EPISODE 200

[INTRODUCTION]

[00:00:10] AVH: Hello everyone, welcome to the Paleo Magazine Radio Podcast. Guys are you excited as I am? It is our 200th episode. Okay, I've only been around for about 50 of those episodes but still this is so exciting. We made it this far with 200 episodes of amazing guests on the cutting edge of functional medicine and ancestral health and nutrition, strength and conditioning, sports and coaching, healthy products and food and so much more. And, I am just so lucky that I get to be part of it and talk to all of these awesome people. I get to learn so much, I get to talk to you guys. I'm really enjoying the process. I hope you guys are too. I'm just pumped.

So, what better way to celebrate our 200th episode milestone than with an amazing super famous, super awesome guest. Today, I'm talking with the *Supple Leopard* himself Kelly Starrett. Now, Kelly needs no introduction but I'm going to give him one anyway. He's an author, speaker and physical therapist. He co-founded San Francisco CrossFit, which is one of the first 50 CrossFit affiliates, so he's an O.G. and he founded mobilitywod.com which has revolutionized how athletes think about human movement and athletic performance. He's also the co-author of the two New York Times best selling books Becoming a Supple Leopard and Ready to Run and he has worked with military, the NBA, NFL, NHL, Olympians, you name it.

So, you could say this guy knows his stuff when it comes to body mechanics, movement and mobility and these are topics that I think are a constant evolution and a constant work in progress for most of us who, you know, are just trying to figure out how to stay healthy, how to stay injury free, we're all working towards our own specific goals and mobility is pretty much always part of that right? So, I think his knowledge and insight is going to be invaluable to all of us and I think this is an awesome way to celebrate our 200th episode.

But before we begin the interview I'm going to tell you about today's show sponsor. Alright, Marc Pro is an electronic muscle conditioning device that works to yield faster recovery, enhanced performance, injury prevention and pain relief by moving deoxygenated blood away from fatigued muscles.

So, everyone from the NFL, to the NBA, over a hundred professional sports teams use this product specifically including, you know, elite athlete trainers like Kelly Starrett, he's a fan of this product too and Marc Pro is offering our listeners today because this is a big deal 200th episode. They're offering us an awesome opportunity to test our product ourselves with a 30 day money back guarantee.

So, you don't have to be a professional athlete, you just have somebody who maybe works out, maybe has sore muscles every now and then and wants to up their recovery and up their performance. So, here's what you do you use promo code paleopod, P-A-L-E-O-P-O-D at marcpro.com to save $32 off the Marc Pro device or $47 off the Marc Pro Plus. So, you can do all of that, you can learn more about the product how it works all of that at marcpro.com so check it out and let's get right to it.

Here is my interview with Kelly Starrett.

[INTERVIEW]

[00:03:23] HK: Kelly Starrett, Haze K-Stizzle welcome to the podcast, thank you for being here.

[00:03:28] KS: My pleasure.

[00:03:29] HK: I really appreciate it. I won't say that I have been exactly an original gangster of CrossFit and I followed you from the beginning but I have been around for a long time. I remember seeing you I think at Crossfit NYC like back in 2008 or something it's been a while so I have been following you for a long time and I'm really, really excited to be able to pick your brain today, so I appreciate that.

[00:03:52] KS: Well, it's good to hangout again, as it were.

[00:03:53] HK: So, what are you up to this days both with regards to making people *Supple Leopards* and just in general? I know I saw in your social media that you were recently doing some XBT Events which are super cool.

[00:04:06] KS: Yes, it's Juliet and I look out and we can see five years of work ahead of us and I know I've been saying that for two years now so I can still see five years of work on horizon and a lot of what we're doing now is now we have garnered an insane amount of experience, an insane amount of pattern recognition because we get to go to so many places and interact with so many extraordinary people really trying to solve you know conceptually the same sets of problems and what we kind of keep having this opportunity of seeing places where we can contribute of helping to continue to solve problems a little bit more clever in the way that we're doing it and you know that I think we've got four books in the horizon on the next year coming out.

We're really excited in the beginning of February we're launching a new way to utilize MobilityWod in terms of the site itself. We will have a daily position perform video much like our daily follow alongs right now which is really heavy gym based equipment so you'll need bands and bar bells and all the [inaudible + 00:05:09] but then what we're realizing one of the things that we want to do is help people just down regulate and so we'll start with a stand alone ten minutes of soft tissue work to be done in front of the TV right before you go to the bedroom.

So at night you can play along and help down regulate because we're still seeing people who are still struggling with how to turn off and where to put in some of their soft tissue mobilization in to already compacted day. So, we got that coming out we keep on launching courses. Yesterday, we launched our adaptive athletics course, online training course through Mobility Wod we're just - there's just a lot of work to be done and we are tickled to do it.

[00:05:48] HK: Yeah, you really don't take breaks do you? In between the holidays like you're just putting out content for us constantly.

[00:05:55] KS: The dirty secret is, this is how we are and what we do so it doesn't necessarily feel like work, it feels like we are at the right place at the right time and we've kinda talk about it before, you know you and I you know having known each other for a long time is the way that I feel about so many strength conditioning coaches, so many trainers, so many thinkers is that something happened not that there haven't been serious thinkers in the last 20, 30, 40 years and we're certainly standing on the masters shoulders, I mean, I like to remind that the

functional movement screen came out in 1996 so tell me what you're dead lifting was in 1996, or your overhead squat or your olympic lift. These things didn't exist.

And but now we suddenly we hit some kind of threshold the tipping point almost that I would say like a singularity where people have access to Instagram, Twitter, podcasts and really paved the way through people like CrossFit in to this functional movement centers where people can get real coaching, where the model was really broken wide open in to this open source continuum and all of a sudden if you are around at the beginning of that you just been holding on with both hands and figuring out in this wild west how to tune out the bullshit and tune in to the really good practices that really matter. Because in this experiment there is a lot of silliness on the internet right now. That's really confusing but also there's never been more free, dynamic information about getting everyone back up to par.

[00:07:33] HK: Okay, so I want to get out of you as much as I can while I have you here, so I reached out on social media to ask my community for some questions. I didn't want to be totally selfish and just ask the questions that I want to ask but I am going to be a little bit selfish. I'm going to go back and forth questions that I have and questions that were posted to me and some similar questions that kind of came up again and again and I'm sure that these are not the first time that you have come across but the first that just kind of came to me as we're talking and you're talking about you know haven't been in the game for a little while.

How has your approach to mobility and even teaching mobility to others, how does that changed since you started? Like is there anything that you used to believe that you now do not? Or is there anything that you used to think was bad but now is good or have you just kind changed your approach to how you communicate it to people? How does that sort of evolved for you?

[00:08:24] KS: That's a really good question and what I'll say is that how we come to conceptualize more and how do we deliver this conversation. So, one of the things that we spend a lot of time with big organizations and I'm talking about big professional teams, big organizations of the military, gigantic events where and how are we going to think about position. And, you know, initially we'd have a lot of conversations with people because they're in pain, because we came from the rehab side, because people have failed on the rehab side after injury or pathology or weren't getting results they needed or people are in pain and a lot of our

conversations were about how it resolve that and how to improve the tissue health, how to restore movement mechanics.

I think now one of the things that we're focusing on is helping people see compensation and a lot of the language that I used to use was heavy bias with my physio references and influences. And for example Brian Mulligan is a brilliant physio from New Zealand and he uses the word positional fault or mechanical fault and that was the language that I really can relate to. And the problem is what we've done is we've gotten relative, I mean if you go in to any sports center on the planet, you're seeing someone rolling a lacrosse ball or some kind of ball. And it was us, it was me, who brought the lacrosse ball to a community. Like that was not a thing until we started showing people this ubiquitous low level tool. If you have ever seen a band distract the hip or I mean that's us. So, there are some things now that are you know sort of taken for granted and we have synthesized a lot of really interesting information there. I mean how many people have knocked off voodoo floss. You know, I think it's astronomical.

But one of the things that we're trying to help people understand is we've all been bitten by intensity bug and right now people are much fitter generally and much more capable than they ever were even a decade ago. And, what we're seeing now is that many of us are not following into the beginner folly anymore which is, “I'm limited by my capacity, I'm limited by my lungs, I'm limited by my strength, my work endurance, my absolute strength,” and now we’re not anymore and what's happening is we're seeing people continue to work in compensated positions and they're compensated because either they don't know what a better position is which unlocks function, unlocks capacity because what they're doing is working or they physically don't have access to the positions that would allow them to work harder or lift more weights or express that mechanics were dealing with.

It really comes down to this beautiful conversation between function and purpose and the idea is the purpose of your knee and the design of your knee really does implicate a certain movement strategy. Low bearing evenly through the condiles, reducing transitional sheer force across the two joint surfaces, you know. Avoiding big valgus moments like there are some things that are true about the way the new works absolutely. And the problem is that we have that I can get this done and I may or may not have pain, but as we've been saying for a long time this should not be about a conversation about pain or no pain or waiting around until I have a problem.

What we should be having a conversation with is how can we express better function and better outcome. How do I choose movements and positions that are in infinite in their application, universal application and express better tissue tolerances, tissue loading, force loading through joints and through those tissues? Well, it turns out that is really the purpose of the joint. So, if I have a cup for example that is really designed to hold a hot beverage but I can use it as a pen holder and that's the difference between function which is the way we can make any of our joints work and your purpose.

So, what we're seeing is that a lot of people are getting really good at being able to put out the flames and mobilize the joint and really try to improve range of motion which we will get to in a second but one of the things that people are not good at is identifying their own movement compensation mechanisms. So they don't understand though, that while they're squatting and their back is around it they completely collapse their arches and their feet is destroyed and their ankle is pulling off axis.

And unfortunately with the body, the way it works is when you move in a compensated way, move with compensation which is a work around which is a solution and thank goodness we're so clever we can do that but in the long haul that begets stiffness and dysfunction and so unless we are kind of always striving towards sound and mechanics, stable mechanics and we have plenty of credit in the bank to make bad decisions.

We can get away with a lot for a long time until we can and all of a sudden we realize that we need to be able to help people say, “Hey look, yes you should be able to squat hip crease below the knee without reversing your back but if you do so and your arch is collapsed and your feet become completely flat, maybe you don't have the capacities to squat at load to that depth yet. So, what's stopping have you control the ranges that you can control.”

And that's really just makes sense and you're saying you use loads that we know we can handle that's used distances that we know we don't break our technique down. So, you really want to extrapolate in that and then I’d also say that we've realized that develop greater competencies. Helping people understand the flip side to the mechanics which is the bio cycle social aspects of your complex human self, that your relationships, your stress, your ability to down regulate, your

tissues, getting cold, getting hot, how you warm up, what are you eating, what's going on with your gut, that always is going to implicate your tolerance for putting up with your body's crap, or your ability to tolerate a bad position or manage a chronic pain.

So, you know what we've realized is that there is an opportunity to become a lot more sophisticated while simultaneously developing core principled behavior that really is sustainable. You know, nutrition is a great example, sleep is a great example. I mean, people are like “Hey I want to get all of my tissues to get better I want a P.R. what do you think?” I'm like “How much sleep did you get last night? Did you drink alcohol before you went to bed? You know, is your phone in your bedroom? Did you get up at the same time?”

I mean like, let's just check all the boxes of crap and that what we're doing is that we're building this very intricate complex sand castles on top of systems that aren't as robust as we would like them to be and now I think we're taking this view that we are all going to be a hundred years old whether we like it or not. We really are.

Now, in my family alone I have two 96 year olds and that's not going to be rare in the future. I mean I think between medicine and joint replacements and how we're conceptualizing the human being we are going to all be there so how we end up there is going to matter and conversely, we really have to take a look at the fact for the average person, moms and dads, working individuals, kids, the environments have really one-eightied underneath us and we're getting a lot more cues and sort of inputs that aren't the way that the human being sort of evolved in the last two and half million years.

If we use the day and night cycle, you know when it's dark you are supposed to go to bed and if you're training hard you better sleep at least eight hours, at least seven hours and most people are not and that's an example of a place where you know the environment, you know, we have Netflix, we have computers, we have phones and iPods, you know, we get up early and all of these small things start to aggregate in to stressors on the original physiology of the organism and we cannot cheat that.

So, conversely what we're seeing is that we're having to put a lot more sort of nutritive input, you know, we're having to take more probiotics and we're having to you know someone sends

me athletic greens I'm supposed to take but instead wouldn't be great if I just take the 20 kinds of vegetables I am supposed to have anyway?

You know, all of a sudden Juliet and I realized last year you each connective tissue or eating this beautiful sashimi chicken breast and our connective tissue came when Juliet made a soup but we weren't adding collagen in, we weren't getting - cooking our meat on the bone. And so, we were making some fundamental adaptation errors and we are I think culturally, and then we're having to go back and fill some of that in so that really changed our view.

We're still working on that grand yard your P.R. squat matters to me but so it does how it exist in the context of day to day life.

[00:17:14] HK: I love that you're talking all of these other elements that make up a healthy, mobile, kind of happy person. I want to get in to a lot of these things to. One question that kind of leads from that is you're talking about this lifestyle that we, this modern lifestyle that we have is pretty contrary to what the human body that you wants or is used to and one of the elements of that I wanted to talk to you about is this concept of this non exercise movement and the idea that - I mean there's a lot of us that work out really hard for an hour a day but we have desk jobs or even jobs that we think that we're not sedentary we get up and walk around a little bit but we're not really doing much.

And, we think that we because we work out hard and we're sore and we're not overweight that we must be doing okay, when in reality all of those hours of not moving you know there's no way that an hour of exercise is off setting the damage that that's doing.

[00:18:09] KS: Damage is not the right word, right? I think we should really be careful, you know I've been guilty of this in the past but let's not say damage let's say it's not giving the inputs for optimal thriving. I mean I think it's a dysfunction around inputs, does that make sense?

[00:18:23] HK: Yup, that make sense.

[00:18:25] KS: Don't think damage, think, hey part of the human condition the way the tendons and ligaments, and tissues are healthy is that they're systematically and loaded for days and days and weeks, and weeks and it takes I mean if we just paying back in take this tight view for a second. The way your body clears you know drainage of lymph and moves your immune system to your body through your lymphatic system. That's how we decongest tissues and if ever you've flown on an airplane and got cankles that's a great example of you not moving enough to develop enough muscle contraction to pump that passive circulatory system of your lymphatics back in to the system which is all driven through just mechanics, right, through movement.

You know, I think what's interesting now is that pan back out you know and look at this beautiful concept of mechanical transduction is in order for yourselves in tissues to actually express the correct DNA and actually express the job that it's supposed to do there has to be mechanical input and that means that it's not enough if you have a low back pain because or your disc are soft are weak or you become synthesized, rest is never going to be the answer.

Your disc are designed to be loaded, you know do they need to be loaded and flexed and not moved that's going to be a problem but if we continue to strip out the movement from the day to day, just the amount of input my body requires just to be a healthy normal function body, it’s ridiculous that we have to put a watch on someone to say you need to track how much you're moving and that's a great example of just you know I have got to take this vitamins because my diet sucks so bad, right?

You know it's not getting into genetics and etc I mean it's very complex no one take me to task on this but the idea here is, there are fundamentally practices that allow the human body, the physical carriage that is so extraordinary and so complex to just function at a baseline level and to your point, this non exercise activities are crucial piece on what we've done and you can see why people are like Erwan Le Corre and [inaudible] air pulling their hair out because what we've said well as long as you do thrusts and pull ups your fine for 20 minutes.

You know you're like, “Whoa, whoa, whoa I don't think that's really what anyone intended.” Even Greg Glassman and his initial was that, hey we need some formal capacity training so that you can go out into the world and express that fitness better.

[00:21:11] HK: Right, so is it as easy I know it's highly individual but is it as simple to say that if you are one of these folks that is stuck on a desk all day that you - if you create regular prompts and you consistently incorporate movement even if it's as simple as getting up and walking around like do a little and that's it.

[00:21:31] KS: Yeah even having a moving desk, don't have a sitting desk, have a moving desk. Have a desk that you can sit on a stool, that you can surf on a surf port and you can put your feet up on a frigid bar. You know that, any chance if you just split your day in to optional versus non-optional sitting what you're going to see is that your choosing to sit a lot because of the contextual cues of the world. You know the world is setting you up to sit on the subway, you know we should be fighting for standing space on a subway, not sitting down as soon as we can.

What has happened is that, like so many of our habits we are conditioned to go in to a room and sit down and that is not, you know, sitting is not going to destroy you but it's certainly going to be a problem if that creates the bulk of your day and most people are sitting. Harvard defines sedentary lifestyle is sitting more than six hours a day and I think when we're talking about all of these hacks or movement ideas you know standing as I've said are walking, meaning we should be thinking about moving or not moving.

And my goal today is to aggregate as much movement as I can however I can, so, I have a long car commute boy I'm going to walk my butt from the end of the parking lot to the door of my job. You know, I'm going to make sure I take the stairs because it's my job as steward of the human is to go ahead and just try to get more movement in so that the body functions better.

I'll give you one more example, when you work with a lot of military groups and one of the military groups is to work with is really clever they use this thing called the Ready Band by Fatigue Science and it does two things really well which text sleep really and text movement really well. It is a simple black band it doesn't have watches, it doesn't flash, it doesn't tell you right.

But what is interesting is that thing has a two week battery life which for between charges which for me makes it the greatest device on the planet, right. The Withings are really good now. I think it's owned by Nokia, it has it's long battery life so you don't have to charge every single day. What we're seeing is that a lot of people have a hard time going to sleep or staying asleep turns out guess what they don't do during the day they don't move.

They don't actually aggregate enough movement during the day to actually create fatigue and one of the easiest ways to solve what seem like really complex behavioral problems, behavioral systems errors, behavioral system adaptations or compensations is to go back to first principles and if you don't drink any water, if you're you know if you don't handle your stress, if you don't have a way to you know if you're not getting good sleep, if you're not moving enough and then training, you know these are the fundamental issues and then what's nice about that first principles is that then we can you know let people express themselves the way they want to do it.

Whether that's yoga or pilates or crossfit or power lifting, it doesn't matter. You know you like to ride your bike great. You know but riding your bike alone going to sole cycle alone is not going to make you a skilled human or no you're going to get the weight bearing effects that you need to free your bones. I mean that's the counter transactions so again once you come back to first principles a lot of really difficult issues begins to sort themselves out and the real magic here is that basics are free, they aren't sexy and they work over the long haul better than anything else.

[00:24:47] HK: Right, I think it's the key is that they aren't sexy that makes it tough for people because you know no one wants to hear that walking is like the best thing that you can do no matter how fit you are. Everyone wants to like work on their muscles up so there' s snatches and get crazy. You know people don't want to hear it's just moving your body as much as you can during the day, that's all it takes.

[00:25:08] KS: Yeah, and so what's interesting right now is that the greatest, I think when the renaissance right now of understanding how the brain is able to rewire itself, how the brain cares for itself. And you know some of the growth factors around brain function are highest during walking and walking briskly and the reason is that people hypothesize that when you're

walking briskly you tend to be walking very fast in a new environment your brain is like, “Ooh, we better pay attention to this.”

And so, it turns out one of the ways to, we know that norms that fire together, wire together and this is why it's so difficult to break habits because those are physically hard wired neuro-pathways in the brain but also the neurons and fire apart, wire apart so if we access your change your breathing pattern and shape, you know the movement of diaphragm we change how you’re squatting a little bit different. We get more movement in, we trigger the ability of your brain to deal with this neuroplastic state in a little bit more responsive way. mSuddenly, we see that hey the resting state as the human being is pain free is really achievable and that most of us are capable of being a lot, sort of, more badass and feeling better than we ever thought and the problem is as long as we keep selling people shortcuts and gimmicks, you know, that's tricky I go to a lot of fitness trade shows and I walk around and I ask myself, “How am I contributing to this truly in dollar ponsi scheme of get quick fix problems?”

[00:26:43] HK: So, this question has been asked to me so many times it's too bad that this is an audio only podcast that we can't kind of show, but obviously folks they can go to your website and your Instagram page for tons and tons and content but what are the best general high level mobility moves or things to work on, some people who are sitting at desks all day.

[00:27:03] KS: Well, first and foremost I think the thing to think about and you know you ask me earlier on how have I changed, how have I remained the same? You remember that the first thing we did ever was I filmed my crotch for ten minutes, in the ten minutes blood test and you know it was the iPhone did not have a camera people, okay?

[00:27:20] HK: Right.

[00:27:20] KS: So, I was aiming the camera myself and I was on Blogger because you know all of these fancy websites didn't exist and Youtube wasn't much of a thing and iPhone didn't have video yet so one of the things that we saw earlier on that was, “Hey before we get fancy before I put my hands on your fully mode fully attack, are you spending time with an end range of your shapes and positions? So if you want the joint to function normally you should take the joint to it's full ranges of motion accurately.

So, if you are worried about your squat let me give you an example Mark Bell is a power lifter friend of mine and long - we have known each for a long time now and early on our conversations Mark we're talking about getting depth and power lifting meets it. I said, “Mark, how many times do you go below parallel on your squat during the day?”

I said, “Be critical about your thinking,” and he said, “I don't know that I've gone below parallel in a squat in like months,” and that's because he sat on the chair, he sat on the toilet, he get out of his car, he squatted in to a box right he got off the edge of the bed, he had breakfast, you know he never actually ever sat on the ground or took his hip in to whole hip flexion.

So, if you do that for months and months and then reinforce release step patterns guess what your body doesn't give you. It doesn't give you those shapes effortlessly. You know and so one of the ideas first and foremost is, hey it's not an accent that movements like if you do drop in to [inaudible] or you go in to move mat, or you jump in to pilates, or you jump in to yoga, or you get a good warm up by a coach at crossfit, you're going to see that those warm up activities, those sort of movement vitamins that are part of, not the skilled programming part, right not the actual work sessions, those movement practices are about expressing normal range of motion and normal tissues excursion for what you're supposed to do physiologically and what's interesting is that the physios are not good at describing what full range of motion is or what full functional motor of control are these full range of motion not the way our movement practices do.

So, if you jump in to yoga, I guarantee you someone is talking about screwing your hand in to the ground and picking up your arch and routing and being balanced and putting your toe on the ground and if you work with Pavel and do strong first and you're swinging kettle bells you're getting all those cues about putting yourself in stable positions and moving your joints through this normal and stable positions regularly and then they're secondarily we're going to say if we get you some load or some cardiorespiratory demand or metabolic demand, or speed, or competition, or stress can you maintain the entirety of those ships.

[00:30:07] HK: You asked a question on Instagram relatively recently that's stuck with me and it was, “How are you assessing your mechanical confidence?” And I'd love for you to talk about that what that term means and how do you go about assessing it because I guess it's different

for everyone like for example for me, I bench press a lot, I do pull-ups a lot, I don't notice any issues with my mobility or ability to get to the end ranges but ask me to zip up my own dress and there's a problem.

So, I obviously have some mobility issues right but I feel like sometimes people -

[00:30:37] KS: Not necessarily, not necessarily.

[00:30:39] HK: No, okay that particularly help, but I mean I feel like sometimes people may be don't even necessarily know, they have issues.

[00:30:46] KS: Absolutely not and the reason people don't know is that they're not confronted in a practice that demands that. So if I ask you to get in to know like a table top so like you're sitting in a long sit, you're sitting with your legs out in front of you and you put your hands by your side and you lift your butt up as high as you can, right so you're making a plank but your body is facing the ceiling and if you can't get to a good plank position, guess what's tight?

Your shoulders and that is an extension. So if you're never take shoulders in to extension like skin the cat or good full range dips, or bench press or then guess what you're never going to be confronted with the fact that you're missing this range of motion. Good movement practices it is not an accident that the power, that olympic lifting is pretty much a movement practice that expresses all of these range of motion of the joint.

Theoretically, you should be squatting deep and you should be lunging on both sides. You know the shoulders in multiple shapes. What's missing from olympic lifting is bench pressing so guess what olympic lifters do? Bench press because that's the one position the shoulders isn't taking in the movement practice.

And so, one of the things that we are stoked on in our thinking that we have really done critical thinking about what are the book ends of function that really end up honestly reflecting the end ranges of position the fullest expressions of positions. So, for example if you're doing pull up is a pretty good indicator that probably you have normal range of motion, these range of motions of your shoulders.

We can test that by handing you a couple of dumbbells and asking him to put him over your head, right? And reasonable for woman we say hold this 35s over your head for men we say 50s and all you have to do is take ten breaths there and what you're going to see is that if your elbows bent that's a compensation if your shoulders inter rotate that's a compensation, if you go in to a banana back that's a compensation, and if you can hold those things effortlessly over your head guess what you got full range of motion, normal range of motion in your shoulder and that's the same range of motion that's expressed or assessed by physios and chiro and physicians.

What the physios, and chiros, and physicians haven't done is taking those full ranges of motion and actually understood how they reflected in our traditional movement practices. But for all of us we are all geared to think push, pull, overhead, dip, lunge, you know push up, you know the push up is basically you know a start position, my arms are straight out in front of me, can I create a stable shoulder there or not? Do I know how to do that? Do I know how to grip the ground and screw my hands in to the ground so that my elbow pits are forward, you know when I come down to my side like in Chaturanga in yoga, no wonder Chatarunga is part of yoga, it's taking the shoulder in to extension. But if I dump my shoulders forward in what we call crappy Chaturanga we neck kings back and your shoulders dip forward then that's a compensation.

So, what happens is now we have all these root language around the movements that we are comfortable with. We need to understand when we hit those end ranges and what the compensation for missing capacity looks like and that could be motor control, I just don't know how to be stable or I don't have the requisite range of motion and guess what most of the time it is. It's most of the time people don't have the indigenous range of motion.

And here's a great example. Put your feet together, heels flat on the ground, squat all the way to the ground, keeping your heels on the ground. Yes or no, one or zero, you either have full range of motion on your hip and full range of motion in your ankle or you do not and that's not ish, that's not within functional movement, that's not hey you get off the toilet, let's high five each other.

That's, hey you can't do what human beings are effortlessly and easily are supposed to do and then suddenly we can begin to ask well, why not? What's going on there? Or you walk like a duck or you squat like a duck and swinging a kettle bell like a duck and you are like a duck so that makes your ankles work like your ankles.

And then we noticed we were wearing high heels all the time and you are never bear foot, well that's a problem. You never sit in to a full squat ever so why are we surprised that, that's difficult for you and so now we begin to really help people underlying saying, “Hey look if these are the signature requisite positions, positional competency in these form of movement practices,” well then I can say, “Hey why can't I get there I can do some sleuthing and enter the word world of mobilization.” Which are really, they are not soft tissue practices these are position transfer exercises.

The book is full, *Supple Leopards* about using these exercises to improve your position, not necessarily resolve your pain, that's the side effect of improving your position. So suddenly now we have a conversation where we can become more granular. So someone says, “Hey I have hip pain or my ankle hurts we can say well, in what positions does that hurt?”

Now, let's become curious about are you squatting with purpose? Are you squatting with function? Are you squatting in a way that you know, are you collapsing systems? Are you creating stability? Are you compensating? And now, we can begin to understand that rarely do we see pain and dysfunction in our joint and tissues system arise from pure pathology. Most of the time it is of our own making.

[00:36:05] HK: Okay, so basically what you just described to me, let's make believe that I have proper shoulder mobility which makes me happy, however, the inability to zip up my own dress is still problematic and maybe it's kind of indicating that I have some mobility issues elsewhere.

[00:36:20] KS: Yes, yes so maybe you have good shoulder extension but you don't have this thing called internal rotation which is one of the things that goes away when you bench press heavy. Snd so guess what internal rotation is expressed with. If you are doing a high hang position and olympic lifting that ability to bring your arms out like a scare crow inter rotate to your hip is like it's a pure mechanic, that's inter rotation and if you don't have it guess what you

can't do, you can't zip up your dress if your thoracic spine is super wicked stiff, sure it's hard to get my scapula in to a good position where I can zip up my dress.

And if I'm not swinging kettle bells or doing hack because that's what the bottom position of the kettle bell swing is, if I'm not doing something that rhymes with olympic lifting or works on that internal rotation, guess what becomes compensated. Internal rotation. Do you think a human being was designed to bench heavy twice a week for every you know without all of these other - No! So what we see is that while benchings is a normal expression of shoulder, it's very technical without all of the rest of the nutritive inputs, guess what happens?

I start to look like a bench presser. I start to look like a soccer player, I start to look like a cross fitter, I start to look like a water poloist, right? So, what you'll see is that you know a lot of the sports that we do, by definition would begin to bias tissues systems a certain way and then well and behold one day we can't zip up our dress and like what the hell is going on, well it turns out all that benching made you stiff.

[00:37:52] HK: I guess is there's an element though of athlete saying that I'm willing to sacrifice some mobility in some areas in order to maximize my strength or my success in certain movement or you don't believe that?

[00:38:07] KS: No, and what we doing is working towards normal range of motion. My children have full range of motion, that's it and the rest of us, because of the lifestyle, because of the environment we live in, because of the movement practice is or the sports we do, our injury history, you know, whatever it is. You know are always chasing that original idea and that is also moving target, you know.

You know if you go train for a marathon, you let me know what happens to your hips. You're going to be like, “Oh my god, I understand runner stiffness now,” you know. And then, the idea is that with our movement practices, we should be pulling ourselves back towards normal through our soft tissue practices our mobilization practices, we should be pulling ourselves back towards normal.

Again, your range of motions are moving targets, that's why everyday we train is an assessment of basic positions and that's why my formal warm up when I take people through is when the first time I'm going to get a chance to understand my athletes are doing and how they are feeling for the day and sometimes that's radically different day to day.

[00:39:13] HK: Okay, so I guess the answer to this question I think may just be that you have to sign up for MobilityWod and use it but one of the things that I think is overwhelming for people I know for me personally and for other people is they know they recognize that they have some mobility issues, they're lacking in some areas but they don't know exactly where or exactly how to fix it.

So like another example would be, I like playing around with a yoga pose, I think it's called the wheel pose. It's where you sort of like you bridge up your entire body, do you know what I'm talking about? So I'm like yeah I love that pose I think it feels good but I know I'm not doing it perfectly, I can't straighten out my knees, I can't straighten out my shoulders. I don't think my hand position is great.

What I don't know, is that because my hips are tight? Is it because my shoulders are tight? I don't even know where to start. So when people have goals maybe they want to improve their mobility in certain areas. They may be able to do a specific movement, they may not even know, like where to start. How do people figure that out?

[00:40:10] KS: It's a great question and very, very typical so the way to think about this is, one, if I sent you like hey what do I mobilize to run faster? What is being used in running?

[00:40:20] HK: Legs. What is it being used?

[00:40:23] KS: You use everything, your arms are swinging, your trunk is stable. I mean so the issue here is you know one of the reasons that we are such advocates of formal movement systems of strength and conditioning is that it is the really easy way to highlight movement mechanical, the components to complex moving systems in a much more simplified system.

So, if you're missing full range of motion in your hips? That's expressed when you lunge or pistol or squat with your torso upright, right? If you're missing full range of motion in your shoulders, we're going to see it when you go to the high hang. Do, try to zip up your dress, put your arms over your head and all of a sudden everyone of those formal movements becomes a correlate or becomes it's own sort of differential diagnosis tool.

So, the key here is that you're thinking well when we for example if you look at the *Supple Leopard*, the 2nd edition one of the things that we help people understand is that we're looking at your start positions and your finish positions and those start positions or finished positions are very formal and range of motion positions.

So, if you are struggling to get in to a pistol that's the problem in your ankle range of motion or your hip range of motion. You can't lunge with your torso up right that's the problem with your ability to extend your hip, you can't do that, you know and so it turns out though the wait for it, running is what? A deep lunge, on either side.

And so, what we're seeing is that most of us are living in the middle window of functionality. Well, function is not a functional movement is not a good word anymore because in physio, for us, functional means you can get up out of bed and feed yourself, right?

It doesn't mean that you can kick ass or lift heavy things or put your bag over your head. It just means you're not in pain when you brush your teeth and what it really means is that we can't get paid, the physician, the chiro, the osteopath, the physio is no longer going to be reimbursed for insurance because you are out of pain and your functional and independent.

Your physio is not the place necessary to address this limitation. You know, so if you have a shoulder impingement, it hurts when you go over ahead on this position this wheel like shape and all of the sudden you're like “Oh I have shoulder impingement,” you go see your physician, she writes you a note to go see a physical therapist because you have a shoulder, now official diagnosis with shoulder impingement i.e. it hurts when I put my arm over my head. And now, your therapist takes care of your tissues, calms you down, does some soft tissue work, mobilizes your tissues a little bit now it doesn't hurt when you go over your head, have we

restored your full range of motion on that shoulder? Have we changed your movement patterns and movement compensations on that shoulder? No, we have not. That's called practice.

So, what we need to do is be clever enough to map a compensation with a joint or tissue system or a movement. We need to be able to map a pain pattern with a tissue system, a joint and movement and then we can just begin to noodle on these things one at a time and we don't have to fix everything today, we are just going to work on it for ten minutes. I mean do you do more than ten minutes of pull ups a day?

[00:43:30] HK: No, generally not.

[00:43:33] KS: Generally not so I mean, magically your push ups, your pull ups intends to improve less than ten minutes of pull ups a day and you don't do pull ups every day, why is that? Because you get a dose and you get a response. So, the key in these physical practices is that we're always striving to improve our shapes and positions and all we're asking people to do is to add in positional competency as part of their fitness goals.

And if you can't get in to these shapes I'm going to say you're not very fucking fit. If you, you know, you can run really fast but your ankles hurt and you're dysfunctional and you can't get off the ground, how fit are you?

You know, you can bench press but you can't zip up your own dress, well that's sweet, you know.

[00:44:18] HK: Thanks Kelly.

[00:44:20] KS: Let's go ahead, you're jacked but you're going to need help.

So, the idea here is that it's okay for us to say “Hey, look it can't always be about strength and speed, and cardiorespiratory capacity.” It's also about skill and skill is a practice and skill is open ended because at some point and you're going to start weeping, your bench press is going to go down because you're going to be 80 years old and you know you might be able, it might be about 80% but it will still going to go down but I guarantee you, you can become a more and

more skilled bench presser your whole life and that's what I want people to understand is that the movement human movement is about skill.

Learning how to eat is a skill, learning how to sleep and take care of yourself, these are skills and you know I don't always have to hit every skill every single day to make forward progress.

[00:45:12] HK: Yeah, okay that actually the way you described that, that not doing more than ten minutes of push ups or pull ups a day and still improving makes me feel a lot better because I do feel that it is easy to get overwhelmed with the mobility work and those tissue work, she was like, “Oh I never going to it's like a drop on a bucket. I'm never going to fix it or improve,” but you know you're saying that every little bit helps right?

And dedicating a little bit of time to it everyday doesn't have to be hours of work.

[00:45:40] KS: No our model has been, my original work on my doctoral degree was around barriers to adherence. What keeps you all from doing what they say they're going to do what they needs to do and it turns out an easy way to get people to not do things as they make it untenable not realistic in their lives. You know, hey you're going to have to do this for an hour a day. Really, how does that go, well it turns out adherence and physical therapy is somewhere in the low teams, mid teams to low 20% it's bad. Don't do what they say they're going to do.

And this is true across all regimens, across how talk to any nutritionist about it's going through with their diet. You know, and people are like “Oh I just fell off, I mean people can't be adherent for 12 hours, 24 hours and things that we all agree. You know I mean you John Berardi is one of my heroes. I wish he was American but he is a Canadian.

[00:46:31] HK: Nothing wrong with being Canadian, I'm a Canadian too.

[00:46:32] KS: Like I said it creates some dissonance for me, but I am in love with Canadians. You know the genius of John is not his, he's really complex sophisticated take on nutrition which is excellent, it's that he is a ninja and an expert in changing behaviors which are really difficult to change. So, when we find that hey, people can commit to making ten minutes of positional

change a day and when we give them tools that makes that really sustainable then ten minutes a day of noodling is not a big deal.

That's what we think and we also see that, you know, boy if you're having a hard time to sleep better, if you do ten minutes of soft tissue work before you go to bed, you're going to sleep better and so it turns out that the last ten minutes before you're going to the bedroom nothing good is happening.

You are watching TV, you're on the internet, you can be immobilizing your hips, or rolling out your soft tissues. There is some net positive inputs there that make real sense and are really, really sustainable behaviors.

[00:47:32] HK: Okay, so I like that idea of doing some soft tissue work and some work before you go to bed because what else are you doing anyway but one of the questions that did come up a lot is what's the best time to do mobility work, and I guess to make a bit more specific. Are there certain types of practices or mobility work or soft tissue work that make more sense to do right before a work out or right after a work out, not around a work out at all or is it kind of ultimately it's better to do it anytime than not to do it at all?

[00:48:01] SK: Well, I think one and zero, are you doing it yes or no, isn't really pragmatic approach. Here's what I will say, you know the gym is a miracle time when we got a lot of things done and where for me things are not conducive of my time or rolling on a roller. That is go to the UFC watch a fight and get ready, and the last thing that she's going to do is lay on the ground and roll around, it's not going to happen.

Go to the NFL, go to any professional sport, you're not going to see a bunch of people rolling around on the ground so if you're about to go fight or lift, or run, or sprint don't get on the ground, it's not what you do but what I'll say is, “Hey man my hip hurts. It's grissely let me hit this for a minute or two.” Ah, it frees up now I got the window opportunity let's go hit it right. That's how we use soft tissue before hand.

But conversely, if we go to squat we get warm and we go to squat and you can't squat all the way down or pull, or put your arms all over your head, or get in to shapes required for the

movements to the day. What's your plan? Do you think, you know, half range of motion and a lot of compensated positions is going to through magical thinking and will and you know eating paleo that going to get - no. So, you better have a plan to improve your positions, that's why sometimes we'll hire, prioritize some mode of control drills or joint tissue drills like joint capsule extension for a couple of minutes just to get the joint open so that we can have better access to the positions we're trying to train.

But we like to save, all of these soft tissue after we train in fact take it home get out of the gym. Go home with it, or once you're hot and sweaty go in to corner room and put on a podcast and roll out for ten minutes. What you're going to see is a way of bringing your heart rate down, triggering that parasympathetic response to you know getting you out of this fight or flight intense training system, coming back down. You just ran a diagnostic on yourself. Man I was tight today in my lats that's so weird I wonder what I can do.

I can go mobilize my lats. And I think when we begin to see how that fits that training is not independent from the mobilization it should be the consilience there. I just ran a diagnostic tool let me fix something that I just tuned up, you know.

[00:50:20] HK: I want to talk more about soft tissue work down regulating this news that we touched on that is a really important aspect that folks have a hard time with and one thing that I read, and please tell me if this is wrong, but I read somewhere that you're doing soft tissue work on yourself and you're rolling around the cross ball and you come across a really sore like hot spot like suppose you leave it alone like kind of not deal with that.

[00:50:47] KS: No, no, nonsense, nonsense.

[00:50:48] HK: Yeah, that's the part that needs it, right?

[00:50:50] KS: Well, here's the deal, if it is a bruise, you go smash a bruise, if you get hit by a bike, no that tissue is injured right? You had some contact to that spot, like how about this let's desensitize that. So let's think about what they're trying to do with our soft tissue work. Our goals are typically to restore sliding surfaces to get my muscles and tissues to inter and intro late in a more less cohesive more independent nature. Those tissues should slide. When I'm

trying to improve blood flow I'm trying to desensitize and I can do a lot of very, very cool things with my breathing and with my brain by contracting and relaxing by taking on model typically as we say hey look did you find a weak spot stop don't go anywhere you just found tissue restriction, you found tension, you found desensitize tissue, don't go anywhere. You should take a big breath as big as you can for four seconds. Contract into the ball or in to the roller for four seconds and then a way to exhale for eight seconds.

Really long slow exhales because it turns out those long exhales are part of that parasympathetic response that my brains says “Nothing bad is happening to me because I'm exhaling longer than I am inhaling,” right? That pranayama breathing model right?

And so no, you know this is not something I read at PT school. I came from the world center for PNF the guys of Vallejo so [inaudible] in their muscular facilitation is what we're about how do we use the position sensors, the pressure sensors of the body to make changes in movement patterns, that's really the ultimate goal remember. It turns out that building tension in the tissues one way to do that. When we add breathing in and we can add some positional competency or positional emphasis and all of a sudden we have a really potent way of storing movement, restoring sliding surface of the body, desensitize painful tissues and re-profusing improving blood flow to areas that are stiff or poorly hydrated and that is simple enough and it turns out it also helps you relax, and sleep better, and feel better, and then your tissues functions better.

So, we used to do this drill at our course where someone has the sorest legs in the gym and people would come and be like, “Ah my legs are sore,” I’m like “Great, you’re perfect, come over here,” and what we do is we grab their legs and I just shake their legs and I just grab them and I just shake them back and forth. And, I just literally like a ski-racer coach grabbing your thigh, just shaking your tough fat back and forth like a jiggler right?

And some people are like, “What are you doing?” “Just hang in there and then squat again,” and they're like, “Wow it doesn't hurt.” I'm like, “Isn't that interesting? That your pain wasn't pain at all it was the fact that your tissues were sliding, were sliding and we just restored those sliding surfaces, low and behold your quads aren't even sore at all, they were just caught made the healing process because you weren't moving enough.

[00:53:54] HK: Interesting, okay. So mobility work obviously is a big aspect of recovery. The recovery process too, right? Because you're facing -

[00:54:05] KS: Let's talk about this. How about another recovery if I'm injured it's recovery, if I'm trying to exercise and should be better exercise, it's part of the adaptation process. So the goal if I bench heavy that's making you weaker, right? I'm creating challenge to the tissue, the tissue now is going to super-compensate right? And then guess what happens I get stronger, after I'm done training. That's the goal right.

Well it turns out, a couple of things, one is there are practices that limit the response, that adaptation response like taking non-steroidal inflammatory drugs right? Like eating like a child, like not sleeping. You know and so all of a sudden you're like blunt that adaptation response right? And they're even genetic components that makes us not equal.

You bench, I bench, we bench the same turns out I really have a low recovery scores, I just can't handle the volume that you can, I'm going to have to take longer to restore my regular adapt than you are right? So, that's even part of it. It's not, I in fact you do have genetic lower recovery scores and says where do we become an expert in adaptation. So here is the deal, and suddenly we're seeing that hey there are some net positive inputs in to blood flow tissue restoration down regulation and you'll see that the old coaches all dealt with this.

I mean the Russians used to have the same they're like if you leave the gym stiff, you're going to be stiff. You know, one of my most famous football players that I've worked it will come and invest the play a guaranteed part of him is a lot famous all pro line backer who play for the games, never missed a game he was a superstar and he go dip around the pool for 30 minutes until he stops being stiff, then he goes home.

So, he would go play football and then go home, he went to the pool and kept moving just like Michael Phelps does after he wins a gold medal, he's like goes high five and then he goes and swim. So, he's like my olympic gold medalist becomes a world champion, sets American history wins a gold medal, someone hands her a shake, she's like high five that was so great, she goes back out and rows for like 20 minutes, right?

Because she's not going to make adaptation areas to those huge inputs and I think when we begin to think about that, that's going to help and then also we start to see that the nervous system is really the limiting factor for all of us that our nervous system is the thing that is keeping us from doing what we want to do. You know muscles and tissues are like obedient dogs period. But your brain will need some time to recharge and now we can say, whether all the net positive behaviors from a sense of our nervous system, well one I can breathe, two I can get cold, I can get hot, I can manage my sleep, right?

I mean if you ever played around with heart rate the variability and used the Omega wave your part of your recovery scores, your readiness scores not recovery scores, are predicated on how you ate the day before. How interesting is that? So, again it seems like it's really complex but it's not then you don't need this technology. You need to make sure that you're eating as many vegetables as you can cram down the day. Our model is like eat like a vegan plus the nicest most expensive highest quality meats you can afford preferably chickens with a life coach. You know and chickens who have names like you know that you know that -

[00:57:25] HK: Have a better life than we did, yeah.

[00:57:25] KS: That's right, those are the animals that you want to eat, put your money there and what we'll see then is get your sleep. Really, really make sure you're sleeping in a pitch black place. Get up and drink some water, move around more during the day and what you're going to find is that you can accomplish more. You won't need five hour energy, ten hour energy. You won't get caught in this depressant stimulant cycle which we are all on most of us. Five bulletproof coffees and a bottle of wine later or Adderall and Ambien or coffee and THC whatever it is, you know we're all sort of burning the candle at both ends and you cannot, you cannot.

And, when we start to take those first principles seriously your tissue health improves, your range of motion improves, your force production improves right? And that's really you're a more stoked human being and that is the goal.

[00:58:13] HK: So you talked about eating well and sleep habits and things like that in terms of down regulating and eating as healthy as you can. What other tactics do you use personally, like

are you in to any of the meditation that's like cold therapy, light therapy, heat all that kind of fancy stuff that everybody is doing these days, what are you into?

[00:58:31] KS: What I am into? I am in to not cheating my physiology and so the idea here is what is sustainable? Do I have a ice tike? Yes. Do I get it everyday? Yes, in the mornings when we ice plunge and do I have a sauna? You bet. Have I already been in the sauna for 40 minutes today? Well, I'm on a vacation, I did otherwise a typical day my wife and I for example walk our kids to school, we walk about an hour going to school. We walk about a 5K in the morning.

We're back at the house at eight. We usually have a few minutes and we jump in the sauna for 10 or 15 minutes and then I don't see breakfast as the most important meal of the day. I see breakfast as the meal where I can really control some of the micronutrients that I may get for the whole day because once I leave the house I'm like it's not my day anymore. It belongs to the business, it belongs to my coaches, it belongs to my athletes right? It belongs to my kids and I'm not going to be able to control my day until I'm back at the house so I try really to dense, nutrient dense breakfast and that's because one of the windows where I have time to make change. So, my wife and I play around with time restricted eating a lot. I think that's a really great strategy as we get older. And you know, that means I don't really eat until ten or eleven.

The idea here is do I have a vitamin D lamp? I do, I'm a nerd around it because it turns out I have really low vitamin D levels and I always feel good sun burned and some of my really good physician friends are saying, “Hey we think maybe taking vitamin D isn't doing what we think and the best solution is to make your own vitamin D.” So, I sit in front of my vitamin D lamp for a couple of minutes every other day.

But again, if I was outside in the sun with my shirt off I would probably not need the vitamin D lamp, you know what I mean. So, all of these practices end up for me being really sustainable about being able to produce more work and I'm lucky enough that I live in an environment where a lot of these things are in my yard, so that I have an access to them that is not a huge gets to go - you know what I mean I think floating is amazing but I think you're not floating everyday because you don't have a floating chamber at home, right?

But you know, I can get hot everyday, I can get cold everyday, I can do my Wim Hof breathing everyday. There's a lot of net positive behavior that you can do that really fit in the things that you already do.

[01:00:47] HK: Right.

[01:00:48] KS: We have to help people simplify, it's got to be easier and if you go to our website, we have a couple of infographics there. One of the infographics is what we called the 24 Hour Adaptation Cycle and that will really help, it's a free PDF if you search 24 Hour Adaptation Cycle on the Mobility Wod, you'll see that this is really a lot of these behaviors that we've talked about. How can they aggregate and where they place in a 24 hour timeline.

[01:01:14] HK: Cool, okay. I actually just bought a infrared sauna myself and I'm very excited about it. I don't have an ice tank but I am in Canada right now which is the same thing so I'm thinking if I just kind of like take some clothes off and hangout outside for a bit and do my Wim Hof breathing.

[01:01:31] SK: Yes, that's wrong.

[01:01:32] HK: It's the same deal right?

[01:01:34] SK: Check this out. Guess how cold your ground water is right now.

[01:01:36] HK: It's like worse than Mars. There are places in Canada right now that are colder than Mars. That's what I'm reading on the internet.

[01:01:43] SK: It's only like minus 34. So all you need to do is turn on your shower and get cold in your shower, it's so easy. So, people are like, I don't have an ice tank. Well, yes you do it's called mother nature.

You know one of the things that we figured out is that a guy on the internet reached out to us and he was like, hey what do you guys think about this hack and this solution, this model and what he had done was he had taken a huge chest freezer and filled it up with water and then

ran it for a couple days, got pretty cold and then put it on a timer that he runs three hours a day and he had a perfect ice bath masquerading as a freezer.

[01:02:21] HK: Amazing.

[01:02:22] SK: It was a $50 purchase on Craigslist and that suddenly is the greatest ice tank there is and now I have all my military guys who go off on to these extreme environments deploy with freezers, and now they are able to get cold, why? Because we found out that getting cold in the morning as far away from sort of the training stimulus as we could, we found out that, that is a really great way to reset the nervous system.

[01:02:45] HK: So, a far away from a training stimulus. That is an important, okay interesting that is an important element that I did not know. Alright, so I have a couple more questions I know you're on vacation so I don't want to keep you too long but I would love for you to talk about StandUp Kids, the organization that you start, you have with your wife, let's work in and put stand up desks in schools because I think that is so important and such a cool thing that you're doing. Can you talk a bit about that?

[01:03:10] SK: Yeah, the short story is when we look at where we're going to have meaningful interventions the earlier we start the better, you know. Whether it's heel striking or movement or maintaining movement to where it's burning calories, better tests scores. It turns out that we're supposed to move. It's not only about standing versus sitting, it's about moving versus being sedentary.

And the short story that we started with one classroom and then worked with two classrooms now our daughters in 5th year, our school is in 5th year standing. My daughter is in the 4th grade and she has never sat at a traditional sedentary desk ever, my youngest daughter. And now, we have 70,000 kids across United States who are at moving desks, through our non-profit. We partner with Donor's Choose and we're part of Michelle Obama's Let's Move childhood obesity initiative and then what we're currently working on and realizing, you know of course that it's really inexpensive to flip an entire class.

An entire classroom is only about $5,000. So if literally what the researchers said that if childhood obesity is a problem in United States and indeed it is, if in two years some of the research in Texas has been able to demonstrate net change in biomass index of 6% points in kids who are at standing moving desks versus sitting desks. It was the greatest single fat reduction intervention in the history of the world and it's called what are human beings are supposed to do? We're supposed to move and what we're doing right now is we're actually partnered with Cal Berkley in the University of California at San Francisco and we're working on doing some original research here in California so that we can really start to make bigger changes at the State Government level because we are going to have this intervention, you know, scale a little bit differently. And right now, it feels to us like we're pouring water on the sand, we just don't have enough water to make a pool and we're going to have to change our approach a little bit and getting the state involved and the state understanding the implications on how simple this is and the fact that it doesn't have to be run by a human being, you just adjust the desk so it's appropriate for the child. The teachers get it, intuitively and only honestly the only feedback we have from teachers is that they get through their curriculum in usually May and they have to generate more curriculum because they are more efficient.

[01:05:29] HK: Wow, that's pretty creepy. It's also cool that you're trying to be proactive right? Instead of waiting until were all crippled adults who are sitting at desks and are miserable. It's like get involved they still can move around. I mean I'm hanging out with my niece right now whose two years old and he's got a perfect squat, and I'm so jealous of it.

[01:05:47] SK: The thing is, you know if you're on vacation with your kid or on a weekend and you have a little person, what I want you to do, many people have done this before just get up and down on the ground as many times as they do and what you'll see is that day and day, you're like holy crap. You know an average toddler runs like 2.9 miles a day or something like that, you know. They're getting the - and that's a toddler is walking 3 miles a day and that's about the 10,000 steps that you're supposed to get.

And so, what you beginning to see is not just about walking though, it's the three dimensional movement, the depth and quality that movement play downward dog, rolling, sitting, you know your hips are going to be open at the end of the day, you'll just be in shock at what's possible if you just keep moving around and so, you know what it's pretty remarkable that the early

intervention and it came frankly because we did a Google talk in 2010 about this and really what we're trying is to help people to understand is that look we're making it more difficult for yourself and a lot of your function, a lot of your capacities are being switched off and I think that's what really people don't understand.

So, let me just make this really simple in a way that people understand related to like my wife. My wife is a stud, she owns a gym, she's my training partner, she is a two time world champion white water paddler. Right she is JSR and she burns an additional 100,000 calories a year because she doesn't sit while she works.

[01:07:13] HK: Right.

[01:07:13] SK: So, I'm now, she's a 135 pounds. I am 235 pounds. So think about how many calories additional I burn because I don't sit at work. Now, check this out, think about how much over a 100,000 calories of ice cream represents and think to yourself that's free ice cream. So for me it's not about I feel better or I sleep better and how much extra ice cream I can chunk down.

[01:07:39] HK: That is a very good selling point, big time.

[01:07:40] SK: So, the issue is you know again, we're going to have to because we are engaged in sort of a real environmental switch in terms of the way we interact with the world. How we commit to work? The kinds of work that we are all doing. We're going to have to think differently about how to make the environment fit the physiology and some of it is as simple as understanding behaviors that if you want me bringing cookies at work, put out a plateful of cookies. I guarantee you I will eat them all.

If you want me to eat vegetables ay work put out a can of vegetables at work, I'll eat vegetables at work. You know and so you come in and the environment is giving you cues about moving, right? You need to have a place to put your foot, we actually think you should have a stool to lean on. Alright, the desk should be at the right height so if you're standing with your elbows by your side, if you measure from your elbow to the ground and added an inch, that's a higher desk should be, very, very technical calculation.

And all of the sudden, you realize I feel better and then I can use my work to create more opportunity for movement, you know if you're a runner and you squeeze in your little run at work or your workout, you go out to the gym and you train at lunch, the worst thing you can do is go back in and stop moving. You know, like lets your body basically not going to clear congestion, you are going to become stiff, but if you come back and you just keep standing and fidgeting you're going to see that you have better adaptation response to your last training session.

[01:09:02] HK: Right, I love that too because I'm an extremely fidgety person and I kind of makes me feel good about my self because I feel like I'm doing something good not being still.

[01:09:10] SK: Well, I tell you what go ahead and look at the research around ADHD and ADD. Look at David Absteine's book *The Sports Gene* and there is a genetic drive to move that is inherent and you know what they did a great mouse study where they had mice run and they found out that some mice run one mile a day and some miles with three miles a day and so they bread those three mile mice. Pretty soon they had mice that run seven miles a day and they took the wheels out and guess what the mice went insane and so they gave them Ritalin and guess what, the mice were fine.

So, you know, what we think is perhaps we've been actually medicating our best movers and fidgeters in the planet. So, there's a great book out there called *Raising Cane* that really looks at the biologic differences between boys and girls and why boys are getting their asses kicked at every measure of school is because they're doing a lot more sitting whenever they had to and they just don't learn well when they're sitting down and they go in to trouble that negative associations and then poof my daughter is suddenly running the universe because boys are sitting more than they are supposed to.

[01:10:08] HK: Right. So, if people want to learn more about StandUp Kids or maybe how they can help, or how they can maybe brought in their schools, they just go to standupkids.org right?

[01:10:18] SK: That's it standupkids.org. We talked about it in our book *Desk Bound* you know it's also a resource around that. The idea chiefly again, is people just need ways to conceptualize the world in a sustainable non freaky way. You don't have to wear creepy toe

shoes and you can still have a couch and you can - but there are - human beings are the most tolerant species on the planet. You can almost see anything and still be a human being right?

But that doesn't mean that you are going to be able to eat anything and do what you want to do and when you just reconfigure your life a little bit towards biased towards some of these principle behaviors. How does standing desk work, it's just about moving through out the day. You know, then what you will begin to see is that you will - there's a whole bunch of hidden capacity and down regulated function that starts to turn itself back on and then if you give that ten years, twenty years, five years, three months you're going to be shocked.

You know, we have a walking school bus that my wife and I started and you know we have a parent after the four or five months walking the kids to school. The parent was just like, “You changed my life, I lost 20 pounds.” We’re like, “You lost 20 pounds doing what?” “Walking to school with my kid.” So this person walked two miles a day and lost 20 pounds.

[01:11:35] HK: Wow.

[01:11:36] SK: Wow, that's what I said. I was like, “Wow what the fuck who are you?” I thought it but I didn't say it. I was like “That is so great.”

[01:11:42] HK: But I mean I guess again, it goes back to what you've been talking about this whole time in terms of do what sustainable do, you know if it takes sustainable do you know if it takes a little bit time and you work your way up it's like something is better than nothing and every little bit does count and you don't want to go from zero to a hundred in one day.

[01:11:57] SK: That is not sustainable, you know really the thing to look at it is you know is that all of these things that we're talking about are really components to a physical practice and when you were thinking hey what are all the components when you practice to sleep and water and a little soft tissue work and maybe exercise and moving around and right get some sunlight and all of a sudden if you only did four out of ten you're still that's a really thorough physical practice and so it's not one or zero, you know, that's I think the problem is we'll make this list of things that we're going to do and then you will be able to go reduce clans and I'm going to sole

cycles a few times a day and get rid of my cellphone and good luck with that, that's going to last eight minutes.

[01:12:36] HK: Right.

[01:12:36] SK: And also leaves us feel like we're really failures and so if you walk and you get 10,000 to 15,000 steps in a day and get some soft tissue work boy you didn't get to train today but guess what you have all these benefits and other aspects of the behavior and that's good enough today. Congratulations on being a really complete human. That's fantastic.

[01:12:54] HK: Right, do you incorporate like massage and deep tissue massage or like sports massage personally? Do you think that is something, I know that may not be something on everybody's plate because of cost or time or whatever. But is that something that you think is beneficial if people can swing it as regular massage.

[01:13:12] SK: I think if you've ever had a massage, how do you feel when you stand up? Really relaxed it's fantastic. Having a relationship with a body worker is always a good plan especially when you get over your head or you tweak yourself or you're a little bit stiff or you just done a big event ,right? Yes go get it. You know the key is for us is that we look at a lot of these interventions as, do they scale or not and if you have one physical therapist for 5,000 soldiers I mean how is that going to go? How is that working for the soldiers? It's not working very well at all.

So we have to re-conceptualize how we are going to deliver health care so it's still the same thing are you getting a massage everyday? No. Do you get a massage every two weeks? No. Okay, every three to four weeks get massages, that your soft tissue work, you wait three or four weeks and then you hope that some 45 minute intervention with really talented massage therapist is going to fix your bullshit? It's never going to happen.

So, you know what you should be doing is sort of working on your self then you show up and you're like I need help on my calves you know and it's just soft tissue work. It's not capsular work, there's no mother control there, right? It's just you know it might be desensitizing or

sorting sign surfaces but it absolutely feels great but I think you can do most of these yourself but the reason a massage is nice you just go lay there and be a piece of meat.

[01:14:26] HK: Right, it's always nice just to be lazy and let somebody do the work.

[01:14:31] SK: That's right after recovery is best. So Juliet and I have a relationship with one of our coaches she has been in our gym for every now in Santa Cruz who is a genius and she's in the city we book a session with her Juliet has just had a hip replacement. You know she had juvenile rheumatoid arthritis as a kid and we put it off and managed it, managed it, managed it so she just have her second hip placement. And Carla comes up and he has been coming up for the last eight to ten weeks and does two hour really hard soft tissue work on Juliet's hips and you know post surgery, I don't get it, but it's amazing.

But what ends up happening is when I'm on the table, man I black out in two seconds, my body is I know what this is and I just deep dive in to this you know unconsciousness.

[01:15:10] HK: Nice.

[01:15:10] SK: I think one more thing is, it's wonderful it's like getting facial. It's like that there is something magic about human beings touching other human beings in a nonsexual way and that's really important because that is missing from human beings. One of the reasons we teach in our gym, partner mobilizations is that we need you to be able to feel what bad tissue feels like. You know my girls can walk up and down my quads and they can tell you exactly where the barbells brushes my quadriceps because it's stiff there right?

[01:15:40] HK: Yeah, interesting. Okay, as we start to wrap this up I can keep you all day but I won't do that to you. Earlier in our chat here you talked about you've got some like four books coming that you're going to give to us. Can you talk about those at all or still kind of like under wraps top secret?

[01:15:57] SK: Well, we got one in layout right now and to talk about it it's called *Waterman 2.0*. My wife and I were professional boaters at one time, professional paddlers and this is in my love letter. So thinking of a coffee table book with 35, foreword by Larry Hamilton and 35 interviews

with waterman, waterman in the planet from white water kayaking to out rigor to stand up, to surf, you know it's pretty exciting and really just a niche book but one that something that I want to do for a long time because I'm a paddler and standup paddling is a fast growing sport in the world and we're seeing it's scratching a lot of shoulders so -

[01:16:31] HK: Do you perform?

[01:16:30] SK: That is just fun and that will be out in the early spring and we got some big projects coming. I will say that Juliet is working on a project called *Death to the Juice Box* which is really helping parents and coaches understand sort of best physical practice around ways physically literate kids.

[01:16:48] HK: Okay, so we'll just have to keep watching you guys on social media and pay attention as the stuff comes out right?

[01:16:54] SK: That's right, we're excited.

[01:16:56] HK: Awesome, for people who want to maybe they're looking ahead at some New Year's resolutions or they just want to like finally get their act together and start doing this Mobility Wod stuff, for real, what's the best place for them to go and get started?

[01:17:11] SK: Well, mobilitywod.com we do it daily ten minute following along intervention and you know we've been doing this for a gazillion years and you can just skip ahead until you find one that doesn't have enough you know it doesn't have much equipment. Again starting early February. You know I think for every first whenever we're launching is that you'll be able to just be able to begin a soft tissue conversation yourself but if you grab any book or went on to the Youtube it's a little bit like you're fly on Virgin America, the touch screen says, touch anywhere to begin well that's how it feels.

It doesn't matter begin on the ball of your feet for ten minutes. Five minutes aside and get some work done, become curious you know, what happens when you are sitting a chair on a ball what happens when you gut smash and what you'll see is that there are plenty of interventions where you can begin a conversation and you don't have to be an expert, you just have to start.

[01:18:02] HK: Right, that's a great place for us to end off. You just have to start I think that's a great message and it's something that I'm going to do when we get off this call. I'm going to start on my zip up my dress mobility so I appreciate you calling me out on that. I think that's going to be my New Year's resolution.

[01:18:18] SK: Well, what's so great that people if you're good therapist truly about listening and you're like I have hard time zipping up my dress and I was like that's internal rotation to shoulder boom you told me what the problem was and I think that is what's really interesting about us more and more people are engaged in this full movement practices and you can see the short comings of exercising right? Fitnessing as we would call it, bootcamp style things where you're just crushing yourself when you're a little bit more of a formal movement practice you're going to see that you develop this correlate language for human function and it makes it really easy to be able to begin to take a crack at fixing yourself and we have to.

What we're talking about is non skilled care and every human being - When you're coming with knee pain or your elbow hurts you shouldn't go see a doctor your five friends are like you should do this first because this is the mechanic, this is understanding, this is non skilled, this is what it means to be human being.

[01:19:11] HK: Right and anyone can start, you just got to start.

[01:19:14] SK: That's right.

[01:19:13] HK: Yeah, well I appreciate you taking the time today, thank you so much and thank you for being so relentless in what you do and putting out so much for us, right? Because that's what we need, obviously, so thank you for that and hopefully we'll have you back on again soon to talk about the new stuff that you're doing this year.

[01:19:31] SK: My pleasure, anytime.

[01:19:34] HK: Take care Kelly.

[01:19:34] SK: Thank you.

[01:19:39] HK: Alright everybody thanks for listening. I hope you feel more supple already and if you're a fan of Mobility Wod and Kelly Starrett's work and you found some success with it. I'd really liked to hear your stories so please hit me up on Instagram personally at the Muscle Maven or at Paleo Magazine's account @paleomagazine and tell me what you think and another shoutout to our show sponsor Marc Pro and their electronic muscle conditioning devices for faster recovery, enhanced performance, injury prevention and pain relief. Sounds like all good stuff to me and Kay Star uses this product as well as many professional athletes who are probably better at this stuff than we are. I mean it's worth a shot right?

Marc Pro is offering a chance to try it out 30 day money back guarantee so if you don't feel like it's working you can return it. So you have nothing to lose and everything to gain including gains right, right? Alright, so you can use promo code PALEOPOD all caps at marcpro.com that's M-A-R-C-P-R-O.com to save $32 off the Marc Pro or $47 off the Marc Pro plus so definitely check that out.

Now, next week I speak with the founder of Sauna Space and these guys makes personal infrared sauna products for your home or your gym or whatever including an individual light panel that you can put on your desk which I am currently using as we speak. It's beautiful, it's making me warm, it's providing this heat and light therapy and it provides near infrared waves that are supposed to make me feel better, sleep better, look better you know all the important things in life right. So, Brian the founder, he's going to talk to us about the technology behind the stuff and why infrared light might be a good next step in leveling up your health and wellness game.

And of course, if you want another way to up your health and wellness game, you can subscribe to Paleo Magazine if you subscribe digitally, you will get back issues and I'm going to guess about a billion recipes and they are all amazing so, yeah, I mean do it why not. Paleo Mag online subscribe now you won't regret it.

Alright that's it for today I hope you come back next week thanks for listening.

[OUTRO]

[1:22:05.8] AV: Paleo Magazine Radio is brought to you by the Paleo Media Group and is produced by We Edit Podcasts. Our show music features the song *Light It Up*, by Morgan Heritage and Jo Mersa Marley, and on behalf of everyone at Paleo Magazine, thank you for listening.

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