

EPISODE 295

The Link Between Power and Aging, Cross Training Secrets, and How to Play On – With Guest Jeff Bercovici

Shawn Stevenson: Welcome to *The Model Health Show*. This is fitness and nutrition expert, Shawn Stevenson, and I'm so grateful for you tuning in with me today.

Listen, when I last talked to my guest today, I had just come back from a deep tissue massage. Now I don't know if you've ever received a deep tissue massage, but this is not the relaxing kind. Alright?

It was quite an experience. It's something I do from time to time to get a little bit of extra work. Man, I was so sore. I was sore. She put the elbows in me, alright? My therapist, I thought she didn't like me, you know? I was like, "Why is she trying to-

And here's the thing, when she's giving the massage she asks, "Is the pressure okay?" And being a guy, you're not going to be like, "No, can you lighten up a little?" I'm just like, "It's okay," you know? Digging down deep, but it felt amazing afterwards.

I was a little sore for a day or two, but my body just really felt in balance again. And we do, we tend to hold up a lot of tension in our body, in our muscles, in our tissues, and it can develop into some little pain spots, you know? Some 'knots' in your tissues.

And so I had a couple of knots right under my shoulder blades, and she lovingly stabbed me with her elbows, alright? But that was the last time I talked to my guest, and just to share a little bit with you, I did a show on massage benefits back in the day, alright?

Way back in the day a couple years ago on *The Model Health Show*, we'll put that in the show notes. But I just wanted to share this with you. There's a new small study found that massage therapy is an effective way to alleviate muscle soreness after exercise and improve blood flow.

This was published in 'Physical Medicine and Rehabilitation.' Alright? So there's a little bit of evidence that this works, but there's a lot more anecdotal evidence, alright? A lot of anecdotal evidence.

And even going back all the way to Hippocrates, the Father of Modern Medicine he's often referred to as, and he said that the physician should be skilled in the art of rubbing, and he's talking about massage.

And this was something that was used regularly in hospitals for centuries, and it fell out of favor more recently, and we're talking about somewhere around the 1940's and 1950's with the really big boom of very strong drugs, you know? Medications.

And so that practice fell out of favor, but we all need that connection. We all need the other benefit, by the way, oxytocin. Alright? Just getting human contact releases oxytocin which is clinically proven to help reduce cortisol, alright? The stress hormone that gets a lot of bad wrap in the media, but it's not all bad. Right?

We need all of these things. We need things to be in balance. And speaking of balance, we also need to have time to play. We're all getting our work on, we're all doing a lot of stuff, parenting, adulting, but we need time to play, to have fun, to even compete.

What a big part of our lives that we so often push to the side as we get a little bit older. And it really engages something in our brains, something that really helps to keep us young, and to keep us driving to become better.

So when's the last time that you competed in something? And check this out, this is really fascinating, this is from our guest today's brand new book, which is amazing. This is one of my favorite books of the year, and I've read hundreds and hundreds and hundreds of -books, this is definitely one of the top books, and it's because of the stories.

It's because of his ability to really dissect things, and find out what actually works. So we're going to be talking about performance today, we're going to be talking about recovery, and all kinds of good stuff, but check this out.

Participatory sports and fitness is an \$85 billion business in the United States, and it's growing at an annualized rate of 3.3%, and that is significantly faster than the rest of the economy. Alright?

So people are engaging in play, people are engaging in sports, you know? The rec sports, and it's a big growing thing. But the question is how long are we going to be able to do this, and do it healthfully, and get the benefits? Because stuff is going to happen probably along the way, you know? With the aging human body.

And so what are the things that we can do to be able to play on? And that's the name of the new book, and my guest today is going to come on here and talk about some of the good details.

Before we do that, I want to give a quick shout-out to- since we're talking about performance, listen to this. A study published in 'Medicine and Science in Sports and Exercise' tested thirty healthy athletes for six weeks to record the effects of cordyceps on their performance.

The group that added cordyceps to their daily regimen had twice the oxygen uptake of the control group, and oxygen is essential in preventing fatigue and supplying nutrients to your muscles and preventing the build-up of lactate in your muscles as well.

Another study done by the same group also showed a 9% increase in aerobic activity from taking cordyceps, alright? So you might be asking, "What is cordyceps? What is that?"

This is a medicinal mushroom that's been used for thousands of years. It's one of the top probably five things in Chinese medicine, and now we've got sound clinical data to back up its efficacy, alright?

Now what I use and recommend for your pre-workout is Shroom Tech Sport, and this is the formula that comes from Onnit. And now you might think, "Okay well cordyceps sounds good in that study. Well what about Onnit's product? Are they actually using the good stuff?"

And here's what they did. They invested- and this is a lot of money to fund a study like this. It's a double blind placebo controlled study utilizing Onnit's Shroom Tech Sport formula. And this was done in a twelve week clinical study at Florida State University, and here's the results.

They found that utilizing for your pre-workout Shroom Tech Sport showed a 12% increase in bench press reps, alright? So if you're getting your bench on, alright? It's going to help you take it to another level.

Shown to increase combined bench press and squat reps - so back squat reps - by 7%. So if you're doing your supersets, you're going to get more out of your body.

And also shown to increase cardio performance by 8.8% right on par with that study that I shared with you earlier. So this is the good stuff, alright?

They're sourcing things the right way. We're talking about organic, no crazy stuff, no pesticides, herbicides, fungicides, genocide, suicide. Cide means to kill, you don't want that in your products, alright? And so they're doing stuff the right way, and this is a company who really cares so much so that they put their money where their mouth is and funded a double blind placebo controlled clinical trials on their products.

Which it could have turned out bad for them, alright? But it turned out to be that the product actually works really well.

Alright so definitely check it out. Now here's the thing, you might have heard about this before, this might be your first time. So I want you to get a free trial, you're going to get a free bottle of Shroom Tech Sport. So I want you to go to www.TheModelHealthShow.com/sport. Alright, www.TheModelHealthShow.com/sport and you get a free bottle of Shroom Tech right now. Head over there and do it now.

Check it out, grab your free bottle while it lasts. And on that note, let's get to the iTunes review of the week.

iTunes Review: Another five-star review titled, 'Game and life changer,' by InTheBay2727.

"I've only been listening to *The Model Health Show* for a few weeks now, but it has completely impacted my life. I am so eager to learn everything that this podcast can teach me about my body and my health.

I appreciate the factual evidence behind every single topic that is presented in the show. Every day there are articles and shows where people just say mindless things with no support, and that would never happen here.

I love this podcast, and I wish there were more hours in the day for me to learn from more episodes. Please keep doing what you're doing, Shawn."

Shawn Stevenson: Awesome, that is amazing. InTheBay2727, thank you so much for that acknowledgement and if this is actually- if you're in the Bay, that's where I am right now. Just so happened to be, I'm here in San Francisco with my very special guest.

And man, I'm very, very happy that things aligned, the stars aligned to be able to be here with him personally, and I'd like to welcome today my guest, Jeff Bercovici. And he's a journalist, sports fan, and athlete, very much in that order according to him.

He is a San Francisco Bureau Chief for Inc. covering tech and entrepreneurship, and a former Senior Editor and writer at Forbes. He has also written for the Wall Street Journal, GQ, Details, Glamour, and the New York Times, and I'd like to welcome to *The Model Health Show* Jeff Bercovici. How are you doing today, man?

Jeff Bercovici: Pretty good. Pretty good. Thank you for having me on.

Shawn Stevenson: It's my pleasure man, it's my pleasure. Definitely glad to be able to connect. So I love your book, I've already shared that with you. Absolutely love it, I think you have an amazing writing style. And I'd love to dive into your superhero origin story first, so let's talk about first, how you got interested in writing, and then let's talk about how you got interested in sports.

Jeff Bercovici: Oh, okay. Writing, always since I was a kid pretty much. It's something I actually enjoyed doing in school, and I remember I had- in eighth grade I had a teacher who- we had to do like a year-end writing project, and I stayed up all night doing it, I had a lot of fun with it.

And then my teacher, she was like this former retired nun, like very stern and strict but had a little bit of a sense of humor, and she wrote on it, "You could be a writer." Or "You should consider being a writer." I thought, "Wow, I should consider being a writer."

So pretty linear origin story from there.

Shawn Stevenson: Wow, that's so cool. Now where does sports come into play? Because you obviously have a love of sports and competition, and you can just feel that thread through the book.

Jeff Bercovici: Yeah, I always loved sports. Growing up in Wisconsin, did all the regular stuff, normal sporty kid, not terribly talented in anything. You know, I was a grinder. I was one of those kids where the coach would let me onto the team so I could demonstrate hustle for the other kids.

Shawn Stevenson: Yeah, oh I love it.

Jeff Bercovici: But always kept that, but like most people, when I got out of college and I joined the work force, it kind of fell away for a few years. So in my mid-thirties I got really back into sports. I started playing soccer, which I hadn't played never really seriously, but I got really serious about it.

Like focused, I was playing two or three times a week with different league teams.

Shawn Stevenson: And you didn't even play in high school, right?

Jeff Bercovici: Not- I mean other than I played some intramural games, but I didn't. I was terrible at it and I didn't take it seriously. But you know, as an adult, I just got super into it.

And with loving it, absolutely loving it, it was the thing I looked forward to every week, but my body just couldn't keep up. I was getting all of these injuries, and I really- from the first time I stepped on the field, I realized like, "This is what it means to be over thirty. You're not a kid anymore."

And it was great because I was getting fitter, and I felt like I was getting fitter and faster, and it felt like in that way I was getting younger, but the injuries just didn't stop, and it got so bad, I had- it kind of culminated in this terrible back injury that I had to

have emergency surgery for. My surgeon told me if I didn't have surgery that day, I could have permanent paralysis.

So I did that, and it was a long way back from that. Really a lot of months off where I was rehabbing and working back, and in that time, I spent a lot of time thinking about this phenomenon that we all see around us.

You know, as sports fans, we see all of our favorite athletes just hanging around longer, you know? Hanging around, having the peaks of their careers later and later. People like-

Shawn Stevenson: Yeah, this is new.

Jeff Bercovici: Absolutely. I mean new- because you hear them talking about it every time you watch sports now. They're saying, "No one's ever won a major tennis tournament at the age of Roger Federer. No one's ever played more minutes in the NBA at this level like LeBron James.

Whatever sport it is, they're talking about these people who are thirty-five, thirty-eight, forty (Tom Brady) setting new records. And I said, "What's going on here that all of these people can compete so many levels above what I'm trying to do, and they're healthy, and they're performing their best? What are they doing that I'm not doing? And what actually makes a difference?"

Shawn Stevenson: Wow, and that's what the book dives into, and you do it so well. But just one thing I want to talk about a parallel. It was eighth grade, I've got your book sitting right here, 'Play On,' and we were talking earlier. And even my awesome AV guy, Mark here, he didn't even know that I wrote 'Sleep Smarter.'

This is our first time meeting today, and he was like, "I love that book." You know? So me writing this book, and he said, "Thank you for writing it," which just hit my soul. And I go back to eighth grade, Ms. Blackmore, and she was my English teacher, and we had a poetry project.

And I wrote these little haikus, and tankas, and all this stuff, and my free form poetry she actually published in the school paper. And from that point, I really didn't have a lot of acknowledgement.

You know, I got good grades, but just it didn't really matter to me until she actually took an active interest in me and just saying that I'm special, and it just really stuck with me.

And so shout-out to Ms. Blackmore, if you listen to the podcast, I love you, thank you. And it's so crazy, that parallel, that eighth grade really kind of set our trajectory like that. That's amazing, man.

Jeff Bercovici: Thank you Ms. Coler, if you're listening, if you're still alive. Teachers are amazing.

Shawn Stevenson: Hey, *Sister Act*, alright? *Sister Act III*.

So one of the most fascinating things- I want to dive into some of these reasons why folks are able to have longer careers, and what we need to look at- like some of the things that are going on behind the scenes that might rob us of that.

And you shared in the book that- because we tend to think it's because of loss of muscle, for example, losing strength as you get older. But you say it's not a loss of strength, it's a loss of power is one of the issues. So can you talk about that?

Jeff Bercovici: Yeah, power is the ability to generate force in a short period of time. So you know, if you think- if you can lift up 100-pound barbell, that takes strength. But to kind of explosively throw a 100-pound barbell, that would be power. That's the difference, you know?

Someone demonstrated it for me. Like it's the difference between- he said, "Tap your finger on your chest. And now take it and pull it back, and go like that."

That's power and you lose power because you have the quick twitch muscle fibers and the slow twitch muscle fibers, and as you age, your muscle fibers don't reproduce as well. They die off basically, your motor units, but they die off at different rates.

The quick twitch ones don't age as well basically, and there's different possible reasons for that, but the result is that athletes in power sports that involve kind of sprinting, or hitting a baseball, or anything like that, they tend to have earlier career peaks than athletes in endurance sports like marathoning or distance running, things like that.

Shawn Stevenson: Right, that's so fascinating. And so one of the things we need to possibly look at is training for power, I would assume. So do we have some examples of folks who are doing that?

Jeff Bercovici: Yeah, absolutely. I mean somebody that I talked to, for instance there's John Welborn who runs a company called Power Athlete. He's a former- he was in the NFL for ten years as a lineman and now he's- as an offensive lineman, and now he's basically like a power coach guru. This is his whole thing.

And a lot of the training methods and technologies that I talked about and that I researched in the course of writing of this book have to do with maintaining that power.

In some ways it's the key to having the sort of physiology and strength profile of a younger athlete.

Shawn Stevenson: Yeah. Yeah, and you gave the example- several times you speckled in examples of Meb who was this incredible long distance runner. So- and he had this kind of surprise victory at a big race. Can you talk a little bit about that?

Jeff Bercovici: Meb Keflezighi is his name. He is an American runner, he was born in Eritrea, and he was the guy who won the Boston Marathon in 2014 when he was thirty-eight.

He has this amazing back story which is that Nike, several years before that, had dropped his sponsorship. He was like thirty-three or thirty-four and they said, "Okay it looks like this guy is probably- he's won a couple Olympic medals, but we think he's probably past his prime," so they cut his sponsorship.

Shawn Stevenson: Wow.

Jeff Bercovici: And for Meb, he's so competitive, this just lit a fire under his butt and he said, "I'm going to show Nike."

So he had this amazing second act to his career where in 2014, Boston Marathon, he was lined up against all these guys who were- on paper they were much faster than him. Much faster, like five or six minutes faster than him, all much younger than him too.

But he went out, and he ran this race that was just strategically brilliant. He checked the conditions beforehand and he said, "Here's the strategy I'm going to follow." And he basically- everyone else underestimated him, and he opened this big gap on all his competitors, and by the time they realized what was going on, everyone sort of wrote him off.

They said, "Oh this thirty-eight year old who's nowhere near the fastest guy in this race, there's no way he's going to be able to keep this pace." And by the time they caught- it was the tortoise and the hare. By the time they figured out what was going on, it was too late.

Shawn Stevenson: So I'm curious, was there anything in his training that allowed him to kind of have that power to push through like that?

Jeff Bercovici: One of the things that Meb's coach, Bob Larson, who I talked to also, he said that one of the things that differentiates Meb from other runners he's worked with is that he's very- he does everything.

He takes a very diverse approach to his training. So a lot of runners, he said, just want to go and do miles, miles, miles, miles. But Meb does his strength work, he does a lot of cross-training.

So he's not just out there running his body into the ground, and he takes a very serious professional approach to recovery, and mobility exercises. He's like a great 360- I mean the reason I started the book with him is so much of what is covered in the rest of the book, you can see integrated in Meb's success.

But that- especially the cross-training, the strength work he does, for someone who is his age, that is in many ways the key to why he's still as fast as he is.

Shawn Stevenson: That's such a great example, I didn't even think about that, in the fact that he's so in a way complete. So just to kind of foreshadow a little bit, is this something we need to be ideally looking towards as more cross-training versus being so specific in our sport?

Jeff Bercovici: Yeah, cross-training- so the thing about cross-training is at that level of sport you do need to do really large volumes, especially if you're competing in something like marathons. I mean there's no substitute for volume in an endurance sport.

But there are good training stresses and there are bad training stresses. So with cross-training- cross-training is just one way to say- to give your body more of the good training stresses it needs to adapt and grow stronger, but minimizing the unnecessary repetition that does things like- can wear down your cartilage, can stress your body in other ways that could lead to over-training, or unnecessary injuries.

Shawn Stevenson: Got it, got it. And you can define cross-training for us?

Jeff Bercovici: Yeah, I think cross-training, it can be a lot of different things, but it's basically just specific training that's not your sport.

Shawn Stevenson: Simple, simple.

Jeff Bercovici: Yeah, my favorite example of cross-training is this guy- Alex Martins, lives right here in San Francisco just a couple miles away. He's a big wave surfer, and he competes at Mavericks, which is the premier big wave competition in the world.

Really interesting sport because so many of the top competitors in it are in their forties, and what I learned from Alex is that a lot of these guys, they train in the off-season doing jiu jitsu because in big wave surfing, really your biggest competitor is the ocean. It's these incredibly powerful waves, that if you ever wipe out, you basically get sucked twenty feet under the water and it's like being in a wrestling

match with somebody who's so much bigger and stronger, and trying to wrench your body, and hold you down for two or three minutes at a time.

So what these guys do is jiu jitsu because it trains them to slow down their breathing, and keep control of their body so they don't get into any vulnerable compromised position where they can get injured, and basically just slow down and be able to solve problems in this highly stressed state.

It's like this perfect example- this perfect cross between very specific training, but also cross-training where you're not just going out and surfing 100 times a year because you can't do that on big waves.

Shawn Stevenson: Yeah, wow and you're also bringing some gifts back to that other sport as well.

Jeff Bercovici: Yeah.

Shawn Stevenson: That's really awesome. Man, that's such a good example. I want to talk about some more of the physiology of the aging athlete, and something you kind of highlighted throughout the book.

And one of the things you mentioned was the activation of the antagonist muscle. As folks get a little bit older, the antagonist muscle is turning on a little bit more when it shouldn't necessarily be turning on. So let's talk about that a little bit.

Jeff Bercovici: Yeah, so this was something- a paper that came out about three years ago, I think identified this, and it was looking at the different reasons that as you get older you experience- you tend to, I should say, on average people experience a decline in muscular strength and force production.

And this one guy looked at what he called coactivation of the antagonist muscle. So the idea is basically every muscle you have, there's an opposing muscle. So you do a biceps curl, your bicep is firing, and your tricep is supposed to be relaxed.

But as you get older, your tricep is firing more and more as you're doing this action, so it actually takes more strength from your bicep if you want to curl to do that curl.

So your body is literally working against you as you get older, and it's not totally clear why. It might have something to do with joint stabilization preventing injuries, but a really fascinating finding.

Shawn Stevenson: Absolutely. And that's the thing, you know? At the end of the day, a lot of the stuff that our bodies do, it's kind of trying to help us in a way, you know? But it can look like a problem.

Like why is it doing this to me? You know? For autoimmune conditions a lot of times. You know? A lot of people- it's like why would my cells attack each other, you know? Why would my own cells attack me?

And one of the things that happens is this molecular mimicry, is one of the things, you know? So folks might be just going ham on whole wheat bread, and it can bring in these compounds that can essentially work their way into your gastrointestinal tract, but get through that lining of the gut.

Everybody's kind of heard about leaky gut condition now, but the issue is when these whole proteins or foreign proteins can get into your bloodstream when only broken down particles should get in.

And so your immune system is going to go and attack those foreign invaders, and that's all good, it should do that, but the problem is that some of those compounds, because they're in a whole form of a protein, look very similar to other whole tissues in the body.

So it might be a chain of like amino acids- just to give an example, BBAA, and it'll go break that foreign invader down. But your thyroid might have a chain of BBAA.

And so your immune system is going and attacking your own thyroid thinking that it's helping you, you know?

So with the body, just keep that in mind, that it's usually trying to find a way to help you. It might not end up the best for us, but if we can look at like what's the root cause, try to do some preventative stuff, try to address it in a more intelligent way like you're talking about in the book, I think that we can make do a lot of good.

Jeff Bercovici: You know, that's something that you really see when you look at life extension. I mean this is only a small part of the book, but I talk to some of these people who are researching radical human life extension, how to get people to live to be 120, 150, 1,000.

And a lot of these mechanisms- so the mechanisms that cause cell death, that cause basically aging and your cells to stop regenerating after a certain amount of time, they're there because if they weren't there, you would have runaway cell growth, which is cancer basically. Right.

So they say, "You know, we can figure out how to turn these mechanisms off, but what we can't figure out is how to turn them off and not have you die of cancer."

Shawn Stevenson: Yeah, that's such a good example, that apoptosis. We have the Hayflick Limit, and after a certain amount of replications, it's programmed cell death. It's supposed to happen to prevent that from happening, and that's what cancer cells do.

They behave the way that they want to, in a way, you know? They don't abide by that command for them to stop growing.

Man, that's such a good example. And I know like Aubrey de Grey.

Jeff Bercovici: Yeah.

Shawn Stevenson: Yeah, so is he in this area I think too?

Jeff Bercovici: He is in this area in fact. Yeah, I met him at one of these conferences, yeah.

Shawn Stevenson: That's an interesting fella right there to say the least. So I want to talk about exercise, just generally, you know? This is in many ways kind of considered this virtual fountain of youth.

So from your experience, and the things that you've learned, how important is it? Just if we're talking about being able to be functional as we get older, what role does exercise play for us?

Jeff Bercovici: Oh, I mean it's everything. Exercise is- I think it's increasingly being recognized as the key to healthy aging. I mean everything from just kind of maintaining strength and mobility as you age to avoid things like falls once you are in your seventies and eighties, and may have some osteoporosis. I mean that's a significant cause of death for people in that age group.

But the amazing thing about exercise is it really does trigger in the body the mechanisms that reproduce- I mean physiologically, exercise is youth. You know? It resets gene expression in a way that causes your hormone production, your other blood factors to be indistinguishable from those of a young person.

When they look at something called your fitness age, somebody who is very fit in their fifties can have the exact same biomarkers and the same life expectancy as somebody- a healthy person in their twenties.

Shawn Stevenson: Right, it's crazy and amazing. And you just said it, it's just exercise is just one of those things, I think it really makes us human. It's a part of being human, you know?

Your genes expect you to move, and if we're neglecting that, then man, we set in place the opposite, this kind of accelerated aging process.

Jeff Bercovici: Yeah, I mean and this is something where your genes expect you to move is a great way to put it because we are just starting to understand like the

epigenetics basically. Like all the stuff that goes on with gene expression, and protein formation in your cells.

Shawn Stevenson: Talk about gray matter as well.

Jeff Bercovici: And gray matter. And they don't even know why, but basically yeah, it turns out that exercise, especially intense exercise- as far as preserving your volume of gray matter in your brain, basically the stuff that makes you human, exercise is just as effective as things like doing- playing chess, or playing bridge, or doing crossword puzzles, you know?

We understand, it makes intuitive sense why using your brain for advanced cognition - use it or lose it - why it helps you preserve that matter. But we don't totally understand why exercise has the same effect, but it does.

Shawn Stevenson: Yeah, man. And by the way, so gray matter, this is part of the central nervous system. Glial cells, neuronal cell bodies, synapsis, the synaptic cleft, all this connection. There's so much going on with gray matter, and you develop more support, your gray matter, and not losing it by exercising.

So please, please make this a call to action that no matter what, we're getting some movement in not just for the physical benefits. Because a lot of times we exercise because we're trying to get sexy, you know? But that's kind of a side effect, it's not the main objective.

The main objective is keeping our brains young and keeping our bodies. Like you said, those biomarkers, significantly younger just by getting in some movement.

So you said that also in the book, and I thought this was huge, this was such an aha moment for me, is that you talked about this concept of compensation, alright? Compensation, and you said that the very best athletes are great at compensation.

So we have these kind of faulty functional patterns, and then we start to build on a shaky foundation. So what's that all about?

Jeff Bercovici: Compensations arise in your movement when you have some kind of limitation that forces you to do something in a different way. Often it's the result of a past injury.

So you know, let's say you have a really classic example- let's say you sprained an ankle and you didn't really get it rehabbed, and now the ankle doesn't really move that well. But you know, you still have to jump, you know? You're a basketball player, you've still got to get up there for those rebounds, so somehow you've got to be able to get down low, and gather your power, and jump up.

Well if that ankle's not moving like it should be, you're going to find some extra range of motion in your knee, and you're going to do that by moving your knee in a way that you're not- that it's not designed to move.

That's a compensation and over time, it doesn't just make you more likely to inure yourself, but it can also rob an athlete of some of their power because what they call movement efficiency, basically how efficiently your body transfers energy between one part of your kinetic chain to another part of your kinetic chain, from your feet to your knees to your hips to your back and so forth, that- basically compensations rob you of movement efficiency.

Shawn Stevenson: Man. So, so good. You know what? And you've also- you've got these scientists, these are some of the people you talked to for the book who are looking at players doing basic fundamental movements, and they can kind of give you a preview like, "This guy is not going to last long unless we fix this."

Jeff Bercovici: This is a really fascinating topic. I spent a lot of time in the book on it because I really wanted to understand what's going on. There is this emerging field, and there's a bunch of technology companies that are trying to definitively establish the link between movement and injury risk.

They are using things like 3D motion capture like you use to render actors in a video game, or force plate. It's the capture - the force that you put into the ground when you jump, and they're taking that data, using machine learning to try to establish patterns that result in injuries, and then they're trying to train athletes out of those patterns whether it's by doing body work on them that eliminates their- that improves their range of motion, or teaching them different neuromuscular habits.

Really fascinating stuff, a bunch of companies here that are competing to sort of be the leader and set the gold standard in it. And even though it's a field that's very much in its infancy, it's such an incredibly valuable thing to be offering to athletes and teams that it's already an economically big industry.

Shawn Stevenson: Wow. I thought it was such an interesting crossover because immediately when you mentioned it in the book, I'm thinking about the video games, or like the Avengers, or when they're doing the motion capture.

And just like it was so Captain Obvious that why don't we do this to actually find out what's going on with our bodies, you know? And it's so, so cool. So up next I want to talk about what are some of the things we can get from the people that we see as our heroes in sports, some of the things that they're doing to play on, to play longer, to play better as we get older.

So what are some of the things we can pull from their stories and implement in our own lives? And we're going to do that right after this quick break. So sit tight, we'll be right back.

Alright and we're talking with Jeff Bercovici about his new book 'Play On,' which you definitely need to have in your library like yesterday. It's such a great book, so fascinating, really, really a page turner. I just went through the book from cover to cover, and absolutely loved it.

So guys, before the break we talked about- so our heroes in sports, you know? Some of the people that we look up to, some of the people that we marvel at like, "How are they able to do this? How are they able to do this so long?" And one of those people that you brought up in the book, which I was pleasantly pleased with, was Donald Driver, alright? I'm a big Green Bay fan from the video game. Alright?

No disrespect to anybody out there, any other teams, but when I was playing Madden, I rolled with Green Bay, alright? So no disrespect. But Donald Driver, go-to receiver, you know?

And you talked about him in the book, I was shocked to- I didn't even know he was their all-time receiver. So what was so special about him that you used him as an example in the book?

Jeff Bercovici: He was their all-time receiver because of what was so special about him, which was he played so many years, like sixteen years, and had almost no injuries. He lost an incredibly small number of games to injuries, despite playing a position- he was a slot receiver where he took a lot of punishment going across the middle of the field.

He said one of the first pieces of advice he got when he joined the Packers was from Antonio Freeman who said, "If you want to make it in the NFL, you've got to go across the middle." So Driver, not a huge guy, not the fastest guy in the world, he just did it by being tough, and by not getting hurt.

So I was interested in knowing what he attributed his longevity to, and his answers were really interesting, but I think a huge part of it came back to this trend that I've seen spreading throughout all parts of the sports world over the last like fifteen years, which is a much more sophisticated approach to fitness that really instead of maximizing for fitness, instead of saying kind of, "Bigger, faster, stronger, more is more," it balances fitness and freshness.

Shawn Stevenson: Interesting. You know, when you talked about Donald Driver, you said specifically there were some- he had an approach to training that was different from other folks in the NFL. Like it was kind of surprising to even know that he was doing this because he didn't even start like doing the heavy weight lifting until later on.

So what was he doing that helped to kind of build his foundation?

Jeff Bercovici: He had this training program that he sort of came up with on his own, that he basically did these short high intensity sessions, like forty minutes to an hour workout, he'd do it like three times a week, and it was- you might call it plyometrics, and a lot of it was plyometric. Fast jumping, fast running, bounding footwork.

And he said he did it because he didn't like weight lifting, and he said the main thing that mattered to him was kind of foot speed and fast recovery. But when you look at it now, I mean this was fifteen or twenty years ago he was doing this, when you look at it now against the background of all the research that's come out since then about the benefits of high intensity interval training, small volume high intensity work, it's predicted a lot of I think what we've seen since then.

Shawn Stevenson: So if you could, I would love to talk a little bit more about fresh is the new fit, and what that kind of entails.

Jeff Bercovici: So there's been this transformation over the last really like fifteen years. I mean you could go back even farther than fifteen years, you could go back thirty or forty years to the roots of the professionalization of sports.

You know, before like the seventies, most athletes were- they had jobs on the side, they were sort of very fit regular people, and then starting in like the seventies and eighties, depending on what sport you're talking about, people started training more seriously, more scientifically.

Sports that had been part of the year became year-round, national markets became international markets, and what you saw is basically athletes turned into superheroes, you know? Everybody got very muscled up and hyper fit, but injuries kept- injury rates in sports kept going up, and the average length of athletes' careers was not really increasing.

Shawn Stevenson: Fascinating.

Jeff Bercovici: So what's happened since then is a number of kind of coaches and sports scientists have been preaching the importance of freshness, basically saying that what leads to unnecessary injuries and unnecessary decreases in performance, especially as athletes get older, is the accumulation of fatigue.

And that training really needs to take into account the accumulation of fatigue because if players aren't fresh, if they're not rested and recovered from their efforts, no matter how fit they are, they're not playing their best, and they're more likely to get injured.

So this is something that it's not rocket science, like it's always been known that you can't over train. The problem was it's very easy to design a structured training program, what you'd call a periodized training program, in a sport like a marathon

where you have one event, and you have four months to train for it, and you can gradually ramp up your workouts in intensity and volume to peak at the right time.

But to do that in a sport like basketball, where you might have games every other night for six months, they just didn't know how to do it. So about fifteen years ago is when you saw for instance Gregg Popovich with the Spurs start saying, "Well I'm going to rest my healthy players during the season because I think they play better when they're a little bit fresher and a little bit more rested."

Again, sounds like so obvious, such conventional wisdom, but actually anybody who was watching basketball at the time remembers it was hugely controversial. The fans hated it, on ESPN they were blasting him all the time, he was getting fined by the league for doing it. They said, "You're ripping off the people who bought tickets."

But the results of it were incredible, you know? The Spurs started- they were contending for championships every year, they had the lowest injury rate in the league, and they were doing it with the oldest roster in the league.

So at that point, every other coach in basketball looks at Popovich and says, "These guys are doing something right." And now it's the conventional wisdom.

That transformation that we've seen in the NBA, if you take that and project that out across all sports, I think that's the single most powerful force we've seen that's extending athletes' careers.

Shawn Stevenson: Oh man, I love that so much. Just looking at the results, thank goodness that he got those results, you know? So that we can- because again, it seems so obvious, but it's a business as well, and if we see for example in the NBA that folks are staying around longer, they're playing better just by giving them some smart rest and recovery.

So fresh is the new fit. In my book 'Sleep Smarter,' I talk about Usain Bolt, and him coming out and saying that sleep is a part of his training program because it helps his body to really integrate with the training that he does. Like he has this knowledge base that how important it is, the recovery portion.

He's literally the fastest human ever, right? It's just- but now and the more data coming out is just really, really cool to see.

Jeff Bercovici: Yeah, and not just data, but the athletes. I mean you know, think about who their biggest influencers are, are people like Usain Bolt, you know? When they hear Usain Bolt saying that, or when they hear Roger Federer saying that he tries to sleep twelve hours a night during tournaments, and they hear LeBron James.

I mean you saw this whole post-season, every press conference he gave after every game, he was saying, "I've got to go get my treatment, I'm going to start my recovery

protocol." You know, when they hear that over and over and over again, that's when they really start to internalize it, you know?

Athletes used to brag about how hard they worked out, right? You know Kobe Bryant does these blackout workouts. Now what they brag about is actually how much sleep they get, or how good they are at napping. I mean that's like a seat change.

Shawn Stevenson: That is, and it becomes a part of the culture, and that's what's so beautiful about it. Another thing, just to take a step back with Donald Driver, that you mentioned with his training. There is some research indicating that doing this high intensity intervals, and doing things like these explosive movements like box jumps helps to improve our proprioception. Right? Can you talk about that?

Jeff Bercovici: Yeah, that one's really interesting to me. So proprioception is your body's awareness of itself in space basically, and there's a fair amount of research showing that things that build proprioception like for instance using a wobble board, a balance board, doing exercises on one side isolaterally rather than doing them- basically doing exercises standing on one foot.

Things like that seem to have a really strong protective effect against for instance lower leg injuries. So you think about your life as an NFL receiver, what are you worried about? Ankle injuries are the number one type of injury in that position, ACL tears, hamstrings.

So it seems like- again Driver, just kind of working out on his own, listening to his own body, came by this program that naturally conferred really powerful injury prevention benefits for him, and that had something to do with how he played as long as he did without pretty much ever getting hurt.

Shawn Stevenson: Wow. And speaking of proprioception, one of my favorite parts of the book is when you talk about the brain body connection, and how your brain- so sometimes when folks are having these injuries, it's the brain- there's some kind of a block in the information getting to that part of the body.

So stepping off a curb the wrong way, and not expecting the ground to be where it is. Can you talk about that?

Jeff Bercovici: Yeah, this researcher named Buz Swanik is the guy that I learned about this from. He studies cognitive factors in injury proneness. When I saw he was giving a talk on that, I said, "Cognitive factors in injury proneness? What does your brain have to do with whether you get injured?"

And he- so he's looking at basically how your brain anticipates situations and models a muscular response to those situations.

Shawn Stevenson: Right.

Jeff Bercovici: And his hypothesis was when you have these non-contact injuries, these like freaky non-contact injuries. Say that you watch somebody tear his ACL and go down in a heap, and there's no one standing around him, what happened?

His hypothesis was that's your brain getting surprised by what happened, incorrectly modeling the situation, preparing the wrong muscular response, and then your joints are prepared for the forces that are put on them.

So he looked at basically what cognitive processing speed has to do- how that is a factor in injury prevention. He looked at people who- he actually gave athletes- college football players IQ tests, and what he found is that the worse people performed at an IQ test, the more likely they were to get- to suffer a non-contact injury during the season.

And his interpretation of that was basically your cognitive- the faster you process information, the better your body can protect itself. And the reason that I found that so interesting for this book is because the older you get, the more experienced you get in your sport, especially in a complex sport like football or basketball or soccer, your brain processes it. That turns into an advantage in information processing.

Your brain does this thing called chunking, where it lumps together related pieces of information so it can process them faster.

Shawn Stevenson: Yeah.

Jeff Bercovici: So you know, a quarterback in football is able to read the field in those three seconds before the snap. So much better after five years, so much better after ten years. So you look at somebody like Tom Brady, why is he able to stay so healthy in the NFL?

It's because he's been reading the field for so long, he sees twice as much information in that amount of time that anybody else sees. And that means when a guy comes and tackles him from his blind side, his brain knew that was going to happen.

He's more prepared for that collision than somebody- than a rookie, and he's less likely to get hurt.

Shawn Stevenson: So fascinating, and somebody like Peyton Manning as well, you know? Being able to win a Superbowl when he's- like his arm strength had went down so much. And you talked about him in the book too, and gave a really great example of him getting some work done to get adjusted in the way he performed.

Jeff Bercovici: Yeah, I talked to this guy Mackie Shilstone who works with- he worked with Peyton, he works with Serena Williams, he calls himself the Career

Extender, because there are so many athletes where he has come to them in sort of the last phase of their careers and helped them find another gear, and reach a new level of their performance.

So Peyton, he came to Peyton, Peyton had a few injuries in the last part of his career that were really limiting his arm strength. Do you remember he had all these neck surgeries, and he basically didn't have any zing on his fastball anymore.

And so what Mackie did was put him on a balance beam at the gym. He said, "Your problem is you're used to being tall and able to see the whole field. And so you're standing up tall when you're throwing," he said, "You're not getting your power from your core and your legs. So I'm going to make you stand on this balance beam until you can throw a football on a balance beam as well as you can standing on the ground."

And that was his mantra. That was basically- Peyton Manning spent his last season before his winning the Superbowl standing in a high school gym in New Orleans throwing footballs off a balance beam.

Shawn Stevenson: Wow, he Miyagi'd him.

Jeff Bercovici: He totally Miyagi'd him.

Shawn Stevenson: That's awesome, that's really awesome. So we can't not talk about the mental side of this, you know? We talked about some of the technical parts of the brain, but what about the mental approach as far as us being able to pull some things from these great athletes and the way that they approach the game mentally, or approach life mentally that allows them to continue on?

Jeff Bercovici: This is probably my favorite topic in the book because the applicability is so wide, you know? It's for everyone. I mean the thing that I heard when I talked to sports psychologists about, "How are these athletes different? People who spend twenty or twenty-five years at the very top of their sport, how are they different?"

What I heard is it comes down to joy, you know? They're able to kindle and nourish this sense of joy in what they do for an incredibly long amount of time, which sounds like it might be- maybe that's like trite or a bad answer, but it's not at all when you think about what goes into an athlete's career, you know?

These are people who from the time they're twelve or fifteen years old, they're told, "You have to approach your sport like a job. You have to go to bed at the same time every night. You have to watch everything that you eat. You have to get up at 5:00 AM and do all this work."

Like it's not a game to them, it's a job, and yet someone like Roger Federer or someone like Tom Brady can manage to bring so much joy to that job that after doing it for twenty-five years, Tom Brady says- after his Superbowl, he said- he gave an interview and said, "There's two things that I really love to do; play football and prepare to play football."

That's like- that's a totally different mentality, you know? That's a one-in-a-million kind of mindset, and that- I mean Brady is not- he's a tall guy, but like he's not a physical- the fastest, the strongest, the anythingest, but that's the one-in-a-million mentality.

Shawn Stevenson: Wow, yeah absolutely. Absolutely. So for us cultivating that love of movement, finding something that we can embrace, that we can kind of carry with us into it and just really changing our perception about this stuff.

Jeff Bercovici: The perception change is intrinsic motivation. I mean what they'll say- what the psychologists will say is it's about being process oriented, you know? These guys, they don't just love performing and winning, they love every part of the process to the point that Federer, he almost never had injuries in his career.

He's amazing that way, but when he finally had to have surgery on his knee when he was like thirty-five, his first surgery of his career, he said, "You know, I thought it was really interesting and fun I'd never had an injury before. I never had to rehab it before. That was so interesting."

Again, that's being process oriented in a way that allows you to have joy in every part of your job, not just the fun parts.

Shawn Stevenson: That's- I really hope people get that. That is so, so powerful. You know, there are so many other things I would love to ask you about, but in summary, for us to kind of take some things away for today. You look at all of these various recovery methods to find out like what actually kind of holds its weight, and you cover some crazy stuff too, like people bathing in wine. Like I'd never heard of anything like that.

But there are a couple of things that do look like- they're very promising, but I think that everything has some value, if not for even the process like you just talked about, and having that placebo effect.

But what are some of the things that we can look at, or just have our eye on for things that are going to help us to recover and to stay more fresh?

Jeff Bercovici: Recovery is- I mean that's probably been the biggest transformation in the way athletes train over the last twenty years, has been the emphasis they put on recovery.

One performance coach I talked to said- he said, "A generation ago, we didn't even talk about recovery. And now everybody sees it as the third leg of the stool. It's on par with training and nutrition."

I think that there is- everybody wants to talk about cryotherapy, about light therapy, infrared treatments. I mean all of this stuff, there's some evidence that it works, the evidence is kind of ambiguous, it comes from small studies that aren't the gold standard necessarily.

What I would say- where I'd say it really has a value is that athletes at the top levels, they're really, really driven. They want to do everything that they can do, they want to be working out, they want to be improving their performance twenty-four hours a day.

So a lot of these recovery techniques, whether or not they have a huge benefit on the athlete's performance, what they do is they give them a channel to feel like they're doing something to put those energies into so that they're not sitting there in the gym overtraining and breaking themselves down.

Shawn Stevenson: Right. And so what are some of those things, those cornerstone things with the recovery? Which they'll probably be Captain Obvious answers.

Jeff Bercovici: Well the real cornerstones of recovery are sleep. Sleep, refueling nutrition, refueling in the right way, and I'd say active recovery is- there's a lot of really good research around active recovery, moving the right way after an effort so that you're stimulating blood flow, you're clearing some of the metabolic byproducts from your muscles.

After that there's the best research around cold therapy, you know, basically cold tubs, and massage, which you mentioned before.

After that it starts getting pretty speculative. But again, almost all of these things- very few of these things have any harmful effects. You don't want to go overboard with something like maybe cryotherapy because what you could be doing if you're doing cryotherapy after every single workout is actually tamping down your body's inflammatory response that it needs to have that muscle adaptation.

But for the most part, you can't really overdo it with recovery.

Shawn Stevenson: Yeah, so great. So what about with nutrition? You said nutrition, doing it the right way. There's a bunch of different things we can talk about, but one thing really stood out as far as nutrition, as far as something potentially like supplementation if we want to look at it like that, and that was something that- there's a lot of data that's still even coming out. There are studies being done right now on collagen, gelatin. Let's talk about that.

Jeff Bercovici: Yeah, a lot of data, a lot of it's coming not far from here at UC Davis where there's a guy named Keith Baar who has done and collated a lot of the research on collagen and the role that dietary collagen plays in the healing and repair of tissues like- connective tissues basically, so tendons, ligaments, cartilage he's also looked at.

You know when one thing- obviously a big limiting factor for athletes as they get older is that you don't heal as quickly. Your body- you're relying on cells that just don't regenerate as rapidly as they used to.

So supplementary collagen turns out to be something that can help accelerate that healing a little bit in those slow growth tissues like tendons, and cartilage, and all you really need to do is just get that collagen in your diet any way you can.

It doesn't matter if it's gelatin, bone broth which I love, it's really delicious, or even just literally like if you're eating a chicken wing, just like chew off some of that nice gristle in the middle of the bone. That has the same effect.

Shawn Stevenson: Share the story about Kobe and the bone broth.

Jeff Bercovici: Kobe and the bone broth. Yeah, he's- I mean a lot of people heard about bone broth for the first time because Kobe, when he was getting into his sort of late-thirties, he'd had a lot of problems with his Achilles tendons. He'd torn them a couple times and had surgery, so he- I mean Kobe is- if you're trying to learn about new sports science, you hear the name Kobe every five minutes because everything that's new and cutting edge, he's like the first guy who tries it. Right?

But for the last couple seasons of his career, every hotel that the Lakers stayed at, the chef- an advanced person would go and teach the chef how to make Kobe's bone broth exactly the way that he wanted it. And he would have it- I think he drank it before games.

And you know, as a fan, the first time I heard this I went, "This guy's crazy. Kobe's a little nuts." Turns out the science is there.

Shawn Stevenson: And we've had the person on the show who introduced Kobe to that protocol, Dr. Cate Shanahan, who's the kind of team nutritionist for the Lakers, and I'll put that in the show notes. And yeah, just to hear that, so crazy. You know?

But for an athlete at that stature to do something like that, that consistently, you would think that maybe there's something to it. You know? And now being able to look at some of the research. And so that's one of the big takeaways I want folks to kind of keep their eye on, is where the science is going with collagen and utilization for that, in our workouts where do we place it?

Is it post-workout? Pre-workout? So that kind of stuff, so we'll definitely talk more about that here on *The Model Health Show*. But man, this has been so fascinating. Such, such great information.

Can you let everybody know where they can find you online and also where they can pick up 'Play On'?

Jeff Bercovici: Well you can find me at my website, which is www.JeffBercovici.com. I'm on www.Inc.com. I cover science and technology including a lot of fitness- a lot of fitness tech, a lot of human performance related topics. And I'm on Twitter, I tweet way too much. It's just www.Twitter.com/jeffbercovici.

Shawn Stevenson: I love it man, thank you so much. Again, your book is one of my favorites of the year. Definitely like literally top two, and it's really well-written, and just dives in. I'm a very analytical person by nature I think, and so you really spoke to my man brain on that stuff, but also just the storytelling, which really brings us in and makes us feel like we're part of the experience as you're going around and talking to all these amazing people. So thank you for taking the time to write it.

Jeff Bercovici: Thank you for connecting with me over it, I love it.

Shawn Stevenson: Awesome. Man, so final question, what is the model that you're here to set for other people with the way that you live your life personally?

Jeff Bercovici: Oh wow. For me, I try to think about my life in terms of being engaged, you know? Am I really interested in what I'm doing? And always kind of challenging myself. You know, if I'm not engaged in what I'm doing, I try to move on and find something else that keeps me going. Whether it's like emotionally engaged, intellectually engaged.

I just think listening to that part of your brain that says, "I'm bored here," that's really important.

Shawn Stevenson: Oh I love it, man. Thank you so much, Jeff. I appreciate it.

Jeff Bercovici: Thank you.

Shawn Stevenson: Everybody, thank you so much for tuning into the show today. I hope you got a lot of value out of this.

So be engaged. I mean what he ended with is so powerful and so important. That's what life is really about, you know? We see this statistically, when folks retire - you're already tired, we retire - and losing that sense of engagement and sense of purpose.

We see our lifespan, or the amount of days that you're going to have left on the planet just shoots down so quickly, versus folks who continue to work, and do things that they love, and they enjoy and they engage in community for a long time, having a longer lifespan.

So we need to have something that we're engaged with, and to be proactive with that. If you feel a loss of or a lack of engagement right now in your life, really pay attention to that because that's tied to your life force in a way, in a really interesting way. So get engaged.

Also being more process oriented. I don't think I can stress this enough, you know? We tend to be goal oriented, which is great, I want you to want stuff, I want you to be able to achieve, but it's the process. It's never the goal.

I promise you, because once you get to the goal- I've met some of the most successful people walking around on planet Earth, and they will tell you many times when they thought achieving that \$100 million business, or achieving the gold medal, whatever it is, that they would be fulfilled in their life, and they found that they were disappointed.

You know? Because it wasn't the thing, it was the process. And for you, it's- whatever your goal is, embracing that process, and understanding that it's qualifying you, right? It's qualifying you for the achievement of that thing, you know?

So keep that in mind. Find a way to fall in love with the process, alright? Find away.

Because that's another thing he mentioned, is that there's this love. And Tom Brady, having that mentality and his love of the game is his competitive advantage. So bring that competitive advantage for yourself, whether it's in your family, in your finances, in your exercise, your health and fitness, in your relationship; find a way to love those things.

I can tell you firsthand the things that my wife- when we first got together, it was cute. These little quirks was like, "Oh that's cute." Then they become annoying, right? It's like, "Are you serious?" These little small things. But I found a way to fall in love with them again. Alright?

Perfect example, she has this tendency to when I ask her- I'll send her a text like, "Hey, while you're at the store, pick up this thing for me. Pick up some collagen for me." Right? And she'll be like, "Sure, got it. Sure thing." Sure enough, she gets home, the one thing I asked for, it's not there.

It's happened more times than I can count, I promise. And that would make you probably want to jump out a window, alright? But for me over time, it just became like, "Oh, Anne's at it again. You got me. You got me." It became cute. I found a way to love even these kind of crazy things about my relationship. Alright?

I know she's not trying to set me up and make sure that I'm not getting that one thing that I want, because she gives me so much more than that one thing, you know?

So it's a little funny, kind of crazy off the side example, but find a way to fall in love with the process. Find something to love in your process of achieving your goal. Alright? Because that's really what it's all about.

Last thing, and there's again so many things to pull from this episode. Make sure that we're engaging in some high intensity interval training, and also things that increase that proprioception, you know? The ability for your brain to be aware of itself in space. Your body to be aware of itself in space.

It's one of the things that's going to keep you healthy and functional throughout your entire life. Alright? So do those explosive movements, alright?

So getting on that bike and doing some sprints, doing some box jumps, doing a little bit of sprinting whether it's on a piece of gym equipment or out there on the track or on the grass on the football field, wherever it might be.

Get your body moving in these more explosive patterns because that's the thing that we tend to lose, is the power, is the explosiveness, and learning from Donald Driver's example, if we add in some of these powerful movements, doing things at a different level, working on the proprioception by doing things like box jumps, then this is going to help to set you up for some longevity as far as that's concerned.

Alright? So make sure that you're adding that in, alright? I've got an episode master class on high intensity interval training that I did back in the day, we'll put that in the show notes. Fifteen different ways of doing high intensity interval training plus the science behind it.

So we're going to talk about the various muscle fibers, the fast twitch, slow twitch, the intermediate fibers, all that stuff. You get a good master class on how that stuff works, how to recruit these in different motor units. We get nerded out, but we'll do it in a way that you're going to enjoy because you know how we do it.

Alright so I appreciate you so much. If you got a lot of value out of this, make sure to share it out with your friends and family on social media. Share it on Twitter, Instagram, Facebook, make sure to tag Jeff, let him know what you thought about the show, alright?

And definitely head out and pick up 'Play On.' We've got some incredible episodes coming up for you, so make sure to stay tuned, alright? Take care, have an amazing day, and I'll talk with you soon.

And for more after the show, make sure to head over to www.TheModelHealthShow.com. That's where you can find all of the show notes, you can find transcriptions, videos for each episode, and if you've 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.