The Foot to Core Connection - Interview with Dr Emily Splichal Transcript

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Introduction and guest background

Hello! That was effortless. I know, right? Like, I've done this before! I always love when technology works. No, no, it's amazing. How are you doing? I'm good.

I'm good. Got my coffee. I got my sleep. Ready. So important. Um, I've been so excited about this. Have been talking about feet all week and people have been throwing their questions at me.

Like I am talking to the functional food doctor today and we get to dive into this, um, so welcome. Hi. Why don't you tell us a little, just a quick bio in case people aren't aware of who you are.

Give us little intro. Sure, of course. So, Dr. Emily, I'm a functional podiatrist. I am trained as a podiatric, but I approach patients very differently.

Approach them from an integrated perspective. I look at the body very integrated. So I'm also a human movement specialist, and I do a movement assessment, gait assessment on every single one of my patients.

I was trained as a surgeon, so that is important because I always have that lens of surgical perspective. And I will oftentimes be a second opinion for patients, do they really need surgery or could we look something else?

So now my practice is based around functional and regenerative podiatry, I don't do surgery anymore. Wonderful. Yay, that's wonderful. You wear a lot of hats, which is why I'm so excited to be talking to you.

So we have about half an hour, and obviously I want this to a discussion, but I have questions for you, so I am just going to dive in and interview you here.

You know, I'm a pelvic floor movement therapist, long time Pilates teacher, Yelping teacher all of those things, but my pelvic-floor work has always strongly featured the foot and the feet.

But they hear it from me, and I would love for people to hear from you.

Foot-pelvic floor connection and gait mechanics

What you see is what is like on a basic level, Because I think we're not necessarily taught that like everything is connected. So in a basic level, can you explain to our listeners who are probably not doctors, they are just like people, what is the connection between like, is there a connection from the foot to the pelvic floor?

And what does that connection like how does it show up? Yeah, I'm so glad that you appreciate the foot as a pelvic floor specialist because unfortunately in Western medicine, it's very segmented.

So we need more professionals like what you're doing to bring this integration. Now, the way that I focus on feet and movement is really based around walking.

And I consider the ability for us to walk is the most important functional movement that we can do. Actually, our brain and our nervous system and all of these factual lines were developed because we stand on our two feet and we walk.

I just want people to keep that in their mind that walking is literally everything. And then when you think about walking and standing up, You have to think about gravity, and gravity is a very important sensory stimulation to our nervous system, to connection to ourselves, the pelvic floor.

And really what I like to thing of is standing up. The only contact point between the body and the ground is our feet. So that's obviously very imporant.

Your foot strength, your foot awareness. And then when we're standing up and moving, you think about where is our center of mass or center gravity. It's obviously the core deep core pelvic floor is what is stabilizing it.

So the contact with the ground and our Center of Mass. to be connected because of how we stand up and how walk. And then it's connected through facial lines.

It's through joint movements, so every time your foot moves, your pelvis moves. Then it is also connected to muscle synergies. This is one of my favorites.

Research has shown that when you activate certain muscles in the brain, specifically the one that controls the big toe, your posterior pelvic floor, or your levator, A&I, actually activates.

And to me, that is a fascinating demonstration that we were designed to move. That's what I take away from that. We were design to walk. To optimize these connections, you have to keep moving.

Yeah, and I think that what you say about the big toe is so important because the way I discuss it in my programming is that during that big, that push off, you talk about The Faces of Gait all the time, I've watched your webinars, we are activating that whole posterior chain.

And that is activating the pelvic floor. And so when people have things like, and I would love for you to talk about this a little bit, but when have something like they turn their feet out when they walk or they have bunions or a lot of foot pronation or supination, we might assume that they're not getting to their big toe.

They're getting that push off that it's so important not only to gait but to the public floor, like is that something you see in your practice? Absolutely, 100%. And I think a lot of people intuitively feel this as well, because I've had patients say, oh, Dr.

Emily, when my blood pressure became this big, it's like I can't feel my glutes anymore. I'm not, I cannot get into my hip and I am like, you are like good job.

You are very intuitive in your body. And yes, it has to do with those connections, the facial lines, and muscle synergies. Also, what's really important for the listeners to appreciate is if you can't get over your big toe, maybe it's a bunion, you have arthritis, whatever it is, your step length has the shorten.

And as soon as you take short steps, you now no longer get the hip extension. Your pelvis doesn't rotate, your T-spine doesn' t rotate. And we move in a very apropulsive way, which is really damaging to the fluidity of the body.

I'm sure you go into this with your clients as well, but we have to be able to take long steps and walk at a certain pace to really optimize the power of human movement.

Yeah, I often talk about the lengthening of the front, like, the psoas, right? Like, we need to get that hip extension and the glutes. And I think also because we sit so much and because are unfortunately trauma, trauma-echoing, echoing trauma.

That does create a curl in. We have a lot of things in our world that support curl-in patterns. Curl- in patterns are not necessarily effective for efficient gait patterns, then not effective for efficient pelvic floor patterning.

I want to ask you, while we're on this, it's so interesting to me. So one of the important things about gait, as you have said so beautifully, is that we need to get to the big toe.

We need create that locking, unlocking. So the foot locks and unlocks. I would love for you to talk about that in lay speak, like help our listeners understand what that means to them, not just to like doctors and professionals.

But the pelvic floor also locks an un locks. And what I see a lot of issues in my practice with the public floor is that people's public floors not locking and unlocking, and their feet are not walking and unlockings.

There's like this locked mechanism happening.

Locked and unlocked foot movement

Foot to pelvic floor, I'm curious how you could describe that in lay terms and what you see, what is the reflection of that inability to lock and unlock the foot?

How do you that showing up in the body? Yeah, I love that you use those words too. There's such a podiatry thing and I was just at a conference talking about foot movements to fitness professionals and was describing locked and unlocked and this is very important.

This is not like lock your knees, unlock your knee. It's not used in that same way. Thank you for making that distinction. where it's not like I'm locked, right?

It's very different. So one, I like that people remember that movement is dynamic and we are continuously dancing. Like we're dancing with the ground.

We're dance with impact forces. The body is this ebb and flow. we have to go down to up. locked to unlock and essentially we go back and forth into it.

The way that I like to describe locked and unlocked is that we have to be able to lock our foot to absorb energy. It's a deceleration moment in the foot.

And then to… So the foot will literally unlock, like it literally lengthens, spreads. Can you discuss what it does? So an unlocked foot is essentially pronation.

That's what a moment of unlocking is. So if the listeners are standing and they want to kind of do it, if you stand with your feet shoulder width apart and then you roll inward on your feets, which is the essentially E version or pronations, this unlocking moment, which is a flattening and a widening of the foot and an eversion and adorsiflexion of your ankle just collapsing in.

That is how you absorb energy. You have to be able to unlock the foots to absorb all of energy that comes from striking the ground. then you do the opposite to lock which is roll to the outside that's inversion it's a little bit of a planar flexion of the ankle external rotation or a lifting of Arches lifted is that locked foot, and then arches dropped, if we were speaking like fitness speak, is the unlocked foot.

And we have to be able to unlock and lock, And then if I can just add one more thing, because ultimately what a locked is, Is that we need to become a rigid lever.

I'm obsessed with the rigid leaver. For good reason. is when you do like a calf raise. So my hand really is not going to do justice on it. But if, for all the listeners, you're like, oh, do a cat raise with your foot on the ground, and then you see it in that beautiful, almost like high heel position, right?

That is called a rigid lever. That's the queen of locked feet, because that is ultimately how you push off and you take a step. Yeah. Which is really important as it reflects into the pelvic floor.

So this locking and unlocking reflects upward as well, which is incredible. But keep going. It's fascinating. Yeah, I was just going to say then this dance between unlocking and locking, it's happening within milliseconds.

You really can't see these things in the foot. That's why I want people to understand that it is a moment. Thinking of it as a moment, so it's a pronation moment.

People are kind of like, huh? Which is where that dynamic training is so important because you can't walk around forcing lock and unlock. You need to train it, right?

Exactly. Yes. And it's happening subconsciously. I'm so glad you said that because I've had people come into my office walking kind of like the Feldenkrais walk, like really slow.

This is when I was practicing in New York City too. How do you get anywhere? Walking is subconscious. Actually, human movement is sub-conscious. And so is the pelvic floor.

It should be reflexive. Yes. The problem is we're all overriding it by tensing it all the time trying to get it tighter and stronger. Yeah. it doesn't work in the foot and not on the public floor Yes, and that's why I think that there are two beautiful structures that are so synergistic, they're a team, right?

And they are just working together in this gravitational, dynamic dance that we do with the ground. And we just have to kind of weave in and out.

Plantar fasciitis and tissue overload

If I may add that injuries, specifically to the foot, and I'll let you kind speak in the pelvic floor area, but in foot if someone can't unlock or lock fast enough, that's where you get injured.

Yeah, that's interesting. So yeah, and I would say in the public floor. Yeah, it's a little different because the pelvic floor is not shaped like the foot, right?

It's more of this doming, hammocking, and it is also a receiver. The pelvic is receiving so many forces, just like a foot. It is a transmitter and a receive, but it isn't shaped.

Like the leg is shaped to get into that locked lever position. that rigid lever position, right? It's shaped to kind of bring us in and out of gate, whereas the public floor is not designed to, the shape of it is different.

You're dealing with like a facial muscular myofascial versus this auspicious Complexity of bones that is just vibrating with the ground and you're also dealing within with with an area that Is bearing the weight of all these organs?

Yes, the uterus like all and if you don't have a uterus There's many other organs right the bladder the rectum like there's just a lot of organs there.

Yeah The foot does not have organs sitting on it. And yet the two are so mirrored in that it is so, they're so married, like you said, fashionally and neuromuscularly and nervous system.

So I know a lot of people want to know about plantar fasciitis. It's always like, And I'm looking at the comments, and people are definitely like, what about plantar fasciitis?

Plantar fascitis, I see it in a lot of my pelvic floor clients. I seen it a in lot people. You and I are on the same page with get people barefoot. Not everybody, not all the time, with respect to the current structure.

But if you could talk a little bit about planar facitis possibly through the lens of kind of as a whole chain, represent like up the chain a little bit.

That would be amazing. Yeah, absolutely, and I totally see the questions. I mean, well, people have a lot of foot questions, oh my goodness. So yes, so plantar fasciitis, the way that I describe this to patients, obviously in this case, is your plantarfascia, which is a thick band of connective tissue on the bottom of the foot, from the heel, runs across, inserts into all five toes, it becomes these five slips.

It is part of a rubber band that is used during the loading and unloading of dynamic movement. and energy transfer.

So it's responding to that locking and unlocking mechanism.

Yes, it is one of the factual components of that mechanism, okay. When you are loading, unlocking to absorb the energy, and I just want to add that energy of impact forces are vibrations.

That's important because if I talk about Plantar fasciitis that we're going to talk about, Achilles tendonitis, stress fracture, shin splints. It's important to note that impact is vibration.

That is so important. Yes. So we are loading and unloading and you're essentially demanding the elasticity of that tissue. The elasticity slash of the tissue.

So can it relax? Can it be a rubber band? And then can you tighten? That's all we're doing. That all were doing is dancing. If you happen to overload the capacity of that tissue to unlock and lock dynamically, you essentially start to micro tear it.

And when you injure it, so you're just kind of like, oopsies, pulled it a little bit too much, and then you create a Little injury. That injury then starts to repair itself.

And while it's repairing itself, you are still going about your day, your life, Your activity, whatever you love to do. So you Are stressing the injury while It's trying to Repair.

This is very important. So then we start to get in this little cycle of it gets stuck, it actually becomes very chaotic in there because it's trying to repair itself and you're still demanding stuff from it.

So that's kind of high level of what plantar fasciitis is. Now, different foot types. different jobs, different activities, things like that, whatever the stressor is, is a little bit more susceptible to plantar fasciitis because maybe a very overpronated flat foot can't stabilize fast enough to support the tissue while the vibration is going through it, just as an example.

Or If I could just add real quick, let's say you stand on your feet for work. I work with many standing employees from first responders to TSA to… Nurses.

It is very unnatural to be on your feet statically, or obviously there's some dynamics, let's say for a nurse, on concrete for 10 hour shifts. It's just unnatural.

So now we're hitting this gravitational fatigue, and this is where pelvic floor is really important as well, but people just get fatigued in gravity over 10 hours.

then they're exhausted, they go home, go to bed, and then do essentially the thing again. So we get this accumulation of tissue stress and that's really what plantar fasciitis is.

It's understanding how to navigate that injury cycle to get control of the situation. I see that a lot of people also are trying to work on their plantAR fasciaitis and their pelvic floor stuff, they're not necessarily changing the forces that are going into the pelvis and the lower leg.

Like they possibly are wearing shoes with a heel all of the time, or they are possibly standing with their pelvis really far forward, where they have a big posterior pelvic tuck.

And these things might be fine for 300,000 people. But then might be causing, like you said, that loss of dynamic stability and that kind of rupture without the repair again and again.

So I do find that people are doing all their exercises, but they're not necessarily changing some of the underlying causes. And I think that the same thing goes with the pelvic floor.

People do things for their pelvic floors like kegels, kegel, skegles, kegels. Hold on. Your kegels are not going to be

that effective if you're not really changing all the things around as well.

Yeah. And that's why I always try to have people, like, don't ask Dr. Google how to fix something, because it's really about the timing of when they do something.

Like, just where within the story of getting past plantar fasciitis, as an example, does doing short foot make sense? Let's just say as example. Right?

And I very much, an important part of what I do, because most of my patients are chronic. So they have a tear in their plantar fascia. That's actually most to my patience.

I have to first put out the fire. And essentially I say, OK, I need to be, the chef, or I'm the one who's running the show here. We have get control of the situation, and I am going to kind of direct you through this healing process.

Because it's hard. But people don't know what they don t know and that's why I love educating and I know that s a big reason why you educate is we're trying to do the best that we can with the knowledge that have so we need trusted sources to really guide us through this process.

Foot sensation, footwear, and whole-chain effects

some of these conditions require a bespoke way of approaching them and not just the five exercises, because the 5 exercises might be wonderful, but everything, there's a few other things to tweak.

So we have just a couple of minutes left and what I would love to talk about is, I think you and I are very much on the same page that Our foot is this incredibly valuable body part that is full of thousands of nerve endings, the ability to sense and feel.

Our feet are like a GPS, they're like an navigator. They are so sensory, and yet we cover them with these shoes that then kind of numb and dampen everything.

I would love for you to talk about how that, again, I think, drawing the connection between how dampening those connections up the chain. Because I think that people think of their bodies as these isolated siloed parts, where that's not quite how it works.

And then I thing what people do is like the Feast of Famine, they're just like, oh, shoes are bad, I'm going to stop wearing them, and then they get injured.

They're like you see being barefoot's bad and it's like wait, gosh. Hold on here. So I would love to talk about what you think about, like shoes, no shoes.

Neurons, No neurons. Like the value of our feet. And then again, how these things express, How the loss of connection of the foot could express itself in the hips, the glutes and the pelvic floor.

I love to talk about the sensory side of the foot. That's my shtick. Traditional podiatry is very much looking at the food from a biomechanical structure.

And it's just the mega bones that is tornating and supranating, and that's how we move. Where really, this is from human movement perspective. This is how stand on our feet.

this how walk is that, yes, your feet are like a GPS. I think that was So creative and I love how you describe the foot in using these words that people can really resonate with.

But yes, the skin in the bottom of the board is packed with thousands of nerves that is by design, because again, it's the only contact point between the body and the ground.

which means it is supposed to read every step that we take and then autocorrect based off the impact forces, our body weight, the surface, et cetera, so that can absorb the energy from the foot strike, store it in our bodies, and release it as elastic energy like a rubber band.

This is the foundation of moving what's called efficiently, which just means very far with very few calories. That's what we wanted to. Yeah, so that every step is effective, very efficient, and transmits through the body effectively.

Yes. Now, this is where it will connect to the hip, the pelvis, to pelvic floor, is that the impact forces in the ground is really the trigger to this stabilization mechanism during dynamic movement.

So if you can't feel the grounds, feel impact force, that trigger is often delayed. It's either insufficient, inaccurate, or delayed, which means the timing of pelvic floor, deep hip, glute activation is going to be just a little bit slow, Which means now your lower leg is not stable, you hit the ground harder than you should, and now you have plantar fasciitis.

an example. Less sensation, less information. Yes. So we start to get this effect, right? This from the ground up effect which then can start the lead top down effect even more and they just feed into each other.

Now footwear, which is a huge thing obviously because now we're walking on concrete and all these different surfaces, we are standing as a nurse on these artificial floors.

that there is a role for footwear. The way that I guide foot wear is always based on three things. Your foot type, your injury history, and then the demands at which you're going to put your foot under.

Right? So that's why I believe in natural footware. I want a majority of people in a majority of situations to be as minimal as they can. As they And that's because as soon as you put anything under the foot, including the most minimal shoe that is on the market, you are still creating a barrier between the nerves and all that information that we're moving on.

So that ideal. But if you're standing on your feet as a nurse, a nurses should not be standing, on a hospital floor, in vivo barefoot. I couldn't agree with you more.

Absolutely. Our bodies are not designed for hours of standing around on concrete. Yes, exactly. Thank you for saying that. Because people get so black and white about it all and then disappointed in the results and blaming the obvious culprit, which might not be the actual culprit.

Exactly. So I believe that it's about taking ownership of your feet, your pelvic floor, understand what that foot type means, and then how do you utilize the tools to optimize the function as much as you can based off of the stressors.

And if that means at work you wear a little bit more structure, that's okay. Then on the weekends or at the gym, you're doing some barefoot, yoga, Pilates, getting out of it.

It's about finding that balance. that's really important and to me I think most people think I'm going to give like this like black white response that like everyone should be in minimal shoes, but I can't do that.

I understand the exceptions to that rule and I need to educate and help people know when they are the exception to the rule. You think that what I really appreciate about your work too is that you love human movement.

You understand human movements, you understand gait, all of it, but you also understand what we're coming to the table with. Somebody might be coming after years as a ballerina, or they might have Ehlers-Danlos hypermobility, maybe they were a surgeon bending over all day long.

Every body is so unique, and we can't just assume that there's one optimal for one body type. And I love that you bring that to table. So that's amazing.

I see a few questions. We don't have time for any more, but I just want to affirm, I've seen a bunch of people commenting on the tongue, jaw, pelvic floor and foot connection, and I want just to step in and say, if you have a two-minute liner about it too, yes, there is a huge connection.

Also, in your work, Emily, about my work I'm very cautious about Now that you know there's a connection between your tongue and your foot, and it includes your pelvic floor, that doesn't necessarily mean you need to go home and just like rub your tong, rub you foot.

Rub your public floor and everything will be okay. And sometimes working on just one area. like working on restoring function to the foot, will absolutely, what I see, start to create function up the chain, rather than thinking, oh, there's a connection between those three, let me go and roll them out or do some strengthening exercises.

And it comes back down to if you think you are having a connexion in those areas, that bespoke approach is really helpful. But also knowing you don't have to skin the whole cat.

working on part of it will lead to the rest of, it I don't know if you have a similar context. I know it's our last minute together, but just to give people some idea of like, if they are feeling the connection up the whole chain, how they might manage that.

Yeah. So I, I use the connections between toes, pelvic floor, tongue. in like an athletic performance, that's typically where I use it more were to teach stabilization mechanisms.

So I like that people use that so versus dysfunction, pain, that side of it. Got it, yes. Enhancing performance. Yes, enhancing performance by realizing that there is this soft tissue skeleton that exists, right?

So just from an athletic perspective, because that's where I use a lot of, is that the coach understands the tensegrity mechanism of this connection and then to utilize it just in their queuing.

And then honestly, I feel that when people realize it and they're doing something, then they can inherently or internally understand why they are doing Like awareness.

Yeah, and awareness, right? So when I lift and I don't put my tongue to my palate, it's behind my front teeth. But I think that this will totally go longer than a minute is then understanding like the clenching of the jaw.

I mean, that's actually more. And I know you do a lot of work with like somatics and trauma and stuff like that is that aspect of the jaw and the tongue and mouth to me is really fascinating to what it could inhibit down the chain but then say okay if there's some intent behind the Tongue and even I'll just say look at Simone Biles there will be videos of her very intentionally doing something with her tongue when she's doing her gymnastics with Michael Jordan.

There's a reason why they do it. They probably don't even understand it, but there's reason. And it's powerful connection. So I'm just going to leave it at yes, it exists.

Yeah. It's connection, But you don' need to feel overwhelmed to attend to every element of the connection and that because things are so connected, I think that when you attend one area, It starts to influence the other.

100%. And I, I always tell people it's, you're just saying hello to these areas. Cause I've had people short foot themselves, the plantar fasciitis, kegel themselves to pudendal nerve entrapments.

Tongue, jaw, and pelvic floor connections

I don't know what they would do with the tongue, but something to TMJ. But you really remember that we dance in and out of this lock unlock. It's happening within milliseconds.

So it was just more like, Hello floor, hello public floor. Hello tongue. It doesn't have to be like… Yeah. I love that.

That goes for everything in life.

We unlock and lock into everything. Don't want to spend too much time in any of those positions. Yes, yes. It was so nice chatting with you. Likewise.

I love the synergy. Yeah, I do too. And I think that people definitely want to explore this topic so, so much. So it's so that we got to dip in and do that here now.

Thank you, thank you so Of course, I hope that if anyone has questions, and I'm always sensitive of people having questions and then being like, "I want my question answered." People can reach out to me and ask questions.

Thank you. Me too, of course. Yeah. And then, you as well. We just have to do this again, because clearly there's a long way to go. Clearly we need to this do again.

Yes.