

## Upgrade Spotlight: Find Your Footing with Minimalist Footwear – Xero Shoes – #935

Dave Asprey:

Welcome to the Human Upgrade with Dave Asprey. Today is a special Upgrade Spotlight where I talk with the founder or creator of a technology that I use and that I like so you can get to know the people behind the stuff that actually works. You're going to learn about how barefoot and minimalist footwear can reduce your injuries, help you have stronger feet, and this matters a lot to me, more than you might think.

I was born with flat feet. I was duck footed as a kid and I had massive foot pain. I just thought it was supposed to hurt when you walked until my early 20s. It was illuminating to see what happened when I got the right shoes. I did not get those in the early 20s. Only in the past few years did I really get that dialed in. There's a lot of people who are walking around saying, "My feet are fine," they're probably not.

The number of my muscles and neurological connections in your feet is unparalleled. If you get your feet right, it changes how you stand, how you sit, how you feel, even how you connect to the Earth in a, we'll call it an energetic way but there's something about standing at full power.

What you would do with even like a New Zealand haka dance, like there's a way of just planting yourself with power, any martial art we'll teach you that. It starts with the ball of your foot, with your heel, even with your toes. I'm still working with somatics and functional movement on getting my feet dialed in because it's that important just showing up and standing with power.

Our guest today is the founder of Xero Shoes. He's a serial entrepreneur and a guy who's never had a job, except he was a professional standup comic, an award-winning screenwriter. He's one of the fastest men in the country over 55, in terms of sprinting. That led him and his wife, Lena, to found Xero, X-E-R-O shoes and these are shoes that are designed to look not like the birth control, FiveFinger shoes that I've worn before and that I still wear on occasion, but I can now go out and about wearing shoes that look like shoes, but feel really good because I can still move the way our body was meant to move.

I wanted to learn more about this. Also, Steven and Lena were on Shark Tank and turned down \$400,000 from Kevin O'Leary. Steven, welcome to the show.

Steven Sashen:

Thank you. Thank you. Pleasure being here.

Dave:

Why did you tell Kevin to talk to the hand on Shark Tank? Why did you tell Kevin to talk to the hand on Shark Tank?

Steven:

Actually, I got to tell you this, Lena and I have a debate about whether she said something that I remember her saying or not, which is when he made us this \$400,000 offer. She said, "Are you bringing anything to this offer other than money?" He says, "Well, I'm a smart businessman. I've got a big Rolodex." I remember her saying, "So nothing?"

Dave:

Which was brilliant, man. [inaudible 00:03:14].

Steven:

Needless to say, didn't see that on the show but it was easy to turn it down because basically, he wanted half the company for evaluation that would've been basically what we were going to make that year. It just made no sense. I think he was trying make good television.

Dave:

[crosstalk 00:03:25]. Yeah. Sometimes there's a lot of pressure to make a decision on camera like that. You made the right call because selling half your company for way less than it's worth is kind of suicidal. All right. You were a standup comedian. When did you decide that shoes were your passion?

Steven:

Never.

Dave:

I want to understand that because your shoes are, they're actually normal looking, but they're made very differently. I was kind of surprised when I got them.

Steven:

Yeah. I didn't have a fondness for shoes prior to starting Xero Shoes. I think I owned one pair of running shoes and that's it. I wore those for everything. It was really the opposite is that when I got back into sprinting, let's see, 15 years ago when I was 45, I got injured constantly for the next couple years and a world champion runner said, "Try taking off your shoes to see if you learn anything from running barefoot." I'm not suggesting people run barefoot, but it changed my life because I learned why I was getting injured.

Basically, when you run barefoot with bad form, you can feel it. It hurts. I couldn't feel that form problem when I was in regular shoes. Running barefoot with good form feels great. I wanted that natural movement experience, but I wanted to be able to get a little protection. My wife didn't want my dirty feet coming into the house. I wanted to not have to argue about whether it was legal to get into a restaurant in bare feet, which by the way it is.

I was making sandals based on this 10,000-year-old design idea and it's really just from getting into discovering what you were talking about, the value of natural movement, the importance of foot health, and all the things that relate to foot health that got me going, but what really catalyzed it was discovering that what the footwear industry has been doing for 50 years is lying to people, is selling people on ideas that they know don't work, but they can't pull back. They can't tell a different story, because they've been promoting this story for so long about arch support, motion control, padding, cushioning, et cetera.

We literally had the CEOs of three major brands say to us, "What you're doing is legit. We just can't do it because if we did, it would be admitting everything we said for 50 years as a lie," which it is.

Dave:

I know this game. Oh, there's mold in coffee and if a major brand admits that, they'd have to admit that their entire inventory is probably something that needs testing and magically they just don't like it when you come from outside the industry and just point out stuff that works, which is why upstarts are all always interesting. Now, 80% of people who start running get injured in the first year. I push that.

Steven:

No. No. Hold on. It's worse, 80% of marathoners get injured, not the same once every year, but 80% of the people running marathons get injured every year, 50% of runners and then for people who are walking around their feet all day, the numbers are just as high. Two things: This hasn't changed in the 50 years since the advent of the modern athletic shoe, despite all the "advances" and if you look prior to roughly 1970, these numbers did not exist. There's no research on running injuries or running injury prevention because it just wasn't happening.

Dave:

That's so weird. It just wasn't a big deal. I used to try to run to lose weight because I was overweight and had bad feet and bad motion patterns. There's been a through line in the biohacking world since even the very first conference talking about functional movement, talking about barefoot, and I got to the point where I toughened up my feet. I could walk around barefoot. I'm not going to be running anytime soon. I got to screw in my knee. I don't mind sprinting, but I'm not going to go for a jog. I don't think it's particularly healthy, but there are lots of people who want to do it.

The barefoot running movement, I've been concerned about it because I think for most people, they can't handle it. A lot of people say, "I tried running in barefoot, but it didn't work." What's your take on that?

Steven:

Yeah. I met many, many people who said I tried running barefoot and it didn't work and they never actually had their bare feet on the ground. I met many people who did get their bare feet on the ground and thought that the only thing you had to do is just take off your shoes and keep running whatever your normal mileage was but it's really, it's not about the footwear. It's about the form. It's just that the footwear informs the form.

Here, I will hold up a normal looking running shoe. When you elevate your heel, aside from the fact that it messes with your posture and put strain on your knees and your back, you tend to end up landing on your heel with your leg out in front of you, basically outstretched. What happens when you have cushioning? It actually increases impact forces because when you have cushioning underneath your foot, your leg stiffens to accommodate the squishiness underneath your leg. That sends an impact transient force spike, that's a term from Dr. Daniel Lieberman from Harvard.

It sends the force into your joints instead of using your muscles, ligaments, and tendons as the natural spring shock absorbers and joint protectors they're supposed to be. A, it's about the form and Lieberman actually did a study showing where he took habitual barefoot runners from Africa, they had great form and then he put shoes on their feet and immediately it changed into something that was detrimental, putting that spike of force into their joints.

The second thing is, it takes a little bit of time to transition. If you're used to certain movement patterns that you get used to when you're in "normal shoes," it takes a while for your brain to figure out how to change that. Many people confuse the "frustration" of learning a new movement pattern with the phenomenon of learning a new movement pattern.

They go, "Well, it was really difficult." It's like, yeah, that's because your brain is laying down new neural pathways, but eventually you get used to it. Remember, the locking in of those neural pathways, that development, happens during the resting periods between bouts of attempts. My answer is A, start small and go legit barefoot or in something as close as you can get, which would be like Xero Shoes, do a really short run, 20 seconds, see how you feel the next day. If you feel great, add

10 seconds the next time. If you feel sore or like you did something, you want to just play with your form using fun as your guide. If you're not having fun, you're definitely doing it wrong.

Once you can do it, because you can spot like accomplished barefoot runner from a hundred yards, they have this weird look on their face. What's it called? Smiling? They're having a good time. If you're not having a good time, you're definitely not doing it right.

I literally, unless you have some significant deformity and even then, I've never met anyone who couldn't make the transition to natural movement. If you give it a little bit of time and a little bit of attention and saying that it's not right for me is sort of like saying, "Well, my arm was in a cast and now I've taken it out of the cast, but I'm going to elect to never use it again. I'm just going to keep supporting it forever." Instead of, "I'm going to do a little bit of work. It's going to take maybe eight weeks to get some strength and mobility back, but after that my arm works properly."

It's the same thing with your feet, your legs, your hips, your back, pretty much your whole body when you get out of shoes that mess with your posture, mess, with more importantly, in fact, this is a point about the people who say they were barefoot, but they were actually in shoes, most of the "barefoot shoes" that were being sold, including the first FiveFingers that was made specifically for running, had enough cushioning that they muted the signals that the 200,000 nerve endings in your feet are trying to get to send info to your brain about what you're stepping on or in to help move your body more effectively and enjoyably and efficiently.

If you still have enough cushioning to mute that feedback, this is research from Irene Davis, it's actually worse for you than either genuine barefoot or some big thick-padded motion control shoe, because it's kind of the worst of both worlds.

Dave:

Interesting. A lot of people haven't heard of something called proprioception and this is your body's sense and your brain sense, but they're different sense networks of where you are in space. Your wrists or your foot knows where it is in space, independent of your brain and your brain has a map of it. But the joint's supposed to know how to work all by itself.

The intelligence is spread throughout the system but if you don't get the signal from the world around you, then you won't know what to do and your local network won't know what to do. The little muscle that was supposed to tighten up in your arch never gets a signal to do it. Stuff flattens out. Your point that semi cushion shoes, don't protect you and take away the signal that it's worse than the fluffy shoes but people say that fluffy shoes do feel better if they're long distance runners because they run wrong or why is that?

Steven:

Well, so there are a couple things. One is, boy, there's so much to unpack here. We know that there's lots of things that feel good that aren't good for us. We know there's things that taste good that aren't good for us. It's the same thing with your feet. You put something on your foot, it can feel really good, especially when you're just standing or walking in a shoe store but it can feel good because you're not, A, you're not using your muscles, ligaments and tendons, which feels great, like lying on a Lazy Boy feels great but if you stay lying on a Lazy Boy, you develop bed sores and your muscles weaken and when is weaker better than stronger? Don't answer, I'll tell you never. That's part one.

The other part is with all that cushioning, people need to understand this basic idea about physics. I know that makes people's brains tighten up as soon as I say it, but trust me, it's easy, it's the difference between pressure and force. Pressure is what your feet are sensitive to. When you have

cushioning, it spreads the pressure over the surface of your foot. It feels like less is happening, but the force doesn't change.

The force is still going up into your body incorrectly instead of again, using your muscles, ligaments and tendons, because to your point, your body can't feel what happens and respond to it fast enough because the pressure has been spread, but the force is still going at the same speed. It's a subtle thing, and boy, one of the things about highly cushion shoes.

There's another one, someone gave me one of the new Nike shoes, the Vaporfly. It's interesting because when you're walking on it, as your heel is coming off the ground, the cushioning, the foam does expand and it kind of hits you in the heel and it makes you feel like something is half happening, but it's not because by that point in the gait cycle, there's nothing you can do to basically get more force into the ground and run better. It's a fake out.

In fact, last thought about cushioning because it's my favorite story, the big fake out when Adidas came out with, and by the way, I say Adidas to be pretentious, when Adidas-

Dave:

Like Target, I got you.

Steven:

Well, no it's because it actually is Adidas because it's Adidas who started the company, but only few people and Europeans can say that. When I say it in America, it's like when you come back from Amsterdam and you say to yourself, "Do I tell people that I went to the Van Gogh Museum and act like a pretentious prick or do I just tell them I went to the Van Gogh Museum?"

Anyway, when Adidas came out with their boost foam, they showed that they bounce a two-pound steel ball off cement and it barely bounces off the other company's foam. It bounces a couple of times off their new wonderful boost foam. It bounces like 10 times. The first bounce is maybe 30% of the height that they dropped it from.

Well, I know physics from way back when. There's an Exploratorium, the Exploratorium Museum in San Francisco has an exhibit where they bounce a steel ball off a steel plate with cement underneath it. You drop the ball through a Plexiglas thing with a hole in it. The first bounce hits the Plexiglas plate, it's like 99.95% responsive. Then, it bounces 260 more times. Adi is faking people out and saying, "Isn't this great? You want something springy," but it's not springy. It's sucky. It literally sucks energy. There's no such thing as energy return. There's only how much energy suck you get.

Again, that energy suck can feel good, but does that mean it's good for you? The research is very clear, the answer is, no, but great marketing outperformers facts almost every day of the week.

Dave:

It sounds almost like artificial sweeteners. The ones that make you fat, but tell you they make you thin so you'll buy more of them. It's a great business model, right?

Steven:

It's an amazing business model to convince people that there's something wrong with them if your product doesn't perform. The question, does your product perform "a Nike study?" Nike did a study using two shoes. One of them was their bestselling, motion control pad and arch supporting shoe. In a 12-week study, they designed over 30% of the people wearing that shoe got injured. This is a recent

study. This was about two years ago. If they haven't figured this out in the last 50 years, something is undeniably wrong.

Unfortunately, many consumers are like the boy who cried wolf story, in this case, it's the shoe company that cried cushioning and every time there's some new "magic technology," people keep running to the store in going, "I think there's probably not a wolf there. I think we're going to let this one slide."

Dave:

Do you think that it's evil executives at shoe companies plotting, rubbing their hands like Mr. Smithers saying, "We're going to sell this," or is it just an emergent behavior where, "Look, we're maximizing profit. People are willing to pay more for shoes that are bad for them, but feel good in the short term," is this a consumer demand thing? Is it an emergent behavior or is it just people like being evil?

Steven:

I think there's probably another option in that, in the triangle of possibilities. I think all of these things have a component to them. What happened... Look, here's how the evolution of the modern athletic shoe happened. Most people don't know this, Bill Bowerman, who founded Nike, was sharing a building with some orthopedic podiatrist, maybe sports podiatrist, I can never remember but anyway, he said to them, "I'm getting these new runners who are getting Achilles tendonitis. What do you recommend?" They said, "Oh, well, clearly their Achilles have shortened from wearing higher heeled dress shoes. Make a higher heeled running shoe. Put a wedge of foam in it."

Dave:

Oh my God.

Steven:

If you look at the original Nike shoes, they were pretty flat and had maybe 10 millimeters of foam. They were actually a great shoe. Anyway, cut to 30 years later, actually cut to, Nike started selling a bunch of these shoes. In the footwear world I have discovered, is a bunch of copycats, scared copycats. If something starts to sell, they panic and start to replicate it and copy it because they don't know what to do because there's not a lot of creativity in this business I have found.

Dave:

Just like food and coffee, who would've thought, right? We've been eating for a long time, been making shoes for a long time, so they just copy each other endlessly. Okay.

Steven:

Totally. Cut to 30 years later, a friend of mine, a guy who actually developed one of these shoes behind [inaudible 00:17:34] he worked at Nike directly with Bowerman for 30 years. He's at a track meet with one of these podiatrists. He says to the guy, "You know that that design, that elevated heel, that foam thing, the triangular wedge, that was your idea. Every athletic shoe in the world is pretty much doing that, using your idea. What do you think about that?" The guy said, "Biggest mistake we ever made."

Dave:

Wow.

Steven:

We didn't have any evidence for this whole theory about Achilles shortening or what the solution was. We were just making a lot of prosthetics, so we thought everything needed a prosthetic solution. There it is but we know the damage that it's done.

Dave:

A while back, I really wanted more normal looking shoes. I went to this boot making place, custom shoes when you have size 16 feet is something you sometimes just have to do because 99% of shoes I can't buy. I dropped 500 bucks and I said, "Well, if I'm going to get custom-made shoes, I'm getting the ostrich leather, why not?" They're cowboy boots, but I fell in with a really wide toe box and my feet could move around in them. I got the shortest heel possible.

But as soon as I wore them with even a little heel, gee, my low back and my hips hurt because I'm used to wearing shoes and walking barefoot. I can't really wear them unless I just want to look pretty but those are like your sit down shoes, not your walk around shoes.

Steven:

It is something that my wife used to complain about before we had more women shoes. She says, "I hate the fact that we own this company because I found this great pair of boots that has a quarter inch heel and when I put it on, I feel like I'm about to fall on my face."

Dave:

What would you say to the many women and probably some men listeners who actually enjoy high heels, but they only want to wear them sometimes. Can you switch from like a Xero Shoes for a night out on the town or something?

Steven:

Well, let's just say that there's a podiatrist who used to teach a course on how to wear high heels. It was really a barefoot strengthening exercise program with the idea being, look, you're going to wear them sometimes, so what you want to do is strengthen your feet so you can tolerate it for that short amount of time.

It's sort of like with running, I say to people that you don't need to run in our shoes if you don't want to. What I can tell you though, is there's two bits of interesting research, one, this is from Dr. Isabel Sacco, showing that you could reduce the injury rate in runners in normal shoes by 250% if you do an eight-week foot strengthening program.

She did this eight-week foot strengthening program. The people who did that over the course of a year had two and a half times fewer injuries than the people who didn't. That's part number one, do some foot strengthening, but here's where it gets more fun, research from Dr. Sarah Ridge showed you can get the same benefits as that exercise program by just walking in minimalist shoes like Xero Shoes. If you want, wear Xero Shoes when you're off, not running and wear whatever you want to wear when you're running.

We have professional ice hockey players who say they're skating better than ever because they're wearing Xero Shoes when they're off the ice and that's translating to when their feet are bound up in foot coffins like skates. Somehow their feet and ankles are stronger and they can tolerate being bound up like that better and longer. Again, it's not only about form rather than footwear, it's about strength, that's the most important thing.

Dave:

The trick for high heels is to not wear high heels and wear Xero Shoes or to be barefoot most of the time, so you have strong feet. That way, when you want to walk around for a night on the town, your feet are so strong. They just don't really, like your hips may hurt or something, but you'll be all right.

Steven:

A, that's true and B there's another option. Why does pretty have to be painful? I think that whole idea is people are really starting to question that and it's like, yeah, high heels can be cool and sometimes they're really pretty as an art piece. Sometimes they can make your body look away that you like, but why don't we just reframe the concept of what attractive is?

It's sort of like in a way the whole athleisure look is starting to do that for people where they're starting to get the idea that maybe looking fit is better than looking fashionable or more accurately, that looking fit is fashionable. I would argue that there's something similar happening with footwear as well.

Dave:

Okay. [inaudible 00:21:33] there was a time in my life where, a lot of people don't know this, I put auto parts in boxes in a warehouse for 10 hours a day or welded Toyota truck frames.

Steven:

Was this a job or were you just doing that for fun?

Dave:

It was actually a fetish. It was a job. I did it during summers because it paid three times what anything else did, when I was in my early education. It kind of wrecked me to stand on cement for that long. What would you say to people who, like there's a lot of doctors, nurses in hospitals, people in warehouses...

Steven:

Look, I'm bouncing.

Dave:

... what's the story there? You're bouncing.

Steven:

Yeah. The story there is the reason that being on your feet all day can hurt is if you're wearing something that doesn't let your feet do what they're supposed to do.

Steven:

The reason that being on your feet all day can hurt is if you're wearing something that doesn't let your feet do what they're supposed to do. Let's start with that. A quarter of the bones and joints of your whole body are in your feet and ankles. They're supposed to bend and move and flex just like any other joint. If you're wearing shoes that don't let them do that, that function tries unsuccessfully to move into your ankle, your knee, your hip and your back joints that aren't built for those micro motions that keep you balanced, that give you agility and mobility.



For example, almost every shoe, including the ones you're wearing, then most likely had a pointy toe box. What? I have no idea why that was developed, but it makes no sense. Think about doing pushups. Well, when you do pushups, you don't squeeze your fingers together. You spread them apart because that gives you better balance, strength, production. Same thing and also being able to move your toes is one of the most important things for just being on your feet comfortably all day.

Secondly, again, elevated heels mess with your posture. The cushioning [inaudible 00:23:27] so you don't get the sensation that your brain needs. All I can tell you is we have thousands and thousands of testimonials from people, including people at our warehouse, our customer happiness team, who most of them have standing desks, everyone who's ever worked from us has gone to a trade show and hundreds of healthcare practitioners and salon hair cutters, and who else, restaurant workers, who say that once they got used to being in Xero Shoes and using their feet naturally, at the end of the day, they feel totally fine.

I like to say, when people ask me what I do for a living, I don't tell them I'm the co-founder and CEO of Xero Shoes. I ask them a question. I say, "Do your feet feel better at the end of the day than they did at the beginning of the day?" They always say no. I say, "Yeah, it's because you're wearing the wrong shoes." I say that because we've heard from a lot of people who said they accidentally went to bed still wearing our shoes because they're so comfortable and so lightweight, they forgot they had them on.

Same thing, we've heard from people who used to just like rip off their shoes and do whatever they could to heal for day who get home and they forget to take their shoes off. Again, it's all about natural motion. If you look back, we want to get primal and ancestral, our ancestors didn't have a problem being on their feet all day, every day. It wasn't because they're different from us, it was just that they were using them and they got used to using them correctly. We can still do that any day, anytime, any of age.

Dave:

Let's say that there's a nurse or a doctor or someone in a warehouse...

Steven:

Yeah.

Dave:

... I used to wear like Oakley combat boots when I would do that, like the Special Forces ones, because they were the ones that made my feet hurt the least but let's say that they want to transition over, does that mean tomorrow they put on Xero Shoes and just do it all day? Aren't they just going to be ruined?

Steven:

Well, they won't be ruined, but they won't be happy. I just had a memory. Have you ever had your arm in a cast or had some significant joint in a cast?

Dave:

No. I have bone density, like a Greek God, apparently.

Steven:

Those were made of stone. Wow. Anyway, I just remember having an arm in a cast and for the first couple of days, your arm gets really sore because you're trying to move it and you can't. There's all this

restriction from natural movement and it makes you sore and eventually your brain goes, "Ah, screw it. Let me just stop doing that."

Same thing happens when you're in a big, stiff shoe that doesn't let your foot move. The transition, I can't give a specific protocol other than listen to your body because everyone's a little different neurologically about what it takes to learn a new movement pattern. The way I say it is, think about going to the gym, if you haven't been to the gym for a long time. You don't show up and do eight hours of bicep curls, which of course, you would never do.

But what you do is you do a set. You see how you feel the next day. Once you're comfortable doing that, you maybe add a wrap or add a little bit weight. You want to think of it the same way. You're going to just wear the shoes for, I don't know, maybe an hour and see how you feel. If that felt okay, then add a couple minutes. If it felt like you need a little bit of rest, then let yourself rest and go back, maybe do a little less time. You want to build up the time slow.

It's really the same advice that you give for running. It's just, you don't want to go called turkey, but you want to give yourself as much opportunity to start listening to your body. My wife loves to say that our shoes aren't magic. They help you become your own coach because they're giving you the feedback that's better than what any other coach would give you.

Dave:

Would that mean half a day in Xero Shoes? Would you do a slow transition or you would just kind of rip off the band-aid [crosstalk 00:26:54]?

Steven:

Well, look, you're talking to the wrong guy. I just went barefoot and never went back.

Dave:

Okay.

Steven:

But I have an unusual skill at picking up new movement patterns. I was an all American gymnast. I've taught everything from Zen archery to running, to yoga, to Tai Chi, to whatever. I'm a bad, bad example but what I would say is start in Xero Shoes, because that's when you're going to be the freshest. Again, just give it an hour and then switch out.

You may find that that switching doesn't feel good, then give it 90 minutes. Then, just again, just listen and just build up based on what your body tells you. The only problem is that there's this whole idea you don't want to do too much too soon. The problem is we don't know we did too much until we did too much. The good news is, that little bit of this pleasure that you will have, it'll go away in a couple days. Start again.

I'll tell you, there's a guy that I know he manages a few hundred people who work on a factory floor, cement floor. Most of the people switched to minimalist footwear except for three. It just wasn't working for them, but over time, they kept seeing everyone else having great experiences. Six months later, they tried again and decided to just slow down the transition and within six weeks for them, they could never go back. They had had the same experience.

Sometimes people just, they take that first little bit of discomfort and go, "Oh, see this is wrong," but again, often the discomfort is building strength, laying down new neurological pathways, or learning in general how to move differently. Again, different amount of time for different people. All I

can say, again, going back to the cast analogy, which would you rather do when you take your arm out of a cast, never use it again or spend some amount of time getting it back in shape so it can support you for the rest of your life.

Dave:

You sort of do physical therapy...

Steven:

Yes.

Dave:

... in order to recover and to rebuild it. It feels like slowly transitioning to Xero Shoes if you're working in one of those environments is probably going to be like physical therapy for your feet.

Steven:

It is.

Dave:

Okay.

Steven:

It's exactly what it is. To that effect or to that point, I got a great story, the changes are sometimes subtle and by the time you notice them, you kind of wish you were paying more attention. Everyone I know, I know a lot of people and I'm not making a medical claim or promise about this, but I, and many people I know, developed arches in their life long, comedy level, flat feet from using them.

My biggest regret is that I didn't take a picture of my footprint when I got out of a pool prior to going barefoot. Then, six months later, a year later, two years later, I mean, it really looks like a different body part than what I've had for my whole life.

Dave:

I have started growing arches for the first time ever. It's taken several years of minimalist issues as well as for me some functional movement, very specific like somatic work on my feet because it turns out-

Steven:

[crosstalk 00:29:43]

Dave:

I never learned how to use half the muscles in my foot and a quarter of our muscles and nerves and joints and stuff that are in our feet but a lot of people, "Oh, you wouldn't know that that thing, that toe that doesn't move a certain way, it actually can, but you might need specific even therapy if your feet are as bad as mine, with someone who really knows feet." There are some foot whisperers out there who can help you transition to any kind of minimalist as footwear.

Steven:

There's also foot fetishist, but that's a whole different story. In the early days with Xero, when I just had videos of my feet, showing people how to make sandals with a do it yourself sandal kit, I got a lot of emails from people going, "Can you make more of those video of your feet please?"

Dave:

They just wanted to buy your socks. It's a very weird internet out there. You should be careful.

Steven:

Yeah, well you're right. FYI, arch height is predominantly genetic. Arch strength is a whole different story. The strength is the most important thing, not arch height. This idea that flat feet are a problem? Not true. Pronation by the way, made up problem, completely fictional.

The solution is not posting your foot, putting something under your foot to support your arch. I know for some people they're going to say that feels better and look, and if it solves a problem for you, I'm not going to tell you not to do it but the real solution is strength.

What I would recommend to people who are wearing arch support and there's some great products out there, we know Aline, for example, but I would still say, what you want to do is, well, two things: One, is as much as you can, do those kinds of exercises that you're talking about to build intrinsic foot muscle strength and there's a program for doing that. In fact, I'm going to be publishing one soon.

But the other thing is, if you are going to wear some sort of support, you want to put it in a shoe that isn't getting in the way of what the support is doing. In other words, Xero Shoes give you a flat platform. There's no built in arch support. If you add arch support on top of arch support, that could be problematic. The other thing with "normal shoes," as the foam wears out, it changes the biomechanics. It changes all of the geometry...

Dave:

[crosstalk 00:31:40].

Steven:

... which affects what you're wearing, if you're wearing an orthotic. You got to be super, super careful about that. Again, the number one thing you can do is use as little support as you can get away with based on the amount of strength that you've developed.

Dave:

I have, and you're going to hate me for this, I've actually put an arch support in Aline shoes. Some of the time when I felt my feet needed it, and it helps to transition a little bit, so maybe that's a solution for people in warehouses or something. Instead of having two pairs of shoes, some of the day have arch support, some of the day don't as you grow the muscles. That seems like it's a pretty good deal.

Steven:

It's a fun one. In fact, one of the top orthotics developers and researchers in the world said to is Dr. Irene Davis from Harvard, he says, "I love these Xero Shoes. I'm going to put my orthotics in them." He thought she was going to get a lot upset. She goes, "Great," but over time, just start making them smaller and smaller and smaller and smaller until you feel like you don't need them. He's like, "Oh, well, all right."

Dave:

I have to ask you this question, and I've seen different people online. I've talked to different functional movement experts. I have not found a consensus. By the way, guys, my whole thing, I talked a lot of experts to learn from them so I don't have to go do all the work myself. Then, I do the work when I can't find somebody, but some of them say, when you run, heel, strike forward. Others say, run on your toes, which is it?

Steven:

I'm going to say, neither. The idea that there's only one way to do it isn't necessarily true because it's going to change whether you're running fast, running slow, running uphill, running downhill, speeding up, slowing down, accelerating, decelerating, I'll say this, what you're looking for is to not put force into your joints. You want to use your muscles, ligaments and tendons.

Your Achilles tendon is a natural spring. Backing up to the higher heel running shoe, even if you're landing on the ball of your foot or your mid-foot in a regular higher heel running shoe, when your foot comes down, you're not letting the Achilles stretch all the way and give you all that free energy back because the high heel doesn't let it stretch. That's part one.

The second thing is, if you're landing with your foot in front of your body, whether you're landing on your forefoot or your heel, you're basically putting the brakes on every time your foot lands. It slows you down and if your foot's far enough in front of your body, your legs relatively straight, and again, that sends that impact transient force spike straight up through your joints, typically into your knee and your hip and your back.

What you want to be doing is landing with your foot more underneath your center of mass. Another way to think about it, is when you're landing, if your ankle is behind your knee, closer to your body than your knee, then you're probably landing correctly and using your muscles, ligaments, tendons correctly.

Now, it just so happens when you do that, you're probably going to end up landing mid-foot or forefoot because it's hard to land in your heel when you're getting your foot right underneath you. That's the thing.

Now, that said, if you're a competitive marathoner or a competitive something or other, you're going to do whatever you need to do to win the race. Then, all bets are off in that case.

Dave:

Okay.

Steven:

What people love to do is they look at professional runners and they go, "Well, look what that guy's doing?" I'm going, "You're not 105-pound Kenyan running a marathon in 2 hours and 15 minutes. What do you care what that guy's doing?" You got to do what's right for you. That guy is doing whatever he can to get enough money to feed and clothe his village for the rest of his life once he's unable to run after he is 32 years old, because he's blown out his knees. Don't look at what they're doing. Look at what's good for you.

Overstriding is the number one problem. If you stop overstriding, you're going to find that your gait naturally changes and it's most likely going to be sort of forefoot and mid-foot. There was a misconception with this idea of landing on your toes because people would just still reach out with their foot in front of them and then point their toes.

That's prancing and that's putting undue stress on the planter fascia and on the metatarsals instead of letting your foot really be that first line of, not only defense, but of support by getting it underneath you. If you do land on the ball of your foot or your mid-foot, you're actually engaging the arch, which makes your foot stronger, your ankle stronger and everything up the posterior chain stronger.

Here's a weird version of that. We had a professional bike rider who got out, finished his training run and put on a pair of Xero Shoes to just casually ride home. He called and said, "I'm putting more watts out in your shoes than when I'm clipped in with my \$500 cycling shoes." I said, "Yeah, because your cycling shoes are just stiff and aren't letting your foot do anything." What's happening when you're in the Xero Shoes is you're engaging the arch that's making your foot stronger and that's making everything else in your legs stronger.

Dave:

You should be able to push your pedals. I used to be a long distance cyclist at centuries and stuff like that when I was trying to lose weight through exercise, that was a bad idea, but it actually makes sense because when I finally found big enough shoes, there was only one brand that made them in my size from Italy or something, it cost more than my bike, and I got the clip in things and all. I didn't actually think that I pedaled with more force versus just having old fashioned, cage toe clips and then pushing with my foot and my leg because you could feel the ankle muscles and all.

Steven:

Well, the ankle contributes about percent of the strength but if you're engaging the foot, you don't need the ankle to be providing strength. You need the ankle to be providing support that then lets your leg provide the strength.

Dave:

Now, there's three things that I've learned to look for. I want you to vet this list. I'm going to ask you about a fourth too, but when I'm looking for shoes that I'm willing to wear, it's a wide toe box, so your toes can actually move instead of being the pointy, weird looking thing. You want it super flexible. There's no stiffness in the sole and I mean, I can bend my Xero Shoes in half easily. Then, there's, yeah, there you go, right? Just twisting it like a dish rag and it moves...

Steven:

[crosstalk 00:37:36].

Dave:

... and then like a natural feel. Even when I hike, I want to be able to feel the rocks on the trail. I don't want to get bruised by them, but I want to be able to sense where I am. If you're scrambling or something, you don't lose connection with your feet.

Steven:

Correct.

Dave:

Is that a good list of the three things? Is there something else you'd add to that list?

Steven:

Those are the biggies you want wide toe that's flexible and you want to be to get that ground feedback that you want. Just like you said, just enough protection for what you're doing. If you're going to be on a trail, look, you can do a barefoot if you really pay attention and it's super fun. You got to build up to that of course, but if you're going to be on a trail and you feel like you need a little extra protection, just enough, but to give you that protection, but still give you that ground feel.

The other thing from my perspective is you want something that's going to last because you don't want to buy a shoe that's going to wear out in a couple hundred miles or be useless in a couple hundred miles. When we developed Xero Shoes, we said to our rubber manufacturer, "Here's the specs that we want. Here's the performance characteristics that we want." He said, "But that's not how they make out soles for shoes." We said, "Yeah, no joke. That's why we want to do it this way."

We make our shoes built to last, keeping them out of landfills. I don't care if you have eco-friendly materials, if they don't last as long as synthetic materials, you're not actually helping the planet. Our FeeTrue rubber soles, we back them with a 5,000 mile sole warranty. Does that mean they're going to last 5,000 miles? If you start and stop your car like Fred Flintstone? No, but we'll still back them by that warranty. We make them last longer.

Dave:

What are the best socks to go along with Xero Shoes or just to go along with barefoot running? Should I be wearing toe socks, which I do wear or something else? What's your take on socks?

Steven:

Well, now you're going to make me cry. The thing with socks is, again, it's about sensation. You want to wear the thinnest thing you can get away with so that you're still feeling things. I'm barefoot in my shoes. I don't think I've worn a pair of socks, but why I'm going to cry is prior to barefoot, I had this amazing collection of tie dye socks. I still have it. I just haven't worn them in like 13 years.

Dave:

You could [inaudible 00:39:39] your feet, just do that and you'll be fine.

Steven:

Oh boy. You have such brilliant ideas. Sometimes, I don't know where to go with them. I guess, sorry, let me say that differently, you're right. I could. The thinnest thing you can get away with. Toe socks are wonderful, for people who love them, they love them. Some people, again, their foot shape doesn't quite work with them and they're a little tricky because of that.

Otherwise, and I wish I could give you a brand recommendation, but since I don't wear them, I don't know but the key, again, you don't want to add padding from your socks or arch support from your socks or the real hard part, trying to find socks that don't squeeze your toes together. That's the real challenge.

Dave:

Now, there's a couple other things that come up on the list and some of this is from the Upgrade Collective, one is ventilation so your feet don't get sweaty.

Steven:

Yeah.

Dave:

I've found my Xero Shoes ventilate, but what's your take on insulation versus ventilation?

Steven:

Yeah. It depends on what you need. If you need a waterproof shoe, it's not going to be ventilated. I don't care if it's Gore-Tex or any other moisture-wicking, whatever. That's the way it is. I mean, as ventilation goes, wait, I'm going to hold up a shoe, this is our Aqua X Sport. We made this for trails and water and it's just nothing but holes in the upper. You step in water, it feels great. You step out of water, the water shoots out of it. It's really fun.

Different people have different things about how much they do and don't sweat. There's only so much you can do about it. This is one of those things where people imagine there's a magic technology that would make it so their feet never sweat, their shoes never smell, and that's just not the way reality works, unfortunately.

If you're going to wear a sock, you can get a moisture-wicking [inaudible 00:41:20] sock that can be helpful but the ventilation in the shoe is not going to be the thing that makes a big difference for you. If you're wearing a sandal and we have people who walk, run, hike and do everything else in our sandals, of course, that's totally open and that's not going to have that same issue but when you're wearing a shoe, we do whatever we can to make things as breathable as possible but we can accommodate all human beings in all circumstances, like every other shoe company.

Dave:

Okay. Ventilation is a maybe, and impactability is another big thing. For me, if I have normal fluffy shoes, they take about 40% of my carryon bag. I'm only going to, I'm a one pair of shoes kind of travel guy, unless I have my Xero Shoes because I can smash them.

Steven:

Yeah.

Dave:

I'll do that.

Steven:

Well, there's two things about traveling with Xero Shoes. One, you can just pack them flat. You know, it's funny, there's a weird neural, psychological thing, when I showed that you can roll up a pair of our shoes, people say, "Hey, that's perfect for travel." I go, "Well, perfect for travel is actually fat, flat and just smooch them," but for some reason, we equate rolling things up with travel.

The other thing is that we make shoes that are really, really versatile. We've had people who've taken a trip with four pairs of shoes and then only worn their Xero Shoes the whole time. The next time they take a trip, they only wear their Xero Shoes and they've got half their luggage free.

Dave:



That actually happens to me all the time. I'll bring the pair of shoes to wear on stage. I'm like, I'm just happier in my Xero Shoes. I just wear those. I'm like that. All right. Question from one of our Upgrade Collective members in the live audience, what shoe would you recommend if you're going to run one of Joe De Sena's Spartan races? Of all the Xero Shoes, what's the right one?

Steven:

Well, you have to buy every shoe we make, obviously, and then figure out yourself.

Dave:

The most honest answer ever from an entrepreneur.

Steven:

Yeah. I mean, come on. That's a really good question. Where I would go for, first and foremost, I would look at the Aqua X Sport, because it's got a grippy tread. It's basically the same tread as our trail running shoe, our Mesa Trail but again, like I said, just moisture flies out of it.

I'd have to really look back at the reviews from people who've done Spartan races and find out, but this would be my first choice. Mesa Trail would be second. It depends on where you want to go after that. I mean, if you want to, you could possibly go for one of our boots, but that would be, that would get too heavy. I'm going to go for Aqua X Sport or Mesa Trail.

Dave:

All right. You have had kind of a masterclass here on what shoes should do and how to move and choose. I want to really thank you for that, Steven. This is important stuff and it's foundational to how you sit, how you stand, how you move, how you feel, how you wake up and it's something no one really talks about.

Now, that you can do it and look normal, which is important for a lot of people, it's a much, much more accessible than ever has been. Just many thanks for the education here.

Steven:

Well, A, you're welcome and B, again, to be candid because I always am, sorry, I'm going to get a little emotional here, I hate the word emotional, I'm getting a little teary, because I'm really touched by this thought, when my wife and I started this business out of a corner of a spare bedroom, like literally on the floor of a corner, we had a debate about whether we should buy a folding table to take things off the floor so the cats would have a harder time playing with the laces. We thought this would be a little lifestyle business. We thought maybe it would make a car payment.

We never imagined that we would be hearing from hundreds of thousands of people around the world who said, "You've changed my life and the lives of my children and my parents and my grandparents." I could not be more touched and grateful that that's what this has led us to.

Now, conversely, I also didn't expect to find out that what the footwear industry has been doing for 50 years is completely unacceptable. The thing that I say is, if that resonates with you, what choice do we have other than to help as many people as possible, as quickly as possible, have this experience so they can discover the fun and the benefits of what it's like to live life feet first. That's what gets us out of bed every morning. That's what keeps us going because running a business is really hard. Having people call you and say thank you all day, is what makes it worthwhile.

Dave:

Well, thank you. URL is Xero, X-E-R-O shoes.com. I got to say, it works for me. There's a lot of science behind it. Thanks for just stepping out there and being a disrupter in the foot industry or the shoe industry because we needed that.

Steven:

Thanks.

Dave:

Have an awesome day.