



Episode 202: How Footwear Affects Posture,
Alignment and Movement With Gordon Hay From
Aline

Child: Welcome to my Mommy's podcast.

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Katie: Hello, and welcome to "The Wellness Mama Podcast." I'm Katie from wellnessmama.com. And today's episode is going to be fascinating, especially if you are a mom because we're gonna talk all about alignment and foot health. And you guys know that I've been on the kind of like barefoot bandwagon for a very long time. But today's expert has a lot of really fascinating research and information about the way that we can properly support our feet. And it turns out maybe barefoot is not always the way to go.

I'm here with Gordon Hay, who is the cofounder, inventor, and creative visionary for ALINE Systems. I met him recently at Paleo f(x), and my husband actually introduced us. He had found him and was fascinated by the system and was like "You have to come see this." Basically, Gordon has over 20 years of invention, patent, and production experience with these types of technologies. And his new company ALINE...or not new, but his company ALINE has become the provider of ESPN Summer and Winter X-Games, and they also have...as well as for the world-renowned education and sports training institute IMG Academy. Super fascinating technology. Gordon, welcome and thanks for being here.

Gordon: Katie, it's great to be here, thank you for having me.

Katie: You are so welcome, I think this is gonna be fascinating because like I said, you kind of opened my mind to a different idea when it comes to how we should actually properly support our foot. And I actually completely agree with you, I think that the two ideas are completely simpatico, but you really brought some new research to the table. And I can't wait to delve into it today, but I wanna start broad spectrum and then dial down.

So, when it comes to feet, it's easy like any part of the body, to think of it in isolation, and people think like feet don't necessarily affect the rest of the body. But from your research, I know that you have a lot of info about this, and I'd love if we could start with, how does having unfavorable bio-mechanics or unfavorable alignment in the feet, affect the entire body?

Gordon: Well, you know, hopefully, the first thing to hit the ground in the morning are your feet, and the last thing to leave the ground at night are your feet, they're kind of important. And when you really think about feet it's a complicated puzzle, there's over 100 moving bones and joints in your feet. And when you move today, in all our unnatural terrain, we'll call it a concrete jungle out there, your feet are so important to transition. So, it's all about timing and sequence of how your feet actually move. So, when you look at feet with over 100 moving bones and joints, they do not have one shape in motion, they change in every nanosecond.

So, people come to me and say, "Wow, great barefoot, I'll just go barefoot." No, think about it, a barefoot hitting concrete, hard tile, hard wood, all this disables foot function, it compensates, it's not natural. We evolve for a gazillion years, and then just in a short while we made a concrete jungle out there, we paved our world over. And there's asphalt, concrete, hard floors everywhere, and it's more the norm. And most people are interfacing that with shoes. And footwear is...normally they're a pile of marshmallows of foam today, or certain materials that all of which disable foot function. So, we got a big problem.

Katie: Yeah, I'm 100% on board with you, because that was the key to me that made sense. Because at first, I'll admit when my husband was like "You have to come meet this insole guy," I was like I don't do insoles, because I'm barefoot all the time, and I don't like insoles, and why do we even need shoes? But when you explain it from the concrete side, that makes perfect sense, because for the last, you know, thousands and thousands of years, people weren't walking on like you said, a hard, flat surface all the time. And I don't do those things now, but I know many people do.

So, like from my perspective right now I'm recording this podcast with you, I'm standing at a stand-up desk, and I have a few things that I alternate between. I can't really do a treadmill while I'm talking, but I do like a... well it's a seat cushion that's normally like a memory from seat cushion, but I stand on it. And then I alternate that with like a river rock mat that's made out of rocks. So, at least the foot is responding to different things, then I also have a balance board. But I know most people are wearing or walking on hard surfaces all day, and I know from like the conference we were both at, that's very fatiguing for the feet to walk like that.

And like you said, people haven't been living in this concrete jungle for all of history, and I'd love to talk before we move on to what to do about it. Like for those with kids especially what is an ideal situation when it comes to kids and their feet interacting with the ground? My default is I send my kids outside in the grass barefoot a

ton, but I'd love to hear your expertise on this as well.

Gordon: It's a great default. If you can, the grass is a great avenue. Your children's feet, they're growing, and when you have a complex function of 100 moving joints and bones growing, and it's subject to unnatural terrain and unnatural footwear, a lot of kids have that inability to grow well. So, it's a real serious question when you really start looking at Tommy or Susie and how are you're gonna address their footwear and how they're gonna play.

Barefoot is fantastic for the toddler, the youth. When they start getting to the point of...in that eight to 12-year-old sense of footwear, you wanna make sure that they're going out the door in an avenue that's a little more favorable. So, a lot of kids it's kinda like I look at.... you put a plate of green beans in front of your child and a chocolate cake, they're gonna go for the goodie usually. If they go to the door and they see, you know, the cute little foam clogs or a pair of flip-flop sandals, and they can go put... they don't have to bend over, and they put those on, they run out the door, it's ease of access.

So, these are the junk foods of footwear. You have to be really understanding that if you put a pile of marshmallows under your feet or your child's feet, it's gonna create compensation, it's instability. So, anything really soft to your hand, a lot of people will go to a pharmacy and find something, a pile of gel, "Oh it's cushiony. That cushion is good," and this and that. Well, think about it, I could tell a six-year-old kid if I put a pile of marshmallows under your feet, are you gonna be strong and powerful, are you gonna be weak? So, something really soft to your hand can't support your body through motion.

And it's kind of like the tale of "Goldilocks" think about it. This is too soft, on the other side of the fence, too hard world. Think about molding a foot, or casting a foot, or bracing a foot. Well feet with over 100 moving bones and joints they don't have one shape. So too hard will actually create compensation as well and interfere with functionality and growth, and all these things that you really want to introduce in a favorable manner.

So barefoot, fantastic for the toddler, the youth. Grass when you can. Some people live in Alaska, you know, and they have a winter baby, and they're in snow, you gotta think about the boot you're gonna put on, and what they're gonna wear to stay warm, and how are you gonna address a footwear wardrobe, not only just for yourself but for your kids.

Katie: Yeah, that makes perfect sense. And before we move on I wanna make sure we touch on this because I have a feeling, we're on the same page on this one. For a lot of the women listening, what is your take on high heels, because to me just logically and intuitively our ancestors weren't wearing those either. So, I'm curious what your take is on high heels and where they fall into that.

Gordon: It's funny, the history of high heels really evolved from I think it was in Mongolia, it was for men to actually lift themselves further out of a stirrup to shoot an arrow over a horse. The evolution of high heels actually has been around for a long time. I love them, I think they are absolutely awesome. But when you really think about from a fashion sense and when and where you do your high heel thing. I'm actually on a project don't tell anyone it's top secret. I'm on a high heel project right now, and you can actually make high heels that are actually not only comfortable, but actually somewhat healthy, but in a footwear diet. So you think about it, if you walk out the door and you wear a pair of flip-flops all day, and then you go and you have a party on a Friday night, and you wanna wear your high heel, well most likely the shearing...remember the

marshmallows, the constant smearing and shearing of your foot in something that's squishy, does not transition well to something that's essentially rigid.

So high heels are a rigid athletic footwear sport, they really are. And if you really wanna feel better in high heels, look better in high heels, it's really a manner of how you manage your footwear diet. So, this can involve a footwear diet for your kids, to you, to your fashion, and then your sports. If you're a runner or what you like to do. If you wear something smushy and smeary all day, that disables your foot function, that actually counteracts all the way up your leg, so you're actually detuning your legs.

So if you walk around smearing all day long, I'll say let's just put the motion of putting a cigarette out or squishing a bug, or smearing, that causes a lot of leg rotation, which goes all the way up your leg and interferes with how the balances of the connective tissues that encompass your whole lower extremity of your body, and that you don't wanna do. So before high heels, manage your footwear diet. Before your sports, you manage your footwear diet. Your growing kids - manage your footwear diet.

Katie: I think that's a good perspective, and I think it's a perfect time to talk about as well because you have said that foot and lower body maintenance is just as important as dental health maintenance. And I'd love to hear you expound on that, because I actually recently interviewed a dental health professional and periodontist who explained how like your oral health impacts your entire body, and how it has these far-reaching consequences. And I'm guessing that there's a similar comparison here. So, I'd love to hear more of what you specifically mean by that statement.

Gordon: Sure, think about it. You know, everybody does a really good job at this. When we brush our teeth every night, and day in the morning we wake up and after our meals, we're pretty darn good... flossing you wanna keep. You know, we bring that forward to our kids then we take them into a professional one, two, three times a year for maintenance and management, and troubleshooting to make sure we don't have problems. Why? So most likely we can eat an apple when we're 90. Well think about it. It'd be nice to be able to eat an apple when you're 90, but how would you like to be able to walk a dog instead of walking a cane, or, you know, maybe even go for a run or a hike. So, you really think about the dental routine was well done. Your body mechanics, I used to say motion is life, if you're not moving, you're not living. Well it kinda makes sense, but I was wrong, quality motion is life. If you're not moving well, you're not living well, and you're not extending your active lifeline.

So really you wanna guard your active lifeline as best as you can, just like you guard your teeth, for yourself, and your kids, why? So, you can be active longer in life. So, you know, motion is life. You gotta move, and your feet are kind of a big part of that and if your feet can't move well, your legs can't move well, and it all backfires. If your legs can't move well, your feet can't move well. So, these are the big puzzles that people really don't know that we're diligently working really hard to make it very simple for people to manage good functionality in their daily movement.

Katie: Yeah, I think that's so important. So okay so we've gone through and barefoot is great when it's soft terrain and it's not concrete. And I get that because I've always, like I said, I've always defaulted to barefoot, I'm just more comfortable that way, but I also don't like running on concrete. And I don't know that running barefoot on concrete is actually a good plan, it tends to give you shin splints when I've tried it. And I know that there's been the whole barefoot minimalist movement which I'm glad that there are now like shoes that are more minimalist like that. But again, like you said, it makes sense not to run on concrete with those types of

things. So, I'm curious, like can you kinda give us the broad range of spectrum like with that shoe diet, and what you should or shouldn't look at, at different levels and different activities?

Gordon: Yeah, sure. All shoes are orthotics. All shoes change the way you move, all of them do. Think about it, you know, you wear a high heel, a boot, sandal, Nike, Reebok, Prada, all these designs, you know? They are beautiful footwear out there but guess what? They all change the way your bodies move, all of them. And your bodies compensate quite well, they really do, but the problem is they compensate at such a momentum that it can do irreversible damage to joints, and dings up the kinetic chain, because we have all these unnatural barriers.

Footwear changes the way you move. Unnatural terrains change the way you move. Your foot is kinda like a player piano, it needs to articulate move and change gears just to rotate your hips. Standing in your kitchen and rotating to put something in a cupboard, your feet need to consistently and continuously transition, and not only to shape but functionality. So, in order for all of those joints to glide and move well, we need to understand that it's a fact, we live in an unnatural world, unnatural shoes, unnatural terrain. It's not just running, walking.

Walking on hard surfaces it's like a fine pin to your face, barefoot, because your foot is really an elegant beautiful transitioning mechanism that has over 100 moving bones and joints. Now I keep saying that because it's really important to know how to let your feet move and move well. Now you're not gonna do it all the time but think about it as a diet. Now I came upon this the hard way, I was a big mountain extreme skier, I was pushing the envelope, and jumping 100-foot cliffs with my buddies out in Jackson Hole as a young guy. And when you're 200-pound guy jumping 100-foot cliff and pulling a 70 mile an hour GS turn, and your feet are subject to all these forces that simply are not natural, we were trying to find means to brace ourselves so that we could stick these landings so that we wouldn't cartwheel and hit rock walls, and it was a bloody mess, we didn't want that. So, we started bracing feet going back, given out my age, over 30 years. We were bracing our feet and molding our feet, and it worked, it worked quite well. It stopped foot displacement to the point where we were able to achieve incredible things.

I wound up becoming a podiatrist and working in the medical world and understanding what was state of the art at that time. But it didn't work with what we were doing, rigid athletic footwear, it was really confusing. When you start really thinking about how to take this massive puzzle of 100 plus moving human bones and joints and get functionality and extreme sports. Well, long story really short, I was so popular I had a very busy lab, and we were helping Olympians win the podiums, and do all these incredible things. And it all came tumbling down from two sports: golf and snowboarding. And what those two sports really do that's more beyond what we were doing, is putting in rotation at the hip. So, we were molding feet, and everybody's heard of orthotics and you mold your skin, your feet, and brace feet and get a cast of you or a mold of you. It sounds great but it's not real. Your feet don't have one shape.

So, we started actually molding bodies in motion with hip rotations and discovering algorithms of where the foot needs to move, when it needs to move there and why. And I realized wow, you can't hand make that, you just can't make it. Timing and sequence of foot motion and transitioning through all variable footweares and terrains, it's just like wow. A good while ago, when I was stumped, that was back around 1999, 2000, 12 years ago ALINE came to life. And it really came to life from hard work, hard research, and when and why things need to move. And then how to actually work through variables of all these crazy different shoes, and what you can work with.

So that was the evolution of what we call foot suspension system. And the foot suspension system is literally just that, it's allowing the foot to have barefoot functionality within footwear. And it's really over 100 dynamics support and suspension structures that assist natural movement patterns as you rotate your hips, or your variable terrain and through variable footwear.

Katie: That makes perfect sense. So, from then... Okay so these would be... You're using these with athletes, but are you also using them with people who need rehabilitation of their movement from like injuries or for just like movement in general? Or when are you finding these are the most applicable?

Gordon: Sure, everything is really a three-part puzzle, all right? Let's go back to eating that apple when your 90. Wouldn't you like to be to walk a dog instead of walking a cane? You really start thinking about, well, here's the facts, we are now living in a world that's not quite natural, we paved our world over in a blink of humanity, just in the last 200 years. And we have in.... we just in the 1970s start putting foam under everybody's feet. So, we have an unnatural world, so how can we start to kinda solve the puzzle?

And it's really a three-part recipe. Alignment is one of them, how you align. And alignment is really...there's all sorts of alignment. If you just stand on a flat surface and you drop plumb bobs from your knees, or we use lasers to better your alignment, the alignment is that static on a flat surface. Now go stand sideways on a hill, that's a new alignment. In order to have alignment of the knee, and foot, and the hips and everything on a hill your feet need to change gears, they need to transition. The downhill foot will come inward, the uphill foot will come outward.

We always heard of the word pronation, that's kinda like this taboo world of, "Oh, you pronate too much?" No, pronation is a natural beautiful function of the foot. You very much so need that to transition well in all sorts of variable terrains. So, it's you when you pronate, when you supinate and how well you do, and it's the timing and efficiency of that. So, one part of the recipe is your alignment.

ALINE, we went across the nation like Ben and Jerry's and we fit up well over 100,000 people with lasers and showed them that pretty darn close to 90% of people are pretty far out of alignment. And they're moving 2 to 3 million steps a year out of alignment, and that creates compensation which is unfavorable to the legs. And so, you show that alignment, then we brought in the put suspension technology, which basically suspended the foot in a transition sequence, so then the foot can actually move. That transition sequence allowed alignment to reappear pretty darn awesome for most people, just about everyone.

So just the core technology, you can get that, get it started. But now we have another problem. Who knows, are you that 80-year-old, are you a 20-year-old, or a 40-year-old, you've got a history of whatever you've been doing for the last 10, 20, 30 years in whatever footwear you've been in and that puzzle comes with you. So, what is that puzzle? If you wore sandals for the last 20 years, and your feet are smearing all over the place, your legs are most likely out of tune. Your legs are kinda like a guitar, they just...you play a guitar hard it gets out of tune and you have to retune it.

So, the range of motion of your alignment is the puzzle, number two. So, alignment, range of motion of your alignment, and the third big part of the puzzle is that footwear diet I keep referring to. What are you gonna wear? Now I'm not gonna take everybody's sandals away, it's crazy, people are gonna wear their sandals or your high heels. Gosh, don't wanna take away your high heels, but I don't want you to be clunking awkward in

your high heels, I want you to be graceful and elegant. And there is no reason why you can't be. All the gals know who they are, the ones at the end of the wedding look around who's at the end of that last song, on the last dance, who's got their shoes in their hand and who's got their shoes on their feet.

Now, this is the puzzle, you want to be that person that can actually have your shoes on your feet comfortably, and all that is, is conditioning and training, just like anything. If you're gonna be a runner, a triathlete, you're gonna condition and train your body to be able to do that. If you wanna wear high heels and wear them well, you need to condition and train your feet and legs to do that, and it's not hard.

Katie: That makes sense. Okay, so I have some more detailed questions related to specific shoes, but I want to touch on a couple other things first because I get a lot of questions about these, and I feel like you're gonna have a good take on them. So, when I wrote about like being barefoot a lot and wanting to be more minimalist in my shoe wear and not have shoes on, I got a lot of people pushing back or having questions related to arch support. Because like no, we have to have a lot of arch support because then if not like our foot is gonna atrophy, and it's gonna have all these problems. And so, and so said I have to have good arch support because I have weird arches or whatever it may be. So, I'm curious, where does arch support come into this? And is this more of like a modern thing because of the hard ground that we're walking on? Or do we need arch support?

Gordon: Well if you... Say your average kid today... It's actually unfortunate when we do a simple assessment, we have a lot of our practitioners do this, just taking a simple look at the foot and the leg and how things are moving. When I say close to 90% of people aren't moving well, that's really out of alignment. Now let's think about your legs. If your legs are out of tune and out of alignment, and driving inward, your leg acts more like a lever arm, and levers move boulders. So, your foot will lose every time. So, if your leg's not moving well, your feet can't move well.

Well the kids today, you know, they're evolving at such a rate in such unfortunate squishy footwear that we're seeing your average 13-year-old gets up there on the stand and you can look at their arches or their foot and their alignment, they're standing on...it looks like a flat foot. Well it's a flexible flat foot, and a flexible flat foot is just fine, and they come right back to good functionality, but you wanna pay attention to this. Really important is understanding how to manage support.

Now an arch supporter, everybody thinks arch, well your feet, they don't have one arch, and your arch needs to transition. People say, "Well I got a flat foot," or "I got a high arch," or "I got this type of arch." Well back then that crazy extreme skier guy, me molding thousands of feet back then, flipping the molds over and realizing something very simple when you started looking at molds from hip rotation point of view, that A, feet don't have one shape, B, the variables between high arch feet and low arch feet weren't that big. You know, it was millimeters, roughly zero to four millimeters and variable from center where we're finding these points of interest that were quite programmable.

And if you start thinking about, "Wow, well if everybody's got the same moving parts... Or like a face, let's think of a scuba dive mask for a face, I can design and make a mask for your face because I know relatively where your nose is, where your cheeks are, how to variable the materials for wider faces or a skinny face. Well, it's the same thing with feet. The ALINE system was designed to enable the variable arches of the foot to transition. And to make the variable foot shapes and the arch depths automatically. Just put it in your shoe and your feet will automatically transition through the suspension system.

So over accentuating, taking a material and putting it into a high arch foot, you're basically limiting that person's ability to pronate well. Remember, if you mold a foot and brace it up, that's fine, now go stand sideways on a hill. If that downhill foot can't come inward in timing to balance your body just to stand there, nevertheless moving, you actually create a compensation that is massively unfavorable to your hips. So, it's really that simple. Arch support is really kind of a broad term like pronation or anti-pronation or arch support. Feet don't have one shape, so there is not one single arch support to focus on.

Katie: Got it, that makes sense. So that would seem like it would apply to, like you mentioned in passing, flat feet as well. Because I get a lot of questions from moms who are like, "My baby has flat feet and I'm worried, do I need to do something to my baby's feet?" And I have no clue, this is not an area I've ever experienced. I guess, like I would say I have arches or higher arches if I had to say one, but does the same kind of apply to flat feet? That when you're like doing something to specifically address that you're limiting the motion for the whole foot?

Gordon: Right, so you think about...here's the good one, your kids are going to have, they're growing. The foot is basically entirely flexible, the kids are like Gumby, they're made out of rubber, right? They grow, and they move, and things are...we evolve that way, and that's good. You wanna start focusing on when your child is in that real athletics stage, the boys around age 7, 8, 9, the girls, you know, right in there, that 8, 9, 10, you really wanna start looking at that footwear and be very careful with the junk food, okay, the sandals, and the soft foamy things. You wanna get them in more of a footwear that will help that foot just have stability and mobility, and timing and sequence when they need it. And there's lots of great sneakers out there, there's lots of great shoes that have a lace and you put it on the kid's foot. Don't let them migrate to the lazy footwear more than call it a third of their outside time. Try to get two-thirds of that time when they're on their feet over an hour in good footwear. Let them have their junk food, but don't let them always have it.

And the same thing with moms, I mean how many moms out there...here's one, they think that after they had child number one, two, three, and then they say, "Wow, my feet grew." Well did your feet grow? No, your arch lowered, they elongated, the displacement at your hip, the child stages. And your feet didn't grow, they lost a lot of their ability to hold their integrity together because of massive amount of loads, and shearing, and displacement, and also going to sloppy footwear. How many moms are out there that go through the stages of pregnancies and they go to a sandal?

So, you gotta be really careful during and all these times. There's a lot a lot of people like, "Okay, I got my 2.2 kids, I got the minivan, I'm done. I'm gonna go running, I'm gonna lose some excess weight, and get back in shape, you know, I've done it." And then they go out and they go for a run, they used to be able to run, but now also their knees hurt, or their hips hurt, and they said their feet grew. Well, your foot is shearing, and if the foot is shearing all that time of foot shearing the leg is out of tune. So, you might have a tight calf, you might have a hip that's not moving well, you might have a weak abductor. There're all these little pieces of the puzzle to solve and it's not a big deal. And that's when I bring people back to just real simple view of a footwear diet. And we can get to the footwear diet at any point you wanna talk about that.

Katie: Yeah, let's dive into that, but first, so basically from what you're saying for all these moms listening because I know this is a common thing, after having kids, your feet seem to change. Is this a fixable thing? Like can moms get back to the shoes they used to wear before they had kids?

Gordon: Absolutely, you can get back to good functionality, you know? Are you... You know, a lot of people go

through a phase of time where the foot is displaced to a point where you're just gonna have a bigger size, or you might have evolved a bump or a bunion or, you know, displacements and things like that in your feet that weren't there when you're 15. And these are variables that you just have to accommodate. And we can talk about, you know, foot shapes, and you have to think about you're a very special creature, and most likely your left foot is completely different from your right. Most people are asymmetrically different, they really are, so you might have a bunion on your right foot, not on your left. So, you buy a wide shoe for it to accommodate a bunion, and then your left hip hurts because that left foot is now sliding all over the place. So, you gotta be very careful of your bio-mechanic puzzles. And there's very simple things you can do to manage those.

Katie: Okay, so let's talk about that and let's dive in, because you've mentioned the footwear diet several times, and I wanna know more. So, what is it and how do we adapt to that?

Gordon: All right, so we're gonna wear shoes, face it, you know, and the hardest ones are my friends that are living in California, in Texas and Hotlanta, Florida where it's hot. You know, people tend to migrate to their sandals, and if you put a pile of marshmallows under your feet, your feet are going to smear. If they smear, that's shearing. Shearing destroys all machines. So, if you wear a sandal all day every day and your foot is sliding outwardly, you're really making your whole leg double wide and you're popping your hip excessively, and lots of rotation going through that leg is just unfavorable, okay? And that's not a good long-term solution of creating instability and in a daily routine and expect longevity.

So, shearing is one of the biggest enemies, but don't take it away. If it's a hot day there's a lot of mesh clogs out there, mesh sneakers out there that breathe well. So, you wanna mix up your footwear diet. So, we're gonna just remember the "S" in sandal is for sedentary. If you're in a shoe that is sedentary, it's fine, you know, you're hanging out at the house, you're gonna be on your butt half the day working at a computer, or every now and again at a stand-up desk or whatnot, you can wear sandal. But if you're gonna be really on your feet over an hour, try not to choose that sandal, okay? And the same goes for heels, a lot of women come to me and say, "You don't get it, I wear heels every day at work." I'm like, "Well, what do you wear after work and before work?" So, you wanna have your handbag, have your heels in your bag and have your footwear that's favorable. I'm the horse's mouth with ALINE, but the foot suspension system brings back alignment for nearly just about everybody.

So good favorable function of the foot is a great start, in a good shoe like a sneaker, a nice neutral sneaker to commute to work, and then put your heel on. Do your heel time, get the heel off and go run off to lunch or whatever and get your foot functionality time inside a sneaker, or some form of...there's a lot of dress shoes out there that have removable insoles that you can replace with a foot suspension system. But you wanna look at the sandal as sedentary.

On the other side, your heels, wear them, but it's not all day every day thing. If you walk around in heels all day every day, your calf and your leg compensates so much that you don't get good daily stretching of vital points of your leg. A lot of women wind up with tight calves. Tight calves relay unfavorable range of motion through the leg. And long-term, every time you walk up a flight of stairs, or a hill, a tight calf will prematurely lift your heel to a point where it'll rapidly force foot shearing. Again, shearing is your biggest enemy. So, sandals sedentary. Heels in a diet. Most people don't have to wear heels all day every day, I don't know how many moms really do. But if you do, great, good for you, but find your functionality time. Look at alignment and footwear, ALINE footwear as a PT for the foot, allowing your foot just to have some function moving through whatever shoe you're working with.

And then when you get into a dress shoes, high-end fashion, it might not be a heel, but woman's footwear can get tricky because a lot of them will have a hard sole. Like let's just pick on a hard, wooden block heel, a short heel, like on a short boot like a cowboy boot that's wood. When you strike laterally, and most women do with the hip angles, it's like landing on a hockey blade. So, you gotta be very careful of those shoes, because if you're wearing a real hard soled shoe even though it might not be a heel, they are really, really abrasive to the heel strike. And that's unfavorable to good timing of sequence or good foot mechanics and leg mechanics.

So, the footwear diet, I always tell people go to Nordstrom's, a great place to go where they have so much of a variety of fashion, and look for shoes that have a rubber sole, and a removable insole. It's something that appeals to you, your fashion, your taste and go with it, get that into your diet, your wardrobe. I work at the X-Games, I help the key athletes at the X-Games because that's more of our proven grounds. So, people come to me and say, "Well what does X-Games have to do with me walking a dog," or whatnot. Performance is the key to health. If you're performing better, you're gonna perform longer, and be healthier longer biomechanically. So extreme sports of the X-Games really tested the motions to a level that I can't find any other sport that really drives, you know, an athlete going 30 feet out of a half-pipe and landing sideways or backwards and sticking their landing. But that is functionality, it takes foot mechanics to be able to do that, that's just good functionality.

But these kids that are pushing the envelope, they wear fashion shoes, they wear their skateboard shoes just for walking around all day every day. Now a skate shoe is kind of like a sandal. And a lot of your kids are gonna wanna wear these. You know who they are, you can probably go right by the door right now, I know a lot of them are wearing those...the Converse, All-Stars, or the cool skate shoes and whatever the cool fashion is today at the school. And they're great, they're awesome shoes if you outfit them well. But most of the designs were designed for an actual sport, like a skateboard, flat, grippy. So, you don't want flat, grippy snacking down in your daily walking. So that's where the ALINE can slide in there and be a nice favorable attribute to your kid's footwear diet. And that's really it, just being...understanding of when you're on your feet the most, and when you can weave in functionality, and range of motion and allowing things to move through our unnatural concrete jungle today. And extend that active lifeline and listen to your body. If things aren't feeling good, there's usually a range of motion issue in your leg. Now especially you could be a 60-year-old that has a 30-year running history, and you got, you know, you have IT band issues, or shin splints or all these puzzles, is usually part of that three-part recipe: the alignment, the range of motion of your alignment, and your footwear diet.

Katie: That's really helpful to understand kind of...I think it's like anything in life to understand it in perspective of no shoe in and of itself should be like completely outlawed or never worn. But finding a way to keep that balance and to make sure that most of the time you're favorably supporting your feet. I'm curious like, are there specific... So, you said like removable insole, and like movable soles are not really hard. And for my kids, I've always tried to find one that also don't have a huge heel lift. I noticed this trend in kid's shoes even that they've got like a half inch to an inch heel, and it's that cushy like foamy stuff, but it's changing the angle of their foot. Is it good to look for, especially in kids, a shoe that's got more of like a natural flat shape that lets their foot move more naturally, or what do you look for as a good metric in kids for like an athletic shoe?

Gordon: I like to look at the heels of shoes that are not so square, I like them a little more rounded so that when the heel comes down it strikes and rolls. Because again, everything's moving, you know, a lot of people like to do research on flat surfaces and just walking forward, that's not the way we move. You know, sidewalks

are angled, kids don't move marching orders forward, they go sideways, they go circular, they do everything. So fluid soles are great. I don't get overwhelmed at the negative drops, and the barefoot sole, and all these marketing things out there because the world is not flat.

The terrain...you get outside the terrain is variable all the time, sidewalks are angled to move water, I mean it's really just an environment that is ever-changing. So as long as the footwear has a removable sole, and is flexible enough, rubber-esque, I'm a fan. I try to avoid excessive squishy. You know, the more cushioning and the more squishy you put in there it feels good for your first initial steps, and it sells because you don't feel really anything. You can hide everything with a pile of marshmallows. But the fact is if you can squish something with your hand and it's squishy to your hand, how does that support your body that needs well over four times your body weight just to move and have good mobility to walk? That's before you're really running and impacting and doing these things. So, you really need to support the body and suspend the body in key vital points of mechanics and allowing that foot to transition.

And again, everything is unnatural, and we need to be aware of that. And then also if you really think about how the foot can move, if the foot moves well, then the leg has a much better ability to move well as well. So, if the leg's moving well and getting daily stretching routines, I mean how many runners do you see seating there doing that, you know, leaning into a wall, or on a curb and trying to stretch their calf or whatever they're doing? And I look, and I just have to cringe because or they're basically stretching out of alignment. So, they're essentially making themselves worse.

So, it's really just by daily walking, it's the easiest thing you can do to...it's like the daily maintenance of that tooth brushing again. You know, it's very simple thing you can do to manage a healthy avenue for yourself and your kids. You know, I go to the gym, I say...and I'm working – I went to the Arnold the other week, and I'm working with all these weightlifters, and you're watching them and they're incredible. Incredible human beings, but they're compensating. I teach them, if you wanna be better at the gym, walk better. You gym a little bit, you walk a lot more than you do anything. People walk 2 to 3 million steps a year, think about it.

All those little drip, drip, drip, drip of the daily walking is your avenue to be a better athlete. You wanna be the next best surfer, walk better. You know, you're gonna have more stability and mobility when you're on your surfboard for your barefoot sport. Gymnasts, weightlifters, runners is a big one. You wanna run better, walk better. Honestly. If you wear sandals all day then go for a run, you're not gonna run well. You wanna golf? Let's pick on a little sport called golf. I mean we're all over the PGA tour right now. Why? Because we actually allow good favorable hip rotation, because the foot needs to transition for hip rotation. One of the most precision sports in the world, I picked on the X-Games as the most extreme, well golf is pretty...it's surgery of a sport. To be at a PGA level it's such an accurate sport, and for that to occur, your feet need to transition. Walk better, not on the course, before you get to the golf course. You really wanna be better at that golf game, manage what you walk in before you get to the golf course, that's the magic. And then when you really look at that big puzzle and the big scope of thing, of moving better in that daily drip, drip, drip, just like brushing your teeth, so you can eat an apple with your teeth when you're 90, well, what about extending your active lifeline? Think about it, do you wanna be active or you wanna be sitting on a couch with great teeth and not being able to move well? That is what we all want to avoid.

Katie: Yeah, definitely on board with that, and that's a great point. I'm glad that you are bringing awareness to that.

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Katie: I'm curious, so I get the reason flip-flops are bad, your foot is holding on to them, it's an unnatural movement. Are there any sandals that are good for kids or adults that are more...I know that probably none are spectacular, but are there any that are better?

Gordon: You know, everybody asks me this one because everybody wants their junk foods and they're gonna go with the best of the evils. I really don't like to pick on brands, you know, everybody tries to make a decent shoe, but the problem is everybody's feet are different and everybody's feet are asymmetrically usually very different as well. And there's a lot of sandals out there and a lot of sandal companies try to attribute themselves to fitness, and health, and performance, and all this stuff. Or you'll have more earthy and ground connecting.

You know, it's still junk food, there's so much...once that heel loses contact, even when you can get these athletic sandals you can hike in, they strap around the foot, there's usually so much polyurethane foams, or EVA foams, or things that are vulnerable. See, the foams, what happens is they break down, they take compression steps, and when they do, they actually hold your body off at angles.

There's cork sandals where I personally prefer, but again I'm not saying there's a go-to. Again, this is not a

license to your sandal all day every day, because it's not a winning solution. So yeah, keep in that footwear diet, sedentary. If you're on your feet, you know, you can even go as far as couple hours, but try...if you're gonna go shopping, you know your day. You're gonna go the shop, you go shop or you're gonna go run the kid somewhere to school, you're gonna go chase around Tommy or Susie on the playground, or whatever you're gonna do, try not to choose a sandal for that time. If you're gonna go to a beach, wear a sandal. Wear it, you know, and then kick it off and hang out on the beach, that's fine. But mix it into your footwear wardrobe, please. And it's so important to mix up your shoes because stability is shearing, shearing is the biggest enemy to your knees, your hips, your everything and your longevity, and that is what we're all working hard to try to help people figure out.

Katie: Agreed, and I love the advice too if you have soft ground like grass or sand to be barefoot, especially for kids. I'm glad that you are on board with that as well. But I know... So, I'm looking at your website right now and having met you in person as well you have several different types of the insoles that go into the shoes. So how does a person know what they specifically are gonna need and what kind of support...is there like a system for figuring out kinda what you might need?

Gordon: Yep. So, we definitely...we're still a little company going out there doing great things and helping people figure out their footwear wardrobes. The product line really all shares the same functionality, meaning that you interface your foot, they're all gonna function the same as far as the guts of the core technologies. And then the top fabrics are changed for a few features, for the golf one or the cycling one, they have a gripping material on there. It's a little grippier for...I like to use the golf or grip. It's for your gym time or rotational sport like golf, or any time you're really in that... You know, a lot of my sailors like to use that product. It's fantastic for really holding you with your shoe in all these extreme angles. That's the green one and the blue one, same thing. On the core technology, the red one, that's what's inside every product. Our core technology is, and our saying is what's inside counts, it really does. These are all highly engineered moving structures that don't fail over long tolerances. I've never seen an ALINE go through several million cycles and still not deliver favorable alignment. Might not be as strong, but it will never compress to a point where the foams and gels and things that they just fail.

So that's the red one, that's what's inside every product. So, when you go to aline.com, the red one is what you get in everything. The green and the blue have a little grippy material. The yellow one and the black one both have a very thin layer of antimicrobial foam and fabric, for that person that is wearing a ski boot or a snowboard boot or a work boot in the winter, the black one. In the fall and spring the black one is fantastic, it's got a heat reflective liner, cozy warm, and really breaths well and functions great year-round for those certain footwear needs.

The yellow one is same antimicrobial foam with a very plush fabric, feels fantastic on a barefoot. I'm a huge, huge addicted fan of slippers, love them. So, when I get up in the morning the first thing, I drop my feet into slippers. I personally...I love L.L. Bean's slipper choices right now. UGG is doing some good ones too, you put those babies in there you'll never go back because interfacing daily routine, I know you did your...I like your cobblestone and your mat and you're mixing it up at home, I think that's fantastic Katie, that you're actually thinking forward and allowing your foot to actually change gears. But if you just do the ALINE, think of the ALINE as activating even such a higher level of dimension, X-Game level of extreme, to precision of PGA, just walking around your house. So, in a slipper, they're fantastic, really, really love that yellow one there. But if you're gonna pick one up, get the red one, wear it everywhere till you get so addicted to it then you can mix it up with your preference.

Katie: Great to know. And as we're getting close to the end, I also wanna make sure I ask you about plantar fasciitis, if you have any specific advice or insole recommendations for that. Because I have surprising number of readers and listeners who email with that question, and I have absolutely no clue. I've never dealt with it so I'm curious if you have any advice for them.

Gordon: It's so funny, I've had running store owners come to me and say, "You know what, I've had plantar fasciitis for four years, just can't get rid of it," blah, blah, blah, blah. It's really...again it's a three-part recipe. I'll keep drilling it down, the footwear diet. Okay, three-part recipe. Your alignment, the range of motion of your alignment, and your footwear is the key to favorability. If you have plantar fasciitis you probably have A, a history of pretty darn awful footwear. B, you're either that or you have overtraining regimen, you're a triathlete and you're really training, training, training and your leg is not moving well. And if you think of the bottom of your foot just like all these elastic bands, we all did it as a kid, anybody ever pull that elastic band till they see it fray and they're watching it, they're totally bored and trying to stretch their elastic till just before it breaks. Well, that's basically plantar fasciitis, so you frayed the bottom of your foot's connective tissues. So, when those fray like that elastic band, they tend to heal at night, you get up in the morning, they re-fray and that really does not feel favorable. And then you go for your walk and you put on probably your sloppy sandals or whatever you're going back out in, and you re-tear it, and then it doesn't feel all that bad for a while. Then it comes back.

That's the vicious cycle. If you have plantar fasciitis you have great news. The great news is you're doing bigger, bigger harm up high. So, if your foot's hurting you in any of the itises: plantar fasciitis, Achilles tendonitis, itis, itis, itis. Anything in your feet, if your foot is not happy, you're really not doing stuff that's favorable up high. And when I say up high, everybody knows somebody with knee and hip replacements, or all this. I mean we're all becoming part robots. We have I think it's over a million hip and knee replacements right now, it's just awful. And young people, like 40-year-olds are getting hip replacements. It's... Look at what people are walking in, in our concrete jungle. Put the footwear diet to use. The biggest thing is, you know, you could try things at home every...usually plantar fasciitis awareness online everybody talks about stretching and calf stretching as the gastroc, G-A-S-T-R-O-C is one of the popular ones.

And you can do some at-home stretching but do it with alignment. Alignment stretching. Try to avoid your sandals like Kryptonite because sandals are kryptonite to plantar fasciitis. So just get that shearing... Shearing is really the Kryptonite. So, you wanna eliminate the shearing but don't brace off the mobility. So that's stability, and mobility, and timing, and sequence, and that's where we really come in in a favorable manner for most people.

So, ALINE and a footwear diet, some daily stretching. You should be out of the weeds...most people are the weeds three, four, five days they start feeling enormously better and that's awesome. If you still have problems after a simple trial like that, you wanna find out what's going on. Who knows, you might have an old football injury or that old...you know, you stood too close to the taxi stand or hip injury or whatever you did, you might have some scar tissue in there. There're all these artisans out there that do these incredible things for helping range of motion in their legs. And a lot of people know their physical therapists or, you know, there's arts called the Active Release Technique, there's Graston technique, there's like all these artists out there that really help good range of motion. Because if your calf to your heel is like a rope instead of bungee cord, your foot is gonna get forced to shear. Even on ALINE or any product.

I can put fairy dust on an ALINE and paint it gold and wish you the best luck in the world, but if your calves, and your legs, or range of motion is really that unfavorable, every time you walk up a flight of stairs or a hill, your heel is gonna lose contact with the foot suspension system. And you're gonna go back to shearing and shearing just opens up that can of worms. So plantar fasciitis, number one thing, get that alignment, reestablish the range of motion, that's usually in the leg of that alignment. And then the footwear diet, and I've had such wondrous, wondrous results with people, raving fans of how fast they helped that out.

Katie: Awesome, and again the link to your website will be in the show notes at wellnessmama.fm. So, anyone who wants to see the ALINE and the products and read more about them, you guys have some blog posts as well that are really helpful, so those will be in the show notes or they can go directly to your website. And definitely like my husband has them, I'm gonna be trying them also, and I appreciate your time and being here. A couple questions that are unrelated that I love to ask as I wrap up. One is, is there a book that has had a big impact on your life that you would recommend other people?

Gordon: Oh gosh. Yes. Probably the biggest one for me, I love... I would break books down to business for me, I really, really geek out on. And for life, I love stories around history and grit and sports around grit. And if I was just gonna throw a couple of books out there that... "Blue Ocean Strategy" it's by Chan Kim, fantastic. It's really about finding new avenues and creating awareness in business, and a whole new marketplace, and avenue of helping people. Love that book. And Tony Robbin's "Unshakeable" book to me was just, you know, for financial freedom and understanding how important it is to really have just purpose in whatever you do. And just really focusing on your business life. I'm a Hemingway fan, I really am, huge Hemingway, and one of my favorite all-time books of life is a book called "Come Spring." It's a story of the family, the settlers coming to the state of Maine. I'm from Maine, just a good Maine kid that grew up in the woods myself. While the struggles in the 1700s, and hopefully the family's produced enough food and survival needs to make it through that winter and hope to see it come spring, that's the title of that book. So yep, that's... Books are fantastic.

Katie: Great recommendations, I can't wait to check those out. And last question, I have a guess of what it could be, but what would be...if you get some...one piece of advice out to everyone in the world, what would it be?

Gordon: Gee, do you think? Look at your feet, your legs, and the way you move. You know, and motion is life, yeah quality motion is life. So, make sure you brush your teeth, go see your dentist, take care of your kids' teeth too. But man, those feet, you walk all over them, and you never really think about them till, you know, something hurts, or you're trying to find a performance solution. But gosh, think about your feet, and your kids' feet, and it's the first thing to hit the ground in the morning, you walk all over those little buddies, and you count on them to go the distance. Yeah, my big word of advice is take good care of them because I wanna see you out there. I don't wanna see you walking a cane, I wanna see out there walking a dog or going for a hike. I was just skiing this spring with a guy, 82 years old, and he was skiing double black diamonds and biggest smile on his face, and there's no reason to not get out there. Even our concrete unnatural world today, but wow, you know, there's so much we can do, you know, you're at the Paleo events, and the Bulletproof events, and the anti-aging, and everybody's trying to solve the anti to this to live longer, do all these great things. But man, I hope everybody realizes the first thing to hit the ground in the morning, those little buddies have over 100 moving bones and joints, and listen to them, take good care of them. I wanna see you out there.

Katie: Gordon, thanks so much, that's great advice. And thank you for your time and being here today, super fascinating, and I really appreciate it.

Gordon: You too Katie, big fun, and we'll talk soon.

Katie: Sounds great. And thanks to all of you for listening, and I hope to see you next time on "The Wellness Mama Podcast."

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