

# Moving the Brain: Transcript

## Steven Bruce

Good evening welcome. This is the Academy of physical medicine. And I'm Steven Bruce. And this evening I am welcoming to the show the fourth time Joanne Elphinstone. Now Joanne is a physiotherapist with over 30 years experience in her discipline. But for the last 20 years, she has been practising what she calls Joanne elephants and movement science or gems for short. And we had her on the show in the past to talk about why control ain't the goal. In interesting philosophy, which will probably have a little bit on this evening, we've talked about exercise science and keeping it simple. We've talked about movement as therapy, and this evening, we're going to talk about moving the brain. Why are we going to talk about moving the brain? Well, actually, we were meant to talk about that last time, but we went down so many different rabbit holes and talk about so many different things in response to your questions as much as mine, that we thought we'd better revisit the topic. Joanne, great to have you with us. You've been on the show four times, and everyone will know why I want you back. But we're all flattered and amazed that you actually prepared to come back and put yourself through this again, thank you.

## Joanne Elphinston

It's just a delight. It's it's a privilege to be asked, actually, Steven, I always have such a great time. And honestly, I never know what's going to happen. Anyway.

## Steven Bruce

It's embracing spontaneity. It's the opposite of control, which I think is a wonderful thing. Now, I'm going to refer to this I'm going to refer to this later on. I didn't mention it earlier on. Joe M is the author of this book, the power and the grace. And I bring it up now because you might be impressed that Joe's got 30 years experience as a physio and she's developed her own sort of philosophy and discipline in terms of product, her own protocol in terms of treating patients. But I think it's actually quite an indicator that a very flattering foreword in this book is written by Tom Meyers, who is the director of anatomy trains and the brains behind myofascial patterns and so on. So that's, that's actually very nice to have someone so celebrated writing a very flattering foreword, Joanne,

## Joanne Elphinston

it was it was actually beyond my dreams, you know, to have I really didn't think that that would be possible. And he was so kind in what he wrote. And, you know, it was it was really beyond both Tom and Elizabeth Larkin, who is so incredibly eminent in her field.

## Steven Bruce

Yes, yeah, as well. But

## Joanne Elphinston

for for your audience, they'll be most familiar with Tom. And I was, I was a little nervous, because, you know, I didn't know what he was going to make of it, you know, get an offer up this book about movement. I didn't know whether he can, especially because I'm tying the facial element in with all of these other things. And you don't know how someone's going to respond. But of course, you know, he's responded incredibly graciously. And I'm very, I'm very proud of that.

### **Steven Bruce**

You should be that whole business of tying in the fashion with movement. And so when I think that's music to the ears of most osteopaths and chiropractors, so those aren't the only people in our audience because we've also got some, some GPS and physiotherapists and so on, but the bulk of the audience is osteo in Cairo. And and I think there'll be fascinated by what you've had to say what you will have to say this evening. And we could recommend the previous three recordings, which are up on the website. And I think one of our one of our viewers this evening, has already watched all those in preparation for this and send you an email about it. But yeah, so impressed with that, that is really more preparation than I've done. Indeed, I know. So I remember those previous broadcasts, but actually, it's a struggle sometimes. But to pull back the information, let me just get back to the ones we've done before. Just a quick word on controlling the goal. I liked that one, because I think the thrust of that was that stability training is not worthless, it's just not any better than any other training that you might do for the body. I think that was kind of the message you were getting across there, wasn't it?

### **Joanne Elphinston**

Yeah. And that actually spontaneous, rich, healthy movement. You know, when we talk about control as a completely other thing to stability training, and it's, as you say, it's not that it's, it's not got value, it's just not the whole show, you know, and that we have this whole kaleidoscope of different factors that come together to create healthy, spontaneous, joyful, playful movement. And what I see so much of is people who've been really given the control message, and they there's no joy or spontaneity in their movement at all. You know, it's it's very cognitive, and they don't really feel it. And so it's about Yes, let's let's have the concepts of understanding how we manage forces. But let's not kind of get too hooked up on the word control because then it becomes something that's quite contrived

and effortful

### **Steven Bruce**

and a lot of stability control exercises that certainly I've seen in the past. And I'm sure it'll resonate with the audience. A lot of the vendors and not the least bit functional. And I think, you know, functionality is great gained a great deal of mileage in physical therapy circles over recent years hasn't,

### **Joanne Elphinston**

it hasn't yet that in itself has taken us down another rabbit hole. Because then functional has become a different set of exercises, and, you know, with certain kinds of equipment, and in a way, it's the same problem. But now we've got it in a different element. And this is why the reclaiming the word functional, has been really important to me. And that's why it was in the title of the book. And to say, well, functional movement doesn't mean that we we go back into these really prescribed

things, but with more planes now and standing up. Functional for me is what is the inherent logic of us as a moving organism. And we're really trying to teach people as about reclaiming their movement, inheritance, and what is functional there, what actually makes sense in the body, when you're moving, rather than these very prescriptive exercises that in theory should turn into movement.

### **Steven Bruce**

So what we're going to try to avoid this evening, Joanne, and it will be kind, if you could help me with this is we're going to try to avoid asking you to pull to mind every single reference paper that comes up behind the things that you talk about. If people need those, they're all in the book in a chapter somewhere, which probably lists all the references. But perhaps you can just reassure us that what you're going to talk about is not just Joanne's theory on life, it's actually been proven, if not in randomised control trials, but in some reasonable studies.

### **Joanne Elphinston**

Absolutely, because what I'm going to talk about is the brain science. But it's about how we translate the brain science into clinical practice, because it's great to know it. And what I'm wildly excited about these days with the rise of the modern neuroscience is now we can actually study the art of practice, not just the science, because we used to think that we could study the science, but the art was somehow this kind of floaty thing that you couldn't really put any any figures on. But actually, it's not true. So I'm going to present concepts. But then underneath those concepts, and that I mean, there's a whole chapter in the book called moving the brain, which gives all the, you know, the where the where this all comes from, you know, how we see motor imagery to how cueing when cueing? What kind of cueing, there's a studies on all of it. And so, yes, that the whole thing is based in that, but it's about how do we use clinical, you know, how do we use our skills, the art of what we do, so that we can bring this neuroscience to life with our patients and our clients?

### **Steven Bruce**

I also think, from what I've read in here that a lot of the message from hopefully what you're going to talk about tonight is gaining patient compliance as well, because it's about educating them in a way which they will respond to Well, I think, isn't it? So I'm going to shut up? Because it's not my area of expertise and hand over to you had no, shall we still talking about moving the brain?

### **Joanne Elphinston**

Well, I'm just gonna pick up on the word compliance, because it's a word that gives me a bit of a bit of a tick. Because there's a big difference if we could move from patient compliance to how do we inspire our patients? How do we motivate them to be to collaborate with us? In this process? It's got a very different, you know, implication to patient compliance, which sounds rather paternalistic. You know, it keeps us in this kind of dynamic of, you know, expert receiver. And I'm much more interested in teaching practitioners, how do we actually invite a patient into co create the experience, which takes the pressure off in a way but it also it means that we become so meaningful, you know, they they're actually contributing with valuing they're bringing because they actually have the first person experience. No, we can't, we can understand that. And if we can have this that in a way that helps to inform, you know, our next clinical decisions, it's really powerful. So yeah, it's quite funny. There's so many words in that it's just part of our normal dialogue professionally. And I guess I, I just don't use compliance very often. How No,

**Steven Bruce**

we're not going to make a fool of myself by saying, Well, actually, no, when I say compliance, I just mean, however we do it, getting the patient to do the things that we know are good for them. But then I thought, I know you're gonna say you're gonna say the very fact that I've got compliance in my own brain means I'm thinking about it a different way. And I don't know whether that's cognitive behavioural therapy or something like that. But I take your point, yes, it does have a controlling sense to it does

**Joanne Elphinston**

Well, I mean, there's no, no criticism. And these are the words we use. These are the words that are in the papers we read, these are the words that are bandied about, you know, how do we improve patient compliance. But it is quite interesting because it does put the patient in quite a passive place, even though we're thinking, Oh, if they complain, they're active, they asked kind of still a passive agent here. Whereas it would be just interesting to see what would happen if we did actually find a way to inspire and engage them. So that they become kind of self propelling rather than us. And John

Curran,

**Steven Bruce**

how are we going to do with Benjamin?

**Joanne Elphinston**

Well, let's pull it a little bit explore, shall we? Let's do so. Okay, then. So let me first of all, just say that the the reason that I've chosen this and wanted to come back to it for your audience, for everybody here listening, is that we have a lot of people, most people I would imagine, who are manual therapists. And so you know, how to, you know, wonderfully communicate with people's nervous systems through the medium of touch. You're having a conversation, you know, with their nervous systems all the time in a nonverbal way. And so what I want to present here is another way to communicate with the nervous system. And in a way that's more about the brain and less about the mind. because everything's very about the cognitive. And there's elements of cognitive that we'll talk about. But there's also how do we reach beyond the cognitive into the wider brain to get a different kind of concept. So that's why I've chosen to bring this and wanted to come back and chat about it. And if there's something I repeat, please forgive me. But, but I just want to drop a few of these things in because, you know, with the teaching that we're doing, especially now that we're online, and you know, when people aren't in the room, we have to be very specific about things. But we're also really getting because it's now a three month programme. We're really getting the stories that clinicians are actually experiencing, when they're using this and how much it's actually shifting the dynamics within their treatments. And so yes, so I thought I'd just like to share some of that with you, and with your audience tonight. So this is really about how do we transform exercise into meaningful movement? I get a lot of people coming to the courses saying Yes, I'm a physiotherapist and osteopathy is I know about movement, but what they really know about is exercises. And it's not the same thing, as far as the brain is concerned. Yeah. So if we dive in, shall I? Shall I see if I can dive in and share my screen?

**Steven Bruce**

Let's hope it works. Yeah, hopefully it will. Let's see. How's that? Yeah, there we go.

### **Joanne Elphinston**

Perfect. Okay, so hopefully, you see me too. And let me just click this through. What I would say is with our words, we can change everything. Now there's more to it than that. And when we go into it on it in our teaching, there's a lot beyond words that we bring as clinicians to actually influence the therapeutic dynamic. But what I want to focus on here is coming away from how we create change from the what. So a lot of people say if they just have the right exercise is in the right order, then change will happen in movement. And sometimes it does. But I'm more interested in how we use these new developments in neuroscience to look at how we do it rather than the what we're looking at the how. So let's just have a look at these two slides. So to the brain movement and exercises, it's just not the same thing. So if I look at the squat, then and you look at this netballer they're both dropping their centre of gravity. And and so you know, there's something in common here, one squat, this is about potential building. So this is a way for us to develop the strength to be able to drop our centre of gravity and raise it again, the mobility, and dare I say at the control, and so we are equipping the nervous system and the body with some potential to draw from but it doesn't necessarily mean that it's going to turn into better movement. So I see, over the years, I've done such a lot of sports work, and you see so many people who do a lot of squatting, but they really don't move very well. So in this case for netball, um, she's having to use dropping the centre of gravity to absorb from a jump, for example, which requires timing. It requires the what's happening next because movement involves a story exercises, not so much. You might give a rationale for why someone's doing it. But in terms of this particular moment, in this athletes day, that movement is part of an ongoing story. There is a what happens next, there is an implication and the central nervous system is doing all sorts of things and many calculations to work out What to do with this. So if we can't drop our centre of gravity cleanly, smoothly and in balance, then we can't capture the energy that we've created in one direction, send it down and then recycle it to go in another direction. This is part of our efficiency, rather than just stopping the motion and having to get going again, someone has to be in balance. But the whole idea here with dropping the centre of gravity is that you have movement options, you have choices. So it's a very different experience to what is happening with the squat situation here. So if I just have a look at two patients of mine here, so they're both athletes, and we see two very different movements, representing the dropping of the centre of gravity. So this is one of those moments dealing when I talk about the word function. So rather than saying squatting, it's a functional movement, I'm saying the ability to drop and raise the centre of gravity, smoothly and in balance that is functional. So one of these examples is quite functional, and the other one, not really. So if we look at the athlete who doesn't have the shirt on, and you'll immediately see that this is this is a rules driven movement. So where is where is he going here. So he's learned a squat, and it's been taught about rules. So you can see his hips have gone backwards, which means his centre of gravity has his weight has been pulled into his heels. So you might notice that the toes are off the floor, and the tendons are very visible as he tries to keep his balance. And of course, he's had to really send his arms out forward to help him counterbalance. So. So this actually is not a particularly functional movement at all. But you may have been taught to squat in a way, well, that so don't, don't let your knees go forward. That's the that's the big thing that everybody gets told. So we have a movement here that really can't go anywhere, it can't even go down because it's going backwards. So the first thing I would be saying is which direction is this movement supposed to be going in? You know, he's clearly not clear about that, and neither have anybody been clear about it, who has been working with him. Now, if we look at the other extreme. Now, in both of these scenarios, I've captured them at a moment in the videos as best I can, at the base of whatever their movement is. And so he's just, he's just about to launch



back in another direction. So you'll see a central gravity's a little bit more in his forefoot. But you'll see that clearly his body has moved down. So this is the concertina, or the jack in the box action, that helps him to store and then release energy in any direction, he could, you can imagine him going up, you can imagine him bounding forward, you could imagine him bounding, sideways, he can go lots of different directions. And actually, this is all perfectly in balance. It wasn't when I first met him, but it is now. So what we have here is we have someone who's learned the rules, and is trying to uphold them as best he can. Someone like this will usually tell me that they can do much better with a bar across their shoulders, which is lovely, apart from the fact that they can't actually compete, or perform their activity with a bar across the shoulder. So I'm looking for independent balance. So here's this cognitive, the other chap, we've worked very much on the feel of it. So it's a sensory experience, rather than worrying about the rules. So I thought that, you know, might be a good thing to do is experienced this idea of getting away from the rules and the getting it right worries and more into the field, and the logic of it. So

### **Steven Bruce**

we're up for a second course you can, in those previous two pictures, yes, I can see that the guy on the left was sticking to the rules. And he's doing a squat, as I've always been told to do it, wait on the heels, because it seems to hurt the thighs more. And the other guys, he's going down further, but that still doesn't compare to your volleyball player. So your netball player who is presumably hitting the ground, moving in a certain direction, preparing to move in another direction twisting to move the ball in this in a third direction is all those other factors going on? The guy on the right here, it's still an exercise surely.

### **Joanne Elphinston**

Well, actually, what I've captured is the moment in the video where he's actually been bounding sideways and he's going to launch himself, disposition, land on his outside leg and then swing the other one across into a kick motion. So it's going to be this very flowing motion. Right. But what does happen when people get carried away on the functional question is that they they go for that drill without the person actually having the building blocks in place to be able to perform it So his first attempt, when I met him with his chronic groyne, pain looked very much like the other athletes. And it doesn't matter how Fun and Fancy the drill is, the fundamental thing is that he didn't know how to drop a centre of gravity. So it's a bit also about putting the right that like the foundations in and not getting distracted with the bells and whistles. But then layering it up to take on board all of these different kinds of things. So it's about being starting them where they really are. Because that's a, that's a big thing for me. Sometimes we're very like, Okay, this is functional, we're going to do that until it gets better. But it's not where the person actually is. And I don't know how many people have come in who are elite athletes, and they're struggling away, trying to do the high level work. And they can't do the very basics. And so, again, it's a case of if you come away from what is a squat, and you take it into the body logic part of things, which is how do we drop our centre of gravity and come back out again, once we can do that, then we can start layering.

### **Steven Bruce**

And it might just be worth me mentioning at this stage that again, this is not theory, you've worked with athletes at the Olympic level. So you have seen this in some serious serious athletes. It's not, this is not make believe stuff you're talking about here.

### **Joanne Elphinston**

I mean, the you know, the people I've met, these are people who have won medals in like World Championships, people who have meddled in Olympics, people, you know, my job for so many years was actually being the the person who is the the end game if you like, they've had lots and lots of stuff. And it hasn't really come together for whatever reason. And what's interesting, and what I'm so happy about my course participants discovering is realising that it actually mostly these people have not been given the simple foundations, but because they have all of that lettuces. And if you dare to meet them, where they really are, with what's actually not happening for them, they progress really fast, which is lovely, but often people don't do it. And because of who they are, I don't dare to teach or say to this person, actually, you just don't know how to go down. You know, I've had, you know, really top level people coming in, like, you know, top five in the world squash players, for example, was just like, well, they have to go down and up all the time. And out, they really struggle to do that. And they come in with their patella tendinopathies and the IDB problems and and when it gets right down to it actually didn't really know just how to let gravity be their friend. And how to do that the number of times that I say to somebody Look, just, I guarantee you, gravity will really help you out here if you just stop fighting it. So let's just let's just let gravity do its job Off you go, if you want to go down, go down, empty your legs for me, because they've got so much tension in their quads. And they think they have to feel that enormous tension to feel strong. Just like Well, actually, interestingly, the people who are actually the best in the world, they don't carry all that tension, they let it go. Because I mean, a muscle can only contract as well as it can relax. If it never relaxes, it never contracts really, very well at all. So again, sometimes people think I don't dare have this conversation with this person. And I would say, Well, do you know what? The number of times someone said to me, why hasn't anyone ever told me this before? Well, they don't dare because of, you know, whatever their world ranking is or whoever they seem that they're going to be. So I would encourage people to actually speak this

### **Steven Bruce**

comment, presumably, there's also some energy saving, I mean, I don't know how significant it would be. But if you're if you're not contracting the muscle all the time, presumably, it'll go on for a bit longer during your sport before it runs out of energy.

### **Joanne Elphinston**

Oh, you spot on Stephen. And this is why it's fascinating when you see an athlete return after a lengthy period of really not doing the normal training and they go out and they PB and they PV again and they PB again. And and our that happening just like well, you know, you're actually using your energetic resources to go where you want to go. instead of actually you pushing against your own handbrake. It's dancers and athletes, the people who have said to me, like the muscles should feel hard, you know, when I'm lying, they're lying on your plane and I will be lying on my plane, they should feel like butter. You know, that that's there's, there's no need for this tension, because you're just using something that's not appropriate and not necessary. You could let it go. Because, you know, efficiency is what we were designed to, for, you know, we're designed to have brain efficiency. We're designed to have physical efficiency and then we happily train ourselves right out of it.

### **Steven Bruce**

presenting an interesting observation or Moment. Pip says that it strikes her that this is a bit like when a baby misses, for example, the crawling phase, and you have to take them back as an adult and get them through the developmental stage that they missed. Does that ring true with you?

### **Joanne Elphinston**

Oh, I think that's brilliant. It's it's absolutely spot on. It's the same, exactly the same kind of idea. And to be honest, it's getting worse. Because any child with any, any kind of smidgen of talent gets sucked into an academy programme. And suddenly, they're not really learning the logic of their bodies anymore. They're doing drills, and they're doing exercises that have been cognitively taught. And they're not really learning how to manage their own centre of gravity effectively. And all those wonderful lessons that happened, you know, when kids were allowed to be free range, and do all sorts of things and have to jump over creeks, and down from trees, and all of those kinds of things which are missing from for a child now. And it's interesting, as it is such an interesting observation, because imagine if you've got a 28 year old professional athlete sitting there, and you look at them and think Well, yes, actually, you just can't manage your own centre of gravity, whether it's on two feet or one foot. And fundamentally, if you haven't got that, no matter what sport you're in, it's pretty difficult to progress without trying to compensate for that with a lot of increased tension. I love that observation.

### **Steven Bruce**

I'm going to leave you to move on. Okay. That's fine. The last time I dragged you down too many rabbit holes, and we didn't get the content out.

### **Joanne Elphinston**

That's absolutely fine. Because something always comes out one way or the other. So I just thought it would be interesting for us to play together a little bit around this subject, because just last week, I had two ladies come in. I've been seeing so many hip patients over this whole COVID period. And these two ladies both have a similar age late 40s. Both with hip pain one with hamstring insertional pain. So post cheerier pain and the other one with quite compelling anterior pain. And one of them has to she has horses, so that obviously requires quite a lot of lifting. And you know, whether it's hooves or buckets, and the other one has kids and again, so they need to be able to drop and raise their centre of gravity, but they can't do it without pain. So in both cases, I asked them to show me what their version would be. And both of them have been doing online exercise classes, whether it's general exercise, or Pilates, whatever it is, and they both showed me something look very much like the athlete without the shirt. So hips go straight back, balances straight back on the heels. And of course, for my lady with the hamstring and social pain, you know, that's, that's a terrific way to really annoy the hamstring insertion. And then for the lady with the anterior hip pain, then everything down the front is contracting like crazy to keep her balance. And in both instances, what we did is we first checked that they had some that some fundamental biomechanical elements that would enable them to drop the centre of gravity, and then worked on balance point. And they were both very concerned about their knees moving forward, I've been told my knees must my my shins should stay vertical, and my knees must move forward. So the thing is that we're actually developed a bit like an anglepoise lamp. No, everything has to go in a zigzag. And if everything is going backwards, you can't actually go up and down. And this sort of, kind of relieve you of that for a minute, let's just focus on where is the weight underneath your feet. It's in my heels. What would happen if you actually just focused on the whole foot, and over the, the whole session was just this, that by the end of each session, both ladies were going all the way down and all the way back up again, saying, well, this doesn't hurt. And then one of them's that, oh, I can really feel my glutes working here. Well, I've not mentioned her bleeds. But because she's now using her body appropriately, she's now actually finding that they are now coming to the party. And in both cases, they said, Why



doesn't anyone teach us this? Because this, we don't, we're not in pain anymore. And so I want to just go through a little short aspect of this with you. So what I might do is just come out of SlideShare for a minute.

### **Steven Bruce**

While you're doing that, why did you say to these patients, what will happen if you do this rather than say, do this and then you'll see the difference? Great question.

### **Joanne Elphinston**

There we go. So Absolutely. Well, the thing is, again, this takes us back to our original conversation about inviting the patient into collaborate. So by me asking the question, Then I'm saying I value your observation. And I invite you to give me more observations. And that actually opens the door for them to give me more. And it was interesting, because then they did actually spontaneously start to tell me things as things were changing, they would report them. And and I will be thinking that's so interesting. You're saying, Isn't that fascinating? And and then they would, are this, this actually relates to when I do that. And then, because of this, the really critical piece of information that I didn't get from my subjective, you know how it ends with a patient, you'd ask all the questions you can possibly ask and in some way down the track. So there's, Oh, actually, and you think, okay, that's the thing. Because in one of these cases, this patient had been going along really, really, really well. And suddenly, she's going on a downward, you know, trajectory for no apparent reason. And it's not, oh, I need to have a, I need to have an injection, or I need to have something I just was like, hang on a minute, this has been going really well, what else has changed? Nothing's changed, nothing's changed. Sure it is, some has come. And actually a whole lot of gardening is happening in that position with the bottom back, pulling on that poor little hamstring answer. She's just like, but we don't think we would have got there. If we hadn't been dialoguing our way through this movement kind of process and just chatting about it, rather than having someone do a repetition, and then judging it, and then feeding back. We're actually just letting them go. And what do you notice about this? Oh, that's really interesting. And what about that? What happens when you if you did that? And how does that change it. So it's a really different kind of dynamic, but they also learn that they're equally responsible, but that I value, what they're bringing. And then when they go home, they come back to me with really useful, insightful information and insights. So it's how we set it up. So that it doesn't become this kind of semi passive thing of me getting feedback. And actually, because we probably won't get to the final slide, there was a slide there on a piece of research that was done on when people prefer to have their feedback. And it relates to this, they looked at athletes and athletes very much prefer to have their feedback after a successful attempt, rather than a not successful attempt. And we have to ask ourselves, when do we tend to give feedback?

### **Steven Bruce**

Yes. And we can't see them because you can give them feedback. But I'm told that everybody who's watching through Vimeo is currently practising they're squatting so

### **Joanne Elphinston**

Oh, okay, great. Well, you know, I'm going to come and do a little bit of that with you. But just to finish off that point, the the authors of that particular paper said that what's so important about this is they they prefer to have that feedback after the good attempt, because it helps to preserve some sense of, of, you know, personal efficacy, you know, it preserves something. Whereas if you're only really getting the feedback, the detailed feedback, when you're not performing what is perceived to

be a successful attempt, then it actually goes entirely the other way. So if we come back to motivation, it's not very motivating. And it really reinforces how people I mean, many people come to me saying, I can't squat, I have no glutes, these are the things that that they say all the time, just like, okay, neither of those things is going to actually be the case, I'm not going to argue with them right then. Because that just sets up one of these, one of those, you're not listening to me kind of situations. But we will lead them through the process of exploration and pop out the other end with a different perception. So, so I'm glad you I'm really glad you asked that, Steven. So let's just have a little play with I mean, as many biomechanical elements that I could play with, because I think one thing that's important is to set someone up to succeed. Because as we'll see later, you know, the brain is already making predictions about how this is going to go. And when it comes to something like squatting, people have a lot of beliefs about that. So I need to set them up to succeed. And many people don't actually have the base components to begin with. So I'm just going to just do a couple of those basic components with you. And then we'll have a little squat together. And forgive me if we've done one of these before, I can't really remember, because I go into some kind of parallel universe where together Steven, and it all just happens, and I forget. So I'm going to go here. Now, I just want I'm going to be using my ball. But what I'd like to point out to us that I would do this first technique on a chair stable chair, because if you can get the central body stable, it's much easier to release the periphery. Whereas if you're trying to keep your centres table and release your periphery. Yeah, that's quite tricky to start off with. Okay, so I'm going to say that to start with. So a couple of the elements that are often quick wins, but often missing is the tibia femoral rotation that we need to be able to squat, and the thermal rotation. So if we just remember our biomechanics, now as when, as we're moving into flexion, we've got that relative external rotation of the Themi and relative internal rotation of the tibia, which helps us to preserve our mineski. That's very clever engineering from our body, but a lot of people are missing it. So there's no point in me working with this with somebody with all the encouragement in the world, if they don't have the basic biomechanics, because everything is going to try and make a compensation for that. So I'm going to, we're all going to stand up and do a little test squat first. And then we're going to do these little techniques, and then we'll just see what happens. So unfortunately, I can't see you all. And he said, I'm used to zoom where I have a screen of 25 people in front of me, but I'm going to grab my bowl. And hopefully, you're a chair. Actually beforehand. Let's do a little test squad. Yeah. So you're just going to just pop your arms just to keep them tidy and out of the way. And we're just going to do a little squat there. Yeah. So let me just, and you're going to get a feeling for, you know, how elastic does that feel? How easy is that feel, some of you will be very good at this. Others of you, this is your nemesis. So, you know, that gives us something to work with. Okay, so let's start with the listening foot. So this is from a Jim's point of view, this is one of our key exercises. And it's a very rare patient who gets out the door without one of these for various biomechanical and neurosensory reasons. So what we're going to do is pick a foot, I'm going to just wind mine, I selected my trousers specifically for this and kept my shoes off, just with this in mind for you. Now, I'm going to keep my thigh where it is, it's not involved, so it's not going to be moving around, I've got the surface of my foot on the floor. And you can get a feel that and I'm going to rest my hand on Monday just to remind my body that that is not going anywhere. And I am going to very smoothly and slowly change my pressure and move it towards the inner border of the foot. Just finding out what's the capability can I find the inner border, and then I'm going to slowly and smoothly move the other way towards the outer border of the foot. And I'm just going to invite you to do just a few of those. And for some of you that will be easy, and for others, it will be difficult. And we could spend an entire half hour on all of the nuances of this particular exercise. But what I'll invite you to do is just place your fingertips on your head of fibula. And just notice where it goes when it comes to the outer border of the foot. And as you transition across the soul of the foot towards the inner border.

Notice where does the fibula go. Perhaps you might notice that as you move towards the outer border so that the fibula moves backwards. And as you transition across the foot, you come towards first Ray, you might notice it comes forward. In fact, if I just lightly put my fingers around my whole lower leg here, and I do it, perhaps you can see that I'm actually rotating the entire lower leg. Yeah, so you can see I've dissociated with rotation, that tibia from the femur, okay. And I'll give you an opportunity just to do a few with the other side and I'll drop a few extra keys in. So you're I am now using my left leg. And again, I've just got my hand on my knee here. I can feel the soul of my foot and how it naturally rests maybe but you're more on the inside or the outside to begin with. I'm going to move my way across to the outer border. And then I'm going to move my way and get back into some shot a bit better. So I'm going to move towards the newborn you might notice that my toes are really relaxed. My foot is really relaxed. And perhaps if you feel underneath, you might notice what your hamstrings do. Because your hamstrings are involved in this. It's often easier to feel when you move to the outer border of the foot. You'll feel the hands earrings and their engagement pair. There's lots of muscles involved in this. But we don't have to be using too much in the periphery. So the foot's relaxed using some popliteal tendons and hamstrings. But to be honest, those Styria, you know, there's quite a lot going on there. So hopefully we've got a little bit of rotation. Okay. So

#### **Steven Bruce**

what I should also say is that, although Jo m can't see you doing this at home, we've installed that crazy is really software so we can see you. So make sure you're joining in.

#### **Joanne Elphinston**

Excellent, I'm going to be looking for a report. Okay, so now femoral rotation. And again, let me just tip my screen up a little bit for you.

#### **Steven Bruce**

Probably in the interest of GDPR, I want to point out I was lying, then we haven't installed any crazy Israeli software.

#### **Joanne Elphinston**

kind of disappointed by that I have to say. Let me just see if I can let a little light in here. Because this room has been having this the afternoon sun beating in on us all afternoon. Okay, now I'm going to do something called a total body rotation with you. And I am going to encourage you to stand up and do it with me, I'm going to go on a slight angle for you. And I'm just going to invite you to just turn your body and look around one way, and then turn your body and look around the other way. And of course, most of us will find that one direction is more more available than the other. This time when you do it, I'd like you to notice what happens with it pressures underneath your feet. So as I turn towards the right, then I noticed that the weight is going towards the outer border of my right foot and the inner border of my left foot. And then if I go around to my left, I feel the transition of the weight. And now on the outer border of the left foot and the inner border of the right foot as I'm going to the left. So just take a moment and notice the transition. And sometimes someone will find that it doesn't happen that way. And that's okay. But if I find that, I know I need to reboot it. Because that's usually when people come to me with those vague, weird miniscule problems that don't seem to fit a pattern. So now that we've done that, we're going to work with it, I'm going to invite you around to the right, good to ask you to put your right hand on your right thigh, you're on the outer border of the right foot and smoothly and very easily, you're going to just transition towards

the inner border of that foot and array again. So you can keep your weight a little bit back on your left leg just to get the freedom from that right leg. And I'm just very slowly transitioning my weight. But you might notice that as you do this, that actually the femur is turning. So what we're doing here is rotation at the hip in load bearing and immobilising within the hip. And so after you've done a few of those, I'll ask you to stay on the outer border of the right leg, pop your hand on the left leg. And now we're going to do the other one. And you can notice perhaps, again, under your hand, as you transition the weight that we have motion in the femur, so there's motion going on here. And I don't have a lot of load on this leg. Sometimes people try too hard, and then they irritate their knee. So I don't have a lot of load. It's about being soft and smooth and easy. And we don't want to push through resistance, there's one thing the body really does reliably, is if you push into resistance, it resists right back even harder. So if we keep it easy, it starts to relax. Okay, so if you come back to the front, and now go around to the right all the way again, just retest your emotion availability before we do the left, so now we're going to turn to the left, and that might feel a bit stiff now, comparatively. So I'm going to put my left hand on my left thigh. And I'm going to slowly and smoothly move towards the inner border of my foot, again towards the outer border of my foot. And notice that my body is not moving around. I'm not doing this, which means that I'm not actually moving my hip, my body is quiet. And I'm just taking up whatever movement is available

from my hip.

### **Joanne Elphinston**

And once I've done that, I'll take my right hand and pop it on my right thigh. Again, don't have really much weight on this leg here. And again, I'm just connecting my foot to my hip. They're having a conversation and we're making sure Now that we have that availability as well, just a few of those. Okay, so facing the front, we're going back to the left again, just to retest. And usually after doing a little bit of this patient, so what have you done to me, so I haven't done anything to you, you've done it entirely yourself. So there's two things of the several I could check tibia femoral, and femoral rotation. So before we now go back into a little squat, I'm going to invite you to find the soles of those feet, and relax your buttocks. Some of you will be going what I did, I have to tighten my glutes like new, because if you tighten your glutes, just check out where your feet go. So if I'm typing my glutes, I'm on the outsides of my feet. So I'm already in external rotation, I've got nowhere to go. So I am going to end up with my bottom out behind me, I've set myself up for failure. So I'm going to actually stand and release, create some space between my sitting bones, so I can really feel my feet. And now, I'm going to learn about my balance point dynamically, because this sets it up. But it doesn't necessarily magically mean that your balance point is going to be on point, we have to find it. So you're going to slowly make your way down. And notice when you start to go into your heels, and then pause and find your whole foot again, and continue. And if you go back, then you'll say, Oh, I'm in my heels, again, with my whole foot. There it is. And I'm going to come down a bit more. And you're going to just go through this little process until you can start to work out, Oh, actually, I could stay in my feet all the way down, and all the way back up again. And as you're doing that, right now, as far as your glutes go, it's like they're two great big hands underneath your buttocks, they're going to catch you. And they're going to just throw you back up again. That's their job, because you're actually allowing them to work. He centrally into range, and I'm finding my whole foot, my press through my whole foot. And then my hip is allowed to do its job. Yeah. So we're aiming for that springy, easy feeling from this, and this is this is one of my most fundamental movements. And I will do this with everyone from an elderly, you know, total knee replacement

patient all the way through to an athlete to kids, or, you know, all these people, I'm going to use the same kind of idea with. So I'd be so interested to see to see if anybody's got any thoughts about that.

**Steven Bruce**

I have one, which again, stems from reading your chapter on moving the brain. And that is that what you've just demonstrated there is actually quite complicated, you wouldn't be able to explain that to a patient without demonstrating. But you make the points in your book that actually demonstrating the exercise is quite important in terms of getting the patient's brain to understand what's going on. You also talked about the speed of demonstration or repetition of the exercise, and perhaps you could elaborate on that what is what's right,

**Joanne Elphinston**

what's right, what's right is what suits that patient. But let's take the first point, which is the demonstration. And this is why we very much encourage people to start learning how to walk the walk and not just talk the talk, because there's good research on motor imagery, and that's marvellous, but the research senses, motor imagery with some kind of visual demonstration gives a person's brain lots lots more information about the qualities of the movement. So for example, if I look at just something very simple, like demonstrating something postural, I could talk to a patient and give them cues, but keep my body quiet. Or I could talk to a patient and give them the sense of poignancy that I'm looking for, and their brain is reading my body for all sorts of qualitative information. And so you know, it's very much a part of my teach, you have to you know, actually say I'm going to have the humility to actually go there. I'm going to find you know, the things I find a bit of a struggle and I'm going to learn from them because actually, that is some of the most powerful treatment you can offer the patient you know, we want to go off on another course to learn stuff to do with the patient. When such an enormous amount can be gained by the with a work on finding your own, you know, sensation And then being able to bring them to the patient. So there's good, there's really good research on that. And then you had a question about repetitions?

**Steven Bruce**

Well, yes, I'm just in the book, you talked about speed of rep, or speed of demonstration, or repetition being important in terms of getting the message across, I'm guessing kind of subliminally to the patient's brain.

**Joanne Elphinston**

Absolutely. So depending on the task I'm doing, I'm going to be using my body and my voice modulation, you know, my tone, you know, my energy is going to really change some people pride themselves on just this is me, you know, that's just me. And I'm like, Well, you know what, you're not using your whole self. As much as you could be. Because if I'm going to really facilitate you, I'm going to change my motion, I'm going to change the energy of my voice, I'm going to change my rhythm and my intonation.

**Steven Bruce**

But many people are a bit confused, isn't it? It? Certainly when I read read that in the book, I was thinking to myself, okay, yes, if I'm standing in front of a group presenting, I will try to be as dynamic and lively and moving as I possibly can. And I will try to get this dull voice of mine to move up and



down a little bit. So it's a bit more engaging. But you suggested in the book, I thought that there was a right pitch and a right rhythm for this, or is it just vary and make it interesting?

### **Joanne Elphinston**

No, it's about Well, I think what he's saying in the book is that lots of people know, this, like, let's say, you've got your your nice yoga teacher voice, your nice Pilates teacher voice. And it's the same all the way through the movement and the class. And that that could be fine for as long as you are actually really thinking about what the effect is that you're actually wanting to have, rather than it being about how you're presenting yourself, which is about me, what we're looking for is what do you what are you trying to help the patient's nervous system to get from this. So I will come along, and let's say, I'm teaching a class and someone's struggling, I am going to really take charge with that dynamic. And I'm going to have to get somebody on board. So for example, I've got a patient at the moment who's Uber intense, will go off on tangents, you know, and I have to be very firm. Now we're doing this now. This is what we're doing, then just tell me, what do you notice? Here, totally different rhythm, totally different intention, then I'm really swinging into leadership. And I'm not trying to be dominant, what I'm doing is actually creating a container for her, for her to calm down and start to listen to her body. Again.

### **Steven Bruce**

I should be watching out for this as I tried to lead you down different terms of tangents, and rabbit holes in this discussion. Don't just say what you're saying will chime with Marie, who sent in an observation earlier on, she said, I'm guessing this is her mantra be a guide to your patient, which is very sensible. But you also use the expression about people's exercises being on point earlier on. And Carrie has said that she's read about professional sports people doing things like ballet to improve balance and core and so on, does that address the types of issues you've been talking about?

### **Joanne Elphinston**

Well, again, create more more nutrition for the nervous system. So I don't think there's any one thing that we could say that would address this. What I am saying this is like a smorgasbord and and rather than just having all meat in the corner of the plate, we're going to add some broccoli and some sprouts and some carrots and maybe a nice salad. And you know, all these different things offer something new. I mean, gosh, it was 35 years ago when they off offseason rugby players were given ballet to do. And some were given netball to do because they recognised Okay, there's things in these sports that will help the general physicality and the physical. You know, I talk about obviously, the kaleidoscope in the book, you know, we've got lots of different colours, and we can change the setting of the kaleidoscope to make all of those capabilities turn into limitless kinds of movement. But if you've only got one or two colours, and you Kaleidoscope, then you know you've got a few limitations really. Yeah.

### **Steven Bruce**

Well, Sarah sent in this. She says, Well, I've been trying to get my forensics to release as they always get sticky, playing with that, and my whole upper body moves more. I'm not sure what she was playing with. But there's a win already for somebody there. Adam here, he was talking about that squatting exercise you're doing a moment ago. And he says he started doing this with his feet close together but then found it easier with his feet further apart. And do you have any thoughts on how far apart the feet should be? Adam from my own perspective, as soon as anything between the

feet starts to touch the ground, you've probably gone too far but over to you might vary from person to person.

**Joanne Elphinston**

Absolutely. And this comes back again to what we equipping them for so I'm going to put them wherever they're comfortable, first of all, to get the idea of how to just move their body up and down. And then we'll vary it. Because I mean, if you're going to be, let's say, I'm working with a skier, it's no good if they can only squat in a play position, because I mean, you there's not going to take you far as a skier. You know, what do people need to be able to do? And so you start looking at different possibilities. So for example, with one of these patients, we were looking at, what do you have to do to pick out your horse's foot compared to what do you have to do to lift the feed box do or what do you have to and all of these things, once you had the basic concept of how to move the body down and back up in balance, then we could diversify it by changing the placement. So So this is where we start to get into this this nice, you know, where you are going back to, which is like, is it just an exercise? No, once we've got the actual sense in the body and the logic of it, we can diversify it.

**Steven Bruce**

Well, on that note, Sue has said, is really amazing. So first comment, and very revealing. She says, How do you work around compensations due to foot pathologies, such as fuses, joints, banyans, and so on? Someone else peppers added to that planners as well.

**Joanne Elphinston**

So what we do is we work with First of all, what, what, what is available? So say, for example, you know, I might want to know, with that foot mentioned that, you know, last, is there a way that that foot could actually be a bit more dynamic? Have we actually investigated that because mostly that hasn't been investigated? I mean, the number of people who come to me who've really never sensed the soles of their feet before, and then stand up from say, listening foot and go, Ah, I thought I was standing on my feet, but I guess I wasn't because I now I can feel my feet. So the first thing I would look at is what sensory connections have not been explored. And then we look at what is available in you know, in the the system. So for example, I had a young ballet dancer who had because of a surgery, a restriction in her ankle dorsiflexion, which makes a play quite difficult. But she was developing knee pain. And when I looked at the play, I realised that she was actually overcooking posterior pelvic tilt. So she's been very much given the message of being here. Yeah, sorry, spinning around here. So she was she wasn't just in a neutral position, she was heavily in posterior tilt. So of course, if you're going to try it, and then play, then you taken away the hip availability, the hips don't flex, if you're in heavy posterior tilt. So actually, the effect of the ankle limitation was far greater, and she was trying to take it up in the knee, because she's effectively locked down above and below the knee. So by actually helping her to find that we don't have to be here, we can actually just be in neutral. Now that I'm in neutral, my hips can bend, which means I minimise the effect.

**Steven Bruce**

Alright, okay, I know, this is not for my benefit, definitely. But I'm sure there'll be somebody in the audience who doesn't know what a PA is no, expect it will be Robin but

**Joanne Elphinston**

so so, you know, when you get a ballet dancer is that very wide turned out, dropping at the centre of gravity, you know, when they're going up and down, and that very, very externally rotated position? That you know, you'd see him belly.

### **Steven Bruce**

Okay. There we go. Most of us will be thinking, why would you do that your body but for for the viewers, I wasn't going to do this again until the end of the show. But Barbara says, just this problem has been plaguing this 71 year old body huge improvement. And please would I share the book again? So the book is called the power and the grace. Funnily enough, it's by Joanne Elphinstone. and hang on because there's some more about that to come later in the show. But it is a it's a bloody good book for reasons I was playing late. Thank you. And I don't plug people's courses or merchandise for no reason. I really don't so but we'll come back to that.

### **Joanne Elphinston**

You Steven Could I just say that it just brings joy to my heart when someone says that because I think that there's certain things that as humans, you know, they are part of our inheritance. And and I do find that with simple elements if we understand the biomechanics of us and the physics of us. And the neurology of us

### **Steven Bruce**

shortfall isn't there which Sandy has brought up because Sandy so she was taught this, the fundamentals of movement many years ago when learning clinical Pilates, and more recently when studying aim with Gary Ward and what's your aim is that right, okay, and that's even motion, of course. But she says sadly, she wasn't taught it as an osteopathy student. And I suspect the same will apply for chiropractic viewers here that you know, we just don't get to cover you can't cover everything in training, Simon says isn't the idea of what you've been talking about inviting someone to do something rather than directing so that you don't raise prejudged expectations, the body needs to unlearn learned habits,

### **Joanne Elphinston**

I guess where I would go with the rather than unlearning, what I say to people is that you have a whole menu of of movement possibilities, and you're choosing this one. And so what we're going to do is we're going to see what other ones you have to offer. Because this particular one, is not necessarily something that's sustainable under the conditions that you're trying to operate. So rather than an unlearning, what we're doing is opening up another option and what we find with people, when we do this, and you invite them to go back to the way they were doing without thinking about it, they find that they can't, because the brains gone, oh, this is a better idea. And it's quite interesting when I say well, should we go back? And maybe I've done something postural or something like this, and they just find that they can't. So all I'm saying to people, is it because I really want to interrupt the correct and incorrect dynamic because it's so it's so oppressive. You know, people are so concerned that they're doing it right or wrong, that they're not moving at all. They're they're not sensing it, they're not inhabiting it. And that's not what we're all about. This is anti movement.

### **Steven Bruce**

There's a couple of things that sprung out of me from your freakout at me from from your book, you make the statement in the brain complete some movement before the body's actually even started

the movement. And and you go on to say what's important is surprising the brain can you elaborate on that a bit?

**Joanne Elphinston**

Yeah, actually, that was what I was going to go into actually next in my little presentation was about well, no, it's perfect leading but you know, it's as if we planned this before Steven. It's about the sensational cerebellum. And, you know, if I if I just, I'm just gonna share my screen again, here.

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