

Connecting the Hip to the Spine - Ref 298

with Carl Todd

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TRANSCRIPT

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Steven Bruce

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 Spino-Pelvic-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, Carl. I am curious to know how much of your time is taken up with the Football Association.

Carl Todd

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 that year and a normal year without any tournaments probably about 50 days.

Steven Bruce

So you're dealing with the national team?

Carl Todd

That's correct. Yeah. So somebody from Northern Ireland dealing with the England national team.

Steven Bruce

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 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

Absolutely, you know, I spent 18 years with the national team, I spent 15 years at Chelsea Football Club, and I've worked in basketball and athletics as well. So my PhD was in spears. So across multi sports, I think that's what probably got me interested so much in the spino-pelvic-hip complex as as a unit and how I can make myself a better practitioner, by challenging the science with the PhD and now how we can help other 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 ideas.

Steven Bruce

Well, I think we've got a hell of a lot of osteopaths and chiropractors watching at the moment because I know that they were there was busy 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 is it that you bring that's new to the party?

Carl Todd

I think essentially there's three things that I would kind of highlight with every patient, whether they come into clinic or whether it's a sports person, and you have obviously the presenting complaint or case history, but if you bring it right down to the basic level, most of the people that we see with, say, for example, hip, pelvic issues, certainly from a sports perspective, they 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 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 think about is: 1. their anatomy, 2. how they move, and 3. how much load in terms of frequency, volume, intensity of activity. Now, we have to sort of define that really. That could be an elderly person who has to get out of a chair and walk around Waitrose to do shopping at the end of the day, that's a load. Or it could be a sports person who's got to run five kilometres every day on a sports pitch and lift weights in the afternoon and things like that. So I think those are pretty fundamental things. And it's always easy to blame it on the load, or you've done too much, you need to do less. Well, actually, sometimes doing less is guite detrimental to the health of an individual as well. In clinic today, I've been 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 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 it's just gonna get particular work. So it's understanding that level of activity.

Steven Bruce

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 all the principles in your book here would apply to pretty much any member of the population, wouldn't they? What I was impressed by, well, 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 -ates, isn't it? You're probably going to tell us about those?

Carl Todd

Yeah, absolutely. So I used to teach, before COVID. I used it to do face to face courses. And students used to say to me, do you know any good books? And I'd say, Well, I know lots of books. But it made me think, well, maybe I should do something. And COVID 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 I came up with this concept of my five -ates which is evaluate, educate, manipulate, activate, integrate. And it's not my concept, that's a business model and anyone can use it. But that sits perfect with the way I work. And I probably spend most of my time talking to patients and evaluating, educating 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, come back to there about anatomy, movement, and load, the same movement pattern dysfunctions you see in elderly patients that you can often see in elite athletes. The subtle difference is perhaps in the elite athletes load

has increased significantly, whereas in the elderly patients the anatomy has degenerated a little bit. And of course, something creates the straw that breaks the camel's back, which causes pain, dysfunction, and then asking to seek someone like ourselves.

Steven Bruce

Does that mean that you have honed your communication skills to a high level, because you said you might do less treatment than is expected and a lot more explaining? And presumably there are a lot of processes involved in that, there's 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

Absolutely. One of our colleagues, you probably know Oliver Thompson, he talks a lot about words matter, communication, and I agree with that entirely. 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 communicate what their perception is of osteoarthritis, and to show them some statistics, some information and actually explain to them, it's not the end of the world, things can be done to make you move better and manage yourself better. The other thing that I would say is in terms of compliance, one of the things I'm very big on in evaluate is taking measurements, not so much range of movement measurements, because in practice, you get tied up with degrees and things like that. But I use a lot of strength measurements, handheld dynamometry, certainly around the hip, pelvic and groin complex. I've created almost a way to profile my patients per level of activity, whether they're sports, whether they're amateur, whether they're inactive, and I know what I would expect them to hit in terms of numbers. And that's quite a nice way to see them through a management plan. While they do things to help themselves. And we can control that situation very well.

Steven Bruce

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

Absolutely. And 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, out of zero to 10, how intense was that programme? And if they tell me it was six, I go, 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 us in black and white because you show me how much more you do. And it's not the case of the treatment plan's failed, or the exercises aren't working, it's because not only are you doing my exercise programme, but you're walking around the shops better, you're taking your grandchildren out for a walk, or 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

So talk to me a bit more, if you will, about connecting the hip to the spine then.

Carl Todd

Well, many years ago, we would see a lot of players who would complain of groin pain, and this was at the time before femoroacetabular impingement became really trendy. People were classed as "you get stiff hips", and we would teach them to mobilise their hips. And I would tend to see this pattern where some of these individuals would not only have groin pain, but they would also start to develop low back pain. And you sort of think to yourself, well, from a biomechanical perspective, I used to be an engineer many, many years ago in the forces, and from a biomechanical perspective, if one area doesn't move very well, another area 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 hip problem. And I started to get involved in testing 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 did standing radialogical and clinical evaluation of the spine, so how things would change. And believe it or not, we didn't find an awful lot of difference. But the cohort 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 anatomy is young adolescents generally can cope with a lot of load through their body, everyone has a tipping point where they break, of course, but they can suck up a lot of exercise, they're robust, they're flexible, they're mobile, they don't want to complain, because they've got their whole career ahead of them and from an athletic perspective, they want to be available. Now, when I go back and I go into it in a little bit more in detail, we know that there's many different morphological characteristics of hip joints from coxa profunda, 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 in the spino-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 believe it or not as an osteopath, we spent a lot of time looking at iliosacral or sacroiliac movement, and it was almost something that I sort of pushed away and pushed to the side as I got into my 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 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've had the flex our knees, flex our hips, flex our spine, but our pelvic incidence angle has remained constant. When we reach skeletal maturity, that doesn't change. What does change is our pelvic tilt, sacral slope angles. Those are more functional parameters. So what I found over the years with working and research is, those particularly stiff, restricted hips, because they're perhaps coxa profunda, or osteoarthritis, they lack the ability to active posteriorly pelvic tilt. And if we can encourage patients and teach them and educate them through hands on manipulation, through 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 our hip dysplastic patients, they are more comfortable in a more anterior pelvic tilt position, because essentially, that acetabular overcoverage is giving them more stability around that hip. So some of the exercises and the treatment, we would apply to a dancer, for example, who's highly mobile, compared to to a runner, who just moves predominantly in a sagittal plane, you'd find at least a slightly different approach, a slightly different tailored approach to treatment and managing. I've talked a lot there, I hope I haven't talked on too long.

Steven Bruce

No, no, not at all. I did have a question come in which relates back to your exercise, your testing regime. It 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 her 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 she wants 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

Yes. Well, I think, Anna, to be honest, the first thing I'd say to you is the patient's paying to see me, so they've committed to that, they've a vested interest in their outcome. And if you can demonstrate a reasonable hypothesis that you think weakness, or lack of flexibility, or lack of mobility is a major causation to the symptoms, and you can change their 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 than it is for professional athletes, because sometimes they're quite lazy.

Steven Bruce

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

Carl Todd

Okay, so normally, we have a system that most people probably have, clinical patients send a lot of information in, might have some letters from consultants that have referred, 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 anyone would, I would be thinking about various hypotheses in my head. For example, if it's an anterior hip pain that they're getting, is it because the pain's more provocative in deep seated positions? Is it more provocative when they're driving their car? Putting the right foot on the accelerator lifting it backwards and forwards? Is it more provocative if they walk up stairs or walk uphill?

Steven Bruce

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

Carl Todd

I'm thinking like a hip flexion issue. I'm thinking there's an underlying source, tendinosis, tendinopathy. Is there a bursitis? Is that a result of the surgery, where perhaps they've had some cam debridement for the impingement, and what we're left with is a solus tendon almost a sandpapering itself against that roughened area. Maybe not rough, but it's an analogy I used to patients. And so that's the type of thing that I would be thinking in my head. And I'd want to test that hypothesis. So what you tend to find in individuals with that type of pathology across the hip, pelvis and groin, 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, say for example, the obliques, the tensor fascia latae and lateral quad, vastus lateralis will be really overactive. So they're trying to perform that hip flexion movement at the expense of a weakened inflamed psoas. So of course, we want to test our hypothesis. So we could do an Ober's test for tensor fascia latae to test and see how stiff that is. We know then, in that position, if that tests positive, that perhaps that individual may be also lacking lateral hip control. So they may have a loss of end of range posterior iliac read activity in that position. So that goes tends to go hand in hand. We know from a range of movement capacity, that they'll have lost flexion, and they'll have lost internal rotation. Why that may be a possible cause is, think about the anatomical attachments of the tensor fascia latae. 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 has lost internal rotation, it's essentially being held at internal rotation because of an overactive muscle. So if we can take away some of that tension, and retrain the hip to move more appropriately, then maybe that psoas can function a little bit more efficiently, and we can start to load that tendon appropriately. If we think as osteopaths higher up the kinetic chain, think about the thoracolumbar junction. Okay, of course, the innervations to the psoas we know this from L1 to L3. So anywhere around that thoracolumbar junction, we're going to find a restriction. We will because if you think about what I talked about before about the overactive obligues, think about their 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 thoracolumbar region can move in terms of rotation aspect.

Steven Bruce

Do you work a lot on trigger points, Carl?

Carl Todd

Yeah, I mean, I've come across lots of people say I don't believe in it, they don't exist. 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 a muscle that's tight, short and restricted, you're probably going to get the same. So for me, yeah, the short answer is yes.

Steven Bruce

Well, the fellow who, one of the two guys who ran the trigger point course, the dry needling course here recently, Professor Bob Gerwin, 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

I use it myself. Very often I might needle TFL and I probably just wouldn't needle, I'd probably maybe do some electroacupuncture. I find that really effective. And 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 how I condense it into that treatment plan.

Steven Bruce

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

Carl Todd

Yeah, so the simple thing there is if we can take away the restricted muscle and we can make an inhibited muscle move better, then essentially, we can allow the psoas to function more efficiently. So that gives us an opportunity then to take a strength measurement. And what 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 the rate of force development, how quickly can they get up there? Or how quickly can they fatigue? And what I tend to do with a lot of my dynamometer tests, I do it over five seconds. And, and I'll say to the patient, look, if you feel pain, just stop, if you cramp up just stop. And invariably what happens is they cramp in the tensor fascia latae, because initially they can generate force, because I've done some treatment, the muscle feels better for for working, but the more force they 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 cramp comes from.

Steven Bruce

How accessible is this form of evaluation in, I'm gonna say a normal clinic? I mean, you're accustomed to working at a different level of athletic prowess to most people. But first of all, 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

My first one I ever bought was about £600. Nowadays, I bought one recently for about £200-300. You can go on YouTube, and they send videos. It's a nice, simple tool. What it does for me, it brings osteopathy into a more objective, it helps with our objective testing. Where we know in the past, sometimes we're criticised because we're too passive, but so that brings things a little bit more objective. And the other thing I'd say is, in terms of using it, it's very straightforward. I mentioned it in the book, I'm going to teach a course in Norway this weekend, I'm going to take one with me and I'm going to show the students how to do it. And will feel present the same type of course that I would do in the UK in June as well, that would be a similar thing.

Steven Bruce

And what about, you mentioned Ober's test, but have you found tests which are reliable and effective in evaluating the spino-pelvic-hip complex?

Carl Todd

Yeah, so okay, so the most important thing is, there's no one test that stands out, we need a battery of tests. 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 knee bend, into a functional position, they may not be able to tolerate that position. Then their knee drops into valgus because of lack of force closure through the pelvis because of gluteal insufficiency. When that happens, I can pretty much guarantee that they're going to test positive with some Ober's or adapted Ober's test. They're probably gonna have some trigger points on that tensor fascia latae. They're active straight leg raise will, on the symptomatic side, be more

laboured or even be a little bit weaker, Steven, compared to the good side. That's an example there of a longer lever activity generating more stress through that anterior hip complex. What I might also find is as a result of this being a long-term grumbling thing, they'll have lost active and passive hip extension. So when we put them into side lying and they lock up their pelvis by holding on to the bottom leg, I know that I can get hardly any hip extension, because of the stiffness in the anterior chain. Not in psoas. 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 point it and manipulate it and stretch it off the end of the bed. No, it's not the psoas. The psoas is a weak link. The stiffer tissues, in my opinion, are the tensor fascia latae, the lateral quad, rectus femoris, maybe even some of the high adductors like pectineus or brevis, those need to be opened up a little bit to give us more freedom of movement.

Steven Bruce

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 very subjectively measure a degree of rotation or movement of a limb. You could put them on the head and measure cervical rotation, you could put them on an arm and measure. And I thought that's a very nice objective way of showing, it's not just my opinion that I made a difference. I can show it now.

Carl Todd

Yeah, absolutely. Okay, I guess I the answer to that is I could do it, because the machine I've got will also measure that. Maybe you might call me lazy, but I just feel there's more value in the measurements of my strength testing. I think for me, there's more value in those for a better outcome than range of movement. And that's it, but there's absolutely nothing wrong with it. If you wanted to measure someone's straight leg raise, perfect. It gives you before and after, there's nothing wrong with that. Thomas's test, no problems. You can even hold it across the spine and look at rotation. But if you think about testing something like that before you treat, and if you think more like a functional perspective, come back to that right hip. If that right hip is in relative internal rotation, because the psoas is inflamed and tensor fascia latae is overactive, and the glutes are a bit inhibited, then rotation is going to be restricted anyway, because the trunk rotation or thoracolumbar rotation is going to be reduced rotating around that stiff hip. And there's lots of studies have been shown that the kinematics of spinal movement changes with the presence of hip and groin pain. So that makes sense.

Steven Bruce

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 K Surowiec Bone Reports, volume 16, in June 2022. His question it seems is, if water is 25% of bone mass, and nearly 99% of the bone by 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, Carl?

Carl Todd

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

Steven Bruce

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

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

Steven Bruce

Yeah, yeah. And I think that's an old football adage, isn't it? Simple things done well? I can't remember what the rest of it is.

Carl Todd

When I was in the military. KISS was a mnemonic we used to use.

Steven Bruce

Oh yes, Keep It Simple, Stupid. Somebody has asked, lateral quad, does that mean the same as vastus lateralis?

Carl Todd

Yeah. Sorry, I was a bit maybe flippant with that term, but yes, vastus lateralis. You tend to find that that tends to be a little bit more overactive, has more trigger points, tender points, throughout it. Why would that be more than vastus medialis? I think it probably has to do with the moment arm of the mechanism of the hip mechanics. Anatomically, because where it's positioned closest to the tensor fascia latae and the iliotibial tract.

Steven Bruce

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

Carl Todd

Yeah. So in terms of basically, let's think about the hip, for example. I mentioned it briefly a second ago. We know 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. Let's think about not an athlete, but let's think

about someone who comes into clinic and private practice. Maybe a lady who's been reasonably fit in her early years, she's got married, had children, become a little bit deconditioned, and then tried to start running again to get fit. And of course, I think that's probably one of the biggest no-nos for me in terms of the development of say, 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 load dynamic activity, but just prepare yourself first. So perhaps integrate into a Pilates class, get a little bit of inherent stability and things like that before you start to do that activity, because what you tend to find is, it's like Shirley Sahrmann, years ago I sat and listened to her 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, he's a very fit man for his age. He's come in, he has pain in his back and it's quite apparent he's got degeneration in bilateral hips. So of course, he's got a lumbar flexion issue, he's got some wear and tear in the lower back, he's got disc degeneration, because he used to be a parachute instructor many years ago and so with all the jumps and the impact, that's probably had some impact on it. But classically, when you look at spinal movements, he's going to be restricted in flexion, you're going to get extension hinging, okay, whether increased translation into extension, side bend and rotation is going to be limited. And of course, when you look at the movement of hip flexion in seated, 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 acetabulum or the 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 round that. And that's exactly the same with patients with low back SIJ pain, because they keep overstretching in those scenarios.

Steven Bruce

Penny's 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. Either they're too lazy to do that, or they don't find the time when they're out of clinic or a 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

Penny, it's really simple. Give them a little bit of what they want, but make sure you give them what they need. Listen, there's very few cases where I go to 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 to make change. And I look at the patient and say, well, if I can do that that quickly, why can't you maintain this as well? So give them a little bit of what they want, but give them what they need.

Steven Bruce

And I guess also, other people have mentioned that 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 and a bit better.

Carl Todd

Absolutely, yeah. And that's not compliance, that's a buy in. Yeah, a lot of my patients that I 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, mobility is the first stage, but motor control deficits is maybe what's driving a lot of their symptomology. And I know that they're not going to benefit from coming back in next week to address those motor deficits, they need two or three weeks to make a sustainable change. And that's how I tend to work with my patients. So I put the onus on them, and maybe 20 years ago, I wouldn't have looked the patient in the eye and said well, if you're going to do this, do it properly, otherwise you're wasting your time. But now maybe with time and having seen hundreds of patients over my lifespan, I feel more competent to do that. And it puts more onus on them to actually make an effort.

Steven Bruce

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 Simmons, she's coming in in four weeks' time to talk about imposter syndrome, but at the time she was talking about 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 psoas or do you not treat it at all?

Carl Todd

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

Steven Bruce

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

Carl Todd

Yeah, only if there has to be a rationale for it. So if it's if it's a shortened muscle, I have a positive Thomas test, I've probably got extension related back pain. And I think these tight hip flexors are provoking some of this extension related back pain, then I will do that, of course.

Steven Bruce

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

Carl Todd

Loads. So if you think about it logically, 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 it to the frontal plane. So what we want is basically a good understanding of having the ability to generate enough effort once we've offloaded the structures, taken a biomechanical strain off that SIJ, by maybe manipulating the thorax, lumbar spine, now be working around the hip, what we need to create is frontal plane stability. So abductors, adductors. We want the abductors stronger, probably about by 20%, I think 18-22% is the entirely good. Okay, so we want them stronger. But we also want to have a similar sort of situation with hip flexion, hip extension, in that sagittal plane as well. So for me, it's not rocket science, George. Okay, remove the biomechanical strain on the SIJ. Remember, most SIJ's are painful because they move too much. So don't manipulate away at it, just to get a crack out of it for the hell of it, reduce the 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. 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've taken from Jeremy Lewis for assessing shoulders. And a really simple thing to test for SIJ 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 SIJ 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

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

Carl Todd

No, I don't. And I always tell my patients not to do them. If you think about the studies have shown on EMG and stuff like that, that there's more activity in the tensor fascia latae than the posterior glute. So classically, I might have my patient do those exercises in the same position as a clam, but they're a little bit more in extension and they might be pushing their leg back against a wall or a Swiss ball or against my hands as a form of resistance.

Steven Bruce

Okay, intriguing that you've mentioned tensor fascia latae so often. For years, I kind of dismissed it as being a muscle that it hurts a lot 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 I imagined?

Carl Todd

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 their pain, so that they can actually play 90 minutes. One of the things I always thought about it is, okay, how can we do this as quickly and efficiently as possible? And I remember many, many years ago going to listen to the late Vladimir Janda talk about patterns of dysfunction and he talked about his 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 speak, 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 go to muscle in terms of release.

Steven Bruce

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. Were you on a Premier League or a premier fitness course round about then, do you think?

Carl Todd

I used to teach them.

Steven Bruce

Ah, right. This is Trevor, who's asking, so I wouldn't expect you to remember all your students on those courses. But other comments that are coming in, Alex saying that, going back to exercises, patients find the practitioners who suit them, some want exercises and some don't. I suppose that's true. And Peter's saying that, it's essential to provide a clear rationale for if patients are going to comply with exercise regimes. But we've had well over 350 people watching this afternoon, so I'm hoping that'll encourage you to come back and maybe come here in the studio, so we can do something a bit more profound.

Carl Todd

Yeah, definitely. I'm teaching a course at the UCO in June, maybe the next course I teach will be in your studio as well.

Steven Bruce

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

Carl Todd

Yeah, well, you can put in the market if you want, I don't mind.

Steven Bruce

I will, I'll send out the links to it this afternoon. But thank you very much, Carl, that's been great. And yeah, that's it for this lunchtime. I hope you enjoyed the show as much as I did. Don't forget next Tuesday's show at lunchtime. Again, this one replaces our normal case-based discussion, and it's all about getting hold of free money. Now, if you're planning to invest in yourself or your staff or in your clinic, this could be really invaluable for you. The money is definitely out there. You just have to know where to look and how to navigate the paperwork and that's exactly what we're going to be helping you do next Tuesday lunchtime. Continuing with the theme of hips, I've got Victoria Smith in the studio in a couple of weeks' time. So do get Wednesday, the 3rd of May in your diary. That's another evening show and Victoria is going to be covering a whole range of theory as well as demonstrating practical aspects of hip treatment. And I mentioned earlier on the needling course with Bob Gerwin and Simeon Niel-Asher, we're now down

to the last few places on that. There's a link to the booking form on the screen, you can still pay in four instalments if you want to. And I've raved about the quality of that course in the past. So I'm not going to do it again now, just bear in mind that the booking discount ends at the end of this month. Course dates are 19th to the 21st of May. So if you want to do that course then get your name down quick. Right. I think we're done enjoy the rest of your week. Have a great weekend and I'll see you soon. Bye for now.