THE MODEL HEALTH SHOW

EPISODE 759

Use These Tips to Have Functional Fitness For A Lifetime!

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SHAWN STEVENSON: Muscle is the driving force of a movement in the human body, but what is this illustrious tissue that we call muscle? What is its real function? Well, on the surface, again, it's moving us through the world, it's helping us to do all the dynamic things that we wanna do, but muscle is also... When we're talking specifically about skeletal muscle, because our heart is a form of muscle as well. But skeletal muscle is the largest depot in our body for glucose disposal, so it's the primary tissue that's enabling us to have healthy blood sugar and to actually do something with the foods that we're consuming.

SHAWN STEVENSON: Muscle is one of the primary organs when we're talking about proteins and carbohydrates and our diet construct. A lot of that has to do with how we're feeding our muscles. And the latest data is affirming that our muscles are actually a reservoir for anti-aging hormones and compounds that help to keep us vibrant and youthful. And so the more muscle that we have, the healthier we're going to tend to be, especially as we get into our later years. And so the key here is, yes, muscle can help us to look good, alright? Muscle is one of those things that's going to help us to have a more attractive, what we deem to be more attractive body composition in our culture. But here's the rub, there's a difference in the types of muscles that we can create.

SHAWN STEVENSON: Now, we can create a bunch of muscles and create imbalances. For example, when I was a kid trying to get fit for football, I don't know how it happened, but I got my mom to invest in a leg extension chair that we had in the basement. So I had this janky home bench press, which should not be fit for human use, but we were down there bench pressing and we couldn't... Because I was strong, we're putting all the weights in the house on the side of that bar.

SHAWN STEVENSON: And I remember my Aunty Janet came over one day and I wanted to show her how much I was benching, and she was scared out of her mind seeing me, probably not just because of the weights, but because of how janky this bench press set up was. But I got my mom to give me a leg extension chair. And so because I've got it, I'm knocking out these leg extensions. And of course I'm doing all my other football training, doing sprints and stuff like that, doing my bench press, but I'm so front body heavy now.

SHAWN STEVENSON: I'm doing bench presses. We don't have a pull up bar or a lap pulldown. And I'm doing a leg extension so my quads are getting all of this attention, but what about my hamstrings? And so because of these imbalances, I had things like consistent hamstring pulls and I'm just wondering what's going on. I'm training the quads and I'm creating these muscle imbalances. And you might have seen some people like that, they're doing all of the kind of spectator muscles that you could see yourself, and they're walking around and they're kind of kyphotic, hunched over, kind of swole in the front.

SHAWN STEVENSON: But we need to make sure that we're training our bodies so that we have equilibrium and balance and grace and complete function. That is the key, and that's what this episode is dedicated to. How can we actually create a body and a level of fitness where we are functional for the rest of our lives? And to do that, you're going to hear from, I'm talking about the top experts in the world in their respective fields at how to actually achieve this. And not only that, we're looking at the demographics, the age brackets that they're at, and taking that into consideration.

SHAWN STEVENSON: Because you're gonna hear from somebody who is in their 30s, another person in their 40s. Another couple who are in their 50s. Another individual who is in his 70s and who's crushing it, his level of fitness is that of somebody who is in their 20s and 30s, he's running, literally running circles around people. Alright, so you get to hear practicality, this stuff really works, this stuff really holds true because these individuals are demonstrating that. And so I'm very, very excited about this.

SHAWN STEVENSON: And again, this is one of those episodes that changes the way that we do things for the rest of our lives, and we just see those kind of automated automatic benefits by implementing some of the things that we are going to be covering today. Now, before we get to our first expert, you have to understand that when building muscle, we're talking about a simple act that is incredibly complex, and that simple act is muscle contraction. Muscle contraction and muscle relaxation. And that act is the driving force for building new tissue, but underneath the surface, the very essence of being able to do that simple act requires a conglomeration of different nutrients, but there are some nutrients

that are far more important than others.

SHAWN STEVENSON: And one of those nutrients, well, just a couple of them actually, but one primary that you need to know about is the role of magnesium. Magnesium makes it possible to relax our muscles. It's a primary aspect of it. So we can't contract and relax our muscles without magnesium being present, and even more importantly, the energy to be able to do that is derived from the action of magnesium. ATP is well regarded as "the energy currency of our bodies", that's what I was taught in my university classes.

SHAWN STEVENSON: What I was not taught and what my professors did not know is that the active form of ATP is when it's bound with magnesium. Magnesium is required to make this energy currency actually able to exchange for gifts and services. Alright? So magnesium has to be present for the magic of life movement to happen. It is that important. And coincidentally, magnesium is also one of the biggest nutrient deficiencies in modern society. It's estimated that 50%-60% of American adults are deficient in magnesium on a regular basis. And so if we're talking about training and getting the most from what we're doing, but just having energy overall, magnesium is a key electrolyte, which is a mineral that carries an electric charge that enables movement in life to happen.

SHAWN STEVENSON: Another couple that are critical, especially if we're talking about performance and movement, are sodium and potassium, but the ratio of those things matter immensely. And the one company that has hundreds of thousands of data points and they're actually fueling the bodies of so many different professional sports teams now, it's crazy. It's crazy how quickly they are just taking over. Because they're getting away from all this ridiculous added sugar, these artificial colors and all the stuff that's actually causing harm to our bodies, to our kids, to our athletes.

SHAWN STEVENSON: And in place of that old age stuff, I'm not even gonna bring up their names, in place of that stuff, we're now seeing the emergence of LMNT. Go to drink L-M-N T, that's Drink LMNT, drinklmnt/model, and they're going to send you a free gift pack with every purchase of their incredible electrolytes. Now, when I'm training, this is real talk, you're usually gonna find LMNT is in my water bottle. Alright? I just noticed the difference. It's just, it

works. And it's the real deal.

SHAWN STEVENSON: And again, we're avoiding all the unnecessary sugars, artificial colors, and all the unnecessary stuff and providing, again, using real-world data points from hundreds of thousands of different data points from countless individuals, what is the right ratio, what is the optimal ratio for the vast majority of people to fuel their bodies. To fuel their cognitive function, their performance, and so much more. Check them out, go to drinklmnt.com/model and get hooked up with that free gift with every purchase. And now let's get to the Apple Podcast review of the week.

[music]

ITUNES REVIEW: Another five-star review titled, "Game changer for a firefighter" by K Rock 400. "Shawn's show was suggested to me by a close friend. Ever since, I have been addicted. My wife has now joined me in listening to your show. You and your guests have played such a pivotal part in rebuilding and re-branding myself." "Your knowledge and research on food, gut health, macronutrients, vitamins and minerals are priceless. It has helped improve my energy levels, my attitude and my relationship with my family. Thank you for who you are and what you do. I am so grateful and thankful for The Model Health Show."

[music]

SHAWN STEVENSON: That gave me chills. Thank you so much for sharing that. Rebuilding and re-branding yourself. Man, that's remarkable. Because that's what it's really all about. It isn't just the rebuilding process, it's also re-orienting and perceiving ourselves in a different way, perceiving the world around us, our impact, our family, all these different things. And so, wow. Thank you so much for sharing that over on Apple Podcast. And listen, if you're yet to do so, please pop over to Apple Podcast and leave a review for The Model Health Show. It means so much. And without further ado, let's get into this powerful compilation on real world functional fitness. We're gonna kick things off with somebody who is a true legend, and I don't use that word lightly.

SHAWN STEVENSON: And many of the things that are happening in the world of nutrition and fitness right now, he's been about this and teaching on these subjects for years, for decades. And I'm talking about New York Times bestselling author and the founder of Mark's Daily Apple and the Primal Blueprint, the one and only Mark Sisson.

SHAWN STEVENSON: Now, Mark has just crossed that threshold of being in his 70s, and he is one of the fittest people that you'll ever meet. And also again, when his peers, oftentimes the majority of his peers in modern society here in the United States, are in a place where cognitive decline is the norm, where there's enormous loss of functionality and muscle tissue and the ability to perform and move through life and to do the things that we wanna do.

SHAWN STEVENSON: Mark is demonstrating that there is an entirely different way, an entirely different model that we can utilize for healthy aging, and in this segment, he's going to be sharing his blueprint for long-term fitness and why it literally starts from the ground up with our feet. Functional feet is a huge key. And you're also going to hear his insights on the importance of utilizing our fast-twitch muscle fibers, especially as we move into higher age brackets. Check out this segment from the amazing Mark Sisson.

[music]

MARK SISSON: Our ability to move, our mobility, our ability to cross the room, cross the state, cross the country, go around the world and experience experiences are what give life a tremendous amount of quality. All of the movement that we do in the gym is based around foot health. All of the things that we do walking and hiking and playing sports, it's all based around food health, it's all based around how strong your feet are as a foundation.

MARK SISSON: And then how that translates, how the information... Look, we evolved barefoot and we spent two and a half million years as bipedal barefoot creatures with this organ that senses changes in terrain and immediately feeds information to the brain on how to flex the ankle, how to bend the knee, how to torque the hip, how to absorb shock on a downhill.

MARK SISSON: All of this information, the brain is ready, willing and able as a processor to distribute throughout the body. And then here we are wearing thick shoes that negate all of the sensory information, and we wear these thick shoes in the name of they're more comfortable, they're cushiony, they're whatever. Or we have high arches in our shoes because somebody said a while back, "Well, I guess we should support the arch because some people have collapsed arches." Well, most people who have bad arches have arches because they haven't worked those muscles of the feet.

MARK SISSON: So proprioception, again, is that ability that you have to sense changes in ground underneath you and to be able to adapt to changes not just in surface, but in elevation. So you think about that person, we've talked about the iconic trip in the middle of the night . Typically their feet are not very strong and so they've been... They've become atrophied to the point, I hate to use the term, but they're like stumps, they're literally like... You're activating knees in the calf, but the feet are just like stumps you're walking on.

MARK SISSON: And you want them to be grabbing the ground. You literally want toes to be able to grab the ground. If you've ever surfed, your feet can control the surfboard by literally gripping the top of the board, that's why they wax the board sometimes. All the time.

SHAWN STEVENSON: And that's why you don't see reindeers surfing.

[laughter]

MARK SISSON: There you go.

[laughter]

SHAWN STEVENSON: We got hooves out here. That's what we're doing to ourselves.

MARK SISSON: Exactly. So the proprioception is, again, it's this thing that we've... That we're all... We have this recipe within us to be able to take advantage of this, and we lose it. We just sort of bypass it and think, well, in the interest of...

MARK SISSON: A lot of people have bunions. Well, the bunions are a problem from too restrictive shoes, from shoes that are being, feet that are being, toes that are being scrunched together, now you get bunions. And then you think, well, now I have to have comfortable shoes 'cause my bunion hurts, so I'm gonna get big, thick, wide toe-box cushiony shoes, and all that does is sort of exacerbate the issue.

MARK SISSON: I wrote 20 years ago, I described the primal blueprint and the 10 primal blueprint laws, and one of the exercise hierarchy was move around a lot at a low level of activity. What that means is walk. Walk or hike or ride a bike, but walking counts just as much as anything else. And walking is not about burning calories, it's about the movement, it's about using your feet to cover different planes and ranges of motion and terrains. And to let the feet inform the rest of the body, again, how to flex the ankle, how to bend the knee, how to torque the hip, how to adjust for the eccentric motion of breaking.

MARK SISSON: So move around a lot at a low level of activity. What does that look like? It looks like five hours a week. It may sound like a lot to some people, "I can't run five hours a week." Don't. Walk a half hour some day, an hour another day, ride a bike a little bit. Five hours, you can get that in. Go to the gym twice a week. I wanna say go to the gym, if your jam is body weight exercises at the local park where they have a park or they have a swing set set up or whatever, but go to the gym twice a week and what we call lift heavy things. Lift heavy things twice a week.

MARK SISSON: And not two days in a row, 'cause you wanna get time in between to build the muscle, recover, get stronger as a result of having done that. So a couple of days in between. So at least twice a week. Some people are gonna go to the gym four times a week. Okay, if you can handle that, fine, but my minimum strategy, again, move around a lot at a low level of activity, lift heavy things twice a week and sprint once a week. Why sprint? Well, again, if we're calling upon our ancestral recipe, our ancestors had to either run for their lives once in a while, either to get away from something that was gonna kill them, or to run towards something that they needed to eat. And get the heart rate up to a max level.

MARK SISSON: And again, not a lot. I'm gonna say four to eight sets of 30 seconds is plenty. And people find that it's one of the most productive workouts they'll do. And you don't have to give minimal rest in between, you could rest a minute, two minutes, three minutes in between. But once a week, sprint. I use the term generically and broadly. Sprinting, for most people they think on the track, but sprinting for me would be the assault bike at the gym, or the VersaClimber at the gym. Or even on the treadmill, walking really hard, up a 15 degree incline. Or the elliptical or the swimming pool. There's so many ways.

MARK SISSON: The idea isn't to sprint like Usain Bolt, the idea is to do whatever it is, using as many body parts as possible to get the heart rate to the highest you can get it for 20, 30, 40 seconds. It's so funny 'cause again, I saw something, Huberman Lab did this the other day, he made a big deal about this new revelation that we have to do something that elevates our heart once a week for 60 seconds. I'm like, "Dude, I've been talking about that for 20 years." And I'm not the only one, humanity's been talking about that for two million years.

MARK SISSON: But we talked early on about where are we headed as a society and AI and virtual worlds and all this stuff, and if we just go back and look at what nature, how we were, how we evolved through this crucible of scarcity and harsh climate, our genes still expect that of us in order to thrive, in order to be the best that we can be. So if you can sprint once a week, just like your ancestors had to sprint, if you can go to the gym twice a week and lift heavy things, or go to the park and do your body weight exercise or whatever. And if you can move around as much as you can throughout the day at a low level of activity without ever paying attention to the amount of calories you burned or the steps. Please steps. Just the time. You are 85% of your way to being as fit as you could be.

[music]

SHAWN STEVENSON: Alright, I hope that you enjoyed that first segment. Next up in our compilation of world leading experts on functional fitness, you're gonna be hearing from somebody who is one of the leading coaches on the planet right now, super in demand. He is also an elite level powerlifter, he has exceeded in the world of natural bodybuilding, he's a high-level jiu jitsu competitor, the list goes on and on with all of his physical accolades. But

he's also an incredible teacher. I'm talking about Nsima Inyang. And Nsima is one of those people that's just really on the cutting edge, and he's somebody who's constantly learning and applying, and he's found out how do we parlay or pivot into these different domains.

SHAWN STEVENSON: So being somebody who's carrying a lot of muscle on his frame, how can we move effectively competing in Jiu Jitsu. Where's the translation? Because a lot of folks struggle when they're putting on muscle to remain flexible and functional, and to be able to use that muscle at a high level. And so you might be surprised to hear this, but in this segment, he's gonna share more insights into the foundation of our fitness, which is our feet, but most importantly, he's gonna talk about how to actually improve the form and function of our feet to do all the dynamic things that we want to do with the rest of our bodies. Check out this segment from the incredible Nsima Inyang.

[music]

NSIMA INYANG: I realize, I'm like, wow. Number one, if I had something that I could wear that was allowing my feet to do what they needed to do, I probably could have kept playing soccer. But number two, the amount that's missed because people are wearing the wrong footwear and not actually using their feet. There's a lot of shoes that are great, they're comfortable, they're marketed to feel like you're walking on clouds, take out that... Super comfortable shoes. But the feet aren't getting the work they need to get.

NSIMA INYANG: This is the first contact that you have with the ground every single morning. When you're walking, when you're running, you're sending shocks up your body, forces that your body that needs to handle. But if your foot is weak and not able to handle those forces in the way that they need to handle them, that pain will go to your knee, that pain will go to your lower back, that pain could go all the way to your neck and your head.

NSIMA INYANG: And then you end up with individuals with really bad gaits, "gait" meaning your walking cycle. Like their feet are pointed outwards. There's a lot of imbalances that can happen in the muscles. But a lot of that starts at the feet. Now, the problem here is that like, well, how do I fix that? A simple way is to start walking barefoot. And that's good, that's

gonna be beneficial, but not everyone wants to walk around with black feet everywhere, right? Black bottom of the toes.

[chuckle]

SHAWN STEVENSON: Got those new black bottoms.

NSIMA INYANG: Got those new black bottoms. But there's tons of shoes out there, and actually it's interesting because barefoot shoes had a really ... they had a surge in like 2011, 2012. I don't know if you remember like with Vibrams and those types of shoes.

SHAWN STEVENSON: Yeah, FiveFingers.

NSIMA INYANG: FiveFingers. But then there's someone that made a book called, “Ready to Run”. It wasn't Kelly Starrett, it was somebody else. And after people started doing barefoot running, they start getting all these sorts of injuries and everyone was like, "Okay, this is not actually good for people," it died down. The reason why it was rough for people is 'cause people didn't give themselves a gradual entry into wearing barefoot shoes or doing barefoot activity. Alright?

NSIMA INYANG: You're now going from wearing a cushiony shoe, to wearing a shoe with no drop, meaning flat. So now your feet are taking all these forces that they are not used to taking, and they're not happy. [chuckle] Underneath your feet it hurts, it's painful. It's like, "God, this is wild." But this is the thing, your feet are getting stronger and they're getting adapted to now the new forces you're putting through them. And then over time, they'll get better.

NSIMA INYANG: But it's just like starting to go to the gym or building any new activity. You need to give yourself a gradual approach. You cannot go off the deep end, start running barefoot, start using barefoot shoes. What happened with me is I did start using barefoot shoes and then I had some pain on the bottom of my feet. I also got like toe spreaders. The ones I would suggest, I don't have a code or anything, but go to correcttoes.com. I've used a

lot of different toe spreaders and these ones are really good. But they will help you get the space back in between your toes that your feet should have, since most people's toes are here.

NSIMA INYANG: But when I started, I would do jump rope, I would walk or whatever, in these types of shoes, the bottom of my feet would hurt. So I'd go back, I'd wear some of my more cushiony shoes for a little bit of time, let my feet heal and adapt. And I'd go back to wearing the barefoot shoes again and doing all of these activities barefoot. And also at Super Training, Mark, myself, a lot of us don't wear shoes when we work out. Because we want our feet to be strong. And it's crazy, within the past year, my foot transformation.

NSIMA INYANG: This is why like learning from all these amazing guests that we're able to talk with and ask questions to is, and this is why you love your job too, 'cause we're able to learn so much and we're able to selfishly, honestly, I'm able to get the benefit from this and then we share it with people. But my feet, the tendons have gotten thicker, my toe spread is back. I have less pain and discomfort in certain areas of my body. I feel springier because now my feet and toes, like my toe are... I have soreness when doing certain movements in the arches of my feet, because they're actually activated.

NSIMA INYANG: When I was a teenager the doctor told me I had flat feet, so they gave me orthotics, these special orthotics to put in my cleats to give me an arch. But that artificial arch from those orthotics weren't helping me. They were weakening the arch that I had, and they were causing me to have more foot problems. And this is a thing, it's not the doctor's fault, this is something that they did for everybody. They're like, "You need an arch, slip something in there." Rather than, "Let's develop those weak feet that you've been stuffing in cushy shoes over your past decade." Right?

SHAWN STEVENSON: Yeah.

NSIMA INYANG: So the feet are something that I think like dogs, if people can fix that, over time. It's not something that happens immediately, you need to adjust when you're having certain pain, there are certain things you could do. But if you can develop strong feet,

everything up chain becomes easier. You gotta remember, it's the first contact you have with the ground. You want that contact to be strong.

SHAWN STEVENSON: Yeah, those orthotics were like a drug, basically. Let's treat a symptom instead of addressing the root cause.

NSIMA INYANG: Yeah. I think the ones I had were called Superfeet. They're pretty expensive orthotics. But it's exactly that, and again, it's not their fault, that's what they did with... For everyone with flat feet. And I had flat feet. But it's just because my feet weren't doing what they're supposed to be doing. Now it's really crazy to me, like when I'm doing lifting or even when I'm sitting around, I wear toe socks. [chuckle] Have you seen those socks that like are individually on your toes?

SHAWN STEVENSON: Yeah.

NSIMA INYANG: Okay, I know they may look really weird and people may not...

SHAWN STEVENSON: You could even have different colored toes if you want.

NSIMA INYANG: Yeah, you could.

SHAWN STEVENSON: If you wanna get super fly.

NSIMA INYANG: Absolutely.

[laughter]

NSIMA INYANG: But the cool thing that toe socks do, is because they're individually wrapping your toes on their own individual toes, they increase your proprioceptive awareness of what your toes are doing in space. Because oddly enough, socks themselves are kind of like shoes. They cast your foot and they cast your toes, and now your toes are just sitting around. But the toe socks help... Like my toes have been moving this whole podcast.

NSIMA INYANG: They're always doing things because now they're activated. And I'm not thinking about it, it's just what my toes are doing because my foot is doing what it's supposed to do. So the thing I think about is, God, if people could just... It doesn't cost money. You could get yourself any brand of barefoot shoes you want, get some toe socks, start walking around. That's all.

NSIMA INYANG: Even if you don't wanna go take a run, just a jump rope. Let your feet get used to what the ground feels like. It's gonna hurt for a little bit, especially if you've been wearing really tight shoes or really cushiony shoes. But if you do that over the next year or two years, the difference that's gonna happen with your feet and then the difference that's gonna happen with your whole body because of that one thing you fixed, dog, it's wild.

SHAWN STEVENSON: Yeah. We need to start. And you're doing it, man, starting a foot revolution. You know what I mean? A foot-volution.

NSIMA INYANG: Foot-volution. [chuckle]

SHAWN STEVENSON: And listen, because you said it, one of the most profound things that you just said was that it's your first point of contact, so it's like this kinetic chain that goes from your foot to your brain and affecting everything in between. So a lot of knee issues are actually rooted in foot problems.

NSIMA INYANG: A lot of back issues are rooted to foot problems. Because again, you make contact with the ground the wrong way, you don't understand that you're making contact the right way, those forces are gonna find somewhere to dissipate. And for a lot of people it's the knees, for a lot of people it's the lower back, for some people it's the neck. It has to dissipate somewhere. And then it's just like I think about people who are running, like they're running as an exercise and they're striking the ground in a non-ideal way over and over and over again. It's problematic.

[music]

SHAWN STEVENSON: Alright. Now as we move into other parts of our bodies, more aspects of our fitness to remain functional and healthy for a lifetime, I just wanted to reiterate how important it is, and again, these are two premier experts in human health and functionality, and they're both, Mark Sisson and Nsima, talking about the importance of having healthy feet and building our health from the ground up.

SHAWN STEVENSON: And that contact, that experience literally from our brains and our bodies, that contact with the earth, starting with our feet. And simple things to do. Because again, we're not trying to go zero to 100 when it comes to having our shoes off more often, because it's probably gonna lead to some pain, potential dysfunction. Because many of us, we've conditioned ourselves to be in shoes and tight shoes, pretty much most of our waking hours.

SHAWN STEVENSON: And what I'm gonna recommend is just to spend more time barefoot. Very simple, especially in a context where you could do that. As soon as you get home, for example, kick your shoes off. And also your socks too. As Nsima shared, even our socks function as kind of a form of a shoe, because they're keeping our toes all bundled up, all together. And so just having some time to have our shoes off. And if you can, implement a few different things, activities without shoes. And this could be, again, just doing some body weight exercises at home, maybe doing some squats at home, just using your body weight, maybe just getting up every now and then doing 20 squats.

SHAWN STEVENSON: Or one of the things that I just did the other day, for example, is I did a bunch of jump rope sets. And I had on some kind of minimal shoes, but I finished my workout by kicking my shoes off and doing a couple of jump rope sets. And I've, again, I've worked my way up to it without shoes on. Just on the carpet, doing a few jump rope sets, and just having that ground contact, letting my feet get oriented with the ground.

SHAWN STEVENSON: And so again, just spend more time barefoot, make that a mandate. And take on some of those other tips that they shared. And when it comes to being able to do some training at home, we've got these great tools, that I've just been picking up a tool

just over the years, and now I have this great collection of fitness tools that makes it really incredibly easy for my family and I to do functional training right at home. I don't have to run off to a gym. And I love training at a gym, by the way, don't get me wrong. But even today, for example, time was a little bit tighter, and because I've got these tools, I was able to do some really remarkable functional training at home.

SHAWN STEVENSON: And that's all thanks to the equipment from Onnit. I highly recommend you check them out. Their steel clubs, their steel maces, their primal kettlebells, have been staples in my family's training. We could do literally hundreds of different exercises and train our muscles in unconventional ways that really translate to the real world. We don't see the same types of problems with losing function that a lot of other people see, and I attribute that very greatly to the incredible folks at Onnit and these remarkable pieces of equipment.

SHAWN STEVENSON: And again, if you just pick up a steel mace, for example. They've got a 10 pounds, 15 pounds, etcetera. But just grab one piece of equipment, start playing around with it, you're gonna find that you really enjoy just picking it up and using it, and just add other pieces as you go along.

SHAWN STEVENSON: Even when it comes to my youngest son, since he... I mean, I'm talking about for years. If I'm utilizing the primal kettlebells and I'm using the orangutan or I'm using the chimp primal kettlebells, he'll be using a little howler monkey and doing some of the similar things. And it's so fun, it's so cool. And he actually, one of his projects was to paint them, so he painted my kettlebells, my primal kettlebells, and it looks so cool. And it can be another little cool project for your family.

SHAWN STEVENSON: And by the way, plus Onnit is my primary source for post-workout protein as well. And so if you're looking for a high quality grass-fed whey or plant-based protein that is actually utilizing science, because Onnit has put some of their products through randomized controlled trials, truly, and the quality is just far superior to pretty much anything out there you're gonna find. You're gonna get 10% off of everything when you go to onnit.com/model. That's O-N-N-I-T dot com/model. You're getting 10% off store-wide. Head over there and check them out.

SHAWN STEVENSON: And by the way, my youngest son, he just turned 12 and he's playing AAU basketball, and some of these practices can be kinda late into the day, into the evening, and so he might have to have dinner early as say, 5 o'clock. And then practice is over at maybe sometimes 08:30, 9 o'clock, and I'm not trying to give him a big meal. Nor does he want to eat, but I need to refuel his muscles, provide those building blocks, and replenish some glycogen as well. And I'm turning to the protein from Onnit. Nine times out of 10, that's what he's getting after his training session.

SHAWN STEVENSON: And if you see my son and just his progress in the way that he's competing and growing and all these things, it's just, it's crazy. It is really, really remarkable to see. And it's not just from my perspective, it's the feedback of the coaches, the parents. You know, yes, we've got a culture of fitness and movement in my family, but also this nutrition is such a huge part of it. So check them out, onnit.com/model. That's O-N-N-I-T dot com/model. And now moving on to our next expert in this compilation of functional fitness science.

SHAWN STEVENSON: This next segment features one of the most renowned fitness and movement experts in the world. In fact, every expert in this compilation has studied her work, she is truly the teacher's teacher. And I'm talking about none other than biomechanist and best-selling author, Katy Bowman. Now, she's gonna be addressing something that can really mess up our plans, mess up our functionality, and that is having neck pain. And it's one of those things that makes everything harder when our neck is not healthy.

SHAWN STEVENSON: And it's also one of the things that's growing like wildfire in our society, and you're about to find out why. Plus, you'll learn some simple tips, in the words of Wu-Tang Clan, to protect your neck. Also, you're going to get a glimpse into what it means to be a chair athlete and much more. Check out this segment from the one and only Katy Bowman.

[music]

SHAWN STEVENSON: I wanna start off by talking about this new phenomenon in our culture called "tech neck".

KATY BOWMAN: Tech neck.

SHAWN STEVENSON: And what are the implications that it has for us as a species?

KATY BOWMAN: Well, tech neck is just that curve, that forward curve of the upper back that is all... Yeah, looking down, and you can go anywhere, a restaurant, concert, you can even go to places where you're supposed to be looking at something else, you've paid to look at something else, and people are looking down at their phone. And their upper backs are curved forward, and then their necks are kind of curve in an opposite direction.

KATY BOWMAN: And that's a human posture. We used to see it in people who are a lot older, as the result of many decades of the weight of your head being under gravity and slowly curving forward. But now what makes it a tech neck is it's being practiced more regularly with the younger generation. And then you adapt. You adapt. My big point is always like you're adapting to everything that you do all the time with your body, and so this is just... In the same way sitting in a chair does a certain thing to your hips and knees, like we've got this now device doing something to our neck.

KATY BOWMAN: The one difference is the chair kinda forces you into a 90-degree hip and knees. You can hold your hand for your device, and a lot of different reasons in a lot of different ways, but we just don't really think of... We don't really think at all, we just go to the device and then there's just the result in posture. So I'm not really sure what it's gonna look like. This is the first generation. As much as it seems like tech has been around, we can't really live without our smartphones, it's like 10, 12-year-old phenomenon. It's not that old.

SHAWN STEVENSON: Versus hundreds of thousands of years of humans in this current form.

KATY BOWMAN: That's right. That's right. Or even 40. Or even your grandparents. You know what I mean? It is sudden onset. It's like sudden onset tech neck forward flexion. So what I try to outline is you got swallowing going through there, you've got breathing going through there, you've got the discs in your spine that are affected by that position, the nerves, any

tissue really in your upper back and neck, and then you have bone.

KATY BOWMAN: All of these tissues and processes are in this new environment of tech neck and we'll see what it looks like, but there are already different, not so much public health, but probably more in the medical community, starting to see more complaints of different things that arise with this particular habit and are going, "You know, adjust your trust posture." And there's been a number of articles.

KATY BOWMAN: Just talking again, is there better ergonomics we could have when we're using our phone? Because it seems like using your phone less is maybe off the table, but you could also just put your phone down and do something else. So yeah, it'll be interesting to see if the environment of tech neck is gonna be talked about in the way that we said sitting as the new smoking. Like I wonder if tech neck gonna have its own on day with headlines such as that. It's like, "Oh, it was more harmful for our body than we knew."

SHAWN STEVENSON: Yeah. Being on your phone is the new Hunchback of Notre Dame.

KATY BOWMAN: Yeah, yeah. It's just, it's just...

SHAWN STEVENSON: 'Cause we're gonna have that muscular development too around this, around this kind of movement or form that we're putting ourselves into as the adaptation, I would imagine as well.

KATY BOWMAN: Well, and I think the challenge... You know, people have been putting their head down to do stuff for a long time.

SHAWN STEVENSON: Right, reading. 'Cause I think about that.

KATY BOWMAN: Tech neck is book neck, it's knitting neck, it's sewing machine neck, it's woodworking neck, it's working on your car neck. The problem is in the volume.

SHAWN STEVENSON: Right, right.

KATY BOWMAN: It's the number of minutes, or dare I even say, hours that we're doing it. And it's also the context in which it's happening, which is we're not really doing anything else with our body. So like if your primary exercise program, if you will, is being on your phone, meaning you do that for six or four or eight hours a day, and if you look at even your devices at work versus your actual exercise time, which is like 45 minutes or 60 minutes, you are exercising tech neck more than you're doing bicep curls or other things with your body.

KATY BOWMAN: So in a different environment, looking down so often might not even result in tech neck. I guess the question is, it's not really clear if tech neck is the position that you're in when you're on your phone, or if it's the adaptation to so much time being on your phone, where it's harder to get out of that position. I would sit in a chair, my knees and my hips go to a certain position, but if I get up out of it they're not in that position anymore. So what's the big deal?

KATY BOWMAN: It's in the hours and years and decades in a chair, where when you get up out of the chair, you're not really getting all the way up out of the chair. You might be upright a little bit, but your pelvis is sort of... Has adapted to make sitting easy for you by never letting that really get loose, never really letting your spine uncurl all the way. So tech neck could also be thought of as the more permanent remnants of so much of that positioning. And that's gonna be the thing that comes back to bite us in the butt.

SHAWN STEVENSON: Yeah. As you said, it's only been about a decade that we've been doing this and had this habit, and so to see what this generation, our kids especially, what they're gonna look like, their functionality, their form, the adaptation from that position.

SHAWN STEVENSON: But yeah, it's kind of scary and weird, but at the same time, you are pointing to some potential antidotes or movement nutrients, and one of them is the head ramp.

KATY BOWMAN: Right. The head ramp.

SHAWN STEVENSON: Can you describe that?

KATY BOWMAN: Well, I love the head ramp. So like I said, your technology does not depend on you being slumped forward to look at it, it works no matter what position you're in. So one, just know that. The head ramp is the very simple exercise of sliding your head back away from what you're looking at and lifting the top of it up towards the ceiling. So if you just grab your phone for a second or mine that is in your hand and look down at it, your head, which is pretty heavy, is out in front of you and tipped forward.

KATY BOWMAN: So the head ramp is the opposite motion to that. You are bringing it back so that it sits over your shoulders. And you are lifting the top of it up towards the ceiling, but without raising your chin. I think a lot of times when your head's down and forward, you think, "Oh, I'll bring my head up." But now you've added a second bend in the neck, and so more than just lift your chin bring your head up, I'm asking you to bring your whole, the whole noggin back to the wall behind you and up towards the ceiling. And that takes care of both curves in the upper back and the neck at the same time.

SHAWN STEVENSON: Is there like a physical cue we could think about with our head?

KATY BOWMAN: Yeah. If you just touch the top of your head and think of pushing... If you leave your finger there and then push your head up against it, that's a really good way.

KATY BOWMAN: If you like to use the wall, you can go up and stand against the wall with your shoulder blades against the wall, keep your ribcage down and then try to bring your head back to the wall behind you, and you might find that your neck's tighter, your upper back is tighter than you thought.

KATY BOWMAN: And you could do both at the same time, bring your head to the wall behind you and then push the finger that's on the top of your head up towards the ceiling and you're moving in two planes at the same time.

SHAWN STEVENSON: And you detail this wonderfully, and there's so many cool visual cues

and physical cues for us. And since reading your book, Rethink Your Position, pick up a copy today, I've been doing these things.

SHAWN STEVENSON: Even today, I was on a stationary bike, and I thought... Now because I'm aware of it, I think about what my head position. And again, there are gonna be certain positions that we're in that it's not gonna be "perfect", but we can get ourselves in a more ideal position. And also that's a movement input that it's gonna be balanced by other things. Versus, like you said, historically people are sewing, wood working, reading, but then there was a much more movement-rich environment outside of that.

KATY BOWMAN: Sure.

SHAWN STEVENSON: And now we're spending hours upon hours on our devices like this, with a very low movement input culture on top of that. And so having some simple remedies like this are important. And the other one that I've been adding to the mix is the chicken head.

KATY BOWMAN: I love chicken head. [chuckle]

SHAWN STEVENSON: And as soon as I read that part, I'm like, "What is she getting into with the chicken?"

[chuckle]

SHAWN STEVENSON: Because from where I'm from, chicken head means something else. I don't know if you...

KATY BOWMAN: I don't even know what it is, but should I look it up or no?

SHAWN STEVENSON: It's just like a kind of a... It's a hood chic, you know?

KATY BOWMAN: Okay. Okay.

SHAWN STEVENSON: Yeah, so.

KATY BOWMAN: A chicken head. Alright.

SHAWN STEVENSON: Shoutout to Project Pat. Anyways, but chicken head, your definition in here is something different and incorporates some really interesting movements that just makes you feel better.

KATY BOWMAN: Yeah, mine's on just having chickens. And chickens have this... If you pick up a chicken, you can move a chicken around, but its head stays still and they have tremendous neck mobility. And so yeah, it's this idea of taking yourself more regularly through your next range of motions. And so like what are all the things that chickens do? The main one is they move their head forward and back.

KATY BOWMAN: So our heads are forward, but there's a balancing move to that and that's sliding it back. And then there's just the idea of stretching your neck to the right and to the left, and of course turning to the right and to the left, and dropping your right ear and the left ear. And then of course there's sliding your ears to the right and to the left. And all of these are movements that you would want to happen between your head and shoulders, but we don't have really very much that's facilitating these movements any longer. And then combined with the phone, now we've got something that's facilitating one neck position over and over and over again.

KATY BOWMAN: So chicken head is this invitation to explore eight more neck motions to balance out maybe the one that you're overdoing. Or like when we talk about movement nutrients, the one movement nutrient you're over-consuming, you're overeating forward head. So now we need to get these other neck motions into your movement diet, and then just like all nutrients you're better for it. You feel better for it.

SHAWN STEVENSON: Yeah. Please, I want everybody to really listen to this. Because we don't think about these things until a problem occurs, right? And a lot of folks are dealing with

random neck issues.

SHAWN STEVENSON: If you're not giving these inputs in controlled things, situations that you can actually have some input and put yourself in these dynamic positions, so that when it comes to a situation where your neck has moved suddenly or you do a certain thing, like your neck has been there before, it has a little bit of a memory of being in a different position. But oftentimes we're just kind of stuck in a certain position for most of the day, and so giving us these movement cues and these inputs is super helpful, especially now.

KATY BOWMAN: Yeah. It's about resiliency in the end. Our culture doesn't really require much movement. There's not a lot of movement demanded out of us on a day-to-day basis, and so we can do well in society without moving. But biologically we stop doing as well, which eventually can trickle down to how well you feel you're being able to perform in society. And that means even like showing up for relationships. When you're in chronic pain, it's hard to show up for other people when you're sort of nursing yourself in your head. It's hard to be in pain and engage outwardly because you're using a tremendous amount of energy and focus on coping.

KATY BOWMAN: And so resiliency, I don't only mean physical resiliency, I just mean the ability to engage in something that suddenly comes up. And that can be, we usually talk about accidents, like you trip on something, you're in an unexpected situation that moves your body differently that it doesn't do tremendous harm. Illnesses come up, life comes up, deaths come up, and other problems. And when you have... When you're more physically resilient in this way, when you move more of your part, you can respond to that trauma, whether it's an accident.

KATY BOWMAN: Even something like a car accident, even something that is large, you aren't taking the stiffest, least mobile version of yourself to everything else that you do. So it's a little bit different than a fitness reasoning for exercise. It's certainly... It's not mutually exclusive, it has all the fitness benefits too. But I think as we see fewer people be interested in moving their bodies, trying to talk about it in a different way of just getting more out of your daily life, is how I wanna frame it. How I wanna frame it now. Which is why we gotta move our

necks like a chicken sometimes.

[chuckle]

SHAWN STEVENSON: You mentioned this a little bit earlier about even sitting in a chair, we're never just really sitting there, we're still being moved, we're moved in a certain position and we're adapting to that. Our bodies are trying to become efficient at the things that we are exposed to, I believe probably most often.

SHAWN STEVENSON: And can you on that a little bit more? Because when we have a body that's very good at chair sitting, it might be, and I'm saying this sarcastically, it might be compromising your ability to do other things. So if you go from that sitting position, sitting in a chair for whatever, eight, 10 hours a day, and that's not far fetched by the way, for most of us. And then you suddenly wanna go to Disneyland with your family and you find like, "Wait a minute, I'm not really physically equipped to do this thing without pain or potential injury."

KATY BOWMAN: That's what I've been trying to get across, I would say throughout my entire career, is we definitely have this idea of like, "I'm in shape, I'm out of shape. I'm fit, I'm unfit. I'm moving, and I'm not moving." It's more accurate to say that you're actually always moving. You're always moving. And you're always adapting to the movement that you're doing. This is chair movement that I'm doing right now. And so if you could add like a dash movement to everything, this is bike movement that I'm doing right now. These are driving movements. These are office movements. This is shopping movement.

KATY BOWMAN: So if you start thinking about, my body is responding to what I'm doing right now. And then you pair that with a tenet of just exercise science, which is you adapt to what you do most frequently. We're all sort of, I've said this before, we're like the ninjas of sitting. We're chair athletes. And athletes, if you think about athletics, really good athletes have specialized in their sport. And they've adapted their anatomy and their physiology, sometimes growing, they've grown more muscle mass, they've grown more capillaries.

KATY BOWMAN: Sometimes they've twisted, there's been twists. Professional baseball

pitchers will have actual bone formations that they have created through the way that they are playing, that makes throwing easier on their body to a certain point. We are chair athletes, we are just really great at sitting. And one of the reasons we have a hard time doing other things is because we are the best at this physically. We have the anatomy. We have made the anatomical adaptations for this. To do other things would require more capillaries, more range of motion. And so when you're like, "Oh man, I really wanna just start moving more," just realize that that's what you're working uphill against, is just you have chair anatomy right now.

KATY BOWMAN: You want to figure out whatever it is that you wanna do. You wanna do this, you want to... Maybe you wanna go on a backpacking trip, or maybe you wanna, there's like a cool hike in your town that you would like to do. Or maybe it's you would like to be able to go to Disneyland, but you know it's a physical event. It's the Disneyland movement. What does it entail? Seven hours of being on my feet. Break everything down into the movement it entails, remove all the judgment about where you are right now and how hard it's gonna be, and then you're like, "I need the... I need to start training the anatomy to be able to do that thing."

KATY BOWMAN: And then it's like, okay, well, I'm using the back of my chair right now as I'm talking to you. Maybe I'm gonna still sit with my hips, but I'm gonna change my torso sitting anatomy so I'm holding myself a little bit more. 'Cause when I'm standing at Disneyland my torso is gonna have to do that. I don't even have to get out of my chair. I can still work, I can still watch Netflix, I can still do this podcast with you, but I can also use more of my musculature to hold me up right now.

KATY BOWMAN: And once you start thinking about it that way, it's like, "Yeah, I just have too much chair anatomy. I want whatever other anatomy," and then you start picking the body parts or break the final thing that you wanna do into the movement set it entails. I have to put something on my back, I have to carry something in my arms, I need my shoulder to be able to stretch this way. And that becomes your training program.

[music]

SHAWN STEVENSON: I hope that you're enjoying this functional fitness compilation. And we're at our final segment and this one is power-packed. It's one of my favorite conversations that I've had recently. And also before we get to that, I want you to keep in mind, there's a revolution going on right now when it comes to building and maintaining, protecting our muscle tissue. There's so much science coming forward.

SHAWN STEVENSON: And keeping in mind the importance of protein. Because it truly is the building blocks, these amino acids are required to build our tissues. Even our hormones that keep all of our cells in communication, they're made from proteins or neurotransmitters. It's so important. And it's not being overlooked anymore. If you're in leading edge fitness and nutrition, you understand this. And with that being said, there is a move away from these junk protein bars that are really kind of glorified candy bars when we're looking for high quality proteins, and people are moving more towards real food and real food adjacent snacks. Things that have been utilized literally for centuries.

SHAWN STEVENSON: And so for me, and also for my guys here at the studio, for my family, if we're looking at high quality protein snacks, and even if we are short on time from traveling, if I'm going to some of my son's games or I've got a road trip, whatever the case might be, we're bringing along the real food superfood protein bars from Paleovalley. And also their grass-fed regenerative farm meat sticks as well. So moving away from all the junk food, protein bars and meet sticks out there that have all of these synthetic ingredients that are simply not good for our bodies, this is where we're getting our snacks from.

SHAWN STEVENSON: And I highly encourage to check them out. They're giving you 15% off exclusively if you go to paleovalley.com/model. That's P-A-L-E-O-V-A-L-L-E-Y dot com/model. Check out their superfood protein bars, their grass-fed meat sticks. And also they have some of the highest quality supplements in the world. All organic, no additives, preservatives, fillers, binders, none of that crazy stuff. I'm a huge, huge fan of Paleovalley and what they stand for, the integrity of their people as well. They're just really, really good people. So stock up, grab you some snacks, utilize these things for your kids, for road trips. And again, go to paleovalley.com/model for 15% off store-wide.

SHAWN STEVENSON: And now in our final segment, you're going to hear from not one, but two world-class experts in human movement who happen to be married to each other. And I'm talking about Juliet Starrett and Dr. Kelly Starrett. Not only are they both high level athletes who we're talking about national championship competition and those kind of things, but then kind of evolving their careers into being coaches and supporting so many different athletes in different domains, whether it's track and field, whether it's football, whether it's weightlifting. They're really about that life. They have a wealth of knowledge.

SHAWN STEVENSON: And they were also sharing they had just both celebrated their 50 year birthdays. And so this is a 100 years of wisdom. Alright? This is a century of wisdom packed into this segment. And they're gonna be sharing some huge insights about movement when you're not moving, I.e, when you're sitting. And these insights are game changers. They're also gonna be sharing some insights about your booty. They're gonna talk about our buns as well, and how does this play into a lot of the things that we wanna do in our lives. And plus, they're gonna be sharing the most important movement medicine that we all need. Check out this segment from Juliet Starrett and Dr. Kelly Starrett.

[music]

JULIET STARRETT: We started the book, that's Chapter 1, we started that for a reason. In part because we love the tests that's associated with it, and the test that's associated with that chapter is you just get up and down off the floor without putting your hands down...

DR. KELLY STARRETT: Criss-cross applesauce.

JULIET STARRETT: Criss-cross applesauce. And the backstory on that test is there was a study done some years ago that people who could get up and down off the floor about putting their hands down lived longer.

DR. KELLY STARRETT: And lived better.

JULIET STARRETT: And lived better, which I think is what we're all really looking for. And so

what we realized is that people don't sit on the ground enough. In our culture we're always chair-bound. We're driving, commuting, sitting in chairs at our offices. Our whole environment is set up to be sitting in chairs all the time. And so we've literally lost the ability to both get up and down off the ground and sit comfortably on the floor. It's really interesting when we suggest to people like, "Oh okay, well, you need to start this test by being criss-cross applesauce," and a lot of people go, "Criss-cross applesauce? What? I can't sit like that."

JULIET STARRETT: And so it's just an ability that we've really lost that's so fundamental as humans. And what we've recommended to people is that they just had more sitting on the floor while they're watching Netflix, which is something that we know everybody's doing at least three hours of the day. And so we just think it's so fundamental as a human to be able to get up and down off the ground, and also it makes us more durable. And I think the word we like and we're fans of all things longevity, and obviously this book is connected to that, but I think the word we prefer is "durability".

JULIET STARRETT: Because really, Kelly and I don't care if we live to be 100, we want to live as long as we live, but feel good for as long as possible and then just like fall off a cliff and die. That's our goal.

[laughter]

JULIET STARRETT: We just kinda wanna be like this and then fall off the cliff and die. And feel as good as we can and live independently and be able to move with our body and hopefully keep our mental acuity. That's really our goal. And to us, that's more durability, because if that means we live to be 85 or 90, like great, we would rather feel good and then just fall off the cliff. So I think that sitting on the ground thing is so fundamental to this book, and seems so straightforward, but really is strangely revolutionary since we never do it.

SHAWN STEVENSON: When I saw the going off the cliff, I pictured you, both your faces on some lemming bodies and going off that cliff happily.

DR. KELLY STARRETT: We're like this. Go ahead, put your hand there. There we go.

[laughter]

DR. KELLY STARRETT: Jill will be driving.

SHAWN STEVENSON: Listen, this is so simple, but... And I actually wanna share this. I noted this, you just mentioned the study. This was published in the European Journal of Preventive Cardiology. And they revealed that this simple act, this simple test was correlated with how long people lived. And you also share because if it's a concern of being able to sit cross-leg on the floor, you share a variety of mobilization exercises throughout the book, and in particular in this chapter and habits that we can use to improve performance on this particular test.

SHAWN STEVENSON: And just to share with you guys, I had my 11-year-old son do it, which you would see him and think, "Oh, this kid isn't flexible." He did it easily. Easily. For me, it wasn't super easy. I could do it, but it wasn't just like as graceful.

JULIET STARRETT: You felt a little creaking as you were standing up. [chuckle]

SHAWN STEVENSON: I mean, just to see how it... It was like he's, you know, like... It was like he was flying, just the way he did it so easily. But you mentioned, you talk about these mobilizations, 9090 sitting, cross-leg sitting in and of itself, leg up, one leg up sitting, hip opener exercises. Can you talk about some of these things?

DR. KELLY STARRETT: The first order of business for anything is to do the thing you wanna get better at. Not the correlate, not a test for it. So this first opening chapter is a little sneaky because what we do is we get people in with something that they can wrap their heads around, which is, "I should be able to do this. I watch kids do it sitting on the ground." And quickly you're confronted with, "Wow, I really struggled with that. Or that was harder than I thought." And it's a nice test 'cause it illuminates this idea that, hey, we're not interested in gymnast level mobility, we're interested in the central idea of can you move and own your way through your world? What is it you wanna do?

DR. KELLY STARRETT: And a lot of times, because the body is so durable and because our world is shaped a certain specific way, we're not really confronted with limitations. Until you go to yoga and you're like, "Wow, I can't do that." Or, "I wanna learn a new skill and that was really challenging. I can't put my arms over my head and we're going climbing today." So one of the things that we try to do with this book is create this language of vital signs. Because you're not gonna die tomorrow if you can't get up off the ground. That's not what it is. But it helps you to begin to establish some benchmarks around how you move and some of your other behaviors. And what we...

DR. KELLY STARRETT: The follow-up to that is, the first order of business to get better at this is to sit on the ground. And we're realizing that instead of applying some fancy tool or, "Here's our 10-day optimized sit-on-the-ground program", in front of the TV, let's see if we can work this into your life where we can begin to work on your hip range of motion in the background. The mobilizations in there are something we call position transfer exercises. They're just sneaky ways to give you a window of opportunity so that you can move more freely. And in this situation, the expression of mid-range, hip range of motion inflection is getting up and down off the ground.

DR. KELLY STARRETT: So we've got some tools in there to help you restore those positions, but the first thing is knowing that, hey, that was a little bit trickier than I thought, maybe I should spend some more time doing it. Or B, I crushed that. I don't need to worry about it. 'Cause I sit on the ground all the time, and I'm a yogi and my hip range of motion is good.

JULIET STARRETT: And also some of those positions you mentioned, like 9090 sitting and long sit, for most people who don't spend a lot of time sitting on the floor, they will naturally need to change positions. For most people sitting cross-legged for an hour it's not possible, like most of us who spend a lot of time sitting, it's just not possible or comfortable to sit that long. So the cool thing is your body will actually kinda give you these cues to move and you're like, "Alright, well, I'm no longer comfortable sitting cross-legged, so I'm gonna move to 9090 or I'm gonna move to long sit."

JULIET STARRETT: And if you just watch someone practice sitting on the ground, it's actually

subconscious, you naturally just move from position to position. And so without even thinking about it, you're getting all this work on your hip range of motion, and most of it is just subconscious. And the only real conscious thing you've done is decide to sit on the floor versus sit on the couch.

SHAWN STEVENSON: Let's talk specifically about chair-sitting as we're sitting in chairs hanging out with each other, which you said this term that is just burned to my mind now, "marathon sitting". So we spend an insane amount of time in our culture just sitting in a chair. What's happening in our bodies, like our biomechanics, when we spend a lot of time sitting in a chair?

JULIET STARRETT: Well, I'll just start by saying, Kelly can talk about the specifics, but I'll start by saying, just to sort of define marathon sitting. I think what we've learned with the research is that if you sit for short periods of time and get up and continue moving around and sit back down, that's actually completely fine.

JULIET STARRETT: We've never set up to demonize sitting and sitting is awesome and we do plenty of it. But what you do see is people are sitting in a chair and often doing that for five, six, eight, longer, even longer, sometimes without actually moving at all. And Kelly is obsessed with the lymphatic system, which is basically the sewage system of the body.

DR. KELLY STARRETT: Isn't every middle-aged man?

JULIET STARRETT: And so one of the things that happens when we sit is that the way that you clear your lymphatic system, you clear the waste out of your body is through movement.

DR. KELLY STARRETT: Specifically muscle contraction.

JULIET STARRETT: So one of the things we'd like to talk about it is like, have you ever been on a flight and then you get to wherever you're going and you have cankles? Have you ever gotten cankles?

SHAWN STEVENSON: I can't say that I have, but I've seen 'em, I've seen 'em on the streets.

DR. KELLY STARRETT: Oh I've read about it, I've read about it.

[chuckle]

JULIET STARRETT: You've seen cankles. But that's just a function of sitting in an airplane and not moving enough for long periods of time. Sitting on a five or six-hour flight is the perfect example of marathon sitting, and one of the downstream negative consequences is that you're not moving and you're not flushing your system, you're not getting... You're not getting the garbage out of your body.

JULIET STARRETT: And it's just... And then the other thing I'll say, and Kelly can talk about the technical terms about this, but then you're sitting all the time with all of your joints at 90 degree angles. We're not meant to be at 90 degree angles with our joints all the time. And so I think a lot of people don't make the connection between low back pain and general stiffness and other issues they have with just bouts of marathon sitting.

DR. KELLY STARRETT: But what you start to play around with is, there's a whole new field called sedentary biology, where we're starting to understand a little bit about what happens to our physiology, our normal processing of our bodies when we don't move.

DR. KELLY STARRETT: So we can define not sitting versus standing, but we can define sedentary behavior in a very scientific, very specific way. If you ever remember the old StairMaster machines from the '90s or early 2000's, for those of you out there who aren't familiar, there was a metric on there that you could use, which was METs. Do you remember METs? And you'd be like, "I don't know how many METs is but I'm killing the MET game right now."

[laughter]

DR. KELLY STARRETT: You're just jacking up all the METs. That's a metabolic equivalent, that's

how much energy it takes for a human being to run. And so what they have defined at Harvard as sedentary behavior is falling below one and a half metabolic equivalents.

DR. KELLY STARRETT: And it turns out sitting immediately really starts to truncate how much energy we're using, so we fall below that one and half metabolic equivalent, and then our physiology starts to get weird, we start not being able to burn sugar and we start to do things strangely, and things are not moving and working as well they I can. So really it's not ever about sitting versus standing, it's about, hey, how do I limit this below one and a half metabolic equivalents. So again, man, if you're exhausted, sit down. It feels so good to take it off. But maybe you could get more movement in.

DR. KELLY STARRETT: And what the research has defined is let's try to limit and aggregate that total amount of time below one and a half metabolic equivalents to six hours. So you have sort of six hours of coins you can put in whatever machine you want. This is my commute, this is my dinner time, this is hanging out. And maybe we can try to limit that.

DR. KELLY STARRETT: Because it really makes it more difficult for us to do the things we wanna do. I wanna change my body composition, well that's gonna make that more difficult. I wanna be more awesome at sprinting, well that's gonna make that more difficult. I wanna have healthier tissues, I wanna have more clarity in my brain, it makes that more difficult. So again, that allows us to expand and when we empower people with that idea and say, "Hey, wow, I've really been sitting a long time, let me see if I can limit that in whatever way I want."

SHAWN STEVENSON: Can we talk about this interaction with the chair itself pressing up against, or us, our weight pressing up against the chair and the intermingling going on with our hamstrings, versus when we are being a little bit more, dare I say natural, sitting on the floor?

JULIET STARRETT: I'm just gonna cue you up to say panini.

DR. KELLY STARRETT: Panini.

JULIET STARRETT: And then you take it away.

[laughter]

DR. KELLY STARRETT: We'll do a couple of experiments here. One is, your butt and hamstrings are actually non weight-bearing surfaces. If you actually sit on the ground, you're sitting on your ischial tuberosities. The bottom of your pelvis is kind of bony and set up for it. Right?

DR. KELLY STARRETT: And when we're sitting in the chair, we're not actually sitting on the bony structures of our pelvis, we're sitting on all the soft tissue structures. So if you imagine high pressure, I'm like 106 kilos, my temperature is of a certain amount, that's how you make panini. High pressure, high temperature. You get grilled cheese. So if you're worried about your hamstring range of motion, maybe you shouldn't make grilled cheese sandwiches out of your hamstrings. We could also do another experiment, and I haven't said this in a long long time, bear with me. Think of the most beautiful person you could think of. You got it in your head?

SHAWN STEVENSON: Got it.

DR. KELLY STARRETT: For me, like Chris Pine and Chris Hemsworth have a baby and that baby boy grows up to marry Brad Pitt and they have a baby.

[chuckle]

DR. KELLY STARRETT: You can see that's a beautiful person.

JULIET STARRETT: What about Kate?

DR. KELLY STARRETT: Kate's in there too. And if you think of that person's butt, what does it look like?

SHAWN STEVENSON: Wow.

DR. KELLY STARRETT: It's gorgeous, right? Now think about your palm of your hand, and your hand is a weight-bearing surface and the connective tissue is gnarly. And now think if that butt of that person looked like the palm of your hand? It does not. So what you're seeing is we have certain areas of the body that are really good at weight-bearing, like your feet, your hands, these hip bones, and then we have areas that aren't.

DR. KELLY STARRETT: It's such a problem when people sit for a long time, like the Aeron chair, that really expensive chair by Herman Miller, they invented that chair working with people who were in wheelchairs who had diabetic ulcers. So what was happening was that people would get these pressure ulcers when they had to sit in a wheelchair for a long period of time, so they invented this fabric that allowed to unload the connective tissue.

DR. KELLY STARRETT: Well, that's a small scale model of us all the time sitting on tissues, they're not getting good blood flow, we're not pumping the garbage out. Do you need to be worried about it? I'm making this doom and gloom. But that's just a snapshot of sort of, hey, long, long periods of time. That's probably not great. Then you add in, we're not really having access to all the mechanisms that stabilize our spines, so we can't really connect your pelvis to your hips very well, we can't use your glutes, we can't use the rotators, we can't stabilize.

DR. KELLY STARRETT: So you end up using a whole bunch of other things to keep yourself upright, and that's fine, until you go stand up. And then when you realize you're like, "Oh." Get out of that chair and you're a little creaky. That's your body not really just immediately giving you access to your full range of motion.

SHAWN STEVENSON: There's a quote from your book, it says, "Once you start sitting on the floor and standing more, you'll find that it not only feels natural, but that you'll crave it." And when I read that, I was like, that is my exact experience. My body tells me I'm craving. I was just sitting with my wife last night, and you've got a sectional couch that latches together, she's got her area, and my youngest son calls it the "queendom spot".

DR. KELLY STARRETT: Yes, yes.

[chuckle]

SHAWN STEVENSON: And so I have to ask permission to come sit by her over here because it's just a thing. And so I'm sitting there and she's coming to kinda get in the nook on my left side and she's laying there for a bit. And the reason she doesn't like to get comfortable, 'cause she knows I'm gonna get up. And so after a certain amount of time, I just felt my body just like, "Go sit on the floor. What are you doing? Go go sit on the floor."

SHAWN STEVENSON: And also, one of the things that starts to happen, which, because I was talking to you guys today, this is the first time I'm saying the words out loud, while we were sitting there watching whatever show it was, maybe like five, 10 minutes into it my leg starts doing this. My leg just starts bouncing up and down. And I don't know that I'm doing it, but all of a sudden she grabs my leg and silences my leg, and I felt like, "Get your hands off me."

DR. KELLY STARRETT: You can't continue.

JULIET STARRETT: Yeah, yeah. You're like, "Move." [chuckle]

SHAWN STEVENSON: She's like, "Stop." I'm like, "Babe, I'm just expressing my... " I said something, you know?

[chuckle]

SHAWN STEVENSON: But I knew what it was. Just like I wanted to move, I wanted to change positions. But she was comfortable and the whole thing. And so literally, once you start getting these movement inputs, your body starts to crave them, it'll tell you. But there's something really seductive about sitting in a chair where a lot of stuff starts turning off.

DR. KELLY STARRETT: Perfect. That's what we should be doing. Let's sit down to turn stuff off. That's great.

SHAWN STEVENSON: Exactly, right.

DR. KELLY STARRETT: That's the right time and application. I've been on my feet all day, it's time to change gears, I need to relax. What's that look like as a kind of conscious strategy?

JULIET STARRETT: Well, I think you know you... Like one of the ways I know that I've shifted over into that crave way, is that way back in the day, I used to be able to sit on a flight and I mean, I didn't find it to be comfortable, but I wasn't dying, and now I'm dying on a flight.

DR. KELLY STARRETT: Is that because you have OCS?

JULIET STARRETT: I might have OCS. I mean, but while I'm sitting there, it's not that I'm physically uncomfortable sitting, it's that I literally wanna jump out of the chair and move around. And I struggle with that. In a way, I think that's a positive thing because to me...

DR. KELLY STARRETT: You become an 11-year-old boy.

[laughter]

JULIET STARRETT: To me that tells me that I've shifted over to that exact thing we talked about in the book, which is really craving wanting to keep moving, moving my body into different positions, and ultimately that's the goal.

JULIET STARRETT: And I think people listening to this actually can get to that place. I think maybe people will think, "Well, look at those are these fitness guys, and of course they crave movement," or something, but I think it's really possible for people to practice some of these things, practice sitting on the ground, practice standing a little more at the office, standing a little more throughout the day. And then I really do think your body starts to really crave that feeling, and then that's when you've won.

SHAWN STEVENSON: You also dedicate a vital sign to hip extension, which, we'll save that. I wanna make sure everybody picks up a copy.

[laughter]

SHAWN STEVENSON: Because it was kind of like one of those things where if you're pulling my leg on what is most important, which you set it up saying, there's nothing that's more important than anything else when it comes to mobility, but hip extension is super important. But I want people to read that chapter, but in it you have a sidebar about the booty. And I think it's a titled like "the rear view".

SHAWN STEVENSON: And you mentioned something along the lines of, our butts are sleeping. Our butt cheeks are sleeping on the job. And you kinda give a command or a cue for us to check in with our butt through the day and fire those glutes.

JULIET STARRETT: Can I just interject and say that...

DR. KELLY STARRETT: Squeeze your butt.

[laughter]

JULIET STARRETT: If Kelly's name had a subtitle, it would be Kelly Starrett Hip Extension. 'Cause he's really excited about it these days. [chuckle]

DR. KELLY STARRETT: I may or may not also own already on Instagram, Knees Behind Butt Guy.

[laughter]

DR. KELLY STARRETT: Trying to get you into hip extension. Look, what you're hinting at is a really interesting phenomenon where if you lose connection or we're not using it, we can see a decrease in function around muscles and movements more importantly. And this ex-hip extension chapter, one of the things that happens when we lose the ability to get into a lunge shape, so walking is a little mini-lunge shape, a big lunge, formal lunge is in a big extended

version of that. If you've ever seen...

JULIET STARRETT: Like running is like a mid lunge.

DR. KELLY STARRETT: Yeah, yeah. And if you ever see someone sprint, that is lunging. Lunge form. That hip extension. And one of the things we see is if you cannot get into that position for whatever reason, we don't know if it's your hips are stiff, your quad's stiff, you're never there. If you can't get in that position, oftentimes what we see is you can't also squeeze your butt as effectively.

DR. KELLY STARRETT: And in fact, in that position particularly, your glutes become very difficult to find. We call it positional inhibition, which means I'm in this position and it's my inability to be strong in this position that has shut my butt off for my ability to recruit that glute squeeze. And what we know is that when we start reconnecting the dots for people, things like low back pain starts to get better. We got a big engine starting to help me manage that a little bit.

DR. KELLY STARRETT: When we start to see people working on their hip extension, guess what? Your knees have to work when your legs behind your body. And because we spend so much time not in that position, we see that it ends up being a blind spot for a lot of people. We have a couple of new products on the market that were tools for us, and one of them is a Bulgarian split squat pad. So if you've ever done a Bulgarian split squat, it's where you basically get into a lunge shape and then you go up and down. And it is gnarly, no one likes to do it.

JULIET STARRETT: But your rear foot is elevated.

DR. KELLY STARRETT: Rear foot is elevated. Rear foot elevated split squat. But it is such a good movement. And again, no one likes to do 'em. Why? 'Cause that's a position we suck. Meanwhile, we also made this thing for better booty thrusts or hip thrusts. You lay down on the bar, you could just do this beautiful hip thrust. I'm so proud of this thing. It sells 10 to one.

DR. KELLY STARRETT: Why? Because everyone loves the booty thrust 'cause you can feel your booty. Guess who loves to get into the split lunge position? Zero people.

JULIET STARRETT: Well, a few people do.

DR. KELLY STARRETT: It's like I made like, here's some really toxic gnarly vegetables that are really good for you. Eat those. No one wants those. Give me the cookies. I want the booty. I want the hip flexion.

JULIET STARRETT: Well, back to the movement-rich environment and standing a little bit though. We do actually talk about just being conscious of squeezing your butt throughout the day, and you can do that while you're standing. So it's...

JULIET STARRETT: Again, it's actually for me, it becomes something that's so conscious, but I'm always playing with my foot position, squeezing my butt throughout the day when I'm standing. And then obviously when I get tired, I will take a seat. But it's just being conscious of making sure to keep those things active and going, and aware that the 90-degree angle is not great.

DR. KELLY STARRETT: Let me ask you this. When you exercise, do you do it first thing in the morning, or do you work in and around all the other day job you have?

SHAWN STEVENSON: It's in the morning, not first thing, but it's definitely in the early part of the day.

DR. KELLY STARRETT: One of the things that we see if you have a movement, if you change your environment to be more conducive to moving more, is that you're more able to be warmed up for your workout. So if you workout at lunch, and you've been sitting all day, it's gonna take you a little while to get all the lights on in the house, get the diesel running and warmed up.

DR. KELLY STARRETT: But if you've been moving more, squeezing your butt, working on your

balance, change your position, fidgeting, you're gonna be able to slip right into that quick 30-minute Peloton, that hour-long CrossFit class, whatever it is you wanna do, you'll find that you can be better prepared more quickly.

DR. KELLY STARRETT: And then on the other side of that, we see that you can continue to decongest and you don't have to do this long warm down 'cause you're constantly moving. Versus if you wanna feel the recipe for getting old, do some gnarly gnarly workout, then sit in a chair for an hour. And let me tell you how you feel when you wake up. When you stand up from that you're gonna feel terrible.

SHAWN STEVENSON: One of my favorite sections of the book is when you're talking about the importance of walking. It's called, Walk This Way. Shoutout to Aerosmith. I don't know if that was on purpose?

JULIET STARRETT: It was. Shoutout.

SHAWN STEVENSON: Okay. Of course.

DR. KELLY STARRETT: Showing our age.

[chuckle]

SHAWN STEVENSON: And so you detailed how the amount of steps that you actually take each day is deeply connected to our life span. And we often don't think about this because "we work out", that that is not set aside in a sense, because we're probably gonna be walking around, moving around while we're working out, but that doesn't insulate you for your body's requirement, and your DNA's requirement for you to actually walk and to put these steps in.

JULIET STARRETT: So when we opened the gym in 2005, when I went to physio school, I was like, "We were gonna corner the world on walking. We're gonna make walking... " "It's so sexy."

DR. KELLY STARRETT: That was not what I wanted to be known for.

SHAWN STEVENSON: It's a hard sell back then.

JULIET STARRETT: We've now become obsessed with walking for a variety of reasons. You hit on it a little bit, there are a... I will go back and say that the 10,000 steps concept was invented by a Japanese pedometer company in the '60s.

DR. KELLY STARRETT: And 10,000 is an auspicious number in Japan. May you last 10,000 years. When you shout "Banzai" that's 10,000 years. So you can see why the marketing worked really well because we were capturing this magical number.

JULIET STARRETT: But what's happened since then though, is there has been a ton of research that has filled that in and shown that basically, the more steps you take a day, the longer you will live, and the fewer chronic illnesses you will suffer.

DR. KELLY STARRETT: That means I just always need to max out my steps or is there a minimum?

JULIET STARRETT: You know, the minimum we say is 8000. The reason we say that is that the average American gets about 3000 steps. And we've also read that it's actually possible for people to get up to 8000 steps. Anything above 8000 is like gold. That's great. If you have a life that allows you to be able to walk 16,000 steps a day, more power to you, that's definitely gonna help your longevity.

JULIET STARRETT: But there's so many other things about walking that are so awesome. We talked a little bit about the lymphatic system and about how walking is the perfect way to recover from workouts, and it's the first thing that we suggest people do who come to come to us with low back pain or post-surgical. Because the best thing you can do post-surgery is just to walk and just keep everything, get the garbage out of your body.

JULIET STARRETT: But there's all these other sort of fluffier things about walking that we like so much. I mean, we talked about this earlier, everybody's talking about it online, but you

need to get a little bit of sunlight on your body. Sometimes you need to get a little direct sun. One of the best ways to do that is...

DR. KELLY STARRETT: The Model Health Show says.

JULIET STARRETT: The Model Health Show says you need to get some sun on your body. So it has a side benefit of you get some sun on your body. It can also be really social, because what we learned in the pandemic is how lonely people are, and how depressed. And kids aren't doing well from a mental health standpoint. People are feeling, even though we're more and more connected online, people are feeling more and more disconnected.

JULIET STARRETT: And so walking is the perfect way to just have a simple connection with people. And so it's just this like moment...

DR. KELLY STARRETT: You can be like this, "What's up?" I hate that guy.

[laughter]

DR. KELLY STARRETT: But he's my neighbor, "What's up?" I now live in a community.

SHAWN STEVENSON: That guy.

JULIET STARRETT: And we're fine if you treadmill walk. Like if you live in Buffalo, New York, and you need to walk on a treadmill in the winter. That's totally fine.

SHAWN STEVENSON: Or walk the mall.

JULIET STARRETT: Walk in the mall. Exactly. I mean, there's a lot of empty malls out there you can walk in. It doesn't matter. Even if it's just walking around the block. One of the things I've done is I've figured out like five places in my neighborhood that are little routes that are just leaving from my front door, walking around the neighborhood, and it's like I know from my house to the end of the block its 1750 steps. If I go from my house down this little mini loop,

it's 3000 steps.

JULIET STARRETT: And so if I just need to fit in some walking, I've sort of set it up for myself. And you get your hip into extension, speaking of Kelly's obsession with hip. Hip extension, it's good for the soul. It's good for the community.

DR. KELLY STARRETT: Check this out. We were working with an elite military force in the Army called Delta, and when they have a lot of disordered sleep, and they do, one of the things that they started prescribing for all of their soldiers and warfighters was walking. So you have all the technology in the world available to you, and the thing that's handed out is walking 12 to 15000 steps a day. So if you're listening to this, hear this, if you have a hard time falling asleep or sleeping, one of the ways that we would help you with that and say, "Hey, let's see if we get you to move more in the day." To accumulate enough non-exercise activity that you actually have sleep stress. It's actually called sleep pressure.

DR. KELLY STARRETT: So that you actually wanna go to sleep, you actually have to move more in order to be fatigued enough. And if you're been on deadlines and you're sitting and you're in board meetings, you can't move and you're on Zoom and you have a hard time falling asleep, one of the reasons is you didn't move.

DR. KELLY STARRETT: So as Juliet says, it's one of these things that makes a huge, huge difference on so many levels. And for us, again, we're sort of obsessed with performance, and one of the things we notice and we give this book to our athlete friends, like world champion friends are like, "Wow, I don't walk enough. And when I started walking, my knee felt better, I recover from my workouts more effectively." Zone two.

DR. KELLY STARRETT: We also found that walking is a perfect time to do all these crazy breath drills. You can do all the eye movement tracking stuff you want, you can just call it checking out your neighbors, where you just your eyes track, you can look far, you can look close, you can start doing breath holds. There are so many ways where you can turn that thing up and make it interesting.

DR. KELLY STARRETT: Plus, we have so many friends who are like, "I'm not running. Over my dead body. I'm never running." And we're like, "Great, have you met the backpack that weighs 10 pounds?" And suddenly you have really a meaningful way to load your spine and load your tissues. It's called rucking. Welcome to walking. It is the future.

JULIET STARRETT: Well, and I think one of the things we have done a good job of in the health and fitness business is tell people they should exercise, and there are, they're spending trillions of dollars in gym memberships and apps and you name it. But that's not working. Like the data is out. People really didn't go to the gym that much until starting in the early '90s. It just, gym culture wasn't a thing. And we've all been now going to the gym and following the rule that we should exercise for X amount of time a day and X amount of time per week.

JULIET STARRETT: And what we see is that obesity rates are rising and diabetes rates are rising, and it's not... That alone isn't working. So we of course are gigantic fans of exercise, we're exercisers, we love exercise, but what we see is that people aren't getting enough total movement in their day and it has all these unintended downstream consequences.

JULIET STARRETT: Your body doesn't feel as good, you can't move as freely, you potentially don't sleep as well. And there are lots of other ways to get non-exercise activity, like that could be gardening, there's lots of ways to keep moving more besides just walking. But what we've found is that's the simple and most accessible way for people to just add in more movement in their day.

[music]

SHAWN STEVENSON: Thank you so much for tuning in to this episode. I hope that you got a lot of value out of this. And if you did, please share this out with your friends and family. This is so important for our families, for our communities, to have this education to maintain their ability to move, to take care of themselves, to do the things that we want to do. To do the things that give our lives real meaning.

SHAWN STEVENSON: We need this education because we have a society that is training us to

do the opposite, to do things that break us down prematurely and depress and suppress our ability to live our lives to the fullest. So share this out with the people that you care about. You can send this directly through the podcast app that you're listening on. And of course, you can share this out on social media with your followers.

SHAWN STEVENSON: You can take a screenshot of the episode and put in your IG Story. Of course you could tag me, I'm @shawnmodel on Instagram. And wherever else you feel inspired to share it, please share it up because sharing is caring. We've got some epic master classes and world class guests coming your way very, very soon. So make sure to stay tuned. Take care. Have an amazing day and I'll talk with you soon.

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SHAWN STEVENSON: 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. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome, and I appreciate that so much. And take care, I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.