



Transcript of “Kelley Starrett on Systems Thinking, Movement Standards, and Getting Ready to Run”

Bulletproof Radio podcast #156



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Dave: I'm Dave Asprey and today's cool fact of the day is watching porn may be just as beneficial to athletics performance as watching any motivational or training video. Hundreds of rigorous scientific studies conducted over decades demonstrate that men like to watch a lot of porn. Studies also show that there's a little bit more to it than that specifically watching porn can improve your sports performance.

That's regards because porn gives viewers a short term testosterone boost. That said there are better ways to have a short term testosterone boost and I'm not an advocate of porn because I think it causes dooper main resistance in your brain which over time would be bad for you. Porn bad but if you have like a big fight the next day and you watch a little porn the night before and you don't get addicted to it maybe it's like good for you, heck I don't know but it's an interesting theme to look at from a scientific perspective.

Today's guest first came on the show a couple of years ago. It's hard to believe it's been a couple of years and that was actually episode number 43. Ever since he has been kicking asset life and he's back on Bulletproof radio to talk about a new book that is now titled Becoming a Softer Leopard which was the title of Kelly Starrett first book. His new book coming out is Ready to Run, Unlocking Your Potential to Run Naturally.

If you haven't heard of Kelly Starrett he is a coach, a physical therapist, an author, a speaker, a creator of a blog that really focuses on human movement, function movement and athletic performance. It is at mobilityword.com. You will great videos of Kelly torturing people on YouTube, wrapping incredibly tight rubbery things around your arms. By the way Kelly because of you I bought some of that stuff and I've made myself cry only once. Anyway, welcome to the show.

Kelly: It is so good to be back. The world has changed since the last we spoke my friend.

Dave: It has and you have really been kicking ass, you are on the first 50 cross fitted affiliates and you are focusing on those so much more than on just cross fit. You've got that intensive cross fit but you are also looking at like orthopedics sports medicine and that's one of the reasons I like your writing and I like your work because you are walking that line between super high intensity and super precision movement.

Functional movement for me personally has been a problem. I don't have good bear crawl, I don't have good cross patterning and some of my inter movement reflexes are not right maybe because of genetics or maybe because I spend a lot of time reading at 18 months instead of like crawling and falling off of things the way you are supposed to. I kind of picked up a funky cool fact of the day but I want you to tell me a cool fact about you.

Because you've already been on the show so you've already done all the basic stuff. What's a cool about Kelly Starrett fact that no one knows?

Kelly: Two things we can tie in right away, one is that I totally agree about the porn, porn is destructive. Karma, mobility ward is based on porn architecture. In order to manage 1200 videos we had we went basically who is managing that much content and really speak to some of the foundational concepts of what you and I do. We look around and say this has already been solved for us we need to re-purpose this thinking, evolve this thinking into having it fit into a better life.

Or having a bit of remains of what's happening in modern life. My wife actually became an expert in porn technology and porn architect, porn tech I guess you can say that. Our whole website, if you go in you are going to be like this is the most beautiful porn site I've ever been to but it about human performance porn. That's number one, number two I think people forget that I used to be like a super boater.

I was like, I'm really excited I just re-read Rise of Superman because even the speaking at the conference at the end of the month which is going to be fabulous, I can't wait to hear him talk. I knew 30 out of the 40 people personally that he wrote about in there and I had a whole other life as professional white water extreme athlete and four class five and had more

friends die and did more sketchy stuff. I met my wife at the world championships in Chile where I was like paddling.

This is all I did and it was so interesting to sort of take those concepts of flow and of best self and higher thinking and what do they call it? Like temporary hypofrontality that sort of concept. It's been really interesting for us because I didn't realize how much we had spurn those risk taking creative pieces on its head and it's really influenced all the things I've done. It's so interesting to tie those pieces in.

People don't know that I was a boater, all I did was run class five and scary stuff and terrify my parents forever and ever. I was able to resolve all of those experiences into more risk taking I guess, or more creative flow. That's it.

Dave: That's remarkable and I've got to say going back to your porn technology kind of thing everything that we are doing right now is based on porn. I say this as a Silicon Valley technologies you've actually to the very, very early use of Usenet, what was it used for more than sharing government documents is actually is for sharing porn. You go before that to home video, those little video cameras, that was actually driven by porn.

Video conferencing like software recording on today, that was driven by porn. Web videos were driven by porn and like many of the customers we had throughout my career in cloud computing they were like secret porn customers with like a nice website that no one went to and tens of gigs of traffic of light dirty pictures. I really do think porn is destructive.

Kelly: Well, here's what I think you are tying into and where we can tie it into is that you've got to tap into sort of an aspiration or deep biased to feel better, something like this is the hook that I don't think enough people are catching on. Like show me what's in it for me. There is this innate drive for men that Serotonin boots click, etc, its destructive karma. Biologic truth of that is strong and reinforces itself.

The idea though that, we can go on and off on this but this point is that we are going to make change it's got to matter to people. They've got to feel

better, they've got to feel more lucid and we really value technology that spurns from children and you shouldn't say porn and children in the same sense but it's got, we value something and say this is good. We take the best technology, the best concepts and then we say can we apply them across the spectrum of humanity.

Like it's got to work for my kids, it's got to work on one on ones, it's got to be working a group of 50 people and what we can really do is we start to then apply that concept with the fact that it's got to hook the ego, it's got to hook the vanity. In that we will see real change out of that and that's good enough. I don't care if somebody knows where the hook is as long as the outcome is sufficient.

Dave: Yeah, there's no doubt that you can hook someone's ego to get them to smoke cigarettes or to eat something that is allegedly healthy like rock hell.

Kelly: Hey you're from marine too, we only eat kale that is like carbon neutral so I don't know if this year we're doing that yet or?

Dave: My heel was actually massaged my mucks and not just any muck, one armed child prisoner mucks, like those are the very best massages you can get. It's really funny because many bad things have happened in health and even in things like moving and running because advertising companies will take things that are easier to sell, they will wrap it in a healthy wrapper and then make it like somehow like wrap your ego into oh you are a good person if you do this practice.

Like wait, that actually causes injury, it makes me feel like crap. Maybe it wasn't a good thing but it's amazing how many of the things we do even from like our skin hygiene, all of these weird practices and I'm getting a little off topic but you will appreciate this. Do you know why women shave their legs?

Kelly: They are cyclists?

Dave: No, just women shave their legs in general who don't ride bikes, I noticed that.

- Kelly: Well, I'm from Northern California and my wife went to Berkeley and I must say if she can braid her armpit hair because that would be weird, I would never admit such a thing but I hear tale that that actually is a practice. I don't know like how, like how [inaudible 00:09:09] I don't know is it the porn, is that what it is? I saw it in Wall Street ...
- Dave: No, it's not. It's because I believe it was Gillette but one of the largest shaving companies and this is 1909 sat down and said how can we sell more razors? They thought about it and they went to the ladies home journal and they said we need to write an article about hygiene and how if women shaved their legs that it increases hygiene. Then a year later like 90% women are shaving their legs and to this day 100 years later like they are still selling twice as many razor blades.
- It's astounding what you can do when you hook into someone's vanity or you say something like that is healthy and then magically they start doing it even if they start doing even though it has no effect on anything except making after shave some more because now you have star wall.
- Kelly: I'm not surprised at all and recently I got so pissed in like buying a 29 Gillette cartridge and I was like I'm going back to the straight razor. I bought a straight razor like a safety razor but it sucked.
- Dave: I tried that too like [inaudible 00:10:14]
- Kelly: I know it's how I felt and I was really like man what the, this is terrible. I was like I'll go right back to the Gillette. I was like okay, so maybe some technologies is good some is, maybe we can often ...
- Dave: My razor vibrates, it's got a little light and stuff, oh men I'm down with that as long as it doesn't give me irritation.
- Kelly: What you've tapped into I think is what we are the one to take on and we had our hands deep into human performance for a better part of the decade now. Really we have just seen it all, we've gone, I mean ever since I've talked to you we have seen more behind the scenes craziness than

people can imagine we've had. In fact without name dropping when we did that 60 minute piece recently, six minute sports.

A lot of even close friends and even our coaches were like, I had no idea you worked with the palates, had no idea you were an arsenal. It's hard to see how many kind of pictures we see of what's going on but one of the things that we decide to try and do is re-purpose what we've gone out of the human performance into a lot of lot of public health issues. Like there are a lot of some low hanging fruit pieces that is not just about getting your faster five capes on and of course the most obvious one to us was running.

It is, running seems to be healthy right, it's natural, everyone runs, the story of the human body, read any of these books and you are like the running skill is the thing that makes us human and running shoes is a four billion dollar industry, billion, right, billion. When you start to get down to is 80% of runners run three times a week are injured within a course of the year. That is like 100% in tray, I mean that makes, I mean I would tell my daughters you can't run it's too dangerous, what are you doing?

Dave: Now, I'm really, really eager to understand this potential to run natural thing that you are writing about. Because Becoming a Softer Leopard I never had a problem, actually it's central. I used to have a big problem being supple because I was so inflamed and I would say bad stuff. When I took enough digestive enzymes, broke up things I was able to like to put ankles behind my head, I'm already a softer leopard by most things because of the yoga practice that I have done.

Moving patterns for running has always escaped me. I have had flat feet, I was dark footed as a kid, I have had three knee surgeries and I used to try to make myself run when I went through an in-pounce. Jeez, I wonder how that ended up with knee surgeries right, like there is a correlation between running when you are a fat ass. I say that affectionately because I was a fat ass and it wasn't my fault that I was a fat ass because I was doing what was supposed to work and didn't.

Kelly: Let me just piggy back on that I developed knee pain the first time in high school playing football and when I was doing all these running and then it

plagued me for years. I could sprint no problem, play Frisbee no problem, jump, do everything else, jog 400 meters, knee pain, motion control shoes, [inaudible 00:13:12] inserts ...

Dave: Those were my shoes too.

Kelly: Like every knee contraction. My friends would be like run for us, I had those like weird [inaudible 00:13:19] things.

Dave: Did you have those cotton fiber inner soul brace things, I had one of those.

Kelly: They were crazy and it turned out I ran like crap and my feet were weak, no one we know is born with flat feet. The 91, the American Academy Pediatric put out a position paper that said barefoot is the ideal state in which to create a healthy foot. Like that is the environment which we are going to see normal foot development coupled with the fact that our recommendation is not to wear shoes whenever possible.

Our recommendation is that a light wide shoe that breathes a tone and is flexible and it's only thick enough to absorb enough impact so you don't get punctured by rocks and has the similar traction to your bear feet. That's the pediatric recommendation nearly 20 plus years ago. How far away are we? It has gotten out of control and the number of injuries and then born to run comes up and you are like I'm in, like this is primo.

I'm going to run bare my foot, get some flat shoes, go out and we see the injury rates spike to the place where vibrant loses what 2 and a half million lawsuit for false advertising. We see that ...

Dave: Actually they didn't lose the lawsuit they just settled it because it was cheaper than [crosstalk 00:14:38] just so we know. They were never guilty, they didn't do false advertising.

Kelly: True fact. Chris Powers who is a senior sort of physio in the American APTA basically came out and said it's when we think it's maybe safer to heal strike than it is to run on the ball. Why, because the severity of the injuries were fewer which is like saying if you drive drunk we see it is better than

driving blind folded. It's like the line of reasoning is disastrous. What we found was that just like you are finding, people are making basic errors, adaptation errors and they sort of end up in this place.

Where my default they start running poorly, their tissues are stiff, they don't have basic range emotions and they don't have the motor control. When we start to address the issues of saying hey the motor control of running eludes me while can you jump rope? Yes, well can you jump rope with your toes sort of straight, yes. Well then you have the basic mechanics of jumping and landing. Right and so the real question is do you have enough range and motion in your ankle to withstand that?

Do you have enough hip extension so that when your leg comes behind you at the end of your gay stride you don't have to compensate and throw your leg out, strike out front and destroy your archers? On and on and on the problem is we haven't taken this, you say hey, look I'm pretty subtle because I have a moving practice well you've had a moving practice for how long?

Dave: Your whole life.

Kelly: Your whole life. When you say I cross the, cross is my movement practice whether you practice yoga or palates or cross feet you have to make sure that you are taking the body and asking it to do all the things that it normally can do. That means basic range of motion that we all, all the physicians and all the physical therapists agree on that are expressed as actual movements. It doesn't matter what your foundation lumen is but running is not a moving practice.

Running is a movement skill, yoga is a moving practice, right? Does that make sense, the differentiation there? One is exercise, one is practicing the positions and the mechanics to be able to exercise correctly. What we saw is that people didn't have the range of motion and they didn't have the motor control and it was just a recipe, it's like a Ponzi scheme, frankly just a Ponzi scheme.

Dave: One of the things and I have done work on a lot of different schools and functions and events, just looking at really to have no pain and I'm amazed at the things I can do. My hip flexors and if you are not into anatomy these are like muscles kind of on the very front top of your hips like below where your belt would be. Mine tend to turn off and I don't feel it but you can tell it. Like wait there's no strength there all of a sudden.

I've been working out for the past year or so, like actively turning them back on consciously where I guess I should flex that because it's not doing anything. It's changed how I stand, it kind of adds a little bit, it's kind of raised my butt a little bit, I mean that's what I hear. It's fun to look at that. It's astounding but it took a lot of work to feel a hip flexor turn on. How do people who just like have stuff like that, how are you ever going to notice unless they come to visit you in San Francisco?

I've actually sent some clients your way because if you live there it is the place to go.

Kelly: The issue is we've gotten so far down this path we are like hey I have to have a ninja guru to be able to turn me back on right. Unfortunately it doesn't work that way, that's not going to solve numerous problems and we see these issues of scale everywhere. The army has one physical therapist for 5,000 soldiers, right and like that's not a scaled system that ever solves any real meaning.

The issue around the body is that one it is self corrected, it really is. If you put it in a better position it turns on. You have to remember that you're wired for hip extension, you have, the plumbing is already there, the practice patterning is about pulling the wires through the conduit that is already laid there. Some of these is okay, I can get into a good position, my hip flexors turn on but then I have to practice being in that position.

I have to sort of get my 10,000 wraps in whatever it is that reinforces that motor pattern so that when I don't go unconscious or I default, or the environment pulls me into a less favorable position A I have to commute, I sit at the table, write all of those things then hopefully the practice can hold

the pattern. What we believe is that if you are in a good position things work and if you are in a bad position things don't work.

We for example don't do a lot of glute queuing around our house, in our gym it's not part of, we don't do hip thrust ...

Dave: What the heck is glute queuing?

Kelly: Like bridges, like glute activations. You don't need to activate your glute you need to be in a good position that if your hips are short, your inside hip is short then your butt doesn't turn on and then everything sort of defaults to like, so thinking your elbow is going to be stiff you'd rather just hang on the elbow and over extension. That's what your body will do, that's, I like to think of it this way, you have these circuits of your body.

Like your knee, I like to think of them as fine as they need to be active. What you said was hey I have this hip flexor but talking about the musculature of your hip doesn't talk about the soft tissue of your hip, the sliding surface is faster. It doesn't talk about the joint capsule, it doesn't talk about the fact that you need to make sure your feet are straight so you can screw your feet into the ground to [inaudible 00:20:12].

All of those things are crucial so that your system turns on again. We have to be thinking in terms of those systems in the first part and in the second part is are we giving people the tool so like they can even get a chance to get back to that? You have to have a moving practice, probably 60% of what we do mobility wise is talk about how to move correctly in whatever skill or thing you are doing. It's easier to do that in a very formal environment whatever it is because it is easier to see what is going on.

That formal environment for us happens to be the gym but it can be in any movement practice, palates can pick it up right away, yoga will pick it up right away, someone can see it. The two things is do we have people aware that they are making movement errors and because the body if you don't put it into this sort of closed position will stay in an open position but seek stability some other way.

Things that look stiff are stiff because you are moving like crap. The reason your cuffs are always tight is your foot is always turned up and you are running this mechanical system through a collapsed arch and part of your cuff is always getting tight trying to stabilize that thing. If you treat something and it is chronically tight chances are you are not really addressing the problem, you are addressing the symptoms and the problem.

That's why ART hasn't cured cancer, [inaudible 00:21:34] didn't cure cancer, physio didn't cure cancer and I say cancer, we've got a movement cancer because we are not thinking about the other piece of this. The environment, right, sleep, stress, all of those things right, that they seem to matter a full third of the equation, the movements and the movement practice and then the tissue health.

We've always sort of addressed one of those things at a time and you have to be thinking in terms of the system and this is why you and I are friends.

Dave:

I love it that you talk about systems because the systems thinking for me comes out of my degree in decision support systems and something about artificial intelligence. Emerging behaviors happen and breaking the body down to pieces for me never worked. I love it you talk about the joint as a system and then you talk about the body system and then the interaction of the body with the environment as a system.

One of the reasons that I had so much knee pain growing up I honestly did not know you are supposed to be able to walk without it hurting because I played soccer for 13 years competitively and I just thought pain is just like what you do with [inaudible 00:22:35], it's supports to hurt. I was chronically inflamed, so you have chronic inflammation. I was eating gluten which funny enough has lectins that sticks to the glucosamine that lies on your joints.

There you go, I'm now getting this problem and on top of that I had adrenal stress large because of toxic exposure and adrenal stress affects the stability of your knee joints. We found that out though acupuncture kind of stuff, so I have all these stuff going on and the way it shows up for me is I

guess my knees hurt all the time and it is kind of normal and I walk funny and I limp a lot. Hey, that is just the normal state of things you didn't even know it.

I find so many people out there have these things like oh yeah, it always hurts. Like my back always hurts when I wake up, my joints hurt. That is not normal and it was normal for me and now it's not normal. If it does happen I could turn that back on, give me oxidized oils and deep fried tempura the next day, funny enough my knees hurt. Amazing, so how often do you describe something like dude you cannot have pizza and beer every night and then work out like this and have a fully functioning system. Like what part of your practice is like dude you've got to stop the really bad stuff.

Kelly: In the book for example ...

Dave: The book being unlocking your potential to run naturally because people don't know the title here?

Kelly: Ready to Run, is people were not given the sort of the follow up to born to run. Great, I'm in, I love the story I'm in. it's so good that we are able to point back at all our friends working in the nutrition environment lifestyle stress component. Because you are an expert in it and you can talk about it with all your friends I don't have to address it at this point here.

Dave: Yeah, so you send people to other websites and basically say you should be [inaudible 00:24:22] or whatever. There are lots of possible information options right?

Kelly: Resisting information, right, eating like a human being should and that's really, we started working with this great company called [Jigsaw 00:24:35] recently. I'm not trying to plug no but other than saying they are doing genetic testing and blood testing and subjective history. When we cut in half and count the rings, how do we measure environments because it's not ... You eat bacon every single day and your paleo, that is a recipe for disaster.

Dave: It is.

Kelly: You have to know what's going on and we can make some general statements, lean proteins, high quality fats, as many vegetables as you choke down. I don't eat almonds because it turns out that was a disaster for me.

Dave: Yeah, me too.

Kelly: I don't process omega three because of my genetics. I have to eat a little bit more omega 3 than everyone else, some things like that. The point is that we can correct so many of these things but we are going to eventually have a conversation about all of them. If you are at the top of your sport I can have you tissues to be as healthy as they can be given your environmental demands and your environmental loads, I get your mechanics correct.

The problem is with humans is that we are so miraculous at buffering what I say is they like smoking chocolate donut diet. Right, I know world champions who can smoke and eat chocolate donuts they are the best in the world. It doesn't mean they are the best they can be they are just the best in the world and we confuse that ability. You are like the flex capacitor that comes back and you can digest garbage and go out to the world. That is not optimal, that's functional.

When people say functional like you know what functional means in physical therapy? You can get out off the toilet, you can wipe on your own butt and do your bra. Congratulations you are functional, that is far away from thriving or being pain free, that is getting about the business. We are going to have to talk about all of these aspects and they have to be addressed. I was just out talking to the WWE all the wrestlers, those guys have gotten religion and they've gotten very serious tripe H.

Their training table is the best, buffet training table I have ever seen in any place. Gluten free, fat beautiful rich, high quality meat, game like, I'm like oh you guys get it. They are spending more time and all I lectured on was sleep, hydration, compression. Like can you manage these aspects because these are things that are killing you in spite of your best practices over here?

Dave: I cannot wait till later this year; I've got a hack for hydration that is out of this world. I'm going to specifically send you some of it that comes out. It was so strong I had to stop doing it because I was getting dizzy, I was hydrating so fast without sticking a needle in my arm.

Kelly: Wow! The research says that sticking a needle in your arm is not the most efficient way to hydrate, isn't that funny?

Dave: I have never seen research like that but I believe that I know a lot of the Special Forces guys that I've worked with, like ah we drink all that lime, we hydrate the next morning and then we ran 25 miles and blew up some targets and you are like holy crap, you guys are talking to me.

Kelly: Well they extremely buffer maybe more than you could and I think this is what is interesting. I work a lot at the military and ambient is like the dirtiest secret in the sports and in the military. What we are seeing is boy you can't be a vampire operator or a vampire soldier and then not pay that piece of physiology. You and I understand before we started you can't choose you physiology, you can't for a short time, absolutely.

You don't need to sleep the night before world championship, you don't. You will still kick butt but a week of no sleep, go ahead and adopt a baby, have a child, let me know how your performance goes. Something is going to give and I think what is really happening now is we are getting sophisticated enough that people can start to pull and push. Boy, my wife and I have really, Juliet is a two time world champion, legit athlete, we all work out and she's my training partner.

We listen like, desire to train today and she's like no I don't feel it, and I'm neither do I, we won't train. Literally when the frying pan is hot we cook and when we really start to pay attention to how we train, [inaudible 00:28:40] does the same thing. No you listen and you are like wow I don't think I need to stress my system anymore and I don't need to measure that to be able to feel that. I need to be aware and it is very simple.

Dave: This means listening to your body will do and for me I was unintentionally, I grew up to not listen to my body like God it's just pain, it's just weakness, it

is whatever it is. Its lack of motivation, I'll just do it anyway. That leads to injury. When it's not time to do something and your body is telling you no like seriously I mean it, don't do that. Then you do it anyway you don't have the stability you need, you don't have the energy that you need and bad stuff can happen.

For me it was a conscious decision to learn how to listen to the signals from the body but also to not over listen to them when it's time to put yourself, to have an extra plate or whatever. That nuance where do we learn that as kids? That's a real question. Like people start running when they are kids, why don't those kids learn optional running or even just how to push themselves or not push themselves in something as simple as a PE class?

Kelly: Well, how about this, PE isn't about exercise, PE should be about physical capacity. Can you do perform body skills and those should be a strength component style eventually, that's appropriate but we started becoming interested in the century lifestyle, right, something we are just rallying, if you and I are both standing right now and the reason I really took, like it was not my life's dream as a child to lecture adult men about posture.

That was not what I wanted to do but when I started getting on the bottom of a lot of the root problems of the ecology of seeing these athletes was because they were sitting so much. I had won division one football track the sitting; they were sitting 14 to 16 hours a day. That's a lot of close hip time and then they were standing up and having knee pain, low back pain, all the hepatology [inaudible 00:30:36] and I was like here is an idea.

If eating donuts makes your joint stiff don't eat donuts. If sitting 16 hours a day is causing this problem how do we mitigate these things? In the along the lines of going backwards I started looking at my children and I was well if sitting makes me feel crappy I look at my kids and I'm like they are stuck in chairs that don't fit them in school, a desk that is one size foot tall. Finally this year we got approval, my daughter's fourth grade class was a stand up classroom.

It was the first standup classroom and we think first classroom in California, it is a public school, we threw out the desk and we said hey we think this,

here is what the research is as, here is every study we can find because that's our next project and they went for it.

Dave: Holy crap Kelly. Okay, I'm going to talk to my kids' school about that too. What age are your kids?

Kelly: Six and nine, George is in the fourth grade but what they've seen is all the kids love it. Here is the crucial part, there is a bar at the bottom of the desk that pivots and they put their foot on and they start fidgeting. They can fidget all day long and no one can see the fidgeting. They change positions ... If you've ever gone drinking in the bar, the captain Morgan pause exists for a reason. By putting one foot up you basically take an extension load out of the back and you can maintain the upright posture.

As kids are moving, they've got some stools that wobble so they would create a move it rich environment, kids will stand more that 14 minutes to 15 minutes in the chunk anyway but kids all love it. We see the technology flood into the schools what we've seen is this is a problem. Kids are on the desk, every laptop, how are we going to address that? We are always looking for what we call blocked positions. My friend Carl Paoli gymnastics extraordinary, freestyle movements, he is always looking for ways to trick you into being safe without knowing it.

For example when guys jump off of the airplane right in the military, how they teach you to land feet together. That foot together position prevents you from having your knees cave in and tearing the AC up. It's a blocked position. The same thing we teach kids that same position, to jump with their feet together and that automatically protects their knees and ankles. They can't collapse; they can't end up and so how do you jump a land, [inaudible 00:32:51] boom solve the problem.

They get stronger and motor control [inaudible 00:32:54]. Well if I put a little kid on a desk when they are sitting up guess what they are going to do, they are going to slouch, they will round and the technology no longer is the problem because we have solved the environment. We got interested in this because we are like well if it is bad for me what the hell is going on with the rest of the kids? No brain study supports sitting, it's a disaster.

We also got issue because we were looking at kindergartners all kindergartners run beautifully. They run on the ball with their foot the same way you would run if you were barefoot, you would run correct, you would self correct if you run barefoot on concrete within ten feet. You will start running correctly, you will shorten your stride, you would stop over striding, you would shorten your stride, your stride frequency would come up, you will run correctly.

What we saw was that in my oldest daughter in the first grade halfway through the first grade half the cohort, half the school or half the class started heel striker. I was like what happened? Did the kids go home for Christmas and ask for some heel strike and motion control shoes? This is what all the cool kids are wearing? Well I think it was a combination of wearing high heel shoes and this environmental sitting load and all of a sudden we saw this change in motor patterns occurred because the tissues forced it.

I think that is what we've got to be thinking about is that are you cultivating or making a better decision right now about everything?

Dave: Kelly Bulletproof radio is pushing about eight million downloads. We are regularly number one in health category on iTunes. A lot of parents are going to hear this, is there a name for this task because I suspect a few school districts are going to get some craze after they hear this?

Kelly: That's great. We started a placeholder page called stand up kids and it's a nonprofit world, we are going to put up interviews and tell people how we did it. We have two things we sort of feel strongly about. One is that we don't have any vested interest in the desk. Maybe I should invent child's desk that will be [inaudible 00:34:46] approved, we will get there. In the meantime we have a desk, we are happy to give everyone information.

Deal with the standupkids.org right now, you have our information and we are happy to email you back about what we are doing. What we have seen is if we get people better information they'll do it. All the information that will be there about the desk we found, if you can find a better desk let us know, we will let everyone know about it and the second piece is. We also

recognize that schools because what we did is we just came in and bought 25 desks.

The teacher was like we will put our money where our mouth is, we feel so strongly about this. We've got donors shoes' sort of lined up to try to come in and be part of this because if we are really serious about putting all this pathology my kids are not gluten free and they've selected it on their own. Georgia eats pasta she gets sick, Caroline my youngest started to go to birthday parties and she would only eat the frosting she's like yeah I don't really like the cake because it made her sick.

If that's the case, if I can teach my six year old on how to not eat [inaudible 00:35:45] on gluten then that is where we are going to see the significant changes. The other thing we see around the school is this, we are going to try to have a designed platform or a designed contest where people can come up with hacks for existing school architecture can we group two desks together or put a block on top of it.

What we are seeing is we lost the solutions to the local communities can make the best decisions for themselves starting with brand new hardware is not always the best option so how can we improve it and call off the system, the teachers love it, the teacher walked in and hugged me. She's like, I'm like how is it going she is like bam, awkward, like is this okay, you are touching my pelvis and your pelvis and she is like this is amazing.

Then what gets us back to all these you are talking about monkey brain, ADD, if everyone on is listening to this has not read the sports gene by David Epstein, you've got to read it, there is large genetic drive and genetic component is the desire to move. He talks about a study where they have mice that one mice runs one mile a day and one mice runs three miles a day, they breed the three mile mice and pretty soon they have mice that runs seven miles a day, they give him a little [inaudible 00:37:00].

Suddenly that mouse runs one mile a day and his inference is wow maybe we are suppressing our kids desire to move, I am a physical therapist, I have had training, worked in pediatrics, kids with real ADD diagnosis, ADHD diagnosis, you can tell those kids right away. We have had a couple of

squirmy families with boys who have been brought in, this is our only and of like four or five, they have brought in and they are saying with your kids' spectrum.

ADHD let's talk about drugs and our parents have freaked out, our friends and we are like get him a standing desk, put him in a corner behavior solves and [inaudible 00:37:36] already because the kid can move and doesn't squirm in the chair and I don't have to ever talk to him about this crappy back position and we cured cancer.

Dave: I can tell you I am going to talk with my kids' school and my kids are five and seven, they are in enrolled in a program where they have to spend two hours a day outside, it doesn't matter if it is raining or snowing, like they have clothes for that and they get to go out there and the first thing I'll do is oh tree, like that is an opportunity to defy gravity and fall as hard as I can.

You can see in the muscular trail of a five year old, I didn't know five year olds could be ripped but when they do that it happens at least that they are not eating crap all the time. This fidgeting is very cool, I had no clue we were going to talk about that because I wanted to talk about running with you because there are a lot of people who are doing marathons especially people who are like oh I got diagnosed with some sort of chronic illness, I think I'll do what killed the first guy who did it.

It's a remarkable feat of human logic, I wanted to talk about that, this stuff is profound.

Kelly: Well I am an ultra marathon, so I have done it I ran down 50k I totally get it but we were seeing is just how do we just prevent, like why are women filtering ACLs nearly four or five times over the men, well some of it we are seeing that this pattern develops and the researchers are saying listen the kids don't have core strength and core tone to be able to manage mutual spine, we are actually physically weaker than we were 20 years ago.

Remember the present physical fitness test, it doesn't exist anymore. Even teaching to that low baseline of being able to change direction, do a pull up, do that sort of this, it doesn't exist anymore and if we are going to get

to the bottom. We are going to see how to address the environmental load and that is what this book is really about, is trying to get people coming back to here is the baseline movement standard.

We know that it is going to be a moving target but let's give you a place to go and say hey look we may not be there now but we can get you there and you can always see how far you are in and as you want to run because running is fantastic, once you can run it's fantastic, we run hills, we run shuttle runs, we probably run three times a week and one of those days are 400s or 800s, sprints right. I don't run more now sometimes I do a three mile repeat like once a month something like that but I do a lot of 400s, a lot of sprinting.

Dave: Our drive way is almost exactly 400 meters which is kind of convenient.

Kelly: Sort of horrifying at the same time, I don't know why you'd want to do that.

Dave: Run to the mailbox, run back.

Kelly: That's right, touch the mailbox vomit and turn around, what's happened is in the book is really trying to get why are people so congested around the ankles, it turns out when you sit, one of the myriad of physiologic issues is that your [inaudible 00:40:26] trigger life shuts down, not only is that automatically compromise your immune system and healing [inaudible 00:40:31] but you don't hump the lymphatic system which clears the congestion which is a mechanical pumping system.

They overflow and got in ankles or sat and gotten into ankles, what your body is telling you is I can't clear the congestion out of the fluid, it is an essential fluid and it's congesting, that congestion stays around there, now you have stiff tissues until you are [inaudible 00:40:52] eating right I have made this error run, sprinting to work, I go to work I go run, I go right back to my office and what we are seeing boy if you get a standing desk, if you wear some compression socks after you train, if you are watching your hydration.

In the book we pull out Stacy Sims who is [inaudible 00:41:12] Osmo some of the best thinking about hydration on the planet right now and she's like there is thing called salts, take a pinch of salt put it in your water and absorb the water you are drinking. Quit blowing out like everyone is drinking a gallon of water a day I am like a gallon of water a day you are in idiot, how much time are you peeing?

Dave: I'm sorry I've got to share my bio hacker aspect on urine and see what you think about this.

Kelly: Did you say urine or your end?

Dave: Urine, now if you are thirsty and you drink it's remarkable it happens but if you force yourself to drink more water than you want you get that super white clear pee which isn't a sign that you are a good person, if you get light clear pee there is two causes for it. Number one is you ate something that was bad for your [inaudible 00:41:58] and bladder so your body intentionally pulled plasma out and so I might dilute this, I am going to excrete it so I don't get cancer or some other even worse thing that's more like short term.

Kelly: Your body is not that sophisticated what are you talking about?

Dave: Oh come on, it's like well if I had to pee and there was not much pee and it was slightly yellow yeah your bloody was diluting some crap you ate or something that maybe you breathe even or you drank so much water. Here is the thing pee is yellow, holy crap anyway that is fine, healthy pee is yellow.

Kelly: 100% right, if it is yellow let it mellow like no one said if it is clear don't flush, it doesn't even rhyme and what you are seeing is people are drinking massive amounts of water, [inaudible 00:42:40] their kidneys and actually flushing the salts out of their systems, we have so many athletes who come in and we've seen this error when people are eating cleaner in their diets now, cleaner also means that they stopped eating any salts.

Dave: Destructive, you have to have salts.

Kelly: Regular sodium chloride works but you need, is that Himalayan sea salt.

Dave: Its Himalayan sea salt I keep it on my desk because I put it in my water or I get water with minerals naturally, mineral water, it's like if you don't do that, it's so simple.

Kelly: It makes a huge difference, if you have to pee all the time it's actually an error, if you find yourself thirsty or peeing all the time you are actually taking too much water, in fact I was talking to the WWE about this and I was like how much water do you drink ma'am, she is one of the divas and she like a gallon and a half a day and I am like how much do you weigh.

She weighs like 120 and what was happening, I was like you are drinking enough water for like a 350 pound guy in the middle of the NFL and everyone started laughing because this woman peed herself on an episode of the divas and she had lost her bladder control because she was super hydrated to be healthy and it is not healthy, animals drink when they eat.

You'll see an animal eat and then drink right away or they'll, like you've got to be thinking minerals in there and you can actually, you think you are an adult woman try to get two liters a day and that is pretty reasonable. Adult male three liters and like that's not crazy and that's if you are exercising because all the other fluids in your apple you eat, if you eat fruit, it takes all it's water but seeing as you can way pull back, you've got to treat the hydration accordingly.

Dave: I love that we are talking about this even that we are focusing on the system of the body, even as it applies to running. I have to mention if you are hearing background noises that's because we are recording this live in across the gym, so I am just across of it. You are hearing guys basically grunting and dropping heavy things ...

Kelly: Oh no, those are girls.

Dave: Those are girls, even better why don't we have live video oh wait ...

Kelly: We can do that we got [inaudible 00:44:47] they are super legit but we had to spend time talking about hydration is that, your tendons and ligaments are comprised mainly of water and what ends up happening is when they become a little mushy or dehydrated, they are all a little bit friable. The way your tissues work is, especially tissues that are elastic or absorb a lot of forces, they have this viscoelastic property that means the higher the force you put on them the stiffer they get.

Dave: That comes from collagen right?

Kelly: Weird.

Dave: Funny what's on top of my fridge, I've grated collagen I take that stuff everyday because like you can't hydrate tissues properly without it.

Kelly: What we are seeing is, we have to get that water into the tendons, the cystamine, there are some other ways you can hack that, what really works is being hydrated all the time, your body will take care of it, you can super push these things but what we are seeing is that those tissues become a little bit friable and will get mushy and they don't withstand the defatation 400, 20 steps, 460 steps in a 400 meter run.

That's 200, three times body weight impact on your Achilles and if your Achilles is congested and dehydrated imagine what happens to the health of that tendon and now we've have a mechanism for a lot of the dancing problems. Your articular cartilage is composed mainly of water, when you take glucosamine, that's glucosamine or glycan I think is the right thing. The salts that go into the articular cartilage is the proposed mechanism of glucosamine it pulls water into the cartilage and makes the cartilage more robust.

You know what works really well, drinking water, we see all the athletes that come in who have really bad arthritis, all do better when we get them off the crappy foods and get them on a regular regiment of hydrating and forget just the VO2 output if you are a little bit dehydrated your VO2 goes, your thermal regulation goes, post exercise nutrition, protein synthesis

can't even happen because you are dehydrated. It's so cheap to have some slat on your desk and drink some water, like solve the problem today.

Dave: It remarkable and this idea that I am a good person if I go for long jogs and I restrict my sodium. Like man you want to break yourself, that's a total recipe for it, I am amazed that we are talking about sodium and peeing even though we are really talking about ready to run but if you are lacking in sodium or you are not hydrated, are you ready to turn?

Kelly: No and that's what we did in the book, the book is not about running technique, it's about all of the errors and tissue and range emotions and lifestyle pieces like wearing flip flops, some simple things that you can do. We advocate for what we call barefoot Saturday, barefoot Sunday. We are just spending the entire day barefoot. Recently my wife and I were, our daughter was at a junior rough night camp, we are trying to get her into being a boater.

We spent five days barefoot, I exercised barefoot, I didn't out shoes on for five straight days, tell me unless you live in Hawaii the last time you were five straight days, you may be different but most people do not go that long and everything felt better. My eyes started shortening my stride when I walked, my feet were tough, I ran on rocks. It's amazing, forget the grounding negative eye on like who cares, you were designed to be barefoot, this is one of the things that we think can get your feet ready to be able to go run, I want you to run.

Dave: There is something else I wanted to ask about because you are one of those guys who might know the answer to this and if you don't just tell me to go to pound sand. Actually some of the highest nerve density in the body on the soles on your feet, my entire life I have been a tender foot, it really hurts and I'd make myself be barefoot because I knew it was good and like I am walking on the ground in the front drive way.

I finally solved the problem and I sat with my feet on my sleep induction mat which has like hundreds and hundreds of spikes on it that is designed for acupuncture, acupressure stimulation, it [inaudible 00:48:50], it makes you knock out, after I did that for about a week and I started standing on

this which is unimaginable I can walk outside and I am not as rough footed as my kids who will run over like cactus.

They just don't seem to care their feet are impervious but for the first time in my life I am able to just walk around outside and not really care too much about the terrain. For me at least there was neurological adaptation, I felt like I was getting so much more sensory information that my brain was changing because I was barefoot, not because I changed my movement pattern but just because a part of me that'd been numb wasn't numb anymore. Do you have science about that like changes in the brain because you are barefoot?

Kelly:

Well I suspect that when you look the sensor, it's use it or lose it and your body doesn't give you any information, it spends a lot of time hunting for the vacuum and you start giving it lots of input, they are basically smothering it all the time in the cushy shoe and then you would expose it to this thing and the sensitivity was probably a little off and around pain, they call it cortical smudging, your brain doesn't know what happens.

I suspect also that you start to down regulate like any weight bearing surface if you don't use it it's sensitive the first time you pull up your hands and killing, pretty soon it doesn't take much to down regulate that, it's interesting that the Chinese have been walking on pebble surfaces and yet we've been making shoes for as long as people have been around like a little moccasin existing for a reason, it still makes a difference.

I was walking, I was in Nepal when I was 20 and I was working there, did a long trek and then I saw people carrying like 80m kilo loads barefoot up in the mountains and you are toast. I was just in Africa for three weeks with my family and I looked at all the Maasai feet and all the kids are running around barefoot and all the Maasai who are barefoot their toes don't touch, your toes shouldn't touch and if you looked down and your toes are touching it really says a lot about how mangled your feet are and how long they've been mangled.

Normal feet there are some beautiful Maasai feet they are spread out and I think what we are seeing is a whole generation of kids who we haven't

never spaced out outdoors, it is painful to spend some time barefoot and your feet start to strengthen and probably down regulate it a little bit, that's one that I can come up with.

Dave: It makes good sense to me, I've certainly played ground because there is yoga toe things I actually force myself like sleep with spaces in my toes to spread then out and then I develop the muscles after that but it took a good year of Yoga before I could consciously spread my toes, I didn't have the muscles and it's cool to be able to do that, I don't know if it's that useful but ...

Kelly: It is very useful to grip the ground and see where you are going and imagine if you had your hands and you couldn't really use your fingers, that's the equivalent of it.

Dave: It is like having flippers,

Kelly: Which some people I know do. I think we did an episode on mobility walk, you can actually take your own hand and wrap it through your own toes and you can spread it out and then you can twist, you should not feel any fascial pain, you grab your fingers you should be able to get like a 90 degrees between your toes spacing.

Dave: To twist like that?

Kelly: I should be able to spread within the webbings. I should be able to get 90 degrees between everyone of my toes.

Dave: All right, I am going to try this now. I don't think I can get my toes up to the camera.

Kelly: In both directions, so I should be able to go forward and back.

Dave: 90, between the big toe and the next toe, that sounds highly suspicious.

Kelly: You grab the big toe and the next toe you should be able to get 90 degrees between the two of them but when the fascia your are stiff and like you

said was that it took you a while to remodel your fascia, we know it takes about seven months to turn all your fascia ...

Dave: Let's see if I can do this, I am aiming at my feet which, well I've been barefoot for a while so let's see what's going on here, you can sort of see my toes.

Kelly: Pull apart, you should be able to get to 90 and it shouldn't hurt.

Dave: It actually hurts, it actually caused weird pain on the outside like between my fascia and my cap on the outer back left side, it could be also that I am standing with my leg bent at a 90 degree angle above my hip.

Kelly: What I am telling you is that one of the things that we are trying to show but that's in the book is, you can do that while you are watching TV, you can do that while you are sitting around in lotus pose, lock your hands in, lock your feet in and start recovering some of these tissues. Because basically we are saying oh yeah it's all about the hips and it's all about the shoe and it's like we are not making the basic assumption, the arch is a non weight bearing surface, period.

How many bridges have you seen that have a support right in the middle of the arch, if it's not it's an arch and so when you [inaudible 00:53:47] that thing your feet get week and it's going to take a year, it takes about three or four years for child's arch's to develop, how long have yours been asleep. We have been able to reclaim a 100% of the archers that have come in flat, no one has flat feet.

After they cultivate the standing awareness position to get their feet turned on where you reinforce and strengthen the feet, you've got to do it, you've got to have strong feet.

Dave: I am still working on getting my archers back but they are stringer than they have ever been but I wouldn't say I am done.

Kelly: You can do a test, let's see how strong your feet are, imagine you are jump roping but you are just going to jump rope on one foot. Take the other foot

put out, squeeze your butt, you feel like you are going to jump rope on one foot 30 times.

Dave: Okay, I'm not going to do it right now because I am wired up to a microphone.

Kelly: You get the idea, that is one of those ways we can build better, hey before you go running pick up a jump rope, let's strengthen your feet, let's make sure that you hit some of these basics standards and so that man when you go out and run then it's just your cap protecting if there injury not us.

Dave: That is awesome. It is also right at the end of the podcast which means there is two final questions.

Kelly: Here we go the answer one is yes these are my real caps, I knew you were going to ask it.

Dave: I was sure you got cap implants, I was so sure, the normal question is what are the three most important things that the recommendation you have for people that want to perform better but you already answered that in episode 43, I want to know something else, your top three other pieces of advice either the next three or give me something new and if you don't remember what you said before that is okay. We were all going to say sleep and stress and things like that but let's talk about running actually, I haven't done this before.

Kelly: One is invest in a pair of compression socks, if you fly on an airplane, if you are forced to sit in a conference, you are going to be compromised by our modern society half the system and compression socks are 20 bucks.

Dave: Do you believe in compression socks when you are in conference room or just when you are in flying, do you wear them all the time?

Kelly: I think you should wear them all the time.

Dave: Interesting, what is the best brand then because brief shop came on in and told me about this brand whose name I forgot that I look like a super hero when I wear them but I wear them but I wear them when I fly, like they are

professional grade recovery compression socks and they absolutely kick ass, do you know the ones I am talking about?

Kelly: Yeah, well there is a lot of good companies out there, 2XU is great, by sense compression, I think you can go into almost any store now, body craft and you are going to find good compression socks. Take a look, try a couple of pairs, they are hard to get on, the real issue is if you are moving around and sitting in a 15 minute meeting don't worry about it, that's not what we are talking about.

Understand that being sedentary causes problems in your ankles and we look at the ankles and the foot as like a hind repository capacity. If you have good ankle range motion you can make up about hip range motion and you can do a whole bunch of stuff because your ankles are flexible. Treat your dogs appropriately, that would be one and sleeping in easy, if you just blew yourself out learning or training hard or whatever you are doing, sleep in some compression socks.

I think all the time we don't want you to be looking at those like a crack but understand it's a fantastic [inaudible 00:57:00] and it is cheap and it makes a huge difference. Number two no phones in the bedroom, no technology in the bedroom, your light needs to be red, your alarm clock and upside down [crosstalk 00:57:19].

Dave: What do they call that when girls are in the same house they are like twinsies.

Kelly: The issue is if any of that light messes you up, you travel and a lot of us have to travel for work control your environment, you've got to sleep in a cold room, you have this cool pad sleeping mattress thing in the website, [crosstalk 00:57:40] I just talked my wife into getting one, I am getting one for myself, she [inaudible 00:57:42] it's so cool. Make sure the room is cold, dark, ear plugs, eye mask, no phone and now we can start talking to sleep hygiene's is huge.

Dave: There is one more thing I got to just recommend, since you are on it and I agree with everything you said, black electrical tape, wrap it round a pencil

and when you are in a hotel with those stupid flashing green security alarms or fire alarms, just take the tape and stick it over it and just leave it there for the next guy anyways, it is like we can slowly back out hotel rooms across America.

Kelly: I love that, I always like, I literally take shirts, the blackness that's so great, I would say the last thing is that I am not seeing people warm up and cool down, people are basically going like, you kind of kick your leg a little bit then you go run, you are designed to know how to sprint away from danger, you should be able to lift up 400 pounds cold, it's not the best way to move. If you just give yourself a chance, I was just doing an article today with state of power magazine a big paddler stone.

I was like we had a rule, we said no hard strokes for ten minutes if you did running drills or jump rope or got yourself prepped and really started walking faster and faster and faster, you just made that five or six or seven minutes of warm up, you would see that your performance would be better, you wouldn't have as strong as second wind effect where people get their second wind, second wind is what I call first warm up.

It takes a while to shift the blood from your stomach to the rest of your body, just takes a little while, it takes a little while for your veins to start to dump that blood back into the rest of the system. Physiologically it takes about five minutes, quit running the engine when it is not warm, you never race a car. Two cool down, I cannot, we say leave the gym cold, be cold, you've got to rub the engine down, I am not saying if you are doing a big run you need to spend 30 minutes warming up and 30 minutes cooling down.

That would be ideal but building in some cool down the last piece around the cool down piece ...

Dave: I just want to say this is chapter 11 in your book you have all this there, right?

Kelly: Yeah.

- Dave: If this is something that is important to you, check out ready to run so you can learn all these in chapter 11, it is a good chapter.
- Kelly: October 21st, it's coming up, one thing is that I feel like people are having a hard time down regulating, we've done so much about up regulating and we are not doing a good job of down regulating. I just talked to someone who basically they put their lights on to red lights they start to cue the family.
- Dave: Our house has red lights, I was going to show you but our bathrooms have red lights in the showers, they totally rock it's amazing.
- Kelly: It works at giving cues, don't watch TV and then decide to go to bed, that's a disaster you are like wired to get the serotonin boost from the same serotonin boost from [inaudible 01:00:34] the phone in there it dings as I open this up I don't get any messages, I don't get any tweets and there are no alerts it's a dead end. One of the things that we are seeing is these kind of errors make a gigantic difference, you can't down regulate, if you roll around on a ball, on a beach ball, on something like your kick ball around your guts.
- If you need to turn off this [inaudible 01:01:02] massage, it kicks on your passive [inaudible 01:01:05] nervous system and literally puts you out and have you ever had a massage, of course, how did you feel after a massage, like you want to fight or like you wanted to be blitz out, right? If we can get people to do five or 10 minutes of soft tissue rolling especially one on their guts it triggers your body that now is time to sleep and down regulates, that's a revolution right there.
- Dave: Kelly I am going to send you a couple of things if you don't already have them, one of them is the sleep induction mat for specifically inducing the parasympathetic response, different than this I'll just send you one. The other one is Gabawave which is liposomal form of Phenylgaba or Phenibut and you take it in the morning and it helps you relax all day long but then when night time comes bam you are down and out because like your anxiety is lower.

I have seen profound shifts in people's ability to enter deep sleep even when they take that in the morning. You focus plus sleep, I think when you talk about that hard transition, I found that in my own life I have trained my nervous system where I can turn on that relaxation response with heart rate regulatory. When you get to people who still have that basic thing going on, the ability to get Gaba in and keep it in is pretty amazing, I will send you those and just give it a try.

Kelly: I love it, well I, this Genesolve this company that we worked with makes and when I had the stress and it's phenibut and V vitamins and at night I get 5htp and Phosphotidylserine because what we are looking at is how I do not live a normal life, I live a life of an adult working professional with two kids, it's the same life of everyone else who is listening. I am not special.

I have the same crazy life everyone else does, what are the places we can push on, we've got to balance out the plate and grow the pedestal and that's what we are talking about. Looks great, you've done a good job saying here is how we are going to push this, right, we can push here, we can push here, I am saying let's grow the pedestal at the same time and suddenly we have a very, very stable organism that thrives until we decide to die.

Dave: That's awesome, I love that and on that note, this is going to be one of the longer episodes there because we talked about too much goal stuff. Kelly I cannot wait to see you at the Bulletproof Conference September 26th through 28th, bulletproofconference.com you and about 36 other top notch speakers including like brain hackers, everything you can think of, like Daniel Amen, Jim Kwik, it's going to be amazing.

You are going to be on stage with other people who are kicking ass as much as you are.

Kelly: My hands are starting to get sweaty.

Dave: Tell people your URL, tell them where to buy your book so that people who enjoy this podcast as much as I have can get a chance to buy.



Kelly: Our home base is mobilitywod.com and we've got links to readyrunthebook.com everything is on there, you can find us, don't be put out by the website, we've got about 600 free videos and then we have a pro level user which is like graduate school for some of this stuff. The whole thing is searchable. You can search we are trying to get it so that you can take a crack at fixing yourself, start there first.

Dave: Okay, that is great advise, mobilitywod.com tell us.

Kelly: Standupkids.org it's coming.

Dave: Thank you, the standkid.org and mobility wide web links in the show notes and when we publicize this podcast just come to bulletproof.com and you'll be able to get all these links so you can just basically keep up to date with what Kelly is doing, if you care about how you move and really about how you are going to run and the whole system of the body, I have come to respect Kelly's work greatly and it's worth your time. Kelly thanks again.

If you haven't had a chance to learn about our new sleep induction mat check it out on the website at upgradedself.com it helps me get to sleep faster and very specifically to get more deep sleep.

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