate any shape. And I can still breathe. Right? But I probably don't have many options if I'm stuck in a single shape all the time. If I don't spread that tarp, spread the trampoline in all of the ways that it can move.

SHAWN STEVENSON: One of the things that I noted to talk about is you really changed my perception on posture just within a couple of sentences. But it was leading up, there were little

things, you're planting seeds as I was going along, but you mentioned how posture is essentially a home base from which all of our other movements emanate. Right?

And inherently, I just, it really hit me that the shapes that we put our bodies in, every shape, every move that we make, it inherently changes the way that we breathe or affects the way that we breathe.

And so, whether I'm lying on the floor, on my stomach, on my side, or hunched over in a chair looking down, holding my phone, it's going to change the way that I'm breathing. And again, we often, the vast majority of us, we never think about it.

Our body's going to adapt, but the adaptation can compromise function. And we want to be more intentional about putting ourselves in position where we can open up functionality, just like the experience of double nostril full-on oxygen partitioning that I'm experiencing right now. You know, getting high on that O out here, you know?

And so, it's really interesting to note this, and I want to ask you about this. Because when you just talked about some of the functions that the diaphragm's involved in, again, this skeletal muscle, we don't talk about that. We don't talk about it in that way. As a matter of fact, the diaphragm is largely not even in the conversation.

JILL MILLER: Not at all.

SHAWN STEVENSON: It's so disrespected. But you mentioned how this process of breathing, the heart is going along for the ride, right? So, I want to ask you about this. What is the connection with our diaphragm, with our breathing and our ability to shift what's happening with our heart rate? Right?

Because our heart rate, and you detailed this so perfectly, can elevate or reduce based on a variety of things, movement, exercise, stress, all these things. But we can change it. We can actually influence our heart rate by changing our breathing.

JILL MILLER: Absolutely. So, these muscles, they're two different muscles, right? The heart muscle is a smooth muscle, and then the diaphragm is this skeletal muscle. By affecting the pace of breathing, by overtaking the "pacemaker," right? By no longer letting the automatic happen, but by deciding I'm going to breathe shorter and faster and shallower, I can get my heart rate to elevate.

Or if I decide to breathe longer, slower, and deeper, I can slow down the heart rate. And this is because of the impact of a really famous nerve called the vagus nerve and how it fires upon

the sinoatrial node of the heart and starts to let the heart either go faster, if I'm removing the vagal input, or if I try to increase my vagal input by going into recovery-based states, which is what this whole book is about, I can start to slow down my heart rate.

And the really, the fastest, one of the fastest ways to do that is by using a stronger, longer exhalation versus a longer inhalation. So that's one of the fastest ways.

SHAWN STEVENSON: So, when we breathe in, the heart rate is increasing?

JILL MILLER: Yeah. When you in... Well, so this is, so this takes us into literally heart rate variability. So HRV is the odd variability that your heart has within itself, that when you're inhaling the heart rate speeds up, and when you're exhaling, the heart rate speeds down. And this is happening all the time. Unless there is no slowing down, right? If you're, you are running from the tiger or you're running a race, your heart is going to be at its maximum heart rate.

But as soon as you stop and you start to walk and you realize there is no threat or there is no longer a race, your heart rate will start to, will start to adjust to that vagal input. And once the vagal input shows up, we're going to have a very, very different wave on our heart.

If we got a heart rate monitor or if you're attached to an ECG, fun or not fun for some, you can see the changes in the beat-to-beat ratio, depending on whether you're in an inhale state or in an exhale state. And it's a lot more complicated, it's outlined more clearly in the book.

But the heart rate variability, the person who originally codified heart rate variability is Dr. Stephen Porges. And his work on the vagus nerve is highlight in Chapter 3 in a really big way. He's got a modern theory about the evolution of the vagus nerve called Polyvagal Theory.

And this helps us to look at how our heart and breath and our, frankly, our whole nervous system relates in different states of arousal, defense or life threat versus a recovery or relaxation response.

SHAWN STEVENSON: So fascinating. And as soon as you said that the heart is going along for a ride on that diaphragm trampoline, essentially, it just really made me realize that our heart is really kind of as it's going along for this ride, that association, that kinship with these two really remarkable organs.

And also, the fact that they're both muscles, we have the cardiac muscle and then the diaphragm being the skeletal muscle, it's just like they're really working together for movement within ourselves. And that inner movement is directly controlling our external

movement, our outer movement. And it's really working in, is going to change our ability to work out, essentially.

JILL MILLER: Isn't that amazing?

SHAWN STEVENSON: Yeah.

JILL MILLER: They're tied together. They are the ultimate neighbors. And I mean, the heart, I say this in the beginning of one of the chapters, the heart has all the sonnets written about it. The heart is the muscle of love. It's what everybody champions, "Oh, I felt that in my heart." But the diaphragm is like, it's not a doormat. It's not just like, "Hey, I'm not just the heart's bed."

SHAWN STEVENSON: "I'm not in the friend zone."

JILL MILLER: I know, like, "We are connected."

SHAWN STEVENSON: We done friend-zone the diaphragm. What are we doing?

JILL MILLER: Not fair. So, if only we could help children to connect with this, the muscle, they can actually change its cadence and then they can change their mood. They can change the way their cognition is functioning. I mean, there's so many, there's the ripple effect is unfathomable.

SHAWN STEVENSON: Specifically, on that, when you're talking about how our breath is this internal reset button, you share this another quote from the book. "It's both easily accessible and quite effective." And unlike anti-anxiety medications, recreational drugs, alcohol, and comfort food, it doesn't come with a laundry list of harmful side effects.

Because you were detailing throughout how shifting our breathing and being more intentional about this, dramatically reduces our incidents of anxiety, depressive thoughts and increases our resilience. Which I want to come back and talk about resilience because you define it differently than I think we're exposed to today.

But also, this shift changing over to our parasympathetic from the sympathetic, also increases powerful anabolic hormones like HGH, for example. Like we're just, we're kind of creating this tonifying youth supportive chemistry and atmosphere in our bodies by shifting our breathing. And it's free.

JILL MILLER: Yeah.

SHAWN STEVENSON: It's free. And the side effects, like you just mentioned, we're usually going for, "Let me get a pill for that. Let me get an injectable for that experience," that you already innately have access to. Let's talk about that.

JILL MILLER: Right. An injectable, or an edible, or a drinkable, or whatever it is. Yeah. I think it's really important. Obviously, pharmaceuticals and other wellness by chemistry, there's totally a place for that.

But part of my path as my own healing from a series of eating disorders in my teens and early 20s was really about finding my way through my body. Because talk therapy wasn't working for me. Prozac, Zoloft, they didn't work for me. They took so much away from me that I wasn't able to really feel myself.

And so, finding ways of inhabiting my body and trying to create a dialogue between the parts of me that I didn't like and that I dismissed, and I was trying to run away from or control and welcoming them to the table, was the path of going through these structures, touching these structures, just like what I had you do earlier.

We did this very gentle supportive thing on Shawn's low back called the decompression of the low back via the lateral raphe using two Coregeous balls. But trying to find ways to welcome the anxiety body or welcome the pain body and start a dialogue in a really, really gentle, nurturing, supportive way. Not continuing to dull or suppress the experience of those voices, which I found that medication dulled them so much.

I didn't know what they wanted to say to me. I don't know if you've had that experience with them. I certainly did. I became so dull to myself, I couldn't feel. And as a sensation junky, it was really important for me to not... It was important for me to be able to let them continue to speak. Yeah.

So, to your point, the side effects of using breath or using the type of massage tools or movement tools that I introduce in this book, you have these other side effects. The side effects are, "Oh, I don't have pain anymore," or "Oh, my shoulder moves better," or "Oh, I have this spontaneous upright posture. Where did that come from?"

That's all from coaxing your tissues and giving them a chance to no longer have to be imprisoned by unchecked stress. 'Cause that unchecked stress... I mean, I'm going to walk out the door, I'm going to drive away. Who knows what's going to happen. Stress is mine to take, or it's mine to dialogue with.

SHAWN STEVENSON: And to this point, when you talked about essentially covering up that alarm that's going off with depressive experience or depressive feelings, anxiety and whatnot and giving the caveat, of course, that our pharmaceutical model has its place, for sure.

However, when our body is giving us this feedback, and we essentially, we take a heavy weighted blanket and we're throwing it over this alarm that's going off, this internal feedback, this biochemical feedback that our body is giving us that, "Hey, we need to probably change," whether it's our behavior, whether it's as simple as changing the way that we're breathing, whatever the case might be, our bodies are giving us innate feedback.

And instead, weighted blanket goes over the alarm, but it's still there, it's still going off. And as you mentioned, we can mask it and not experience what it's trying to inform us to do, and that's the culture that we've really co-created today, is where we are hiding from all these things, and we are creating an atmosphere within our body set.

It's like a minefield, really. And so many of us are walking around with these exposed mines and we bump it to another person or another situation or another stressor and the entire system explodes. Instead of having this internal access. Which for you, it was through tapping into and experiencing it through the body.

As you just mentioned, I can't really put it to words, but after doing the exercise... And it's going to be different from person to person, of course. Not, I would imagine that everybody's going to have that double nostril jump-off so suddenly.

But also, what I said, the first thing that I said was I felt more of me. I felt that there was more of me in the room. And it's just like a very strange thing to articulate that.

JILL MILLER: Yes, there are always intangibles that happen. A big part of the book, there's two chapters on fascia, so let's talk about fascia 'cause that helps us to define this strange, intangible experience that you just had like, "I feel more present. What is that?"

Well, the two chapters in fascia, one of them just helps you understand fascia, the other one is on fascia and your sensing systems. And in fascia and your sensing systems, I go over the difference of proprioception, which is your body's knowledge of itself in movement or position, and then there's enteroception, which is your body's ability to listen to its physiology and to make sense of that, so it's your subtle sensing system.

So, we have this growth sensing system with proprioception, and then we have this subtle sensing system with enteroception. And what does that mean? So enteroception helps us to know that we're hungry. We can feel the movement in our organs, we can feel the movement

of air, we can feel the movement of blood. So, heartbeat, breathing, these are all enteroception. Even sexual desire is an enteroception feeling.

JILL MILLER: But that strange thing you felt like, "Oh, there's just more of me," that's also enteroception. Or the warmth that was generated from doing those gentle movements, the strange rolling warmth. Your awareness of more dual nostril breathing that's enteroception.

So, in Body by Breath, one of the big assists is to help bodies in this recovery-based cocktail to dial into enteroception and to try to parse out these unique experiences that are a part of all of us, but they're going to be the first ones that are subdued and smooshed down because of the go, go, go of our sympathetic nervous system. The sympathetic nervous system sometimes is running away from these deep feels within the body.

So enteroception is even the feeling of your emotions in your body. It's so interesting. But just doing something that's simple, that little, tiny positional release allowed you to have buckets and buckets of soft experiential, ephemeral odd awareness.

SHAWN STEVENSON: We've got a quick break coming up. We'll be right back.

No lifts, no gifts. Here are just a few benefits of building muscles seen in peer-reviewed studies. Building some muscle mass can significantly improve your insulin sensitivity, improve your overall hormone health, improve your cognitive performance, improve your immune system, protect you against injuries and speed recovery, and defend your body against age-related degradation. This is just a small slice of what a little bit more muscle can do.

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Just hearing a little bit about... For somebody like yourself, when I get exposed to their brilliance, I'm just like, "How in the world? What track could somebody take to arrive at this place?" And the stories are typically, especially somebody who is displaying a certain level of excellence, it's very atypical. It is not what you would think.

And you mentioned your tryst with various pharmaceuticals to try to address some of the things you were dealing with, but part of your entry into this field, which I would imagine when you were a kid, you did not see yourself doing this, that you're doing today.

JILL MILLER: No. My gosh.

SHAWN STEVENSON: But you struggled with your perception of yourself, right?

JILL MILLER: For sure.

SHAWN STEVENSON: Your enteroception of you mightily to the degree that you experienced several diagnosed disorders. Can you talk a little bit about that?

JILL MILLER: Yeah, sure. I came at this... So, I'll just say one thing. I wrote a book almost 10 years ago called, The Roll Model Method, which has been a bestseller. It details myself myofascial release approach. And it really is a great way to address musculoskeletal issues, mobility issues, and it really is highly focused on this proprioceptive arrangement.

This book is the book I wanted to write when I was approached by Victory Belt 12 years ago when they originally met me, or they originally reached out to me. They had seen me on my friend Kelly Starrett's program on a platform called CreativeLive, and I presented an hour seminar on fascia and an hour seminar on breathing.

And the next day, there was an email in my inbox that said, "We want to publish your book." I said, "Well, I don't have a book." They said, "Well, write one and we'll publish it."

And so, I knew that self-myofascial release was a rising trend and that I had something to contribute there, but I wanted to write about my core approach. But I knew breathing wasn't trending 12 years ago, 14 years ago. Only in the yoga space, which is where I was. And so, I had to put all of that on hold 'til now.

But my story of how I got into self-myofascial release in the first place, and why this is the book that really needed to get written, was I was a very overweight kid. I was a super chubby kid, very junk food eater. You were talking about this earlier, and pinwheels, burgers after school, Hardee's roast beef.

Like every day, I would have a burger after school. I don't know how that happened. And French fries, the whole thing. But I was really overweight kid, I was very short, I was 4'9", 100 pounds in 6th grade. So, I was very round, big thick glasses, 'cause I was a reader, very inactive.

SHAWN STEVENSON: This was even more rare back at that time period?

JILL MILLER: You think?

SHAWN STEVENSON: Yeah.

JILL MILLER: You think that was rare.

SHAWN STEVENSON: So, you were probably sticking out.

JILL MILLER: Oh yeah. So I was that kid. I was very smart, very bookish. And I guess I'm still smart and bookish, but I'm quite a different body now than I was back then. And so, I figured out that if I stopped eating, and I got this idea from...

Actually, it was a TV show, one of those news shows Jane Fonda was on, like 2020 or something like that, and this word "bulimia" came up on the show, and they said that she would throw up when she ate, and I was like, "That's a great idea." So, I started starving myself and I also eventually became bulimic.

Now, I want to say something about that. When all this stuff happened, I was going to the library and checking out books on anorexia and bulimia, 'cause I knew something wasn't right about that. So, I was learning about these diseases while I was engaged in them, but I couldn't stop.

And the short version of the story is, during college I was still acting out, which is what we call it from the bulimia space, I'm still binging and purging, but I was in the dance department and I had to take Pilates classes, and I got my roommate who was pre-med, I got her to take the Pilates with me, and she would always complain that she was sore after Pilates, and I was never sore.

I just didn't get sore abs 'cause I didn't feel my abs. I couldn't feel them at all. I was using my limbs to get through the classes, you're limbing the exercises.

And so, one day I was also doing work study at a yoga studio or something, somehow, I was at a yoga studio, and I remember mentioning to the teacher that I couldn't feel my abs and that I was bulimic. I knew that these were connected. I knew that this sort of black hole of non-feeling was partly what was the drive for the bulimia.

And she said, "Well, why don't you lay face down on this prop and breathe?" And so, she handed me this hamburger bun shaped sandbag, and this was a prop in the Iyengar yoga space, they used to use it for head stands. And it was very, very hard, 'cause it's made of sand.

But I laid down on it on my abdomen, and when I laid down on it, it was absolutely unbearably painful. Just gnarly visceral pain. Enteroception, right? But that pain started to help me drain the emotions that were stuffed in there, the stuff I was running from all along. I finally had a cable of connection between my emotions and the physical feeling of disconnect inside my guts.

And so, I started to... I was like, "This is unbearable, but this is amazing." There was something like dark night of the soul, like there was something about that that was like, "This is going to help me."

And so, I started to roll up a hand towel in my dorm room, and I would roll this hand towel up and I'd move it around my abdomen like a honey bun. I'm from the South, we used to eat honey buns. And breathe, breathe, breathe every morning, and that's really what helped me to work my way out of the disconnection I had and into feeling and listening.

It was like an amplifier. I was able to listen to the voices inside of me that I was afraid of, that I hated, that I was angry at, and start the process of healing. And then now I have this tool called the Coregeous Ball, which is much more gentle and much more supportive than rolled-up towel or a sandbag.

SHAWN STEVENSON: Hamburger sandbag?

JILL MILLER: Mm-hmm.

SHAWN STEVENSON: Ironically, is a hamburger?

JILL MILLER: Oh, my goodness. Well, how about that?

SHAWN STEVENSON: Look at that. The full circle.

JILL MILLER: That is a connection. Yeah.

SHAWN STEVENSON: That's what's going to happen here. When you're here with me, new revelation's going to happen, 'cause that's what you're doing for all of us as well. But listen, this is such a remarkable story, because what you're opening up is this awareness for us that all of ourselves have a deep intelligence and a memory. We talk about this phenomenon of like muscle memory, for example.

But it's really ourselves are highly intelligent, and there's an innate learning capacity that they have, and they're also storing up experiences. And so, in essence, in a micro-way, it creates a global situation when we're stuffing down these emotions and kind of hiding out and finding ways... Our bodies are also great at hiding stuff and adapting, right?

JILL MILLER: Oh absolutely.

SHAWN STEVENSON: Covering up dysfunction in order for us to keep moving forward. And so when you made that analogy of that cable connection, I pictured Doc going back to the future, right at that last moment, getting that cable connected, the lightning going through and being able to time-travel, and you are able to access those memories and to associate with them and to process and all the things, because you got everything online by going within.

And so, there are certain... Essentially, and you share this in the book as well, there are certain buttons that you can push. You're always looking for ways like, "How can I get into the system faster? How can I... " I don't want to use the word "hack" here.

JILL MILLER: Use "tap". I totally am with, "How can I tap in."

SHAWN STEVENSON: How can I tap, right? How can I tap in. Tap it in, just give it a little tappy, how can I find access to this system?

JILL MILLER: I think I call it portals. Like there are these portals, right? And it is...

SHAWN STEVENSON: Now we're on Star Trek now. Beam me up, Scotty.

JILL MILLER: It is so time space... Well, you brought time space travel, and you brought Doc from Back to the Future, that there are these hotspots or these access points. And they're going to be different for everybody. I think I've found a few really universal ones, and I highlight them in the book, in the Rolling chapters.

But we... Well, we are stardust. Oh my gosh, you've really got me in the outer space. But I really had this disorder of enteroception, I really wasn't able to hear or sense my physiology. I was so controlling of my physiology because I didn't want to feel the things that I thought would destroy me. And of course, there's lots of stuff in my past, and that's not all in the book. Maybe someday all that stuff will come out.

But it was really important in order to meet myself developmentally. There's no way I would have been able to age healthily out of that. I had to go through that. I had to go through my body and go through that process in my own way.

Because honestly, at the time, therapy and talk therapy was all in the head. It wasn't talking to my body. I needed my... My mental health was not in my head. It was a body-wide issue, and I needed a body-wide way of being able to show up. And I think that's really true for a lot of people, a lot of bodies.

It's not just something that we can extract by talking it out. We've got to move, and we've got to be tapped into these parts that we have punished or thrown away or run away from.

SHAWN STEVENSON: Yeah. There's a statement that there are many paths to the goal, but when it comes to our bodies and our minds, we tend to find ourselves, especially if people have spent a lot of time researching this stuff and how to help people, how to help people to recover from trauma and whatever the case might be, and it's this overarching belief that it is strictly through the brain, strictly through the brain or what we...

There's a difference between the brain and the mind, by the way, which we'll put Dr. Caroline Leaf's episode for everybody in the show notes, but the brain isn't just operating in isolation. And also in the book, you share something that was really remarkable, because now the vagus nerve is hot out there on the streets, with the brain and the gut association, the gut-brain connection.

But you say that it really should be the gut-brain-brain connection. Because the gut itself is functional as a brain and running processes without... You can cut that; you can cut the connection and the gut is going to continue to function in many different ways to do its applications.

And so being able to access these memories, this internal information through different ways and understanding talk therapy, yes, valuable, and understanding that conventional exercise and movement practices, yes, valuable, but there are other paths to the goal and the methods that you're bringing about are remarkably effective for so many people.

Because we're storing up things in places that we often don't know, especially within this space, within this core complex where all the party is happening. Not all the party 'cause... Well, we tend to think that it's all happening upstairs in our brain, right? So, can you talk a little bit about this distinction?

JILL MILLER: Oh, my goodness. Alright, so... Where do we start? Pressure on parts is a very valuable therapeutic application. What I mean by that is self-massage. So, the... Because we have been so like the brain is everything and all your thoughts and all the things, but as I illustrate with my own story, I was a talking head. I mean my body was moving, I couldn't feel most of it.

And so, I needed, and I think many people need something to illuminate the experience of sensation. Your body thinks and feels. You are a sensational being. We have so many sensory neurons throughout our body that are helping our brain to orient us to our environment.

Recently, there was a re-calculation of the number of sensory neurons in your fascial tissues. So previously, they thought there were maybe about 100 million sensory neurons in your fascia and your skin, for comparison, has about 200 million and your eyes have about 150 million sensory neurons.

But this re-calculation, which was done by this researcher, Martin Grunwald, basically concluded that there are 250 million sensory neurons in your fascial tissues providing feedback about, well, about the proprioception and about the enteroception and about temperature and pain and all sorts of things.

These things terminate in your fascial tissues. Even when you have terminations, obviously, I mentioned the eye and the skin, there's terminations lots of places, but that makes our fascial tissues the largest sensory organ we have in our body.

And so, your brain is everywhere in your body, right? It's calculating it up here, but my body thinks and feels. My body thinks by feeling. That's how my brain gets its thinking. And that's one of the messages that I broadcast in the book. Your body thinks and feels. And if we're cut off from feeling, we're really trapped, we're really trapped in our head and isolated from ourselves.

So, using tools to pressurize, to agitate, to traction, to promote touch, brings us back to sensation, to being a somatic being instead of just being a heady think-any being all the time.

And I'm really an advocate for people to be able to illuminate their sensate body as brilliant and not to just discount the rest of your body as a meat suit, and then all the good stuff is happening bing bong up there. So that's why it's body by breath. There is a chapter on brain by breath and we got a lot more going downstairs.

SHAWN STEVENSON: Since... You mentioned this several times, but I really want to give a clear understanding of what fascia is. Can we talk a little bit about that?

JILL MILLER: Sure. So, fascia is one of the connective tissues within your body. It evolves out of the embryo in a part called the mesoderm. Alright, let me clarify. You've lots of connective tissue. Your bones are a connective tissue. Your ligaments are a connective tissue. Did you know that your blood is a connective tissue?

These are all different connective tissues that come out of the same layer in the embryo. But what your fascia is that stringy cobweb-like membranous stuff that you see when you butcher meat. You see those white threads that travel through.

These white threads, they look white, by the way, because you've got oxygen hardening the collagen within them, and so all of a sudden it looks white, but these are like these translucent layers throughout your body. They give you your form and your shape. They suspend your cells from foot to face and everything in-between.

And as I mentioned before, they are highly nerve-rich and they are also highly rich in cells, in living things. Your fascial tissues have a number of different cells that live within them that produce the collagen that... Oh my goodness, collagen, this is a wellness podcast, people love taking collagen.

There's this cell called the fibroblast that lives and tends and mends your fascial net, we often call it the "fascial net", and the primary molecule of your fascia is collagen. There's also elastin.

But that collagen and the elastin allows you to be able to have elasticity within your body. It allows differential movement to occur within your muscles and at your joints. Your fascia is your seam system, put simply. It's the thing that strings it all together.

SHAWN STEVENSON: So, with that being said, can our fascia be strung too tight?

JILL MILLER: Oh, for sure.

SHAWN STEVENSON: Or can it be needing some hemming?

JILL MILLER: That's cute. That's awesome. You're the first "Can fascia be hemmed?" question I've ever had. So, I'm going to hem and haw a little bit here. Yeah, so your fascia is also the repair... One of the primary repair systems for your body. So, when you get an injury on the deeper than the skin, let's go... We're going deep injury here.

The fibroblasts, they migrate to the site along with all these neutrophils and cytokines and all sorts of stuff to your immune system, get in there, but the fibroblasts migrate there so that they can spit out collagen so that blood vessels can grow and help bring the supplies there. So, the fibroblasts are the wound repair system that you have in your body. Isn't that cool?

But if the wound is very, very significant and it doesn't end up repairing itself... Well, you're repaired, you're healed, that's amazing. But sometimes when the wound is very, very significant, we have over-zealous fibroblastic activity and we over-produce collagen and that ends up leaving nodules or scars or glomerations that end up not allowing for good glide or good movement within a certain area of our muscle or joint or whatever the injury was.

And so those gnarls in your fascial fabric tend to make you have to accommodate movement around them. We get these movement and dams in our body caused by excessive collagen production, scar tissue.

Can we hem it? Well, hemming is through different processes of massage, or very, very intense friction to help improve glide in the area, but the friction can also be actually a very, very gentle, long, steady traction, very similar to actually one of the de-compressive exercises that we did. So, there are a variety of ways to address the hemming and the remodeling in a scar zone or a gnarl zone or in a glomeration.

We used to call this "adhesions", but this is bigger than an adhesion. This is really a burr that's stuck within your soft tissues that's creating movement dysfunction and can definitely lead to pain.

So yes, you can hem, but it's a little bit more... Not like going in there and trimming it with scissors is going to make it better. If we go in there and trim it with scissors, we'll have new scars that we have to deal with.

SHAWN STEVENSON: There's obviously a lot of therapies today that say that they're targeting the fascia.

JILL MILLER: Sure.

SHAWN STEVENSON: Is that something that we're kind of just automatically doing when we're engaging with massage, self-massage?

JILL MILLER: 100%.

SHAWN STEVENSON: Utilizing therapy balls and things like that?

JILL MILLER: You're never not addressing your fascia by rolling on a foam roller, by scrubbing with a yoga tune-up ball, by using a, not a chisel, one of those... The guns?

SHAWN STEVENSON: The therapy guns or...

JILL MILLER: Yeah, but they're working on all the systems, but it's helpful to be able to differentiate and discern which system you really want to impact the most, and then what those results are. So, I also wrote a chapter in a medical textbook called "Fascia Function in Medical Applications". During the eight years it took to write this book, I took a year off to write for this medical textbook and I wrote a chapter on self-myofascial release.

So, this is really a very near and dear topic to my heart. And the theme of self-myofascial release in research, the very first research paper, I think popped up in 1990 or 1991. It's a very, very young field. In fact, palpation science is only 150 years old in terms of all sciences. There's more science on nuclear stuff than there is on palpation science. That's mind-boggling, right? And radiation. Not nuclear, but radiation. Thinking about Marie Curie, she's one of my favorites.

So, palpation science is a relatively new science. Self-myofascial release is even newer. And so, it is very interesting to see what our tool-based intervention's doing. We don't know all the things, but there's a few things that we definitely can see are happening with tool-based work.

SHAWN STEVENSON: This all brings it back to understanding that we're operating within this container, essentially. You said earlier, our meat suit. But within this, there is room for expansion, there's room for awareness, help to get things back online, to help to make sure that things are gliding correctly and communicating correctly.

The biggest thing that inhibits this, and this is a big umbrella statement, is stress. And obviously, there are a tremendous amount of stress inputs that physical, mental, emotional, spiritual stress, but we have an overall stress load that you address in the book. And again, we're just like throwing that weighted blanket on this stuff and not addressing these stressors, stuff is just building up. And so...

And eventually, of course, we're going to have a breakdown in the system. By going zero to 60, if we don't have an intentional strategy today more than ever to go 60 to zero to recover, life is going to hit us with something that just is like, "Oh, you're going to sit your ass down over here." Right? It's going to make you do the thing, right?

But we can proactively put ourselves in a healthier position. And so, this is leading to the conversation I want to talk to you about, which is about our positions.

JILL MILLER: Okay.

SHAWN STEVENSON: Because earlier when we talked about posture...

JILL MILLER: Yes.

SHAWN STEVENSON: And it hit me like a ton of bricks reading that section that the way that we move our bodies, the shapes that we put our bodies and inherently control the way that we're breathing deeper, now we understand is inherently and controlling what's happening with our diaphragm and its ability to be a robust, Arnold, we want some strength to this muscle. Right?

And obviously a lot of our postures today are not very advantageous. We're going into this kind of hunchback vibe, looking into our phones all day or at the computers. And so, you are demonstrating through the book and even giving visuals and visual cues about fixing our posture.

Now, here's the statement that you said, and again, it sounded audacious.

JILL MILLER: Oh boy.

SHAWN STEVENSON: "Being that our posture is essentially a home base from which all of our movements emanate," you said this, you say that "Posture is one of the easiest things to correct." That's a statement right there.

JILL MILLER: It's so funny hearing my quotes. Alright. So, one of the ways I break down posture in the book as it relates to breathing specifically... 'Cause this book is not going to teach you about your hip joints and your knees and your ankles and your feet position like the Roll Model does. This book is really concerned with your axis. It's really concerned with the pathway of respiration, and then its ripple effect everywhere.

I break respiration down into three zones, and I think this is very helpful to understand posture. So, there are three zones of respiration. In zone one, we're focused on the stuff below the respiratory diaphragm. So as mentioned, the diaphragm lives in the lower sixth ribs, it attaches to the lumbar spine.

On its way to attach into the lumbar spine, it crosses across two of the most pivotal postural muscles known to human body. That is the psoas major and the quadratus lumborum. So those are some big muscle names if you're not familiar with muscle anatomy.

But the psoas is a gigantic hip flexor that starts at your high inner thigh, and it hooks into every one of your lumbar vertebrae, your low back vertebrae and its discs, and then it threads its way to the very bottom of your thoracic spine, the ribcage spine.

So, we've got a muscle that tethers the diaphragm, that's going from thigh to thorax. That's a lot of territory that you're inhabiting with just that one muscle and the diaphragm is connecting to it.

We also have the quadratus lumborum, which is a wider squatter muscle that connects the top of your pelvis to your lumbar spine. And again, it's hooking into the diaphragm. So, we look at zone one as having this... Every zone has these musculoskeletal components, but we have this tremendous lumbar spine component. You did a bunch of stuff out there on the map that helped to mobilize those tissues that I just named.

Add a third into the mix. The diaphragm that lives inside your ribcage, its fascial downstairs neighbor is a muscle called the transversus abdominis. The fascia of the transversus abdominis, the transversus abdominis is your cummerbund muscle. Looks like a cummerbund.

And you use it every time you exhale, you use it when you cough, you use it when you sneeze. It's that muscle that compresses if you want to look skinny, usually. You tighten your cummerbund muscle; you tighten your transversus abdominis muscle. And when you do that, by the way, and you could even hear it in my voice, when you tighten the stuff below the diaphragm, it's going to narrow my ability for my diaphragm to move down when I breathe.

Let me rephrase that. The zone one is the stuff below the diaphragm. When you have a relaxed and open zone one, your diaphragm can easily descend on inhale and then pop back up into the ribcage on exhale. Your diaphragm should be able to move down and up just like a trampoline, and your gut area should expand and then fall in. You should have enough elasticity in the zone one that when you breathe in...

When you breathe in correctly, there's going to be bloat, not just 'cause your belly pooch is out, but your waist, your low back, even your pelvic floor, there's a transference of pressure as the diaphragm descends circumferentially, I get this sphere action happening below it. Does that make sense?

SHAWN STEVENSON: Mm-hmm.

JILL MILLER: But if I have tension or restriction in my transversus abdominis 'cause I want to look skinny, or I'm bracing for a punch all the time. Or I've got hip pain, or I've got low back pain and I've got tension in those muscles, it is going to inhibit the full range of motion of my diaphragm into that zone one area.

Zone one breathing is our most calming recovery-based parasympathetic dominant style of breathing. When I breathe into my gut and allow the gut to expand, and then allow it to fall in. My diaphragm is experiencing its full ease of contraction. There's nothing that it's having to push against in the contraction phase of inhale. It's not inhibited.

If I inhibit my diaphragm in zone one by tensing, then I'm going to breathe into zone two. Zone two breathing is a coordination between the intercostals which move the ribs and the diaphragm, which is living in the ribcage. So, when I'm doing zone two breathing, I've got ribs that are pumping up and down.

That's a great thing. I want to have these bony fish gills moving out and in and helping to pull air into the lungs and get air out. But typically, when we're in our zone two breathing, we're in a more aroused, active, heightened state. We use this in athleticism all the time. You have to brace zone one, steel your guts in order to lift something heavy, otherwise your low back will go out, or you'll strain an SI joint.

I have to stiffen my zone one in order to have a successful push, pull, thrust action. It's what we're using to stabilize. So, the breath has to go somewhere, it's got to go into zone two, which is more active, more sympathetic.

Now, the third zone of respiration is zone three. Zone three is the stuff that happens in the head, neck, face, collar bones and shoulders. And I use a zone three breath in case of emergency, in high fright or fear, in delight. But it's not tenable. It's not an enduring breath, it's something that I need short, explosive, emergency, or thrill.

But if I breathe like that all the time, I'm probably in shock, I'm having an asthma attack, and eventually I'll probably pass out because your body just can't sustain that, right?

And so, if I'm using my zone three muscles to do respiration, I'm going to have neck pain, shoulder pain, range of motion challenges with my shoulder, neck. I might even have chronic jaw pain, teeth grinding. So, we see these sort of maladies of zone three that are sometimes associated with very high stress, high chronic stress.

'Cause some stress is good, right? We're talking... When Shawn and I are talking about stress, we're talking about the diabolical stress, the stuff we're not recovering from. That build up in the system. So, there's zone one, zone two, zone three, I think is really helpful for people to be able to see.

I want my diaphragm to move really well, in zone one and zone two, I don't want my muscles of zone three to be the thing that pull air in day in and day out, because they're not designed to do that there. It's very costly, metabolically. I want to use my lower metabolic cost muscles to do my breathing for me. And then in case of absolute emergency, obviously you want your own three stuff to kick in.

How does it relate to posture? Well, your spine is a channel through, like a maple within a maple. So, if the diaphragm is this skirt and we've got the spine, that's also helping to optimize the behavior of the diaphragm, right?

If I'm rounding forward at my computer all day, it's going to create distortions in zone three, especially 'cause I'm gripping here. So, what I'm showing is I'm gripping a... If you're listening to this, I'm gripping a mouse or I'm gripping a keypad, I have tension going through the fascia of my hand, wrist, forearm, elbow, shoulder, all the way up to my face, cheek, eyeballs that are creating that cast. If I use my friend Katy Bowman's term, a cast of a zone three breather day in and day out.

So, we do have to do things, I think, on the regular to make sure that we're decomposing the tensions in zone three, so that we can get to a more balanced zone one, zone two, for our overall output.

SHAWN STEVENSON: This is essentially medicine for the stresses in our lives, being able to access that parasympathetic through this... Again, it's an innately, we all have access to it, but in this case, today, more than ever, we might need some training. And being able to push these different buttons, whether it's through our breathing or whether it's through manipulation of certain spots on our bodies, which you walk us through in the book, Body by Breath. Body by Breath. This is helping to reduce that overall stress load.

JILL MILLER: For sure.

SHAWN STEVENSON: Just being able to ratchet down so that we are getting access to more resilience. Now, this is the last thing I want to ask you about, because you did bring it up when you talked about resilience in the book, what we tend to think about is being tough, being able to endure, that's what resilience just on the surface is. Even for me as I was reading it, just like, "Yeah, that's what it is. Yeah."

But then you articulate that resilience is truly, if we're looking at what it really means, resilience is the ability to bounce back. Let's talk about that.

JILL MILLER: You are your own best hero. I mean, you need to be your own hero, especially today. You have to advocate for your hopes and dreams, your family. And it's very difficult to have to always be the lead and be the leader and not take the time to refuel yourself and your cells.

You can't keep filling if you don't empty. And we tend to run to depletion and then just hope that we can get more energy instead of actually doing the work of truly refilling our souls and our pitchers and our physiology.

That's actually very, very simple to do that refill, and I outlined it in the book, it's called the "five Ps of the parasympathetic nervous system". This is the ability to build a tolerance for parasympathetic state. Many of us are running 'cause we're running from something or we're afraid of something.

The ability to not just to stop and be still because stillness can be terrifying to many bodies, especially bodies that are running, running scared. Or running toward, it's not just running scared, we're also running toward, we have ambitions, we have goals.

There's this phenomenon called "relaxation-induced anxiety" that I discovered a few decades ago, and it just stuck with me. I was like, "Wow, relaxation-induced anxiety." That's the phenomenon when you start to go into relaxation states, where you start to get anxious about letting go, about your vulnerability.

Sometimes I see in the classroom when people go into Savasana corpse pose at the end of the class, they can't be still. They're fidgeting, their eyes are opening and closing. That's when the pain starts to set in, for some people. When they start to get still and they're finally still, all of the things that have been submerged during all the action, it becomes visible, it's uncomfortable, it's untenable.

Relaxation-induced anxiety, there's some estimates that between 17 and 53% of people experience this. Which I think is why meditation hasn't really stuck in the general population,

'cause it's uncomfortable. So how do we help bodies that seem meditation resistant or relaxation-resistant, how do we help them to find a way to refill?

And I think these five Ps are a really good formula to help not only those bodies, but the bodies that like stillness too. And those are... The five Ps are, number one is perspective, and perspective has to do with mindset. Mindset. And those are throughout the book, in Body by Breath, I have dozens of them, but one of them is, all of me is welcome here.

That includes the anxious part of me, the part that can't sit still. "You're welcome here too. Come here fidgeter, we're going to hang. You want to fidget? Let's fidget."

The second P is place. Ideally, to truly relax, the place needs to be safe. Now, in the throes of a stress moment, and that can happen on the street, it can happen in an airport, it can happen on the airplane. I was on the airplane yesterday, hitting a lot of turbulence I was like, "Okay, this is a safe place."

Didn't believe it at all, right? But I had to go through, I was like, "Okay, let me think of the physics of clouds and airflow and the airplane wings." I literally had to go there to make the place safe for me. So ideally, the place is sanctuary-like, it's where you feel at peace. That could be outside, it could be inside. For true relaxation physiologically, it should be warm, it should be a little bit dark, it should be quiet.

The third P is position, and I don't mean posture. Position in terms of your physiology, where you're going to find the greatest relaxation response is on the ground, is laying down. We're slightly in a gentle slope, a little bit reclined.

So, quickon their number of positions, you'll see throughout Body by Breath, where I have the pelvis is lifted up on a block or on a Coregeous Ball so that you create some of the baroreceptor reflex in your body and that it helps the vagus nerve to come online and tamp down on sympathetic outflow.

So, you've got perspective, place, position. Now, the fourth P, we didn't even get to this 'til now, is pace of breath. So, pace of breath is how you're organizing those breath reps that you asked me about so early in our conversation. Ideally, your exhale is longer than your inhale.

Now, there are paradoxical breath strategies you can do where you load your inhale, but for the just grand scheme, your exhales are longer than your inhale, that helps the vagus nerve to come online.

And then the fifth P is palpation. Obviously, I use role model balls, but palpation means you are using something or even your own hands to press, to conform into different spots on your body.

And ideally there are these spots within the axis that I identify that are these, the vagal portals of pressure that really help the vagus to also become more and more dominant and to quiet the sympathetic nervous system, to quiet these unknown braces, these unknown barriers to relaxation. And so that's kind of the recipe.

SHAWN STEVENSON: I love it, the recipe is effective and it's attainable for all of us and thank you for giving us these access keys. Can you let everybody know where they can pick up Body by Breath and also follow you, get more to your universe?

JILL MILLER: Yeah. Body by Breath is on Amazon, it's on Barnes & Noble, you can get it everywhere. Get it at your local bookstore, we love seeing it on bookshelves. It's a heavy book. Just be prepared, it's 4.3 pounds.

SHAWN STEVENSON: It's a great table book. It's a great book, just to have sitting around. It's beautiful as well.

JILL MILLER: It's really beautiful.

SHAWN STEVENSON: Yeah.

JILL MILLER: And then you can find me online, my website is tuneupfitness.com. I do courses in person and online. I have a number of trainings that are available online, like I mentioned. I have one with Katy Bowman, and I have one with my friend Kelly Starrett. I even have one with Tom Myers, who many consider the oracle of fascia.

And you can also find online classes with me, I'm an online classroom where I do 30 minutes to hour-long classes every week, and I have a mentor group. There's also teachers that teach Body by Breath, yoga tune up and roll model work all over the world. You go to our website, you type in your zip code, you can find them. And then I'm on Instagram @thejillmiller.

SHAWN STEVENSON: Awesome, awesome. You just mentioned a couple of people, friends of the show, Kelly Starrett and Katy Bowman as well. Katy's second most repeat visits here on the show, and that says a lot because of the caliber of people that we have access to, but for Katy to come on the show so often.

And it's because for me, one of the smartest people I've ever met, same with Kelly Starrett. And both of them have referred to you in our conversation's multiple times, and it's just been in the back of my mind like, "Jill Miller, Jill Miller. This mystical Jill Miller, when are we going to connect?"

JILL MILLER: It turns out Shawn and I live two and a half miles from each other this whole time.

SHAWN STEVENSON: It's down the street.

JILL MILLER: I can't even... It's unfathomable. I had no idea you were right here.

SHAWN STEVENSON: Yeah. I'm grateful because you've really opened up my mind. I love... Obviously, there's a statement that knowledge is power, but it's beyond that, it's really... Especially today, we're inundated with information, but we're starving for real profound knowledge that shifts the way that we're thinking to empower us, and that's what you're providing. And even before we met, I had access to that and into your experience, and I could tell you it's real.

JILL MILLER: Oh, thank you.

SHAWN STEVENSON: And so, you're the authentic real deal, and I appreciate you so much for sharing your brilliance.

JILL MILLER: Thank you, Shawn. It's been a long time coming.

SHAWN STEVENSON: Jill, thank you again, for coming to hang out with us. Can't wait to talk much more. And everybody, make sure to pick up a copy of Body by Breath, do yourself a favor. This is a manual for enteroception that is going to influence every part of your life in a really, really incredible way. So, appreciate you so much.

JILL MILLER: Thank you so much Shawn.

SHAWN STEVENSON: Jill Miller, everybody. Things don't change until we change, things don't move until we move it, we've got to take action on what we learned about today, put it into play for ourselves, utilize some of these insights. Really start to work on our bodies, work on our breathing, and really see things change from the inside out.

Jill mentioned something that I didn't want to let go in passing because it sounds kind of superficial, ethereal, she said we're stardust. I don't know if you caught that, "We're stardust."

And the reality is, that's far more truth than we realize. Because when you see yourself in the mirror, you're literally seeing what has come from this planet what has come from the Earth itself. But the Earth didn't just form out of nowhere, it's a very, very complex astronomical, literally every sense of the word, event.

And there's so much about our planet that has pulled things from various places, that is now experienced as our galaxy, we truly are made from elements from the universe. That's what we are.

And we see ourselves as this little thing, this accident, without placement, without meaning. And it's so unfortunate because you are made of the infinite. You're made of all of this, through and through. And so, we are so remarkable, we're so powerful, and I want to encourage us to tap into that more.

Because we live in a society where, and this is the powerful thing, is that our body follows our mind in so many different ways. And of course, we're looking at Jill's work in using our body as an entry point into shifting our mind as well and shifting what's happening with our brain.

But when we are inundated or addicted, consumed with fear, consumed with messages that you're not enough, consumed with messages that you have no power, that is going to be the movie that we're continuously playing, and every cell in your body is going to experience that.

And I say, no more. Enough is enough. And we can all fall victim from time to time and forget, and that's why mediums like this are so powerful to help you to remember who you are, to you remember how powerful you are.

And so, I hope you got a lot of really great empowerment and insight out of this message today, and if you did, please share this out with your friends and family. You could take a screenshot of this episode and tag me, I'm @shawnmodel and tag Jill as well and let her know what you thought about this episode.

Or you can send this directly from the podcast app that you're listening on. Or you could pop over to YouTube and hang out with us in the studio for this episode as well. Lots of great options, lots of shareables, but most importantly, it's about empowerment. Of ourselves, of our families, and of our communities.

I appreciate you so much for doing into the show today. We've got some epic episodes coming for you very, very soon, so make sure to stay tuned. Take care. Have an amazing day. I'll talk with you soon.

And for more after the show, make sure to head over to themodelhealthshow.com. That's where you can find all of the show notes, you could find transcriptions, videos for each episode, and if you got a comment, you can leave me a comment there as well.

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