

## Connecting the Hip to the Spine – Ref 298

Steven Bruce 17:12

Hello again, great to have you with us. I hope your week is going well. We're going to make it even better today with some expert thoughts on connecting the hip to the spine. Now, I know you are well aware of the connection between the two and the importance of dealing with them both as a unit when you've got patients, but it is always good to take things to a new level. And my guest this lunchtime is Carl Todd, who really is an expert in this field. He's got a PhD in orthopaedics and clinical science. He's the author of this book managing the spinal pelvic health hip complex, which was published earlier this year. And amongst other things, he's the Football Association's consultant osteopath. So great to have you with us, Cole. I am curious to know how much of your time was taken up with the Football Association.

Carl Todd 17:58

Thank you. Thank you, Steven, for having me here today. Probably between about 50 to 100 days a year. If we have a tournament, for example, like a World Cup, you could probably write off 100 days a year and a normal year but fidelity tournaments probably about 50 days.

Steven Bruce 18:14

So you're dealing with the national team?

Carl Todd 18:17

That's correct. Yeah. So somebody from Northern England national team.

Steven Bruce 18:24

No wonder our team doesn't do very well. It's deliberate sabotage. I'm glad to hear it. I mean, one of the reasons for asking about that, of course, is that I just wanted to let people know that the level of sportsmen that you're dealing with, and so the demands must be quite high, because clearly they are at the end of their envelope, I imagine for sporting ability and achievement.

Carl Todd 18:49

Absolutely, you know, I spent 18 years with the national team spent 15 years at Chelsea Football Club, and I've worked in basketball and, and athletics as well. So my PhD was in spheres. So across multi sports, I think that's what probably got me interested so much in the hip, spinal pelvic hip

complex as as a unit and a high where I can make myself a better practitioner, by challenging the science for the PhD and lie high, we can help our people understand it and maybe change the way they think or work but maybe just try to open their minds a little bit to sort of some new new ideas.

Steven Bruce 19:29

Well, you know, we've got a whole lot of we've got quite, I think we've got a hell of a lot of osteopaths and chiropractors watching at the moment because I knew that they were there was busy crashing and crashing our login system as they were all trying to join. So there are lots of people interested in this but of course, they've all been taught about the hip and the spine and and how they work together. So what is it we're getting wrong or to put it a different way? What what is it that you bring this new to the party?

Carl Todd 19:54

I think essentially is three things that that I would call the highlight is, is with every patient, one of their come into clinic or whether it's a sports person, and you have their obviously the presenting complaint or case history, but if you bring it like down to the basic level, most of the people that we see with, say, for example, hip, pelvic issues, certainly from sports perspective, there tend to be quite chronic. It's not as simple as a straightforward muscle strain or mechanical, acute back spasm. These are something that sometimes people can can still exercise can still sort of work still still achieve a certain reasonable amount of daily activity, but there's an underlying grumbling issue. And I think the three fundamental things that I like to sort of think about is one their anatomy to how they move, and three, how much load in terms of frequency, volume intensity of activity, now, we have to sort of define that really, it could be an elderly person to be asked to go to butcher and walk around Waitrose to do shopping at the end of the day, that's okay. Or it could be a sports person who's got to run five kilometres every day in a sports pitch and lift weights in the afternoon and things like that. So I think those are pretty fundamental things. And it's, it's always easy to blame it on the load, or you've done too much that it's a cultures fault, you need to do less, well, actually, sometimes doing less is quite detrimental to the health of an individual as well. In clinic today, I'd be working this morning, and I've had someone come in who'd been to have a consultation with someone else, and they've been told to stop doing all physical activity. And I thought, well, that's fair enough, I understand there's a time and a place to do that. If it's a raging red raw, acute injury, but if this is something that's grumbling along, and you'd have to move and get up and drive your car and get out of your car and climb stairs, then you need to do something, because otherwise you're just gonna get particularly work. So it's understanding that that's that. That's that level of.

Steven Bruce 22:02

Yeah, I was gonna say, you mentioned earlier on that this applies to everybody. And of course, the book here talks about If the athlete does this, If the athlete does that, but but all the principles in your book here would apply to pretty much any member of the population, wouldn't they? Well, what I what I was impressed with not impressed by I'm not trying to blow smoke here. What I really liked about the book is there was one case in it that I was reading about where you came up with four differentials, which include the respiratory system, or the muscular system and whatever else, you know, there was there was lots of exploratory stuff in here, which challenges the thinking process quite nicely. I think it's your evaluate part of your five eighths, isn't it? If you're probably going to tell us about those?

Carl Todd 22:43

Yeah, absolutely. So sorts of stuff like my whole, I used to teach. Before COVID. I used it to our hands, face to face courses. And students used to say to me, do you don't want to get books? And say, Well, I know lots of books, but it made me sort of think, well, maybe I should do something. And that's what's called it probably accelerated that. And it made me sit back, Steve and actually think, well, what is it that I do different to somebody else that gets the result that I want to achieve? And, and I come up with this concept of my five eighths which is evaluate, educate, manipulate, activate, integrate, and it's not it's not my concept, not a business model, and anyone can use it. But if not sits perfect the way I work. And it's probably spend most of my time talking to patients and evaluate and educate them and very little time, actually, with treatment. And actually, that works exactly the same in sports for people as well. And the same patterns with movement dysfunctions, we'll come back to there about anatomy movement, a lot. The same movement pattern dysfunctions you see in elderly patients that you can often see. And in elite athletes, the subtle differences is perhaps in the elite athletes load has increased significantly, as the elderly patients, the anatomy has degenerated a little bit on of course, something supplements creates a straw that breaks the camel's back, which causes pain dysfunction, and then ask them to seek someone like ourselves.

Steven Bruce 24:13

Does that mean that you have honed your communication skills to a high level because you said you you might do less treatment than is expected and a lot more explaining? And presumably there's there are a lot of processes involved in that there's not not worrying the patient unduly but there's also getting them to comply with what you want them to do and understand what it is you're trying to explain.

Carl Todd 24:34

Absolutely. You know, one of our colleagues, you probably know Oliver Thompson talks a lot about words, matter communication, and I agree with that entirely. You know, you've probably seen it a lot in private practice where patients come in and they look petrified because they've been told they've got osteoarthritis, and nothing can be done for them. But it's making them understand, you know, making them sort of basically committed What their perception is of osteoarthritis, and to show them some some statistics and some information and actually explain to them, you know, it's not the end of the world, things can can be done to make you move better and manage yourself better. The other thing that that's what I would say is in terms of compliance, one of the things I'm very big on and evaluate is taking measurements, not so much range of movement measurements, because in practice, you get paid up with degrees and things like that. But I use a lot of strength measurements aren't held dynamometry, certainly around the hip, pelvic and growing complex, I've created almost a way to profile my patients per level of activity, while other sports, whether they're amateur, whether they're inactive, and I know what, what I would expect them to hit in terms of numbers. And that's quite a nice way to to, to see them through a management plan. They do things to help themselves. And we can we can control that situation? Well,

Steven Bruce 26:02

presumably, it's a great way of feeding back to them whether they are back to their normal performance standard and preventing them from trying to go too early too soon, in their rehab.

Carl Todd 26:14

Absolutely. And, you know, a real simple way that I often use in clinic is when I set them an exercise plan that they run through, and I say, well, so I'd have zero to 10, how intense was that programme. And if they tell me it was six, I goes, Okay, so for the next number of weeks, before I see you, again,

I'd like you to to mark every programme in terms of intensity, okay, your perceived exertion during that exercise, but I also want you to record the time it took you to do it. And then what we do is we multiply the time by the rate of perceived exertion. And that gives us a measure of load for that patient. So I know when they start doing too much, and then they get sore, then well, there's a reason for some black and white because you show me how much more you do. And it's not the case of the treatment plans field, or the exercises I've worked is because not only you're doing my exercise programme, but you're walking around the shops that you're taking your your grandchildren out for a walk, or you're, you know, so you're walking the dog, so all these things are really, really important in terms of compliance to any particular type of management plan.

Steven Bruce 27:21

So talk to me a bit more, if you will, about connecting the hips of the spelling them.

Carl Todd 27:26

Well, I many years ago, we would see a lot of players who would complain of groin pain, and this was at the time before femoral acetabular impingement can really trendy people were classes, you get stiff hips, and and we would tend to mobilise our hips. And, and I would tend to see this pattern where were some of these individuals would would not only have groin pain, but they would also start to develop low back pain. And, and you sort of think to yourself, well, from a biomechanical perspective, I used to be an engineer many, many years ago, when the forces and from a biomechanical perspective, if one area doesn't move very well, somewhere, very has to move more. And so I kind of get that. And I understand that. So we chase the back pain, but really, the real cause is a hidden problem. And I started to sort of to get involved in testing, there's the science behind it. And we looked at that, a bunch of skiers who had increased hip joint morphological changes. And we looked at a bunch of non athletes, and we compared those with MRIs of their hips, and we stand in radial, logical and clinical evaluation of the spine, hi, things would change. And believe it or not, we didn't find an awful lot of difference. But the compact that we had at the time were between 17 and 18 years of age. I suspect if we go back into that cohort, 10 years later, it'll be very different. And I think what's important to understand in terms of the Natalie is, is young adolescents generally can cope with a lot of load through their body, there comes a point everyone has a tipping point where they break, of course, but they can suck up a lot of exercise from a robust, they're flexible, they're mobile, they don't want to complain, because they've got a whole career ahead of them. And from an athletic perspective, they want to be available. Now, when I sort of got back and I sort of grew into it a little bit more in detail, we know that there's many different morphological characteristics of hip joints from coxa Profunder, where we have a very deep socket to someone who's got a very dysplastic hip, and they're extremely mobile. And all of these cause a certain amount of compensations and overcompensation. So this is the spinal pelvic complex. So the underlying theme that I come back with after five years of research and looking at this was the pelvis was essentially really important. And, and believe it or not as an osteopath, we spent a lot of time looking at your sacral sacral iliac movement, and it was almost something of a sort of pushed away and disappeared and pushed to the side it was, as I got into my sort of treatment plan over the years, and I find myself coming back to understand it a little bit better not. And fundamentally, it comes down to three parameters. And if we look at a morphological parameter on the pelvis, we have what's called an angle of pelvic incidence. And that's an angle basically is taken from the femoral head drawn at a perpendicular line onto the sacral base. And you and me are both sitting here, Steven, so we've walked in, we've sat down to do that, we, we, we've had the flexor lease flex, or hips, flex or spine, or a pelvic incidence angle has remained constant. Okay, when we reach skeletal maturity, that doesn't change, what does change is our pelvic tilt, go slow find those, those are more functional

parameters. So what I found over the years with working and researching those, those particularly stiff, restricted hips, because they're perhaps coccyx, profounder, or osteoarthritis, okay, they lack the ability to active posterior pelvic tilt. And if we can encourage patients and teach them and educate them through hands on manipulation to to exercise bias, then we give them a coping mechanism to reduce some of that hip pain. Likewise, if we go the other way, and we think of IQ dysplastic patients, they are more comfortable in a more anterior pelvic tilt position, because essentially, that asset tabular over coverage is given the most ability around that hip. So some of the exercises and the treatment, we've applied to a dancer, for example, who's highly mobile, compared to to a runner who who just lose predominantly in a sagittal plane? Okay, we would find, you'd find at least a slightly different approach, a slightly different tailored approach to treatment and managing has talked a lot about having sort of,

Steven Bruce 32:10

no, no, not at all. I did have a question come in which it relates back to your exercise your testing regime came from Anna. And it's something I imagine that lots of people are worried about or concerned about. She's saying that she's not sure her patients would do all that homework that you described, because our own experience is that people really don't want to do the exercises at all, or they do them for a few weeks, and then stop. So if you want to know how you encourage the normal person, rather than the elite international athlete, to do the exercises and to record all the differences.

Carl Todd 32:41

Yes. Well, I think other to be honest, the first thing I'd say to you is the patient's parents evening, so they've committed to that have a vested interest in their in their outcome. And if you can demonstrate a reasonable hypothesis that you think weakness, or lack of flexibility, or lack of mobility is called as a major causation to the symptoms, and you can change her symptoms in that first session, that they're with you by some hands on treatment and with appropriate aftercare, then I think you have a buy in straightaway. And from my own personal perspective, I think sometimes it's easier with private patients to get them to comply to exercise. So that is for professional athletes. Okay, because sometimes they're quite lazy.

Steven Bruce 33:31

That's bit counterintuitive. Yeah. Maybe you could take us through some case history, in outline, just to give an example of your approach to a hip problem.

Carl Todd 33:46

Okay, so so, you know, normally, we have a system that most people probably haven't used clinical patients send a lot of information in, may have some letters from from, from from consultants that have referred, they've maybe they've had previous surgery, maybe the surgery hasn't worked. And they've asked for an opinion. patient comes in, I'll take a case history, just like any words, I would I would be thinking about various hypotheses in my head. For example, if it's an anterior hip pain that we're getting, is it because the pains more provocative and deep seated positions? Is it more provocative? When they're driving the car? Went from the right foot on the accelerator lifted up backwards and forwards? Is it more provocative if they walk up stairs and walk uphill?

Steven Bruce 34:32

So what are those? What are those? What are those criteria leading you to? Let's say it's car pressing the accelerator? What are you immediately thinking then?

Carl Todd 34:40

I'm thinking I'm thinking in my head. I'm thinking like a hip flexion issue. I'm thinking there's an underlying source tendinosis tendinopathy is a source but scientists, is that a result of the surgery where perhaps Perhaps I've had some calm debridement for the impingement, and what we're left with is a solar Standard, almost a sandpaper in itself against that, that roughened area. Okay, yes, it's maybe not rough, but it's an analogy I used to patients. And so so that's the type of thing that I would be thinking in my head. And I'd want to test that hypothesis. So so what you tend to find in individuals with that type of pathology across a hip pelvis and groyne, if you take away the ability for a tissue to function efficiently, then somewhere else has to draw more activity, more load that gets redistributed. So a classic example there, you would find, so for example, the obliques, the tensor fascia Lata and Lateral Quad, vastus lateralis will be really overactive. So they're trying to perform that hip flexion moment, okay in the at the expense of a weakened inflame source. So, so of course, we want to test our hypothesis. So we can we could do an Oberst test potential partial data, to test to see how stiff that is, we know then, in that position, that test positive that perhaps that individual may be also lacking lateral hip control. So they may have a loss of an arranged pasta yolk with meat activity in that position. So that goes tends to go hand in hand. We know from a range of movement capacity, that they love loss flexion, and they have lost internal rotation. Why not? Maybe a possible cause is, is think about the anatomical attachments or the tensor fascia Lata. If it's overactive, it's going to pull us more into anterior pelvic tilt. It's also an internal rotator. So it's not that the hip is lost internal rotation, it's essentially being hampered internal rotation because of an overactive muscle. So if we can take away some of that potential, and retrain the hip to move more appropriately, okay, then maybe that source constructor function a little bit more efficiently, how we can start to load that tendon appropriately. If we think as osteopath, higher up the kinetic chain, think about the thoracolumbar junction. Okay, of course, the innovation to the soloists we know this from L one, two L three. So anyway, run up Oracle lumbar junction, we're going to find a restriction. We will because if you think about that, and what I talked about before about the overactive obliques, think about anatomical attachments, we're going to get tender points trigger points, that's going to affect respiratory motion in terms of inhalation breathing. And that's going to affect how the the thoracic or lumbar region can can move in terms of rotation aspect.

Steven Bruce 37:32

Do you do work a lot? I do work a lot on trigger points. Cool.

Carl Todd 37:36

Yeah, I mean, I've come across lots of people say I don't believe in it. It doesn't they don't exist. I find I've not found any evidence to show that that's absolutely true. I think if you get a muscle that's fatigued, weak or inhibited, you're going to get trigger points or tender points. I think if you get as tight, short and restricted, you're probably going to get the same. I don't think it's so for me, yeah, the short answer is yes.

Steven Bruce 38:02

Well, the the fellow who, one of the two guys who ran the trigger point course, the dry needling course here recently, Professor Bob go, and he's a neurologist from Johns Hopkins. He's actually done some research fairly recently, which has, he says, pretty conclusively shown the existence of trigger points and the effect of getting rid of those trigger points. If I can dig it out, I'll share that with you. But he and Simeon between them, I mean, they're all over the effectiveness of needling for trigger points. It's just quite extraordinary.

Carl Todd 38:35

I use it myself, you know, so very often, I might need a lot of TFL. And I probably just wouldn't need a lot, probably maybe do some electroacupuncture. I find that really effective. And, you know, it's, it's nice and simple. And while that's working, I'm planning in my head. Okay, what else I'm going to treat on the spine, perhaps what I'm going to do in terms of neuromuscular activation for the appropriate muscles afterwards. So it's hard I sort of density into into that. What not treatment plan.

Steven Bruce 39:05

I'm sorry, I interrupted you there while you were in the middle of your examination evaluation process.

Carl Todd 39:11

Yeah, so So the simple thing there is if we can take away the restricted muscle, and we can make and inhibit muscle move better, then essentially, we've we've we can allow the service to function more efficiently. So that gives us an opportunity then to take a strength measurement. And what will you will find in an example like that, when it comes to taking strength measurements, of course we have peak output. Okay, that's fine. That's a lovely little number. But what we also have is, is high quickly the rate of force development, how quickly can they get up there? And our high criticality fatigue and over what I tend to do with a lot of my dynamometer tests, I do it over five seconds. And, and I'll set it basically look, if you feel pain, just stop if you cramp just if you cramp up just stop and invariably what happens is a clump of potential partial After, because initially, they can generate force because I've done some treatment, the muscle feels better for for working, but the more force it generate, and the longer it goes on, then the muscle fatigues. And of course, they have to gain that activity from somewhere else. And that's where the chrome comes from.

Steven Bruce 40:17

Our accessible is this form of evaluation in I'm gonna say a normal clinic. I mean, you're, you're accustomed to working at a different level of athletic prowess to most people. But first of all, I'm going to compete can people buy a suitable dynamometer without expending too much money? And would they know how to use it the way you do without too much training?

Carl Todd 40:37

You can buy nowadays, my first one I ever bought was about 600 pounds. Nowadays, I bought one recently for about two, three to 300 pounds, you can go on YouTube, and they send the videos. It's a nice, simple tool. You know what it does? For me, it brings us the opera for you into a more object that helps with our objective testing. Where we know in the past, sometimes we're criticised because we're too passive. And, but so that brings things a little bit more objective. And, and the other thing I'd say is, is, you know, in terms of using it, it's very straightforward. I mentioned it in the book, I'm going to teach a course of Norway this weekend, I'm going to take one with me are going to show the students how to do it. And when We will, will feel presented the same sort of type, of course that I would do in the UK in June as well, that would be a similar thing.

Steven Bruce 41:30

Right. Okay. And what about you, you mentioned oba's test, but have you found tests which are reliable and effective in evaluating the spinal pelvic hip complex?

Carl Todd 41:43

Yeah, so Okay, so the most important thing is, there's no one test, it sounds like we need a battery of tests. So so what I didn't mention at the start, if I looked at that individual standing in front of me and I put them into a single leg stance, a small leap and into a functional position, they may not be able to tolerate that position. Okay, what are the knee drops into valgus because of lack of force closure through the pelvis because of luteal insufficiency. When that happens, I can pretty much guarantee that they're going to test positive with some adaptive oboes or adaptive overstaffed are probably gonna have some trigger points on that. They're active straight leg rates will on the symptomatic side, or laboured or be even be a little bit weaker Stephen compared to the the, the good side, okay, that's an example there of a longer lever activity generating more stress through that anterior hip complex. In the long term, worse, what I might also find is, is as a result of this being a long term grumbling thing, then I've lost active and passive hip extension. So when we put them in the sideline, and they lock up, then that pelvis by holding on to the bottom leg, I know that I can get hardly any hip extension, because of the stiffness of the anterior chain, not in soloists. And this is a mistake people make, they think this is stiff, I need to release this tendon and I put my fingers into it really deep and trigger pointed and manipulate it and stretch it off the end of the bed. No, it's not the sorts of sources the weak link, the stiff, stiffer tissues, in my opinion, the tensor fascia Lata, the Lateral Quad, rectus, femoris, maybe even some of the higher doctors like practically so brevis those need to be need to be opened up a little bit. Okay to give us more more freedom of movement. Right.

Steven Bruce 43:36

Another question I was going to ask you, you said earlier on that you tend not to do much measurement of degrees of range of motion and so on. Have you come across the sort of equipment that John Graham, a physiotherapist demonstrated on the show here several years ago, simple devices which vary subjectively measure a degree of rotation or movement of a limb. You could be you could put them on the head and measure cervical rotation, you could put them on a measure. And I thought that's a very nice subjective way of showing, actually, it's not just my opinion, or an objective way. It's not just my opinion that I made a difference. I can show it now.

Carl Todd 44:12

Yeah, absolutely. Okay, I guess I the answer to that is I couldn't do it. Because I have got the machine I've got to the will also also measure that. Maybe you might call me lazy, but I just feel there's more value in the measurements of my my strength testing. I think for me, there's more value in those credit for for for a better outcome than range of movement. And that's, that's it, but there's absolutely nothing wrong with it. You know, if you wanted to measure someone's straight leg raise, perfect, you know, it gives you before and after. There's nothing wrong with Thomas's test, you know, nope. You can even hold it across a spine and look at rotation to give you okay, but if you think about testing, something like that before you treat, and if you think more like a functional person have to come back to that right hip. If that right hip is a relative internal rotation, because it's so awesome flamed and tensor fascia Lata is overactive, and the glutes are, are a bit inhibited, that rotation is going to be restricted anyway, because the trunk rotation or thoracolumbar rotation is going to be reduced, rotating around that set it. And there's lots of studies have been shown that the Charismatics of spinal movement changes with independence of hip and groyne pain. So so that that makes sense.

Steven Bruce 45:33

Okay. I've got a fairly long question here. And I'm not sure it's one that lends itself to our discussion today. It's coming from I'm told this is Hg, but I'm pretty confident this is Hector. I'm sure I'll get

corrected if I'm wrong. And I'm gonna have to read it word for word because it's quite lengthy. He says bone hydration can dynamically changed due to healthy ageing, disease and treatment. Rachel case Cernovich bone reports volume 16, in June 2022, but is a number that his question is seems is if water is 25% of bone mass, and nearly 99% of the bone by a number? Not sure quite what's meant by that? Why do we not look at the dielectric influence of water in bone? A natural way to make dielectric water become more mobile is exercise speed up the fluid movement of the body? Another way to influence dielectric bone water is treat the subject in water. Does that make any sense to you? Is that something you've ever looked at? Cop?

Carl Todd 46:35

No. I understand what hackers are trying to say they're absolutely in terms of hydration and bone hydration and stuff like that. You could even take it further in terms of cartilage, disco, hydration, and stuff like that, of course. But it's not something. The only time I've ever managed anyone on water is when they've had an acute low back pain. And I've had to take him into a pool and do some hydrotherapy after I've been treated to get them moving. So I don't know much about that my brain

Steven Bruce 47:03

and one imagines you must have access to quite a lot of machinery like that, or aids like that. In elite level football. Do you use anti gravity pools for rehab and things like that?

Carl Todd 47:14

Yeah, absolutely. But you know what, Steven, this is really important. I think, I think sometimes in the modern world, modern day people get obsessed with a 2% things that make a difference. Yeah, they want to, you know, they wanted to have these gadgets and do all these things. And, and whilst they have some value, I think the real value is doing the 98% property. And I think you can't dismiss that. And you know, when I, I see this, and I've got lots of experience of seeing this over the years, so it's a thing, it's really important to the simple things really, really well.

Steven Bruce 47:45

Yeah, yeah. And I think that's an old football adage, isn't it? Think simple things done? Well. Like I remember the rest of it is when you probably

Carl Todd 47:58

military, I think it was kiss was a mnemonic for us to use keep.

Steven Bruce 48:04

Keep it simple, stupid. Somebody has asked us Lateral Quad. Does that mean the same as Vastus? lateralis?

Carl Todd 48:10

Yeah, I Sorry, I was a bit maybe flippant with that term. But yes, vastus lateralis, you tend to find that that that is his top tends to be a little bit more act overactive has has more trigger points tender points through like it? Why would that be more than vastus medialis? I think it probably has to do with a more madonn of the mechanism of the hip mechanics. Anatomically, because where it's positioned next to the closest to the tensor fascia Lata and the iliotibial. tract. Yeah.

Steven Bruce 48:42

I was looking through some of your other slides earlier. And you've talked about I think one of them is about the influence of movement on what we do. Can you elaborate on that prep?

Carl Todd 48:53

Yeah, you know, it's so so in terms of basically, let's let's think about the hip, for example. I saw I mentioned it briefly a second ago. We know that, that when people walk when people run, and when people turn and change direction, they kick a ball, they have altered hip mechanics, as a result of pain. Excuse me. Let's think about not an athlete, but let's think about someone comes into into clinic and private practice. Okay, who maybe a lady who's been recently getting an early years, she's she's got married children, become a little bit deconditioned and then try to start running again, to get fit. And of course, I think that's probably one of the the biggest, or biggest Nanos for me in terms of, of, of the development of say, lateral temporal lateral gluteal tendon pain because they are deconditioned and they're trying to do a really high load dynamic activity. There's nothing wrong with doing a high low dynamic activity, but just prepare yourself first. So perhaps integrate into a Pilates class get a little bit of inherent stability and, and things like that to basically to before you start to do that activity, because what you tend to find is, it's like showing several years ago, I sat and listened to a talk to me about the body takes a path of least resistance. And I just had someone this morning, a new patient who's a golfer, is a very fit man for his age. He come in, he has his pain in his back. And it's quite apparent these guys degeneration in bilateral hips, so of course, he's got a flexion flexion issue, okay, he's got some war on terror and lower back, he's got disc degeneration, because it used to be our chief instructor many years ago. And so with all the jumps in the impact, that's probably had some impact on it, he's had a scan on, but classically, okay, when you look at spinal movements, okay, he's going to restricted inflection, you're going to get extension engine, okay, whether increased translation into extension, sideband. And rotation is going to be limited on of course, when you look at the movement of hip flexion and secret, as he lifts his hip into flexion. It's limited to a certain point, but it moves externally into lateral rotation, or external rotation. That's the body taking the path of least resistance. There's obviously some degenerative changes in that asset adenoma femoral head. So when it comes to a certain point, it abuts against the the structure, and it has to find a way to get one back. And that's exactly the same with patients with low back SHA pain, because overstretching in those scenarios.

Steven Bruce 51:39

Yeah, okay. Penny is brought up a point, it kind of relates a little bit back to what we're saying earlier on. But we're often sort of trying to address this on this show, which is that so many patients want something done to them, they don't want to be sent away and made to do it to themselves. They either they're too lazy to do that, or they don't find the time when they're at a clinic or whatever, or multitude of reasons why they don't want to do it. How do you address that with yours? What's the what's your solution to this?

Carl Todd 52:08

Penny is really simple. Give them a little bit of what they want, but make sure you give them what they need. Okay, so so, you know, this, I, there's very few cases where I don't see patients where I don't put my hands on them. But what I would say is the length of time I spend putting my hands on change. And I look at the patient say, Well, if I can do that quickly, why can we even take this as well, you know, so give them a little bit of what they want. But get give them what they need. Yeah,

Steven Bruce 52:40

right. Yeah. Okay. And I guess also, other people have mentioned that they know if you can show them the evidence of what's happened to encourage them giving them positive feedback, it might just encourage them to do it a bit more, a bit more and a bit better.

Carl Todd 52:56

Absolutely. Yeah. Absolutely. And that's a compliance. I sit by him. Yeah, a lot of my patients that I see, I don't see, I tend to see like, every three, four weeks apart, and there's a reason for that, because most of them come and they have motor control deficits, which is the first stage well, it's not the first mobility as a first stage. But But motor control deficits are what is maybe what's driving a lot of symptomology. And I know that they're not going to benefit from coming back in next week to address those motor deficits in the two or three weeks the next sustainable change. And that's how I tend to work with my patients. So I put the onus on them, and I do know, maybe 20 years ago, I wouldn't have looked the patient or the eye and said well, you know if you're going to do this, do it properly. Otherwise you're wasting your time. But But now I'd maybe with time and and having seen hundreds of patients overnight my lifespan is I feel more competent to do that. And it takes more or less on them to actually don't make an effort.

Steven Bruce 53:57

Yeah. Well, Stacey's agreeing with Penny as well saying that, yeah, definitely. Her patients are lazy too. And we actually we kind of looked at this with Serena Williams, I think her surname was who came she's coming in in four weeks time to talk about imposter syndrome. But at the time, she was talking about how you how you change beliefs, how you influence people to do what they're supposed to do. And it is hard, but to some extent, patients have to take charge of their own destinies, don't they? I've been asked about your specifics of treatments. I don't know who asked this one. But someone says how do you treat Solaris or do you not treat it at all?

Carl Todd 54:36

I depends what it is, you know, is it a tendinopathy? Is it is it a bursitis? Is it a shortened muscle? I've only probably come across in sport and 18 years of sport, one MRI scan showing a source tear, okay, so it's quite a strong muscle. But, so, in terms of basically sickly, an infamous inflammatory response. If it's reactive, you've got to calm it down. And so, come back to what I said a minute ago, Steven is think about offloading as much of the tension around it to a light room to actually move and relax. If it's a technicality, they respond well to isometric loading. Okay? If it's a shortened muscle, of course, you might have to release it and stretch it. Okay, I get that. If it's if it's a tendinopathy, that's improving, and we were improving in terms of isometrics, then what we might have to do is give them some control free range, so take them into mid range into a longer lever, and load that handed in different positions. And that might be non functional or functional based exercises. Yeah, that makes sense.

Steven Bruce 55:49

Yeah, I think so. But you haven't mentioned mentioned digging your fingers into it to try and inhibit the muscle in order to lengthen it. Is that something you avoid?

Carl Todd 55:58

Yeah, only if there has to be a rationale for it. So if it's if it's a short muscle, I have a positive Thomas test, Bobby got extension with a back pain. And I think you know what, I think this is these tight hip flexors are provoking some of this extension with a back pain, then we'll do that, of course.

Steven Bruce 56:16

We've had a question from George asking how you treat, do you have any specific exercises or treatment protocols for SRJ? instability?

Carl Todd 56:25

Notes, so if you think about it logically, okay, what we want to try and achieve is frontal plane control. Let's keep it as simple as that initially. Of course, we want sagittal and transverse plane, but let's keep the frontal plane. So what we want is basically a good understanding of having the ability to generate enough effort. Okay, once we've offloaded the structures taken a biomechanical strain off that SRJ by manipulating the thorax, lumbar spine, now be working around the hip, what we need to create as frontal plane stability, so adapters adapters, we want the abductor stronger, probably about by 20%, I think 18 to 22% is the term they give. Okay, so we want them stronger. But we also want to have a similar sort of situation with hip flexion hip extension, and that sagittal plane as well. So for me, it's not rocket science, George. Okay, remove the biomechanical strain on the SAPA. Remember, most si j's are painful because he moved too much. So my favourite is don't manipulate away at it, just to get a crack out of it. But for the hell of it, reduce a biomechanical strain on it. Okay, that might be from spinal manipulation might be from manipulating symphysis. pubis might be from working specifically in the musculature around the pelvis and hips as well. Okay, and then stabilise the area. One of the things I sometimes do is I talk a lot in my book about symptom modification techniques. And this is a thing that I taken from Jeremy Lewis for assessing shoulders. And a really simple thing to test for SHA instability is to apply pelvic reinforcement, and ask them to do a straight leg raise. And if it makes it better, then you know, you need to generate more activity in those muscles. Or, you know, you need to maybe try and provide a strategy, like an SI Jay belt, or some kinesio taping or something like that, to try and give them a Get Out of Jail Free card to allow them to get over that stage where they start to get a little bit stronger. So that's just an example.

Steven Bruce 58:25

Yeah. Okay. Laura has said that she often gives gluteus medius exercises to stabilise wobbly patients. And her specific question is, do you use climb exercises?

Carl Todd 58:38

No, I don't. And I always tell my patients not to do them. You know, if you think about the studies of shoulder EMG, and stuff like that, that, that there's more activity in the tensor fascia Lata than the will and the posterior glute. So for me, I need to do exercise more I like bias. So So classically, I might have my patient do those exercises in the same position as a clown, but they're a little bit more extension and they might be pushing their, their, their leg back against a wall or a Swiss ball or against my hands as a form of resistance.

Steven Bruce 59:15

Okay, intriguing that you've mentioned tensor fascia Anantha. So often tensor fascia Lata so often, I for years, I kind of dismissed it as being a muscle that it hurts a lot if you push it if you press it, but I didn't think it had a huge significance in pelvic biomechanics. Clearly, you think it's probably more significant than than I imagined?

Carl Todd 59:37

Yeah, for me, yes, I think, I guess when you're working in sport, and you're in a situation where you're under pressure and stress, and someone comes in, and there's a game the next day and they've got this problem, and you have to try and find a way for them to move better reduce your

pain, so that they can actually play 90 minutes. You know, what are the things I sorted out? I, I, I always thought about it. So I locate How can we do this as quickly and efficiently as possible. And I remember many, many years ago going to listen to the late Barbara Janda talk about patterns of dysfunction that he talked about as postural and phasic muscles. And that's what really stuck in my head. This was back in the 90s. When I when I heard him speaking, and this has always stuck in my head. And for me, specifically around the hip, I think it's a really important muscle. It's my goal to eat muscle in terms of release.

Steven Bruce 1:00:31

Okay, we're, we're really we're almost out of time here, Carl. It's clearly going down very well, this discussion. And I'm really sorry, we haven't had you in the studio because we could have done a lot more demonstration and practical illustration of what you're doing. But your fan club is definitely online. Somebody says he recognises you from a fitness course in approximately 1996. Where you want to have Premier League or a premier fitness course renovate them, do you think I used to teach them? Right? Okay. This is Trevor, who's asking. So I wouldn't expect you to remember all your all your students on those courses. But, yeah, and other comments that are coming in? Alex saying that going back to exercises patients find the practitioners who suit them someone's exercises, and some don't, I suppose that's true. And Peter's saying that, you know, it's essential to provide a clear rationale for if patients are going to comply with exercise regimes. But we've had, you know, well over 350 people watching this afternoon, so, yeah, I'm, I'm hoping that I'll encourage you to come back and maybe come here in the studio, so we can do something a bit more profound.

Carl Todd 1:01:34

Yeah, definitely. You know, I'm teaching a course at the UCL in June, maybe the next course I teach will be in your studio as well. So well, yeah.

Steven Bruce 1:01:42

And I would love to advertise your course at UCL except for like you said, Toby, there's only two places left on it now. So quite possibly, you don't need the marketing.