Academy of PHYSICAL MEDICINE

Biomechanics and Pain Science

with Greg Lehman

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TRANSCRIPT

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Steven:

I'm joined by Greg Lehman today, Greg is actually in Canada joining us through the magic of zoom, of course, and he is a physiotherapist. So, um previously a chiropractor and is internationally renowned for his expertise on pain science and in particular for his great expertise in picking apart people's preconceptions about how their treatment works and how pain works. Greg, welcome to the Academy.

Greg Lehman:

Thanks for having me.

Steven:

Was that a reasonable assessment of your abilities, skills and personality?

Greg Lehman:

A little bit. I think, I think I'm more just, I pick up on my own ideas,

Steven:

But I was told that I could look forward to ruffling a few feathers today, but I think you said you didn't do that deliberately.

Greg Lehman:

Don't do that deliberately. And I tend to say when I, when I challenge people, I'm really challenging myself. I don't want to argue with people who are completely different from me, but if they're similar to me, then I get to argue with myself and they're a proxy for me. So,

Steven:

Sure. Jus quickly I'll introduce you. You're a physiotherapist you're you were a chiropractor, you are a chiropractor, of course you don't practice as a chiropractor anymore.

Greg Lehman:

It's just the licensing here. You would have to be regulated by both bodies colleges. And I, I wasn't, I would just be paying $4,000 a year to be licensed as a Cairo and there was no real, real reason.

Steven:

Yeah, sure.

New Speaker:

Yeah, you can do everything in Canada as a physio that you can as a Cairo. So, what's the point?

Steven:

Well, I guess, you know, I think the same is here, you know, you can do whatever you're trained to do, can't you? Which is kind of a, the point of the exercise in our terms as therapists, let's set this thing up behind me pain science, where are you on the spectrum? Because I was struck by a spectrum that you've put up on one of your blog posts, which was basically putting the bio psycho social model at one end of the spectrum and the kinesiopathological model at the other. Would you like to elaborate on that spectrum of it?

Greg Lehman:

Yeah, I, I would just say, I don't know if I, I think I use the term like movement optimism instead of bio-psychosocial and I, and I might've, I might've used them like interchangeably and that, that wouldn't be totally accurate because the bio-psycho-social would just be a larger umbrella term for the Kinesio. The Kinesio pathological model could fit into the bio-psycho-social. So, what I meant by that was the Kinesiopathological model is, is the classic idea that if your body isn't in the proper alignment, when you deviate from neutral, say your, your knee caves into valgus, it increases the load on the lateral patellar facet. Therefore, you might not have pain now, but you will later, mean it's, it's sort of, you're going to pay for it later with that technique and how you move. And then the movement optimism approaches. Well, no-no where our bodies are like these wonderous things that can adapt to these stressors and those techniques matter less for pain and injury. Then we would then you'd be led to believe from the kinesiopathological model and what I thought, the variable there. And so, where we all stand on this spectrum will kind of depend on how optimistic you are about the person's ability to adapt, right? So, if you really believe in adaptability, then you would fall much farther on the movement optimism idea that you can tolerate these things, and it's safe to move a number of different ways. If you're not so certain about adaptability, then you might say, Oh, it's safer to be in these positions. You have to get these positions. So that, that, that was sort of the, the idea there, that spectrum of optimism of there's lots of ways to move and less optimistic that you have to be more rigid in how we move.

Steven:

Yeah. So where do you find most practitioners are on that particular spectrum? I kind of like to think that we all think we understand the biopsychosocial model.

Greg Lehman:

You know what, so if we talk about it with bio-psycho-social, I think most of us, and this is totally fine are really into the bio still, or the biomechanical. Like I think even, even people who are vowed, who believe that the psychosocial variables matter for pain, when you look at their treatments, they're still very much mechanical interventions. But what I would say happens with the spectrum is there, is these people who use mechanical interventions, they're targets of their rehab might be more psychosocial factors, not just physical factors. So, they're open to that idea. So, if Peter O'Sullivan in that research group, the cognitive functional therapy group, they definitely have people exercise. They, they have people like they are Louis Gifford would encourage people to bend and flex and move. And that's a lot of their mechanical interventions, but their target isn't thinking I need to increase the range of motion in their spine, I need to get it stronger and work these muscles it's I need to build confidence and decrease fear and get people active again. So most of us still have a mechanical intervention when you embrace the bio-psycho-social, you're kind of open to your mechanical interventions, having a multitude of effects, and you can never parse what those are either. It's like my joke to you is what's your favourite ingredient in a cake? Is it the flour or the egg? Like, I don't know, it's a cake. You can't figure it out at some point, I can't.

Steven:

Well, my wife and there's the answer to that in her case, it's always the icing,

Greg Lehman:

Yeah, okay.

Steven:

But as you say, a few people would know the differences. Well, okay. I just find it slightly hard to put this into context, because if I have a patient who has, let's say an arthritic knee, and when that patient walks, they get pain and they know that when they walk, they get pain are you saying, well, sort of ignore the pain. Just keep walking.

Greg Lehman:

No, no. So like that with the bio-psycho-social or pain science tells us is that that pain in the knee would be an interplay, uh between the peripheral nociception, which is with arthritis is, it's not necessarily the joint damage or degeneration, it could be the chemical sensitizing components, and they might also have fear, worry, rumination they're sort of nociceptive or just their nervous system might be sensitized. So, we know that there's a very poor correlation between the amount of pain that you feel with NEOA and the amount of NEOA. So, a lot of people, a lot of their pain would be driven nervous system wise, right? And then, so your question is, well, what drives that sensitivity in the nervous system? It's not just structural changes. It's beliefs it's ex, expectations. So, it's the NEOA is a great example of the interplay between all of the variables that influence how sensitive or how much, how much pain you have. And now our treatment is okay, what are the things that we can, we can target there? So, to specifically answer your question, sorry, some of those people, yes, we actually should start poking into pain. And that's part of the advice, because we can explain that you're safe. You know, you're, you're safe but sensitive. So, and those people get to start poking and persisting into painful exercise or painful activity and that in turn might actually desensitize them. And that's like the standard recommendation right now for NEOA is that it's safe and beneficial to poke into discomfort. You just have to understand why it's safe.

Steven:

So, let's, let's say when one looks at the imagery, you can see that the articular cartilage is worn through so effectively, we've got bone on bone contact. The logical mind says, well, if you carry on exercising, you're just going to erode more and more bone now, and that will be painful.

Greg Lehman:

Yeah. So, I mean bone on bones is an interesting concept because you can have lots of degeneration and you may not have you have thinning of the cartilage, but you still have the sorry, the synovial fluid in there. So, you can still have a buffering. And again, we don't tend to see this big correlation between pain and those joint changes. So, what, what we know from most of the exercise studies and most of these are done with, you know, moderate to severe OA exercise is actually a catalyst for adaptation in the joint. So, believe it or not. And although I'm not caught up on, on structure, you can increase the cartilage or you can have changes in the joints with, exercise. So, we, we just, I just, I just did a lecture on this. So, we generally see that increasing load on the joint does not lead to more damage or more pain. That's the, that's the amazing thing, that it doesn't cause. Like the reason we get OA and we wear away is either you had an injury when you're young or, and primarily

because you're born and you were duped, that's just, what's going to happen to your knees. It's primarily genetic. It's not influenced by the environment that much.

Steven:

So, turning that on its head then, if you reduce the load on a knee is that going to help the healing person. If you're a fat bugger and I say, lose weight.

Greg Lehman:

So, it's, you're setting me up here, cause now you're talking to my favourite topic. So,

Steven:

Was I that transparent?

Greg Lehma:

I don't know. I don't know, but you couldn't have, you couldn't have seen the lecture I just did on the weekend cause I haven't released it yet, but I just had this huge keynote on this where we're load it. It's so counterintuitive. So, let's talk about losing weight. So, without a doubt, we do see when, when people are, have a BMI greater than 30 that they are more likely to have pain associated with NEOA. There definitely is when they strike the ground, when they walk, there's greater forces when, when they hit the ground, but this is what's amazing. So, when they, there's a group of people when they lose weight, they will have less pain. It might go from five out of 10 to two out of 10 or two and a half. It's not usually down to zero.

Greg Lehman:

Uh so they do improve. But this is what happens. They end up loading their knee more, after they lose weight, it increases the load on the knee. There's a number of reasons. One might be, cause they're probably protecting it before. Two might be their mechanics change, so they'll actually start to bend their knee a little bit more, which increases the moment and the compressor force. Three is they walk, but this is probably the biggest one, they walk faster and they walk more because they feel better. So, they've actually increased the stress on their knee. And then if you follow them for 18 months, this is a work of Messier or Hendrickson.

Greg Lehman:

If you follow them for 18 months, there is not more joint changes at 18 months, but they have less pain. So, like what, what people would argue, and I don't know the chemistry at all, is that, it, being overweight is, has a metabolic inflammatory. That's why it's contributing to the sensitivity of the entire system, not just at the knee. Yeah. And, and you know, what's exciting too. Sorry you got me going, you just press play. And now I'm talking, I'll just end here. It's why you can also exercise. Like you don't have to lose weight when you have NEOA, exercise or other treatments that don't change the stress on the knee, will also cause less pain. So, you don't have to have less load to still do better, there.

Steven:

Okay. but what you said is that people who lose weight will have less pain. So telling them to lose weight, isn't necessarily working the way we think it is, but it will still have a beneficial effect.

Greg Lehman:

Exactly. So, it's a, it's a, it's a helpful way to, to help with NEOA, but it's not a required way. So, there's other things you could do, which could be increased physical activity. It could be increased coping. If we get better at figuring, figuring how to change the sensitivity of the system through other things, I don't know, like Tai, Tai Chi will help. Right. it's not necessarily making you stronger, but it helps with the sensitivity of the season of the, of the system.

Steven:

So, well, I guess also if you are sensitive about being obese, then that is another stressor for the central system, isn't it? Which will contribute to that bio-psychosocial overall sensitization.

Greg Lehman:

I think so. I think we set up a subset of our patients to fail and people tell them, Oh, you have to lose weight before you get the surgery, or if you want to get out of pain. And they say, I I've been trying to lose weight for 30 years. Thanks for ruining me. Like, it's just not going to happen there, buddy. And so, I like to think that, you know, being overweight or having a higher BMI, it's one thing like I use the cup analogy for pain. You have all these potential stressors or contributors or mediators of pain that go into your cup. You have pain when it overflows. It's one thing that's in the cup. You don't have to get rid of everything. So maybe a higher BMI is one of those things. You can, but you don't have to.

Steven:

Yeah. You talked. When we spoke a few days ago, you were talking about, you've contrasted the idea that you asked people to lose weight in order to save from knee arthritis. But then at the same time, there's very good quality evidence to say that if you continue to strengthen and exercise the knee, then it will feel less pain, which itself puts more stress on the joint.

Greg Lehman:

Yeah. I love it. That's the irony is we talk out of both sides of our mouth when it comes to load. So, and, and this is what you see with exercise, like to me it's just, it's, you're loading the joint and it catalyses adaptation. And what's interesting is, it's I just, it's funny, I just read a paper last night at 12:30 AM, cause I was telling you, this is really early for me. I don't, this COVID thing is messed up my sleep cycle. And so, I can't remember the author cause I wasn't paying attention to it yet. But what they looked at is with strength training, we have responders to strength training and non-responders so one subset will actually get stronger in their, with their quads. Another group won't get stronger, but guess what happens to pain? No difference. They both have a reduction in pain. So just getting, getting stronger isn't a requirement to have like a successful recovery. It's just a really nice side effect.

Steven:

Right. So, what's the mechanism then?

Greg Lehman:

Yeah.

Steven:

How are they getting that?

Greg Lehman:

So, so this is why the bio-psycho-social is, is nice. Cause that that's, that's where it's, that's where we get to think Okay. It's complicated. It's not just the stress on the joint. There's a few ideas. One, one could be primarily nervous system where exercise is a, is an anti-inflammatory. So that would be an influence at the, at the periphery. So, you might influence the production of nociception. It, it also exercise is involved with the exercise induced hypo algae's. Yeah. So that's that short-term pain reduction, which might lead to long-term pain reduction. There's probably a habituation variable where when you poke into pain, sometimes you sensitize in the short term, but in the long-term you can habituate where you have less of a response to the, to the nociception or maybe, there's less nociception that, we're not sure exactly.

Steven:

Does that happen with a pain, which is episodic? I mean, knee pain for most people is probably only occurs when they're walking, but for habituation to occur, does it not have to be constant?

Greg Lehman:

I don't know about that cause it's just done like it only gets studied experimentally, right? Where you do like these, this thermal testing where you poke someone with the hot prod and then in the short term, like within the session, they'll have more pain with the same intensity and then over time they have less pain. But related to that is, if you tell them that it'll get worse over the days, they, they they'll lose the habituation response. So,

Steven:

I suspect, I suspect if research is conducted the way you've just described that your controls are a bit more lax in Canada than they are in the UK, poking people with hot prods,

Greg Lehman:

Where are they? I always thought it was in Europe where you guys do all the nasty stuff, too many rules.

Steven:

Christina has asked the question about whether you advocate supplements such as glucose, saline or others.

Greg Lehman:

I don't, it looks like the, I mean, I don't know that research. I haven't looked in that research for years, but the last study I just read, it was maybe a year, year ago and it didn't seem to really make that much, much of a difference. So, I'm not saying not to. I'm just saying that I don't and I was under the impression that's what most of the systematic reviews say, I'd rather have just,

Steven:

I think independent, independently. I might've just thought on the basis of no evidence whatsoever that since the evidence seems to show that there are responders and nonresponders for glucose, saline again, it might be more of a psychological component. In much the same way that we get a placebo effect from the [inaudible].

Greg Lehman:

Yeah. And I don't think it's one of those interventions that I can't see any harm. So that's why I'm saying like, yeah that's your call. That's not one of the ones.

Steven:

What I said is slightly controversial of course, because there is a proposed mechanism of action for Lucas. I mean but nonetheless Nick Burns has said physical degeneration can obviously cause pain, swelling and contractility of tissues and therefore joint restriction and for visa tissue fluid exchange. Is that something you agree with?

Greg Lehman:

Physical what? Can cause what?

Steven:

Physical degeneration.

Greg Lehman:

I don't know what physical degeneration is. I mean like NEOA?

Steven:

Yeah. I guess I'm well, Nick can come back if that's wrong, but that's what I inferred from, from what he said that, yeah.

Greg Lehman:

I mean, tissue injury can be related to pain that that's not uh, debatable, but at the same time it's not required to have pain and it's not sufficient. So, you can have like in the hamstring literature people tear their hamstring quite quickly. It's pain-free, but it's not healed. That can take a while. And then over the next year there'll be fibrosis, which you could, or scar tissue, you could call that physical degeneration and they're doing well and they don't have pain. So, so you can have these like structural changes like that. And you're not, you don't necessarily have to have a thing that would be good. Yeah. Or tendinosis like in it with a tendinopathy, you can have lots of tendinosis and be completely pain free so that, that's technically physical degeneration, that's tendon degeneration and you can be pain free. So, you don't necessarily, that's the thing that's, what's so tough here. And I know it sound very wishy washy, but it really is.

Steven:

Yeah. yeah. It's to the point, and first I thought perhaps Nick was being a bit provocative by saying physical degeneration can obviously cause pain, but I suppose he used the word can. So, it has the potential to do it in a group of patients.

Greg Lehman:

Yeah, absolutely. I mean, like you'll see papers like in a spine by Brooke Kinji where he'll it'll show, you know, 60% of people over 55 will have these degenerative changes in their spine and they won't have pain, but that same research group will also show, you know, if you take a group of people who have low back pain, they are more likely to have more changes in their spine. Right. So, I always say like, its structure is not destiny, but it's not irrelevant it's kindling for the fire. Like it there, I think it predisposes you.

Steven:

So, Iqbal has asked how do you decide regarding pain who should do more? And by that I presume Iqbal means more exercise or more strength training or whatever, who should not.

Greg Lehman:

Good question. I actually, actually, that's the one that I struggle with every day. It's the it's this expose versus protect debate, right? Like who are the patients where we want to say, oh, you need more stress, you need more of a catalyst to adapt and then, or who are the ones where we want to say, Oh no, no, you have to back off, it's too much for you right now for whatever reason, which, which, we're not sure. So, in general, this is the crude rule. If someone's avoiding and they're fearful and they, they haven't been, you know, stressing their body or exercise or they have, they've been avoiding certain activities or movements then exposure, you're considering that at some point in time. But if you have someone, who's what we would call an endurance coper where they cope with pain by pushing into it quite often, and it's not successful. So that's the work of Monika Hasenbring, or they used to call them over activity. That group a temporary back off is relevant there, but I'll totally admit that when I'm not helping people, what I look to do is maybe I should back off or add more. That's what I always look at. Like I got it wrong. I've definitely got it wrong before. And then sometimes I get it right after changing it. So, it's a great question. Cause it's tough.

Steven:

Well, actually Salome has asked whether you'd be prepared to give us an example of how your treatment, your thinking process and your treatment plan might develop using uh, an, an example of a patient of your own.

Greg Lehman:

So I can give you an example from last week of two people, right? Like one after the other that were very similar, but it ended up being exactly opposite. And they're both like young, I think maybe one was a former pro athlete. The other was just, you know, one of these, the best athlete in his area. So anyways, one had withdrawn, like with low back pain, was afraid to bend, was worried about bending. He had tried avoidance and a neutral spine for, for years. You know, like lot of like fear and worry of moving his back was quite sensitive to that. So that was the idea. Let's, let's find out what you have to. I thought I understood what was going on. And it seemed like exposure, you know, and with no with no safety behaviours, not bracing, you know, try not to guard doing it fearless, fearlessly and thoughtlessly, and then someone else.

Greg Lehman:

So that was the exposure was same idea, low back pain for years, but it would wax and wane. And it was regularly tied with too much activity where he could be really active for a few weeks and then you'd push it. And I had his whole training program for the past few years, the past few years. And it seemed like he was an endurance coper. He would just hammer into it and then get setbacks for weeks. And so very similar, but their approach to pain was different. So, when we exposed one, one we avoided would be the idea. And then the one where we avoid, that's not called graded exposure. What that ends up being is what's called graded activity where it's just getting the dosage, if whatever they have trouble doing, you're going to do that. But it's the dosage that's key.

Steven:

Yeah. How much should they, we influence this with our communication with patients in clinic?

Greg Lehman:

Oh, I think we do a lot. We don't even mean to like, cause we all have like our own philosophies and lens of how we see things. And so, whether or not I would have practiced the same way 15 years ago with both, 15 years ago, I might've done the same thing for these two, which might've probably been what I would call general desensitizers so it could have been, let's do some manual therapy. Let's just do general exercise to build you up. And both of you let's start to do things again slowly, which isn't a bad treatment approach. It's just, I'm probably focusing on other areas now, but we also, it's hugely practitioner dependent and what I'm, what I'm so interested in is like how people can be uh, really different on the surface, but maybe they're doing the same things mechanism wise. And if we can figure that out, what the common threads are between different practitioners, then I think we might be onto something.

Steven:

One of our audiences identify himself or herself only as PC and says, this is, matches what he or she has heard from an orthopaedic surgeon and a paediatric, what you've been saying. Low level changes delivered in weights weight loss with some evidence to suggest that orthotics can have a bigger benefit with Forster's offload. And that's the bit that intrigued me about the observation is whether you feel that that sort of artificial intervention in the form of I'm assuming [inaudible] can make a big difference.

Greg Lehman:

I don't think anything makes a big difference that's even on stuff, even the stuff that, especially when it comes to NEOA for talking about NEOA. Yeah. You know what, like orthotics are neat cause they are right like orthotics, we've kind of like thrown the past 15 years. We said, you know, don't do them because they're not changing foot pronation. They're not changing the kinematics. And then maybe 10, 15 years ago, I think the work of, you know, Beeno Nigg or different researchers said, well, it's not about the kinematics, it's about the kinetics. It's how it changes the stress at the joint and the muscles, or it might change the dampening at the calf or something like that, that idea. So, there could be something there, but again, it implies that decreasing load is the, is the right thing. Like it still is assuming that that's the mechanism orthotics could work for a number of different reasons. And so, I would certainly be open to, I don't know, the research on, on a NEOA that, that, well, I wanted someone to write that part of my course for me, but with knee cap pain, there definitely is some pragmatic research that it's helpful. So that's something I've had a change in

opinion on, through the years is orthotics. So, I think there's, there's something there, but I, I wouldn't, I have no idea the mechanism.

Steven:

Yeah. And I've often wondered again with orthotics about whether the proposed mechanisms, mechanisms are the actual mechanisms of action for them, because lots of people love to say that they're doing this and they're doing that and I wonder sometimes how we can really know that. Pips uh, Pip says something that she does when she takes glucosamine chondroitin without a doubt makes a difference to the early OA changes in her dip joints. Yeah.

Greg Lehman:

Yeah.

Steven:

No arguments with that uh.

Greg Lehman:

Yeah.

Steven:

Um, Nick, Nick says uh, and this the same thing as before was he came in earlier to confirm that he was talking about OA inflammatory changes like that. But also, here is saying that actually it was simply moving with psychological help from others, can be of benefit. So that psychological help I imagine is something that you've looked into quite extensively.

Greg Lehman:

No, no, not super-duper, because I try to focus on things that are like will help me pragmatically. So like you, you do with that type of work, what ends up happening, what they look at in that literature is exercise plus like coping skills and that's sort of what people mean by psychological interventions. And really it ends up being really straightforward. It's just good education. Like this is why it's safe for you to start exercising and walking. So, I don't know if it's like the, those, the coping skills or the education that helps inherently or if it gives people permission to do or the support, like Nick said, like to do the activity and that's a prerequisite. So, I don't, I don't think we know that. So, I always just do, I kind of throw a lot of things that people, cause I can't be sure what, what has to happen. So I do a lot of the coping skill stuff and education with, with the exercise, but certainly there's something there, but giving people support. Yeah.

Steven:

We're actually, I should actually say to people that similar, I put your web address up here, greglehman.ca well worth visiting. You've got a phenomenal ebook on there, which you aren't even asking for people's email addresses in order for them to download it. It's very, very readable, very presentable. And seems to me like an excellent summary of what pain is all about and why we experience it and what we can do to try and alleviate it because that is, surely that's one of the hardest things is to convince a patient who is suffering pain, but it is safe to continue in the face of all the things they heard from their GP that they've been told about their x-rays or their MRIs.

Greg Lehman:

It is uh, and w what's difficult. So, what we try to do with things like that is give them, so that's a new idea about, about their pain, but give them support for that by things that they've already told us, like, we're like, we're in the opinion changing business in some way. And you can't just tell someone you're safe, you can, but it's not always helpful. So, you kind of look for something that they already know to support it is, is the idea. That's why still doing a physical exam, even though we know are most of our physical exams, aren't very good for finding structural lesions or anything. I think you can use a physical exam to sort of highlight how great people are in some way.

Steven:

Getting back to that clinical setting then you, I think are slightly critical of the idea that I might decide I want to adjust the L3, L4 junction because I have decided there is a restriction there, and that's what the patient

Greg Lehman:

Yeah, I mean that, so now you're going back to my old wheel house. So that was my master's so long ago in the late nineties. And so, my master's was before I went to Cairo college was on what are, what's the biomechanics of spine manipulation. And what you're talking about is my, my two old friends that, Kim Ross and Dave Breznik, who, who I think published the most important paper in manual therapy ever. That's what I, and I go, I'll give keynotes just on their paper. And it was the skin fascia frictionless interface paper. And what they said when I'm saying is manipulation of the lumbar spine can definitely be helpful. It can definitely help a subset of people. You know, it's, it's definitely worth trying, you know, and all of these things, I'm not against that, but what our research was and their paper in particular was, you probably aren't doing what you think you're doing.

Greg Lehman:

Meaning in the lumbar spine, you can't isolate. If you can't just manipulate L3 on L4, you're going to zipper. And so what Kim so that if you few studies there, one was that the skin fascia frictionless interface was that was in the thoracic spine mainly and it just said, if you're manipulating the, I don't know if people can see me in here, the only force that the spine feels like the joint is that, which is perpendicular to the bone. So, you can't push it in different directions, right? It's just going to go down like you can't, if you think that there's a lateral tilt, you can't correct that you're just pushing the bone, it's going to move. And that can be helpful. In the lumbar spine, Kim did a paper with accelerometers measuring where the crack came from, like really impressive stuff. And what they showed there was these great manipulators just couldn't be specific. It just, it was chance if they got that joint, they would get that joint, but they would get other ones as well. So, it'd be like that stuff. But no one was like thinking bing, I got L2 ping I got L4, you just couldn't do it. And you don't need to,

Steven:

But if their opinion was that that one junction was restricted. It doesn't matter whether they got other ones as well, as long as the one they thought was restricted is now moving properly. Sure. Properly in inverted commas.

Greg Lehman:

Yeah. I know. I know. I know. I won't jump on you. Yeah. That they would. Then at the same time, there are other research and tons of research in the nineties before the said this, well, we don't even have a valid way to identify L3 not moving properly or well on L4, but what's important is the person came to you and they were in pain. That's all that matters. So, if you want to manipulate them and you think that's the right thing, then go for it, it's just not about some specific segmental lesion. I know that's hard for people to give up. It was freeing for me, but I actually started with that. So, I guess I didn't really have much to give up. So, I can't judge anyone.

Steven:

So, one of the questions which has come coming inevitably, is, is everything we do just placebo?

Greg Lehman:

No, that's the thing it's like, I say, I was talking about when biomechanics matters and just because we say biomechanics doesn't matter, the way people have said it matters. It doesn't mean there's not things about biomechanics that are important. So, it's, I don't think it's placebo. It just means that things are working via other mechanisms like exercise helps or strength training helps not necessarily because you got stronger, but there's all these other factors that occurred and you needed that strength training intervention to get those other factors. So, so it's not placebo means inert. It's definitely not inert. It's just complicated.

Steven:

Yeah. So in that, in that sense, then it's very difficult then for somebody trained as an osteopath, by themself as a chiropractor, as you were as a physiotherapist to determine exactly what they should be doing with an individual patient in clinic, because you want that complicated mix of factors, that's going to relieve their pain. And presumably you want it also to be better than that. So, we want it to prevent recurrence. So how is that going to happen?

Greg Lehman:

So, I think I, I can't answer specific specifically, but I can give like a general framework talk here, but I think we should always do is like say, okay, what are the general things that people need to do to be healthy, right? Or to help with pain? What does the literature tell us in general, that everyone would benefit from right? And, and, and there's lots of work out there. This, this, this could be sleep, this could be nutrition, not an area of mine. This could be physical activity. This would be resuming hobbies and meaningful activity. Again, getting involved with them, if they're missing their, their social engagement. You know, this could be a good education about their problem being listened to have a therapeutic Alliance. So, there's a bunch of general things. And then we want to ask, is there something that you need, that's very specific, right?

Greg Lehman:

That, that, unless you get this, you know, you won't recover and that's where it gets, that's where the debate, the debate would be. So, like tendinopathy or like a hamstring tear or things like that. I tend to think, yeah, we probably probably need to be more specific here. Right? We need to definitely address this and get specific load to adapt, and you want to get back to running or hiking. So, we

need to create a program to get you back to running and hiking. And then for prevention, again, it depends on the injury or the pain, but in general, if it's sort of, if the condition is more nonspecific, like the fuse pain that just kinda moves or low back pain, very nonspecific your, your interventions for prevention, they're probably more nonspecific. But if it's something like a specific injury, like a hamstring tear and a football player, then we would say, you need more specific strength and conditioning for, for that region. So again, it depends there.

Steven:

Christina has said, there's no point in having orthotics and again I assume we're talking about [inaudible] until the body structure is sorted out, all they do is strengthen a bad position. What's you're thought on that comment?

Greg Lehman:

I, yeah, I, I probably, I guess I would probably disagree. Cause I don't think that structure is something that we need to sort out with most people, I don't think uh,

Steven:

Is that one of your biggest bugbears? I mean, I got an impression from looking for your, your blog, your website and so on, that you don't have much time for people who say you mustn't stand like this, you mustn't walk like this, mustn't sit like this.

Greg Lehman:

Yeah, yeah. That that's, that that's the reaction. That's what the movement optimism about. So, I think, I think that's what Christina is saying would be the idea that someone pronates a lot, they have delayed supination, their knee, my cave in. And I would argue when you look at that biomechanical literature, that those things are normal variations. They aren't something that are predisposing you to any injury. So, an orthotic, this is the thing. Like I had a little lab before and we used to measure people's running kinematics and they'd out.

Greg Lehman:

They say show where my orthotics. I'm like, Oh, you do whatever you like, but the orthotics aren't going to change it. And I would have them do it and regularly orthotics don't change your kinematics. They, they're just not strong enough, they're like, it's not a strong enough effect there. So, they wouldn't reinforce the pattern. They're just not, not really changing that, that much. We run, the, or walk the way we do, because it's so complicated. It's very hard to change gate and when people try to, they usually don't succeed like in the NEOA world people talk about something called the verus whip or the knee adaption moment. So, the foot wants to go in and the ground wants to cause it to do that. And exercise programs will be developed to change that. And they don't, but people still get better. So yeah. Or, you know, hip, the hip might drop during running. You don't have to change that, you can try. And it might be helpful, but you don't have to change it and people will be out of pain. So yeah, I guess I would, I would disagree with the premise behind that. Sorry.

Steven:

We've got an interesting comment from Lawrence, which I think you probably sympathize with or agree with. He says that Fryette's laws in inverted commas are still part of the osteopathic curriculum

in the USA and they're treated as a fact. And he said, he, he said, this is a heresy warning. Isolated lesions can't be detected manually or treated specifically.

Greg Lehman:

Totally. Yeah. Um preaching to the choir. And it's funny, we've known that for over 30 years, we just, Fryette's Laws that that's not like the coupling like lateral bend or is that the yeah.

Steven:

Complicated. And you're putting me on the spot.

Greg Lehman:

Wow. That's like an old term. I haven't heard of that. I, I'm against, evolution.

Steven:

I tell you one of the reasons why, one of the reasons why I can't remember it is because ever since I went through training, I have always been suspicious of laws like that written many years ago when people thought that they were accurate, but I've always thought, well, I'm not entirely sure I agree with this.

Greg Lehman:

No, I, yeah. I, I, and I think the, the, the writer doesn't agree with it either. And he's, I would agree with that. We just wrote a paper and I would love to be, I was very happy part of it with Thornwell Paulson on the SSI joints for changing the narrative. And that's what we went through. All of the false beliefs and, and his PhD was on that. Like, it doesn't go out of place. You can't detect it with your hands. There's normal movements that there's, there's no problem with form and forced closure. Yeah. It could be super sensitive and it can be a generator of nociception. We're not saying it's irrelevant. This is what I mean by reconceptualize and biomechanics, the joint could still be sensitive, it can still hurt. But it doesn't mean there's a dysfunction in how it's moving. That's, that's, that's the reconceptualization.

Steven:

Sue Fowler has asked whether we can have a reference with a Kim Ross paper that you talked about earlier on. If you send that through to me, I can, I can push it out to people.

Greg Lehman:

I can tell you right now. So, it's Ross 2003 and clinical biomechanics. That's the that's the skin fascia frictionless interface. And I go through that on my YouTube channel, I think too.

Steven:

Right? So, skin fascia, frictionless interface, Kim Ross is also great speaker, isn't he? And um I've been, I've been trying to tempt him to come into our studio from time to time. But of course, being in Canada, that's a little inconvenient. I might actually text him. I might actually text him to come on this show because I think he's a great guy to speak to.

Greg Lehman:

Absolutely. I feel like I'm their proselytizer, I've literally gone around the world three times just to pump them up. I honestly think that skin fascia paper is just genius. What it means is this folks, like if you just rub your skin on your face, it just slides. You can't grab that bone underneath the skin. And if you can't grab that bone, the only force that that bone will feel is you pushing into it. You can't like close your mouth, you know, you can't push your job backwards. So, all the techniques, and we see this in the physio world, these techniques where they like try to, Oh, I'm going to distract the radial head, no chance. Like you, you can't cause you're, you gotta, you gotta be perpendicular. You could push it. Medially it'll feel that, but you can't, you can't distract it and you couldn't compress it. So like, you know, anyways, that's I love that stuff.

Steven:

Well, I had a question here from Camillea whose uh, so I think it's a question I haven't gotten to the end of it yet. She says, isn't this, some of it isn't some of it's to do with the patient's priorities and how they can ignore their pain because of the things they need to get done in the day, a farmer will carry on working because he's got animals and the mother will pick up her child, even though her backaches, I'm gonna pick you up on that Camillea, because fathers pick their children up as well and we live in a very sexually equal opportunity world at the moment.

Greg Lehman:

Uh I pick them up and throw them,

Steven:

I've said that very tongue in cheek. I said that very tongue in cheek.

Greg Lehman:

So, so absolutely. And there is an argument out there related to that where, where some of our messaging should be pain is normal. It's really unfair to tell people that they need to be 100% pain free all of the time, or you're not going to have these bouts of pain. And, but what the, what people would say what has happened. So maybe a hundred years ago, what we all did when we had pain, as we kept picking up our kids and kept doing our farm chores and we weren't suffering or disabled, we were functioning really well, but we had some pain. So that the argument is that that's a really healthy thing, what those people are doing right there. They're still doing meaningful activities with pain. Like I, I have some persistent pain. It moves around. It's my ankle, my shoulders, but I keep doing the things that I want to do. I just, I just manage it. And if, if I just stopped doing everything and waited to be, and I've tried to get treatment, all that stuff before I wouldn't be able to do anything. So those people that that's the healthy, that's, that's a healthy approach. I would argue.

Steven:

Well, I mean, we we're right up against the clock, but one final question for you, perhaps where is the weak link in the chain? Is there something that we osteopaths, chiropractors, physiotherapists should be doing differently in our own treatment? Or should we be trying to address a lack of knowledge perhaps at the GP level or elsewhere in the, in the caring community?

Greg Lehman:

That's a good one. I would say there is a lot of misinformation out there. I think the more people getting like blogs and writing the same message, that would be helpful more for the patients, the

consumer, right? When they, they, they, they have so many doubts and questions, but, but I don't, but I get it because even in this small group of us talking, you know, and asking questions, we're going to have lots of differences in opinion. So, so it's hard. And who is anyone to say? They have the, exactly the right answer.

Steven:

That takes us right up to two o'clock Greg. So thank you. Thank you very much for that. We have been asked again about your ebook, but if people go to your web page, which show your website, which is Greglehman.ca, and we'll also, we'll put a link up to this as well after we finished the program, not only can they find that really, really excellent ebook and several people have written in to say how good that book is, but then also find your very, very interesting blogs there, which you know, they make fascinating reading and also provides a really good basis for us to be able to communicate to patients why they should trust us when we say yes, it's okay to exercise. And yes, it's okay to distrust the findings of that MRI or that, that X Ray.

Greg Lehman:

But can I comment on that just quick?

Steven:

Yes please.

Greg Lehman:

So, I have a website called oaoptimism.com that has short four to seven-minute videos just on those topics, why it's okay to exercise when you have OA, what pain means, why we're sensitive. Yeah. So that was done just for people that send their patients to that's all free too and all that stuff.

Steven:

Brilliant, oaoptimism.com. Fantastic. Greg, it's been great having you on the show and um just, when are you next lecturing in UK or Europe?

Greg Lehman:

I think I'm in, well, I'm in Europe I'm in Copenhagen, in September, which would be the first since March or, and then I'm in Manchester in late November.

Steven:

Okay. Let us know when you are about to embark on those, because we'd be delighted to remind people that, you know, you're here in person and they can go and listen to it. And online courses and other trainings, we just send them to your website and see what's going on.

Greg Lehman:

Yeah. That'll be ready in three weeks. What I'm doing with that, which I'm really excited about is if you get the online pre-recorded stuff, you automatically get to use that as a hundred percent credit to the interest, in course, right. I'm pumped with, I think that's a good, listen to me. I'm complimenting myself. It's a good idea.

Greg Lehman:

But that way, you know like you take a course and you kind of remember stuff and then you forget it. And now if you get everything pre-recorded beforehand and after it reinforces it, and I don't want to have people pay twice. So, like, if you get it online, you get it as a credit for the in person. And that the in person makes the in person more of a discussion, which is better.

Greg Lehman:

Greg. That's been great. Thank you very much for joining us. Thank you.