Regenerative Podiatry: Healing Chronic Foot Pain From The Ground Up Transcript

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Opening and Podcast Introduction

Next thing I would say is to have an awareness of your foot type. So we need to know, is my foot a little bit more rigid? Is my a foot little more mobile?

And then depending on that, we have to start to build some strength in our foot, just like every other part of our body you have strengthen. You have strength your feet as well.

And then I would say focus on balance. Balance is one of the most important longevity markers. And with that, it is your ability to stand on one leg for 10 seconds.

If you cannot do that that is you target that you work towards and then that can help unlock some of this movement longevity. Welcome to the Functional Edge.

I'm Dr. Julia Ward, and this is where science meets real-world strategies for living healthier, sharper and stronger. From uncovering hidden environmental toxins to unlocking peak performance and mental clarity, we cover it all.

Ready to take control of your health and thrive? Let's dive in. Hello and welcome to the Functional Edge podcast. I'm your host, Dr. Julia Ward, medical director and founder of Balanced Body Function Medicine.

Today, we're honored to welcome Dr Emily Spiegel to our show. In this episode, Doctor Spiekle will be sharing insights on regenerative podiatry, the root causes of chronic foot pain, and the powerful connection between foot mechanics, sensory input, and whole body healing, offering expert guidance to help you navigate your health journey with the latest advancements in functional medicine.

So stay tuned for an engaging conversation that promises to empower and inspire your path to wellness. Hi, thank you so much for joining us. Of course, it is a pleasure.

All right.

What Regenerative Podiatry Is

So for those who may not be familiar with your work, can you explain what regenerative podiatry is and how it represents a shift from traditional model of foot and ankle care?

Yes, absolutely. So I was trained like probably every other podiatrist that the listeners have encountered, which is in a very orthotic, supportive shoes, surgical mindset.

That goes against everything that I believe in, where I'm much more functional and regenerative. So under the functional regenerate, functional podiatry means that, I look at the entire body.

I know that the feet are connected to the rest of the body, and I do movement assessments on every patient. And then I tie in even more so the functional medicine side where I think about diet, sleep, stress, what is supplements, hydration, every component that affects the body's ability to heal itself.

And in the regenerative side, that's typically for chronic tissue injuries, plantar fascial issues is probably the most common. Or I'm using various regenerated medicine modalities, whether it's red light, photobiomodulation, systemic enzymes, peptides.

And I'm using them in conjunction with each other to really accelerate the body's healing for chronic tissue injuries. Awesome. Wow, that's amazing. So in your experience, why do so many chronic foot conditions like plantar

fasciitis or tendon issues tend to linger or recur despite conventional treatments?

Yeah, so I actually talk about this a lot, and what I find is that the patient unknowingly gets in their own way to healing. And what is really, really important when you have a tissue injury, let's say plantar fasciitis in this case, is that the body goes through these very systemized steps to heal that injury.

Why Chronic Foot Pain Lingers

Plantar fasciitis is technically an injury, it's a micro tear to the fibers of the plantar fascia. And if during that process of tissue healing, there's any overload or premature stressing to tissue, Example being, patient starts to feel good, they start running again.

What happens is that you essentially restart this process over and then you get more and more of a chaotic environment that has poor blood supply and essentially the body gets stuck.

in the middle of the healing process, which means this patient can never get out of that cycle. That's typically where I come in and I say, I am now going to be the captain of this ship and we are going be guiding it.

And I will tell you when is the appropriate timing to start to load your tissue or stress your tissues. And oftentimes it is longer than a patient thinks.

We really need to almost overtreat our soft tissue, especially when it's something that is chronic, like a chronic plantar fasciitis or fasciasis. Yeah.

Okay. And when you look at patients through a regenerative lens, which foot and ankle conditions seem to respond the best, and why do you think that? Yeah, so definitely plantar fascial issues, plantofascial tears.

So when it comes to your plantarfascia, which is the thick band of tissue on the bottom of the foot, what starts to happen is as it starts get stressed and overloaded in repair and the stress and over load and it gets in the cycle, is that tissue actually gets thicker.

And so that's a degenerated plantor fascia tissue. That responds really well to regenerative injections or medicine. And then the other one would be partial tears of your plantar fascia.

So it's very common when you have a plant or fascial presentation and it is not responding to conservative physical therapy, orthotics, kind of a traditional protocol.

Oftentimes there is a partial tear or like a fraying in some of the layers of fibers and then that responds to this regenerated protocol, that's probably the most common.

The other one that I'll mention real quick is we have ligaments around our toes. So they're called plantar plates.

Best Conditions for Regenerative Treatment

They're actually your plantarfascia. And they cross the bottom of the toe joint. Every time you take a step, that ligament, plantarplate, which is your planar fascia, is critical to how you stabilize your foot and your toes on the ground.

I see a lot of partial tears of plantar plates in my office. Those respond really well to regenerative protocols. And then you have your, you know, split tears and tendons, your ligament injuries that are more in the ankle, not crazy high success in joints.

So that is something to think about. More of it is much more ligaments and tendonous tissue. Okay. So there's a lot of growing interest in therapies like shockwave, PRP, peptides and other biologics.

How do you integrate those into your treatment approach and do they actually support tissue healing at a deeper level? They do. So I just had a patient that I was explaining this to yesterday because she didn't want to do the entire protocol of what I have.

And she was trying to piecemeal it and say, well, can I do just laser? Can I use do you just shockwave? Well, could I try a PRP and if it doesn't work, then do shock wave?

So what explained to her and what, I want all the listeners understand is that each of these different modalities, plays a different role in the totality of the healing process.

And there is an appropriate timing that you want to fit each of them in. The shockwave, which is one of the most known, I guess, as far as because a lot of physical therapists are doing it now and they just shock wave everything, is the purpose of shockwaves.

The true purpose shock waves is to disrupt the environment and you are, you could think of it kind of like shaking things up. to prepare the reparative process.

So I use shockwave before I inject biologics. And biologists could be the PRP, Wharton-Shelley exosomes, but the timing is I'm preparing the environment.

Using Shockwave, PRP, and Peptides

Then you would do the PrP or the biologic, which is essentially stimulating the cell, the fibroblast, to do what it does, and it lays down the collagen, to then repair the integrity of the tissue.

The peptides are just reinforcing the fibrolast, so it's kind of energy. You want to keep the energy going through this entire process. So I will do shockwave to prep the field, the biologics to get the soldiers to the area and get them active.

And then the peptides are continuing in kind of the engine behind the scenes. So I will do peptide for two months during this process. I do two rounds of injections of biologic and then I'll do the shock wave before I inject as the preparation for it.

And then the entire way through, I use red light or photobiomodulation as a way to just reinforce the microcirculation, the mitochondrial activity, decreased substance P.

So again, it's the timing and they're very synergistic. Wow. That's amazing. Yeah. It makes sense that you'd want to do things in a specific order and altogether.

Yes. One thing we emphasize in functional medicine is that no single therapy works in isolation. So in your model, is regenerative medicine enough on its own or does true healing really require integrating movement and rehabilitation as well?

Yes, great question. As Igane Karizab always said, these have to be an integrated approach. The regenerating modality in its is not enough to get a patient to full peak function.

Let's say it is a runner and that runner has a partial tear of their plantar fascia and they've been dealing with it for several years. Now they come to me and I'm going to do my regenerative protocol, which takes three months.

I then can't just set the patient back to running and doing their level of activity. I have to understand how to progressively create load and stress to the tissue by understanding really how our body stabilizes and interacts with gravity.

And that's the other part of what I do in my practice.

Why Rehab and Movement Matter

I'm a human movement specialist and I create a lot of programming to strengthen the foot, to get our foot to connect to the pelvic floor, or to your whole system to connected to gravity, To prepare the tissue to take ground reaction forces or impact forces.

That's a whole second side of the story. If you don't do that, It is very likely you could overload the tissue again and go right back to where you were in the beginning of step one and you've overloaded and now you have degeneration of the issue again.

So it is a whole body approach where one phase has to lead into the other phase. Yeah. That makes total sense. How important are gait patterns and foot mechanics in The Healing Process?

And what do you see happen when these underlying patterns are not addressed? So kind of similar to what I was just saying is, if I do not look at the way that the patient is stabilizing their feet, their foot to core, the weight that their foots strike is when they run, whatever the dynamic activity that they're trying to achieve, and go back to that activity post-regenitive protocol, If I don't look that and even assess the foot type, do they have an overpronated foot that is ligament-lax that truly needs to be stabilized with a custom orthotic?

as an example. If I don't look at that, again, it will overload the tissue. This is also where education is important and probably the third part of what I do in this whole thing or the underlying thread of the protocol and to the reestablishment of the movement patterns is the education.

And I need the patient to understand why did you overload in the first place? These are the signs you understand it moving forward. This is how your body is supposed to interact with the ground and with gravity.

Here's how you present. here's our protocol to try to re-established proper stabilization and strength.

Gait, Foot Mechanics, and Sensory Input

and then once they understand and they're truly educated, You get much greater buy-in and you create a empowerment to the patient or an ownership for their movement pattern or for the foot type.

And that's what I try to achieve as well. Oh, that awesome. That's great. So you often speak about the role of sensory input and the nervous system. Can you walk us through how the brain-body connection influences chronic foot pain and ability to fully recover?

Yes, so I love the sensory side of the human foot and the body in general. And what I find is that a lot of chronic tissue injury that I'm presented with in my office starts by movement patterns that are disconnected.

The patient has no awareness of their foot strike in the ground, of impact forces coming in. So there is a sensorally disconnected movement pattern. So part of that is if we feel our feet, if feel the ground, If there is a conversation that we are having between our body, our fascial system, which has 100 million sensory nerves, and gravity, a sensory constant, that creates much better movement accuracy and movement efficiency.

And those two things will keep you injury-free. So if you do not have movement accuracy and movement efficiency, you ultimately will start to overload the tissue because you're not aware of your movement patterns.

You kind of go through a no pain, no gain philosophy. you load the tissues too early in the recovery cycle. So it's very much built around creating the stabilization patterns, but having an awareness of where your body is in space and how it's moving and talking to the ground.

And that's a neurosensory process that is inherently built into everything I speak to a patient. Got it, got it. Orthotics are very commonly prescribed.

How do you view their role with regenerative framework? Are they helpful, overused, or sometimes even counterproductive? So in my protocol, the second phase of these three months is art supports.

And the reason why I use our supports, now they might be over the counter, maybe they're custom, depending on the foot type. But the reasons why incorporate them is I'm trying to really control the level of stress, tissue stress.

If someone has fallen arches, overpronation, a flexible flat foot, anything like that. It is very hard to control the level of stress, tissue stress coming into the foot through activities like standing, walking, running, et cetera.

So I use the orthotic or the arch supports to continue to allow a little time out to the tissue. and then I try to not be reliant on them, every orthotic patient that I get is still getting foot strengthening exercises.

So they're not magic inserts that you never have to strengthen your foot again. There's actually research showing that custom orthotics can weaken your feet and cause a denervation and an atrophy of your footh muscles.

Orthotics in a Regenerative Framework

What I say on that is if we use orthotics, which maybe you need to for your type, I'm going to still give you foot exercises so that we are still in control of our foot and our footh muscles and how our feet controls to the rest of the body.

Got it, got it. Well, for someone who's listening, who has been struggling with chronic foot pain, what are some of most common mistakes you see people making that may actually be slowing down their healing?

So overloading the tissue, so not giving a true window of healing. I think potentially, depending on the timing of it, that there can be an inappropriate use of steroids, cortisone shots, or even oral steroids.

Again, there's a time and place for them, so I do use steroids appropriately in my office. Another one would be doing something like shockwave, which is a regenerative modality, but then not offloading the tissue sufficiently.

So you are stimulating and then just still stressing the foot, and you will never get out of that cycle. So I would say those are probably the biggest ones that I see.

Yeah, that makes sense. Looking ahead, how do you see the field of podiatry evolving over the next five to ten years, especially as regenerative medicine and a more systems-based approach continues to grow?

I would love to see a growing specialization of regenerative podiatry, but then around that is to have well-established protocols that are created for the podiatricist so that there's a logic behind how they're done.

And I'm very passionate about regenerative modalities, biologics, but I find that a lot of providers are doing that very inconsistently. So there is not a full understanding of how does a modality like shockwave actually enhance the efficacy of a biologic, which would be like PRP for the listeners.

How could they work together? And it's not just do shockwave and then if you fail that, then let's do PRPs. That's how I would want to see the future of podiatry to be, but more of this broader totality.

I think making them accessible for people.

Common Healing Mistakes and Future of Podiatry

All of these all of these services are cash-based. They're not covered by insurance. So it's very difficult for a lot of patients to have access to them.

How do we make it more accessible knowing that if you have chronic foot pain, it is going to greatly limit your ability to move. If you cannot move, you will not have enough activity, which means now your other comorbidities go up

and it just becomes a public health concern.

by something as simple as a chronic plantar fasciitis that a patient can't walk. Yeah, yeah. Well, as the final question, because I know our audience is always looking for practical takeaways, what are a few simple things that people can start doing today to better support foot health and prevent long-term breakdown?

Yes, so I would say, one, release your feet every day. It can be as simple as rolling your foot on a golf ball, a cross ball. My company has a product called a Neural Ball, but I tell patients, leave it in front of your bathroom sink.

And every morning, every evening when you brush your teeth, I need you to release you feet. Its just starting to create this foot awareness habit. Next thing I would say is to have an awareness of your foot type.

So we need to know, is my foot a little bit more rigid? Is my a foot little more mobile? And then depending on that, we have to start to build some strength in our foot, just like every other part of our body you have strengthen.

You have strength your feet as well. And then I would say focus on balance. Balance is one of the most important longevity markers. And with that, it is your ability to stand on one leg for 10 seconds.

If you cannot do that that is, your target that you work towards and then that can help unlock some of this movement longevity. Yeah, absolutely. That's great.

Well, if people want to find out more about your company and your services, where should they look? Absolutely. So my practice is just my name. DREmilySpickle.com, if they know how to spell that, or Dr.

Emily Pediatrist, you will totally find me. I do see patients everywhere. Most of my patients are virtual. And again, I'm giving that outside of the box perspective for patients.

They also do a lot of second opinions on surgery, was trained as a surgeon, don't do surgery anymore. That is one way.

Daily Foot Health Tips and Closing

Then on Instagram, people want to look for content. then that is DR Emily DPM. And then the final one is on YouTube. I have hundreds of videos around education, webinars, exercises, tutorials, more than you probably ever want in relation to functional podiatry and really how our feet connect to the rest of the body.

Awesome. And we'll definitely put all those in the show notes for everyone. Wonderful. That is great. Well, thank you so much for joining me on the Functional Edge.

I hope today's episode gave you fresh insights and practical tools to level up your life. If you found value in this conversation, I'd love for you to hit subscribe, share it with someone who might benefit, and leave a review.

It truly helps us reach more people and continue to bring meaningful root cause health insights to those who need it most. For more resources, updates, and behind the scenes content, please visit drjuliaward.com.

And until next time, stay strong, Stay healthy, And keep living on the functional edge. Thank you for joining me on The Functional Edge. I hope today's episode gave you fresh insights and practical tools to level up your life.

If you found value in what you heard, don't forget to hit subscribe, share the podcast with someone who needs it and leave a review. It's the best way to support our mission of bringing powerful health solutions to more people.

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