Academy of PHYSICAL MEDICINE

Transcript

Delivering Therapy Online

With David Vaux

APM: We're in London at the studio this evening and I promised you some controversy in this evening's discussion. Now, I wasn't aware that this was controversial until a few weeks ago. But I was talking to my guest this evening and he's had some comments from across, particularly the osteopathic community arguing that what he's gonna talk about this evening is not osteopathic, it's not proper physical therapy. Now my guest is David Vaux. We've had David on before, about two years ago talking about treating dystonia in elite musicians and others. And he's a long track record in treating the elite across the athletic and the musical world. He's got a masters in health and exercise science. He's got a masters in pediatric osteopathy as well as his principal degree in osteopathy. And he's with us this evening. David, welcome back to our studio.

David Vaux: Nice to see you again.

- Yeah it's nice to see we can provoke a bit of controversy with what you're gonna talk about.

- Yeah, yeah.

- Yeah, well we'll see, won't we? Because of course what we want is we want lots of feedback from you, the audience. You are anonymous unless you tell us otherwise. But please, if you feel you can, let us have your name. It adds a little bit more flavor and color to the discussion. But keep the questions and the observations and the criticism, if you will coming in. You've developed a treatment protocol which you're calling Movements In.

- A Move to Improve.

- Move to Improve, sorry Move to Improve. I should know that because I've been rehearsing it for the last half an hour, Move to Improve. So you called it The Move to Improve which is actually something you've trademarked. And presumably this builds on or reflects work that you've been doing with treating dystonia in musicians or anyone else from that. I think it's based on the research of some others as well as your own, A Letterman for example.

- Yes, yes. Well it touches upon quite a broad spectrum of research actually, including psychotherapy, physical therapy and neuroscience as well. Two years ago it was interesting because I was beginning to formulate a model then how to treat quite complex, sort of sub clinical conditions. So things like dystonia or people with conditions for instance that the medical professions wouldn't really want or could offer anything else on. So generally speaking, things like chronic neuropathic pain, polymyalgia, etc.

- When you say sub clinical. What exactly do you mean?

- Well this isn't something that you would want to apply to someone who's suffering with MS. Or in the throes of nerve compression from a disc bulge. But we're talking about down the line where something's become chronic. When some of those pathways, they're there to do a job. In some cases, to warn you that something's happened or etc. That have been turned on for too long. And therefore unhelpful. So, I guess two years ago was the point where I started to talk about my work with prescribing movement and educating the patient and trying to empower them and such. Moving on, that was going back some time.

- Yeah.

- At that point, I'd done a collaborative book chapter at that point, with Matt Walden as well where we started to formalize the framework around which certain case studies could be discussed. Case studies for instance did include a chronic neuropathic pain patient and musician's dystonia. The basic premise was built upon necessity really, for me in practice. In that, if you work in a practice that typically attracts quite complex patients, sometimes with long histories of quite nebulous dysfunction in their nervous system. Then I found myself struggling with my training as an osteopath, to help. For instance.

- Why does your practice, or did your practice attract that sort of patient in the first place? Given that you've only recently developed this mechanism for dealing with it.

- Why did it attract it?

- Yeah.

- Historically, the practice here, I worked in a practice for the last 10 years with Stuart Korth.

- Yes.

- So we tended to see quite complex, quite nebulous conditions.

- Right.

- So yeah, that's why. So I found myself being faced with quite a complex list everyday.

- Yeah and I'm sure most osteopaths watching will know the name Stuart Korth, a very senior, very experienced, very highly regard osteopath. Deals primarily with cranial osteopathy, I think. Is that right?

- He's known primarily for his work in pediatrics.

- Oh pediatrics, okay.

- Yeah.

- So a lot of cranial osteopathy involved in that presumably.

- Yes, yes, yeah.

- Okay, but as I say, very, very experienced man.

- So all out of necessity really. For instance I found, if someone has such hyper sensitivity. As a manual therapist, and even the slightest touch was pain provoking,

- Yeah.

- And in some way, building upon that loop of dysfunction. Then how can you offer something to them? Or for instance if someone has had past experiences where they don't like to be touched by a male or female practitioner. But yet they're there for help. So that's the discussion, and I wrote an article for the IO Magazine in March this year in which I discussed such cases. What do we do? Is it still osteopathy? Not so much is it still manual therapy. But is it still osteopathy if we're not touching the person in front of you?

- And is this what has provoked the controversy?

- Yes.

- Because not the online delivery which we're gonna talk about later, but the fact that.

- There is more that, yeah.

- But it's the not touching part of it.

- Yeah, yeah. I mean I found myself with a small percentage of patients everyday that if I'd already done your general new patient standard assessments, yellow and red flags and health questionnaires. And then later down the line I found myself interacting with these people in a different way. I found myself interacting with them and prescribing movement and explaining what happened in the nervous system. Trying to give them the tools to understand it firstly and then potentially to do something about it with some daily practice of movement. And there are a few patients who were referred to me from quite a long way away. We all sometimes see people who travel to see you. And it was unfeasible for them to continue to see me. So then one thing led to another and I thought well actually I have seen these people. Physically assessed them and looked at them and I prescribed movement and coached them in it. And then that quite seamlessly really transitioned onto liaising with them online. Before I did that though, before I made that leap I had quite a journey in understanding where I stood in terms of my osteopathic principles. Where I stood in terms of the GOSC, the General Osteopathic Council. Where I stood in terms of my insurance. And this was partly general which I wrote about. And it was interesting because I found that when I asked them, quite senior peers. Interestingly some people have been going through similar dilemma, and having to speak to underwriters. There was a gentleman in question, was working for a healthcare charity and was designing online videos and online pictures and exercise programs. And realized actually that his personal liability as an osteopath, is on the line. So to prescribe any kind of video or any kind of information, even via the phone you have to be, you have to have an eye on the information. You're giving an eye on your liability as a professional. And so it opened up a really interesting, I wouldn't say can of worms but it opened up a really interesting thought process. Thinking okay, well how many of us in daily practice take a phone call in practice and give some advice? And have we not actually, have we done the yellow flags, red flags? Have we assessed whether they're safe to exercise or stretch? What happens if we make it worse? All these things shouldn't be a climate of fear but it should just be a climate of understanding where we stand as practitioners. And that then escalates into well if we're then gonna start putting things into even pamphlets that we give to patients. So are we then gonna start giving short courses of exercise to people, or movement as I do then we've got to be able to make sure that person is safe. It's going to be effective and they have consented in all the same ways, even if that's online or whether it's face to face.

- Now we would make an assumption I'm sure that osteopaths, chiropractors are capable in clinic of making an assessment of a patient that the sheet of exercises I give you is safe to proceed with. So although, I'm struggling to recall when I was trained in that. So I'm not trained in the link between safety and the exercises. I can't remember that in my training. Did you?

- I don't think I did.

- No.

- No.

- And so therefore what we're doing is we're making an intellectual judgment here that because we understand the function and structure of the body that we can deduce whether these exercises are safe. So what did your insurer say when you said well you're gonna do this over the phone and all over the video?

- Over video link. They were not concerned how I delivered the advice as long as I was qualified and had the expertise to do it. Those were their words.

- Where do they, and I'm sorry to get on this, it might be a bit of a rabbit hole. But as should be, there are lots of people watching this who might want to follow your method of delivering some of their treatment. And actually, how do they deduce what it is you are qualified to advise your patients? They know you're an osteopath, they know I'm an osteopath. But they don't know what I'm not experienced in or what I'm not taught to do.

- Well I think they have to ask the questions and you have to I think, and it has to be done at this stage on an individual basis, and you go about. In my case, in prescribing movement I couldn't actually cite a specific CPD course that had included that, but my background in exercise prescription from my masters degree.

- You've got a masters degree in health and exercise science.

- I also was formally in the services and I was a physical education officer there so I had a background in that. My point to the insurer was that if there was a course I'd be running it which I subsequently actually started to do. I did, on my masters degree in pediatrics have access to weekend courses as part of the masters modules. In fact my ears perked up when you were talking about early reflexes and movement based strategy prescription for pediatrics for special needs children, etc. There's a lot of evidence that we were shown and actually given examples of where if you prescribe certain cross-hemispheric neural exercises that that would be beneficial to children with special educational needs. So I could deliver them a portfolio of my experience and also a portfolio of what I would prescribe this for and why I wouldn't. And I

think as long as they can see that you're doing your due diligence and you are being safe, then they're relatively happy. There are courses out there that you can do. There are all sorts of things you can do. And I think everyone has to have a discussion with their insurer because they call it adjunctive therapies where you can have that, a slight adjunctive caveat to the bottom of your.

- Most of which don't cost you any extra in premium and so.

- They don't cost you.

- They just need to note that you've done it.

- Exactly, so I had this discussion. It was a slight increase in premium for me because I think I was the first person who wanted to actually do it. So they, it was minimal, but it was more of a gesture on their part to acknowledge that. And yeah, we went from there.

- Okay. So can we go back to the physiology behind your new philosophy in treatment.

- Well it's not a new philosophy. It's based in the old philosophy. First things first, it's based in Andrew Taylor Still's philosophy the principles osteopathy. Mechanisms that can be, innate mechanisms which are there to help us. The interrelatedness of structure and function, and vice versa. That is where this has come from. It's just applying it in a slightly different way with the benefit of what we have now in terms of modern technology and scientific breakthroughs.

- But you talk a lot about neuro, sorry I interrupt you again. But you talk a lot about neuroplasticity in what you're doing. So without wishing to make this too Janet and John. Just briefly, what do you mean by neuroplasticity?

- Neuroplasticity is happening to us all the time. We are continually regenerating if we're learning new skills or languages.

- Regenerating.

- Regenerating neural tissue.

- Okay.

- In regards to, I mean it's quite a broad question. But if we're talking about learning a skill. All the time we're learning, so for instance to do the perfect tennis serve. We're learning and learning and learning. We're laying down a pathway, we're laying down a circuit if you like in certain parts of our nervous systems. And all the time we're thinking about it we're kind of using our

executive function, our frontal cortex and we're trying to think too much about it. And we've all had that probably where suddenly, or if you're trying to ski and then you suddenly can ski. Suddenly, something kicks in and you're not thinking about it anymore. That's where instead of using your executive frontal cortex it goes to the cerebrum, sorry the cerebellum.

- Right, yeah.

- So it comes imprinted in there. And so then that process of learning something is a plastic process.

- I've mentioned on previous broadcasts there's a bit of sort of the policy behind the zen approach to tennis, isn't it. The stop thinking about it and let your brain do the work without you thinking about it.

- Yes they call it flow. They call it flow when in any sport or any endeavor sort of grace under pressure.

- Right.

- They call it flow when something happens naturally.

- Okay, so by plasticity, what we're saying is what you're saying is, that there's plenty of research to say that we can actually change those pathways, change the neural circuitry to our advantage provided we get the right stimulus.

- Yes, and it can also go wrong.

- Yeah, okay.

- Which is often what we're all dealing with in practice. Where someone has an overreaction. So we've all seen people with history of disc prolapse, nerve irritation, the classic kind of symptoms that you see and two years later they have a facet strain in and around that area. And they have sciatic nerve, yet probably they don't have another disc bulge.

- Yeah, okay.

- So they still have that distribution in the myotome or dermatome. But you know, give it a little bit of gentle treatment, a little bit of mobilization, or not. And it probably, 24 hours, 48 hours it would be a lot better and the sciatic type symptoms have gone. So we've all seen that. And that's where sometimes that hyper sensitivity can be a problem with phantom limb pain. There's a lot of evidence again from the medical profession and amputees where they have very, very severe symptoms in the absence of the formally injured structure.

- Yes. But you can also, you could postulate that actually once upon a time there was a pain pathway there. And wherever that pain pathway now ends it can still be stimulated and it will give the brain the impression that the pain is coming from further down into where the phantom structure is.

- Absolutely. I was speaking to a surgeon, an army surgeon about this actually. And they've learned now that when they're about to do the amputation they try to anesthetize as early as possible. And they go as high as they possibly can as well.

- With the anesthetic?

- With actually to the injured limb. Because they found if they didn't anesthetize sooner of the later, then as soon as that pain message can be switched off, the better. I mean obviously.

- But how does that affect, how are they theorizing that that affects the phantom limb pain afterwards?

- They just found better outcomes, better outcomes with that. If they can turn that pain off as quickly as possible and actually leave, and I think they're also saying that they can leave that person in an induced coma as well so that it's almost breaking that circuit of conscious pain for as long as possible, before bringing them back around.

- They say that the economy, and science and technology benefits an awful lot from the military, don't they. And the war in Afghanistan must have done an awful lot for understanding phantom limb pain and amputation.

- Yeah, absolutely.

- Sadly, but.

- Sadly.

- But being used for medicine.

- There is so many, the UK forces surgeons now are probably some of the most highly trained in the world, unfortunately.

- In those specific things?

- Yeah.

- You mention in the document I was reading about your protocols. This idea that there are hidden neural mechanisms. Mechanisms are dormant and switched off which presumably you want to reactivate to the advantage of

the patient. So I guess the question is. Why are they dormant? Why are they hidden?

- Well I don't think they're hidden. I think, this is again controversial. But I think, if we think about in a very simplistic term sympathetic and parasympathetic systems. If sympathetic systems are hyper aroused the parasympathetics don't get a chance to function. If the parasympathetic system can be nicely balanced against the sympathetic the those are the sort of pathways I'm talking about. There's nothing mysterious about it. But you could argue that the lifestyle we all live. We live quite a linear life now. You know, where we kind of, we walk in straight lines, we sit in little offices, we stare into boxes with light coming at our faces. We drive in straight lines, well most of us. And I just theorized really, what our ancestors would make of it if they looked at our working lives now. Even a couple 100 years ago, not that long ago. And I think this all kind of taps into noise and light and difficult working environments. All these things, I feel have an imbalance in the sympathetic, parasympathetic balance. When we think about what we are. When we think about where we've come from in terms of being an organism, a human being. Then you know, I would say that we are a paired hemispheric movement-based organism. And if we stop.

- Slips off the tongue easily there doesn't it?

- Yeah, absolutely. I've been rehearsing that's all. But if we stop actually acting and engaging with what we are and who we are then I think you see, I think there's the potential to see that imbalance more and more prevalent. And with all the modern, western kind of healthcare issues that we're now seeing, that huge rise in reported pain levels. Was it one in four in the western world have pain. Regularly have pain of an unknown etiology. Ten million people in this country have pain of unknown in etiology, I believe. So huge numbers. I think if we.

- Are you getting your hands on a lot of these in clinic? There's lots of them. But are these the sort of people coming to you in clinic that your protocol is working with?

- Not necessarily. I mean, what I enjoy in clinic, like everyone else I enjoy quite a varied list. What I tend to find is that I now have something else I can offer someone.

- Yeah.

- Who comes in. I mean, I would always start with my osteopathic practice. But if I find that, a case that is slightly more complex or I had a recent case over the last six months of a lady who suffered with polymyalgia for five years on high, high levels of serious, serious medication. And for her, these are one of the patients that you sometimes you can't physically do much, and so I was

doing prescriptive movement and visualization with her. And she's had a great outcome. Now whether that's placebo, fair enough. Or whether that is just her being slightly more empowered and that being a trigger for her to improve then I'm happy with that as well.

- Yeah.

- But it's as much to do I think with our clinical interactions to do with our words and our demeanor as is it is to do with our hands on that patient. I think a lot of people probably agree with that. That's not too controversial. But I think what is, is when we start to then say well. Where does osteopathy, an osteopathic consultation start and finish? For me, because I'm confident in exercise prescription and movement-based prescription then I guess for me it's a natural adjunctive. I wouldn't even call it a therapy, more of an adjunctive skillset I can bring in that which I'm ensured to do. Which I can deliver to a patient either in clinic or online. When I think about the original osteopathy principles. I think that it's hard to find a more elegant example of structure governing function. Where you think about if you prescribe someone movement, and they move. And that's lighting up a certain part of their brain and then via daily practice that part of their brain, for instance the sensory homunculus changes somehow for the better. Or you can do something. There's now the 1965, I think pain gate theory where the over sensitized pain gate at that level of the spinal cord is wide open because of a number of factors. One of which is sympathetic arousal. That if you can do something to adjust and close that and give them less pain, then that is a direct result of movement potentially. And that is functions governing structure. For me, that's as relevant as the bone trabecular structure. And the way that the bone trabecular became curved in a certain way because of the way that person moved during their life. Why is that so different to the nervous system structure or the networks that we find in the nervous system? They're different, in some people are more developed in some people than they would be in others. So for instance, a professional musician their sensory homunculus would be very different one to Jonny Wilkinson's feet. Their pictorial representation of their sensory homunculus in their brain would be very different to someone who is a pianist. So we all are subtle versions.

- Well, as one of those paired hemispheric movement-based organisms. You're surprised I remembered that.

- Yeah, well done.

- You talk in, again in the notes that I've read about your style of therapy, about Movement X. Cross-hemispheric movements.

- Yes.

- Why is that important? What do you mean by that?

- Movement X or just cross, increased cross-hemispheric movement, I think it was a lot of evidence from various disciplines including psychotherapy, including just neurology. There's a lot of work by Lorimer Moseley and the Neuro Orthopaedic Institute. And good quality stuff at that. Who all say that cross-hemispheric stimulation of the cerebral hemispheres and indeed, the cerebella hemispheres is a beneficial thing just generally across the board. And we're not just talking about pain here we're talking about how you feel. We're talking about again, engaging with who we are as an organism and actually communicating with it. I say, often say you can't just tell someone to get better sometimes you have to show the primitive nervous system something that it recognizes. You've got to, yes you can tell it but you can also show it via movement. And it's that movement, that cross-hemispheric movement is showing, I believe anyway and this is the logical next step from all that research that's there. Is a practical way of showing and if you actually give cross-hemispheric stimulation to someone.

- Being a bit of an idiot. What do you mean by cross-hemispheric stimulation?

- Well, a very simple movement which. So, for instance eye movement, so side to side eye movement. ENDR practitioners.

- Which is eye movement, desensitization and?

- Retraining.

- Retraining, yeah.

- They often get the patients to cross tapping or they will actually tap the patient on both sides. If you imagine, I give a very simple advice a very simple piece of advice to someone just as an example. If you imagine, if I may with this pen.

- Of course.

- So imagine this is a toothbrush and you're standing in front of your mirror. You're looking at your mirror and you're brushing normally then you change hands over, like so. And then you're brushing the opposite side and then 30 seconds later you're changing your hands. Now the key is, that you're looking at your reflection and it makes what seems like quite a simple I'll just change hands to the opposite side. But actually if you're not looking at your hands you look at your reflection, you've got to coordinate suddenly both sides in quite a complex maneuver and then do something that feels a bit strange on one side. And if you really want to make it more difficult you do it on one leg, you can do it with one eye. And alternate it, just suddenly making it an everyday thing into quite a complex neurological balance.

- I'd be worried where that toothbrush is going to end up.

- It depends the size of your toothbrush I guess. But, so just something very simple. Or I get people using kitchen cloth or silk hankies and they can just throw up one side, catch it with the other. And the idea is that you're crossing one hand over your theoretical midline or your feet over a theoretical midline. It doesn't matter if someone's in a wheelchair either or isn't able to stand on their own. You can find all sorts of ways of getting them to engage one side on the other. Quite simply, it's actually a quite simple process.

- Excuse me. Do I recall you saying that this is something that NASA were also working with their astronauts in terms of overcoming the effects of zero gravity?

- Yeah there was an interesting, I think some time ago where NASA found the astronauts were displaying symptoms of dyslexia in Zero G. And they gave them these sorts of exercises and found that it helped.

- Intriguing that they would have thought to do that.

- Well there is a lot of evidence in the educational circles that a strong correlation between improved eye hand coordination and cognitive ability.

- Okay.

- And I think that was probably. This is going back some, maybe 15 years. And I think that was the genesis of the work that people in century integration do with special educational needs children. Suddenly the work of OTs, they do a lot of that.

- So actually does this reflect as well the primitive reflexes material that we were talking about earlier on. That we've got someone coming in to talk about in a few weeks' time.

- Probably, I mean I'd be interested to watch that one myself actually.

- Yeah.

- Yeah.

- Yeah.

- Yeah, absolutely.

- Well I would be interested to hear what he has to say.

- Yeah.

- I must admit.

- We have someone who practices in our clinic.

- And then has very good results with all sorts of, presently children. And I've seen the results myself.

- Yeah.

- So it's.

- Yeah.

- Where were we? We talk about Movement X. Movement X is just Movement X for cross-hemispheric.

- Cross-hemispheric stimulation, yeah. Well I'd also say that when we're thinking about cross hemispheres people tend to just think about. We tend, I think to compartmentalize and to reduce I think we're all a bit guilty of that when we think about neuro anatomy. Supposed to reduce it down to a certain point, a certain level. I think it's better to think about the nervous system or if you think about like myself already great we see the person in a red glow and you think that's the network, that's the neural network. And it's better to get a left to right, up and down, left to right, up and down and back and forth. And if we can get all parts of the nervous system stimulated doing something that involves your whole body moving ideally then you're communicating and letting that nervous system know that in my opinion, that all is well. So when we're talking about the brain then we're talking about the hemispheres, the cerebrum and the cerebellum. There's a lot of stuff with eye hand coordination. To say that if you can improve eye hand coordination you'll get an increase generally in cognitive ability, concentration and also a stress response. The interesting thing is that people are now coming around to question where the seat of personality is, where the seat of anger, anxiousness is we've all sort of heard of the amygdala and the brain stem. But, people are now beginning to question whether there's just this network that which functions up and down the brain. For instance, the cerebellum again has 10% of brain matter but 50% of the neurons and the connections. So people are started to look a bit more there in terms of, behaviors.

- While we've been talking we've had three questions come in about Movement X, cross-hemispheric stimulation. The first of which is. Do you think that dancing is a good form of exercise in that regard?

- I think it's amazing.

- Right.

- Yeah.

- I'm still struggling to know when a movement constitutes cross-hemispheric stimulation. Is it simply you have to move something beyond the midline?

- Yeah.

- It's as simple as that?

- It's as simple as that.

- I mean, I think anything with dance, we've got a clip of something I think, to show people later which is quite apt. My feeling is that, and again I'll repeat this hasn't come from me. All I'm doing is taking what we already know and trying to apply it to someone in clinic or outside of clinic, to help them with something that maybe you wouldn't have traditionally thought applying these movements for, or to. So dance, singing doesn't particularly involve cross-hemispheric stuff, but it's that group activity. That empowerment and enjoyment, just being happy.

- Okay.

- I've often asked people who how they, often sort of asked people how they relax, how they if someone's got chronic pain, how do they deal with it. And people often say things like swimming, cooking, things like that. And when you think about swimming. It's often quite a rotational thing going on. Cooking is often quite a cross-hemispheric kind of sensory thing going on.

- So essentially it's yoga, etc? It doesn't have to be a directed cross-hemispheric activity? It just might be accidental. You're gonna figure out and actively say I'm gonna do cross-hemispheric stuff and brush teeth with the wrong hand.

- No, I mean you've got a reason to. I mean, I would say that it would benefit you're doing balance exercises. That cross-hemispheric stuff, I think if you did it and practiced it daily, specifically for five or ten minutes a day then you're gonna have benefits. What benefits there'll be will probably be dependent upon who you are. Buy if someone's doing yoga or someone's doing dance. If someone's also doing group activities or sport and that's fantastic too. But when the theory becomes a bit more interesting as a clinician is when you have for instance, with my gentleman I had some time ago with severe dystonia. He was a professional horn player and every time, the only time he got dystonia in his neck which was a tremoring movement. Something akin to

this is when he brought his horn up to present it here, and then it would trigger it. So then it's not so much for the general prescription of movement isn't gonna help him. Though it will to a point but it's not gonna be specific. Then you start getting down to the really interesting cases where you have to really think about the neuro anatomy. You have to really think about the sensory homunculus and in this matter, sensory cortex. And think well what is next to the neck? What is next to the lips? How can we increase the helpful neural chatter for this gentleman, without triggering that dystonic response.

- Yes. And in fact that's a preemptive question which has just come in from Bob. So Bob, thanks for announcing who you are. Bob says. Does your approach occasionally make matters worse rather than improve them?

- Yeah, I mean absolutely. I mean after anything we do, if you can make it better you can also make it worse. And I think, if for instance in that context with the horn player. Speak about an actual case then. We found that this all happened over the course of months and months and months. We would gradually build up to. So for instance we had, we took his horn right away and we just had the mouthpiece and we actually, literally like a mechanic set, built up the horn so that it was often we thought to do with the weight of the actual instrument was in some way triggering as well as the offering it up. So on occasions when we went too far and the instrument he had or the box parts which we had was too much he would trigger and have a response and we'd have to manage that. And what we would do is step down to the formerly mastered level and stick on that for a while and then eventually we would try to nudge that again and nudge that boundary we'd come to and see if it triggered it again. I have had cases where it hasn't helped and you've got to be up front in the beginning. You're dealing with people generally, who are coming to you because they probably do want something that is a little bit different and medication hasn't helped, surgery isn't an option.

- I know you've worked with elite rugby players and golfers and you've also worked with as you say, a fairly elite musician in that case. Have you also worked with elite dancers? In general, have you done a lot with dancers?

- A little bit with dancers, yeah.

- In that case, I mean I have little experience of dance myself, as you may imagine but of course we're all unaware that a lot of dancers will practice in studios with mirrors. And so therefore, can that be helpful in rehabilitating a dancer using mirrors the way you described with the toothbrush. Dancers looking at themselves in reflection.

- Absolutely. I mean where I practice, I've got quite a small, kind of little part of the room which is about six foot by six foot but there are walls there and a wall there and a mirror there, mirror there. Four sides and a mirror there. It's very much part of all that because it just, I think it's helpful for individuals to

kind of practice it and see themselves in a full mirror. See themselves side on, and then you can use, as we're probably gonna go through a bit later you can use mirrors in all sorts of cunning ways to kind of thaw the brain into moving in a way that it didn't think it could. So in regards to studios and dancers, then yeah I mean of course, of course that's helpful, yeah.

- And they can do that without your personal supervision once they've been told what it is they're trying to achieve?

- Potentially, it depends on.

- On the person.

- On what's going on, yeah, on what the problem was.

- You've come up with wonderful mnemonic for your protocol, MENDED, haven't you? Which starts with the Movement X and then education is next. I think I can remember the last few. So education comes next. Now education in what? Are you teaching them detailed neuro anatomy to try and explain why things are happening?

- You go to their level.

- Yeah. So if I'm a bricklayer.

- You would use terms that they would understand.

- Yeah, no offense to bricklayers or anything like that.

- No, actually.

- Generally, they're not gonna have a great deal of anatomical training.

- No. You go to their level. It depends who you're dealing with. But I think the more that you can help that person understand what's happening to them. And do what we do best, which is empathize and make them feel safe and you're there for them. Then that's a huge part of this, that's a huge part of this. And there is a lot of work to explain pain. Book, again by Lorimer Moseley and Butler. That's the amazing thing, I think to have every clinic room to have that in your library because just by explaining and educating someone, then you're giving them you're not giving them a fish, you're giving them a fishing rod, aren't you.

- Yeah, okay. So we then come on to neural multitasking. What do you mean by that in your MENDED mnemonic?

- That was a phrase I came up with some time ago just to because I wanted to explain that it's not just about cross-hemispheric stimulation for me it's also about visualization. And again, visualization is a hugely hot topic. There's often good quality and there's a lot of bad quality research out there talking about it. But when you look at some of the better quality stuff.

- Are they, are both those researchers coming out with the same answer whether they're bad or good?

- It's an interesting question. I think they apply in different ways. I generally would say with visualization that we've all probably seen sports people or we've all probably done it ourselves where we try to visualize something positive. But again, this comes down to very basic neuroplasticity. It comes down to very basic, sometimes ancient philosophies that have said this for millennia. To try and think positive, to be mindful, to meditate on certain things. Generally if you keep that in the more positive sphere then you're gonna have beneficial outcomes psychologically and neurologically. And that's been proven. We live in an age now, when these ancient philosophies and kind of sayings that we all kind of feel instinctively from experience are effective, and now being proven and validated by things like functional MRI. Which is a fascinating time to be living through. Where we're seeing a lot of these things being now validated. And I mean, it's the balance that I think especially as a professional of osteopathy who have again, on account of living through these times. In that, we have to balance experience-based with evidence-based. And we're living through a time where evidence-based is becoming more and more important. And thankfully, a lot of our osteopathic principles are being validated in a structured function. We've discussed that earlier. So yeah, yeah.

- So give me an example of what you mean by neural multitasking.

- So neural multitasking would simply be if you prescribed a cross-hemispheric exercise for someone. You could also ask them when they're doing it to visualize something positive.

- Right.

- And it doesn't have to be goal orientated. It's just something positive. It sometimes helps. So for instance with the lady with polymyalgia. She has her goal was to always go on a cruise because she just hasn't been physically able to move and it's been impossible for her to even think about moving onto a cruise ship, even getting there. And so the positive thought was you'd booked your holiday, you're on that cruise. Visualize that. What are the pictures of that you want? Something positive, how it feels. And she holds that picture in her mind as long as she can while she does her cross-hemispheric exercises which for her, are with a piece of silk which she would throw and then it

would float and then she'd catch it and throw and then she'd catch. So something as simple as that.

- And that doesn't simply reinforce the good message when you're doing that activity. Well, we want a general beneficial response from this lady. If she's getting a positive image in her mind whenever she's throwing bits of silk it's not confined to that. It's only when she throws bits of silk that she feels good.

- Yeah I mean, if it lasts longer or if it's confined to that, I don't really at that stage I don't really care. The thing is to try to engage her executive function with something positive because we know that that will have neural benefits whilst engaging the primitive nervous system which is the part that we think probably is mediating this dysfunctional hypersensitivity. It's something that it recognizes as said. Now there's obviously, what I would just add is that we went through quite a long process of deciding what for her would be a non provocative cross-hemispheric movement. Because obviously not everyone could be able to do that, it might trigger something. So we found something that didn't So you engage with the primitive nervous system. You engage with the executive function nervous system the consciousness at the same time. And you paint a picture for it. And then you show it, that everything is well. You don't just say everything's gonna be alright you show it that everything is well via movement.

- Yeah, okay. Someone sent in to ask a question asking whether you think juggling is a good activity.

- Yeah.

- In terms of cross-hemispheric.

- Yeah I mean we have an army of like circus performers, aren't we?

- We could, yeah.

- But no, of course, of course if someone can. Yeah, of course. But what I like to say is that it's generally if someone can juggle then it kind of defeats the object. It's got to be something that is a learned process. I like it to be a learned process. An active participation in something that initially is challenging.

- And learning to juggle might be a challenge too far perhaps in the onset.

- It could be a bit scary and actually what you want is when the, if you've got a tissue or a handkerchief. When they're floating, there's a randomness to that when they float. And so, if you're having to adjust a couple of times remember you're not looking at it you're looking at your reflection and having to adjust in real time, in your mirror image. It's something that

becomes very complex if that tissue or handkerchief isn't doing what it's meant to be doing. If it's floating off like that.

- Yes.

- And when it, the interesting thing is when you're coaching people in these very simple movements. If a handkerchief or a silk tissue or a piece of cloth falls to the ground, they go oh, I missed it I couldn't do it. Good, because it's that randomness, it's that chaos which I want to try and evoke because they're having to adjust and do quite finite dextrous control again and again and again, even if it does fall to the ground. And that I feel, is an unconscious movement-based action they've had to try to do whilst now, there are things to say as you're thinking right, okay. Are they still visualizing at this point? No they're not. As long as they're starting with that positive visualization because what we don't want them to do is have any kind of. You've got to keep it positive. You've got to keep it so positive, obviously. Because if we are on some level also playing in and mediating for the placebo effect then good with me, that's fine with me. There's something also called the nocebo effect.

- Yes.

- So we've got to be very mindful of our words.

- So tell me how the nocebo effect would affect your patients then if you weren't doing your job properly.

- Well it's as simple as the language that you use. Well, this might work but it probably won't. Or well you know, we're looking at oh you've had it for two or three years, a bit tricky, you give it a go.

- This has come out in so many of our broadcasts actually. In fact, the last one we were doing was about informed consent. And then she, I can't remember whether the questions came out on air or subsequently. We were talking about if you have to say to a patient this might make you hurt for a few days. Is that actually going to induce a state where they do hurt for a few days? Is that a nocebo, a likely nocebo effect in itself?

- It is, but also if you say and then you'll feel better but that pain you're feeling isn't going to be the joint being damaged underneath.

- It's a beneficial process.

- Yeah, it's not as.

- You can turn that around and make it a positive thing.

- Yeah, I think you could in most cases, yeah.

- Someone's asked us whether what you've been talking about could help with vestibular problems.

- That's tricky. You've got, one of the things I would say is that people with balance issues or people with I wouldn't get someone with vestibular issues doing anything too complex because often it's best if they're bending down to pick things up off the floor, etc. You could actually have adverse effects. I would probably think more kind of eye movement exercises with them or potentially the brush ones. But I'd be very careful of that kind of Frankfurt horizontal that we talk about a lot with the vestibular apparatus.

- Actually for anyone who's interested in vestibular problems, it'd be worth looking at the recording of our interview with Johan Witt who talk about that specifically, about six or nine months ago, I think. But it's there on our CPD library on the website. Johan Witt, I can't remember the title of the broadcast at the moment, but know that someone will prompt me. Right, so where are we going? We were talking about here. We've got as far as.

- Neural multitasking.

- Neural multitasking right. So the next one means daily practice. So this I think leads into perhaps, your online therapy because they can't come and see you everyday they practice this. So is there a role in this where you could observe them through Skype or something?

- No, no, no, no I wouldn't expect to be observing them. I haven't got live webcam in people's houses, no. A voyeur, kind of looking at people, not at all. But it's.

- But you could, when a patients doing these exercises they could be using their computer webcams and saying am I doing this exercise right?

- They do. So in the past what I've done is had like a weekly session with them and they've, we've had like a session there where I prescribed something, they've done it and they show me is this right. And then the week after, followup and I'd ask them to demonstrate it again just to make sure they've done it right. But their daily practice is their daily practice and they take responsibility for that.

- Right.

- But obviously you coax them and you try to get them doing it, firstly is it safe. firstly, are they doing it effectively.

- Yeah of course.

- And with any practice of anything. It's interesting but you're probably aware and probably the viewers are all aware of the theory of ten thousand hours of practice.

- Yes.

- It's quite a well known to kind of develop, you know.

- From a book called Bounce by I forgot the name, it wasn't Sinnard was it. It was a different one

- I'm not sure.

- He's a a table tennis player and his theory was that there were no natural experts but ten thousand hours of practice whether you're a musician or a sportsman would make you expert. And his research showed that there were no examples of people who were expert who hadn't done ten thousand hours. And I think he said there were no examples of people who had done ten thousands hours who didn't become experts. So that's all you need to do, ten thousand hours.

- His work was based on a book called The Talent Code, though.

- Right.

- By a guy called Daniel Coyle. And I don't think. What was the name of the tennis player?

- The book was called Bounce and I can't remember his name. I'm thinking Synnick, but it wasn't Synnick.

- I met him at a conference and he wasn't too pleased when I said, oh have you read Talent Code. He wasn't too pleased at all.

- But his book's very readable.

- It actually is good and it's got some good stuff in it. But I would recommend The Talent Code by Daniel Coyle which is talking about the same processes and it's got some lovely illustrations in there as well. I'd also.

- You like a book with pictures.

- There's only a few. But there's another book without pictures. The Brain That Changes Itself by Norman Doidge which is a very well known, it's on all the bookshelves. Probably in it's third or fourth edition now but it's well worth, especially the chapter on pain. Well worth the read.

- Okay.

- As is Lorimer Moseley and Butler's work.

- A good question has just come in actually. Does your cross-hemispheric stimulation exercise, does that work with an unrelated part of the body? So if you've got a dysfunctional leg. Can doing those exercises with your hands actually benefit the lower limb?

- If it's something specific to the limb. To a lower limb, then you can I think the cross-hemispheric exercises generally have like a, a scatter going approach. But if you want to get specific about a certain nerve route or a certain dysfunction in a diameter of a myotome you need to be a bit more prescriptive and a little bit more detailed in your prescribing of movement for that specific area.

- But the answer is yes, it would be beneficial but you also need to be specific as well.

- Yes, only to a point then you need to potentially build upon that. With using the same sort of theories, I had a golf player who had left leg pain and so we structured a lot of stuff around small movements to begin with. Pool based, unweighted in the swimming pool movements actually and float suits just to get her moving unweighted. But for her, it was less to do with kind of, the cross-hemispheric stuff and generally, more to do with quite prescriptive movement for her supposed dysfunction.

- Okay I need to only just correct myself. It was Adam Frosh, not Johan Witt who gave us our discussion on benign postural vertigo and the vestibular system. And I believe it was Malcolm Gladwell who wrote Bounce. Was it Malcolm Gladwell?

- It was, yeah.

- Malcolm Gladwell wrote Bounce.

- Was it Gladwell?

- Well I'll tell you what. What we'll do, after this we'll make sure that we post the correct reference on the website. There's a lot of questions coming in about juggling. And I think people are getting a bit too focused on juggling about whether they can do one, two or three grapefruits and so on.

- But I think the theory of what you said is that the cross-hemispheric stuff it doesn't matter what the mechanism is.

- Yeah, I mean I think you've got especially small children. Think about climbing. If it's hard to get a child especially to do this. So you got to kind of use your imagination and think well what sort of movements will help with that. And we were talking about primitive reflexes earlier and the commando crawl. Now there's something called the gecko, isn't there? You see a lot of people doing that in gyms where they're kind of doing like a lizard walking across on the floor.

- All those things we do in cross, climbing frames. Go Ape, kind of, other brands are available but Go Ape is one of the places that people take young children. Thank God that I don't have to do that anymore.

- You're out there for your own enjoyment now.

- Yeah. I'm just like that weird, older guy climbing up frames. But you find that you've got to try yes juggling, yes if you can get the chance juggle with tissues or with silk handkerchiefs, then yes but it doesn't really matter how you get them to do it. It's that movement. If you take any apparatus away and look at what the body's doing. As long as they're doing something. There's a lot of martial arts.

- Wax on, wax off.

- Yeah exactly. I knew you were gonna say that. It doesn't really matter, dancing obviously. But why try to, how I try to sell this to someone because you've got to kind of get them to buy into it. Is that this will take you five minutes in the morning, five minutes at night. They're not all gonna have access and the time to do this. If they come to see you, they're generally quite serious about learning something that might help them. And not everyone's gonna, some people are gonna turn off if we say alright he needs to learn to juggle. So if you say, there are certain movements you can do. You can even keep it as simple as certain balance exercises as you move your hands. And as you get their confidence you can bring in certain activities like the toothbrush one or the tissue one. Because the thing is with juggling is that the ball drops. If you missed it, you missed it. And also depending on what you're doing you're not always gonna be doing this. What I want to see is this. You've got to be quite an advanced juggler to do that and still do it. And what I want to see is that tissue or the silk handkerchief floating for some time. Which gives you time to see it in the mirror and adjust to it or not. With a ball, it's gone.

- There's no way I'm gonna be able to watch the juggling balls in the mirror and catch them with the wrong hand.

- Yeah.

- Unless I'm really, really good at this already.

- Yeah, yeah exactly. So I mean I can see everyone's point but.

- Should we move on from juggling?

- We can, if you like.

- Malcolm Syed, I was nearly right. It was Malcolm Syed, not Gladwell.

- Gladwell is an author.

- I was close.

- He does a lot of self improvement stuff.

- Yes, yeah yeah yeah. Sorry I'm getting this information is coming to me from the team, I think from the team it might be from viewers, I'm not sure. There was a question, yes. Some of you are asking about concussion and whether what you're talking about can also help with the special senses, sense of smell for example when some people can lose their sense of smell as a result of head injury.

- It depends how, I'm obviously as far as comas go, it depends how soon after the concussion. I wouldn't be wanting to touch anyone who still had any kind of frank concussive symptoms.

- Oh okay.

- I did see someone recently with a concussed. What the medics have called concussive concussion syndrome which is a year on, they're still having tenderness and a bit of disorientation. And to be honest with you, I just sent them back and said you probably need to be I would probably get a scan more than anything. So I'd probably leave that alone. This is one of the things I wouldn't want to mess with.

- Yeah okay. Predictably, someone's asked where we can learn these exercises. And of course you've mentioned the fact that you're now offering training in your own protocols, aren't you.

- Yeah that's right, I do online training.

- Of course.

- I also do workshops of course. The technology is a lay down. I also do workshops as well. I'm actually doing Friday afternoon workshop at the IO Conference this year. So you can come and see me there.

- Okay.

- But my website is online as well.

- Right. So if for example, one of our practitioners were watching this evening. Osteopath or chiropractor thinks this might be useful for some of the type of patients that they're getting in clinic. They can go to your website and they can somehow get online training from you.

- Yeah, I mean it's quite at the moment it's real one on one time, so it's via a live feed. I send modular stuff and then we go through the modular stuff and go through movement online. Or it's a quite normal CPD workshop that we do over the course of a weekend. So yes, all there online.

- Your website is?

- Www.themovetoimprovemethod.com.

- The movetoimprovemethod.

- Dot com.

- Dot com, okay. Well again we'll put the reference up on the website.

- Of course.

- But I suspect that it's nice for people to know in advance what, where they should go. Right. How about a demonstration of some of the techniques that you use to help improve function?

- Okay. So we can. So for instance I think you were interested in looking at how you might do some neural stuff on a video link.

- Yes.

- Is that the sort of thing you wanted?

- Well exactly because we said part of the controversy about this was that you may not necessarily putting hands on a patient and does that constitute osteopathy or chiropractic or genuine treatment therapy.

- Yeah.

- But you are delivering this online with some success, I imagine or you wouldn't continue to do it. So how would that work?

- So generally speaking, I would've seen the patient and assessed them as you normally would in clinic. And then as you move forward through once you interact with them, if they want to interact online if they live too far away, or it's convenient for them too, and for you, then you can. What I would say is that I wouldn't, at this stage having had the discussions I've had with insurers I wouldn't be offering that to someone who I hadn't personally seen and assessed.

- What if another practitioner has seen them?

- Well I had that, but I still wanted to see them.

- Okay.

- Because although I have every respect for other practitioners, I'm sort of doing slightly different things so I just need to make sure that there's no cons or indications to what in effect is seen as gentle exercise.

- Yes, yeah.

- That is what I was told. And so there are all sorts, there are online things you can do. The EPOMED, which is anyone who's worked in physical education or personal training or conditioning would know that it's a basic yes, no to exercise. At the end if there's any yeses then you'd send them back to a GP. If it's all no's then you can carry on.

- Okay, so again we can download this and stick it on the website together with the recording of this discussion and people can just use that if they see fit.

- What I would say is that everyone has to decide for themselves. I wouldn't say that what we're gonna be doing now is kind of tantamount to assess competency in this, which is what they'll be asked. But I think someone if has a background in similar stuff and wants to develop it and gets to a point where they want to interact with someone. Then that's something they got to think about and discuss with their underwriter, I would strongly advise.

- You're being very cautious about what people should do on the basis of a discussion they're watching between you and me, and I think that's.

- Oh yeah absolutely, I'd even be cautious about the workshop stuff I do. I mean, a lot of the workshops taken up with these issues, the ethical issues of it and how to protect yourself as a practitioner. How to protect the patient. This isn't for everyone, but I think what I would say is in the workshops more than anything what I'm finding is, that this helps the practitioners as much as it can help anyone else. And if you can imbue being to it into your own daily practice. You know, how you help yourself. How you think about certain

things. It just, with me obviously as I said earlier I just feel this is a nice adjunctive skillset or personal knowledge that I bring, if I need to. But I don't give it to everyone.

- Okay. Right, so let's have a little demonstration then into how you would do something online. Shall we? Now, so that people understand how this is working. This is not a seance. You have to imagine that I am the patient and that I am watching David on my computer screen. So this is the bloke on the screen, I'm the patient. Now for some of this you'll be looking over my shoulder seeing what I'm seeing and what I'm trying to do. So, how are we gonna work? This is gonna be a dysfunctional hand, or arm.

- Yeah, okay. So it's the theory of mirror box theory. You try to fool the brain into where formerly it might've been dysfunctional or tremor or spasm as in dystonia or pain when movement. So if you can fool the brain into thinking that that hand is moving without any issues then there's a lot of again, a lot of evidence to confirm that there's beneficial adaptation in those dysfunctional structures.

- Okay.

- So what we'll be doing is there would be a video link between us then.

- Yup. And I would have my hands here now. Let's say that your dysfunctional hand is your right hand.

- My right hand, that's the dysfunctional one.

- Yeah. But what we've done is we've marked our hands in the opposite manner. So you're gonna adjust.

- Right, so I'll do that. This is my left hand, so I'm gonna mark this with a big R. And this being my right hand, I'm gonna mark it with a big L. Have you taken your hands away? You preempted me there. I'm gonna bloody well do yours as well. So the camera can read it. If I'm gonna go around with L and R on my hands then you're doing the same thing. So we've now both got our hands marked the wrong way around.

- I'm not gonna get home in one piece now. You think I'm joking. Right, so. Okay, so the way that a session would work which would obviously be doing quite a few movements. But if you just keep it really simple. I want you to look at the image in the screen. Not your hands, the image in the screen. The image in the screen, these hands moving are your hands. Focus on your hands moving in this screen. Now watch your hands moving in this screen now. And what I would do, is I would go over a series of movements depending on what the dysfunction was. I would just do stuff with pencils, I might even draw things. I might even actually be drawing one hand then the

other initially. That's the starting point. And then we do things like I'm now gonna move, now focus in on the screen on the right hand. Watch your right hand moving beautifully without dysfunctional pain. Now I want you to mirror what I did. So look at the hands in front of you. Look at the one marked R. Look at the ones in the screen marked R. Now mirror what you see.

- So now I'm watching your hand but moving mine. The one with the same mark on it.

- Yeah. Now, we'd do that for some time. But we're not going tonight because for the purposes of time but basically.

- How long?

- I'll be doing movements, couple of minutes each. So over the course of a half an hour just disappears immediately because you're doing quite a few things. Yeah as I said, you're also doing things with fine dexterous movement dependent on what the problem is. But basically you're trying to fool the brain into thinking that everything's fine and you're moving dysfunctional pain, formerly painful limb or dysfunctional limb without any problems. Okay, so that's that. We've then got actual, I mean people can use mirror boxes if people are familiar with that. There's Lots of really great CPD out there to use it. But I think we had a discussion you found it quite interesting that I used a mirror box theory online. And we could demonstrate that now if you like.

- I was intrigued actually when we talked about this online the other day.

- Yeah.

- You used a particularly high tech piece of equipment.

- Indeed.

- You used the cardboard box.

- Never leave home without one.

- What is the, and in the cardboard box I'm watching your hands on the screen but mine are hidden from me in the cardboard box. What's the value of that?

- Well again, so if my hands are here.

- You need to lift them up just a bit so the camera can see them, but yeah.

- Okay, so you are in the box. You're focusing on the image that you see in front of you which is my hands.

- Okay.

- You're moving your hands.

- So much as we were doing just now.

- Yeah.

- But I can't see.

- You're not seeing them, so you can vary it. So for instance, we now say that that hand is the dysfunctional one. So if we set up, like so. This is just quite a nice little example of now.

- So you have the iPad.

- Yeah, I hold that. Now, obviously what will have to happen. Obviously I'll be on my computer screen guiding this. You'll be at home doing this. You put that hand inside the box.

- Now hang on, let's get this. The camera needs this too. Is that okay? That way.

- So that hand if you can.

- High tech feedback from the studio team. So this hand now, which is my good hand this is the dysfunctional one.

- You can obviously be in the picture.

- Well can I introduce Claire, who's the studio manager for this evening and giving us little hand signals on what to do with our iPad. So everyone's got an iPad. So now we've also got an engineered mirror box this way, haven't we?

- Yeah an engineered mirror box basically. So very simply what you'd be doing is you'd try and get the image of the hand L, in there and you'd be moving it. And what you're getting is a reflected and at the same time, you're moving the hand in the box in the same way as you're moving this. But even if it is a dysfunctional movement basically it's more of a dysfunctional movement.

- So your patient is not able to see the hand in the box.

- No.

- But they need to be able to see the iPad.

- Yeah. And I would make quite a point of being able to see the iPad image because otherwise this is pointless.

- And I cannot from here, but the camera can see it properly but it's easy to do.

- So I've done this live via video link with somebody who didn't have a mirror. And I think it was genius on his part to say well I've got this. And I thought it was actually reasonably good because you can do it in the office, if you need to. You can do it from your lunchtime if you needed to. With mirror box therapy, we've rushed through that. But this is just basically the mechanics of how it works. As there are whole courses out there on mirror box therapy but this is neuroplasticity. This is, I still think valid in regards to what we can do in terms of clinical practice.

- Oh, well actually somebody's asked earlier on if you could demonstrate that exercise with the tissue that you were talking about. I happen to have in my pocket, no I don't. I haven't got a silk handkerchief in my pocket. Can we do it with an ordinary tissue?

- I can give it a go, yeah. Usually you use a, the best thing to use is kitchen towel or the sort of plain colored towels we use. I can use it with a piece of tissue.

- One of those will do.

- I have to stand. How is that gonna be for the cameras?

- Tricky. Okay, so.

- Okay. So basically you'd have someone, ideally this is done when you're standing in front of a mirror. It doesn't have to be a full length mirror. It can be just the standard bathroom mirror. And the starting point for this would be to have them with their hands crossing over like this. Almost like the matador kind of thing with the, what would it be. What is it they've got?

- A cape.

- The cape, yeah. So there'd be a tissue there and then the movement is like this. And as you come up, you let the tissue go and then you grab it. Now this is falling a bit faster because I like something sort of big so it flutters down. But the basic movement, looking at your reflection. There's no reflection for me but I will imagine there's something there. Up and then. Up and then. So the movement you want to see is quite a circular movement and I throw and then I grab. And like so, and then start again. You can see every time has been slightly different, slightly random. Adding to the fact that I would ideally be looking at a reflected image of that. Makes it a bit more complex. Now if someone's really confluent with that then you can get them to do it on one

leg or just slightly raised knee or whatever. Depends on knowing whether this is gonna be just a general thing or a more prescribed thing for a specific issue. You can also add in too a bit of light deprivation. You can do with a professional sportsman I think a pair of Nike Strobe glasses which actually strobed depending on what you wanted. Yeah, it was amazing.

- The question in my mind is why.

- It was sensory deprivation. Nike developed these glasses sometime ago.

- So it's a torture technique.

- Yeah exactly. I don't know if they ever made it to market but anyway, he had them.

- Yes.

- He was a pro guy. But the simple answer would be then you could just close on eye, open one eye you know, it's the same thing.

- Yeah.

- And it just adds a level of difficulty. I think though those glasses were used for athletic, quite technical athletic or technical bits where they would try and make it as difficult as possible and replicate when you're exhausted.

- Yeah.

- And so neural function is decreasing and potentially you're making more and more fatigued and they're trying to replicate that.

- Yes.

- Which was very interesting.

- Somebody here has said that learning how to juggle silk handkerchiefs is clearly the way to go. You may not be aware, but some others may that my sister-in-law is a very high level professional juggler and dancer and choreographer.

- I did not know.

- And my, Claire has threatened to get her to demonstrate this for a video on Facebook. Actually it does remind me that several years ago now she and her group were invited to the Welcome Institute in London to demonstrate the relationship between sight and activity. And in fact they were asked to juggle when they couldn't see their hands.

- Oh fascinating.

- Which has nothing to do with what you're talking about but it just.

- How did they get on?

- They're pretty good at it. They got on quite well I think. I'm not sure what they were trying to prove in the demonstration but and again, it's a bit of a rabbit hole. Someone's actually asking a technical question. Do you know why this cross-hemispheric activity improves neural activity?

- No one really knows definitively why. There's a lot of suggest it does seem to help across the border on general cognitive memory, happiness in the nervous system. There is, the interesting thing is that there is a lot, obviously who have called.

- You've heard of REM sleep?

- Yes. Rapid eye movement.

- Rapid eye movement where when you're in deep sleep the eyes are moving from side to side. And what the scientists believe and actually I think have proven now is that that's when the neural repair goes on at night. That's why people who don't sleep often end up with depression and end up becoming very ill and you can die I believe, if you're sleep deprived that in terms of torture.

- We have a sleep expert coming in in a few weeks' time. We'll talk to them about this.

- That'll be interesting. So hat neural reparative mechanism is there and I think is a very innate one. And that kind of, that I'm attracted to that theory. I'm just attracted to the fact that as I've said paired hemispheric upright movement-based organisms. I'm attracted to that as well because if you break down what we are that's not, and if you're kind of using your body in a way that you're meant to use it then I think there is some benefits to be had. So, yeah. I mean there are lots of theories out there but no one really has put their, has actually identified exactly what. But I like REM sleep, I think that's also why AMDR is so effective. They're all tapping into. A lot of people have, you know dance therapists, yoga teachers are all tapping into the same mechanism. But what that mechanism exactly is we might never know.

- Yeah. Strangely enough, I was looking. I forget what I was looking for on the internet the other day but I came up with an article on the I think it was the five most ridiculous exercise therapies. And amongst them, was a, a dance type exercise movement. And I can't remember for the life of me what it was

called but I can look it up. But actually having said that this most ridiculous exercise therapy they said that it worked. It actually was really good for weight loss and toning and all the rest of it, even though it looked ridiculous. And effectively, it was just walking with rhythmic side to side movements. And again, it suggests that whatever the mechanism, it's working. And of course, people wanted to know why this works. And we don't know why an awful lot of things that we do to patients work, do we. All we can do is work on the evidence that shows retrospectively that we had a beneficial effect, I suppose in many cases.

- Indeed and it depends on that person. I don't think it's going to work for everyone. I mean, a lot of the things work or don't work on that individual's perception of the world. Where what they come with on that day. Will be as unique to them as their fingerprint. So not everything is going to work for everyone. We just sort of go with where the kind of distribution curve of stuff that we think does work.

- You mentioned a few conditions earlier on and one of our viewers wants to know what conditions this is suitable for and what it's not suitable for. Have you got any specifics that you can offer in that regard?

- Well I've found it to be really useful for dystonia. I found it to be really useful for things like fibromyalgia and specific neuropathic pain where the pain gate at certain levels become aroused. So they're having specific, as opposed to polymyalgia where there's a general hypersensitivity. Unfortunately a lot of people. We talk about sensory desensitization sort of things of a specific nerve route or something like that. Then, that I found it to be in my personal practice in the cases that I've dealt with, to be very effective.

- Suppose actually.

- I would just also, I've found it to be very effective in working with performers with performance anxiety.

- Right.

- So you would generally find that the performers I've worked with would be given this more general cross-hemispheric exercises depending on what they felt comfortable with. What I wanted to do, they would do this if they have a history of performance anxiety daily. But they'd also be doing this backstage in the wings sometimes before they go on stage. Taking them away for five minutes and doing this as part of their warmup.

- Yeah.

- I found that to be very effective. And if we are in some way tapping into the parasympathetics. Tapping into the cerebellum relationship with sort of the

cerebral and the cerebellum relationship with the vagal nerve. Then we're tapping into I think something that can be really effective for just controlling your fright arousal mechanism.

- I think I saw IBS mentioned in your notes as well.

- Yeah.

- Another area you've treated?

- I have, I have. Because these are all syndromes, aren't they that they potentially we don't really know why but I think we do know, generally speaking they'll be something in regards to anxiety. And in terms of sympathetic arousal affecting in those cases, the nerves. And then therefore digestion, so. In those cases you might want to. I remember prescribing cross-hemispheric movement but one of the patients I had in particular it's quite interesting. They were on all fours, they were happy and safe to do so and they were doing hemispheric movement which crossed over that way. And we're trying to get involved the more lumbar and thoracolumbar region.

- Excuse me for a second, yep go on.

- Where the spastic nerves would be.

- Yeah. And there's a fairly question for which the viewer apologizes because it sounds a little bit crude. But, whoever it is is saying that they have often offered advice over the telephone to patients that aren't charged for it. Now you just talked about 30 minutes for the patient online. How do you feel ethically about charging for that?

- I mean, just to clarify I don't charge probably like everyone else, I don't charge for if it's over the phone, five or ten minutes with a patient. Of course I don't. But when I'm talking about a patient who I've seen and I've coached and prescribed initially in clinic and then they want to continue that in an online setting then I would be charging them for my time.

- Right.

- Yeah.

- Okay. And would you charge that so the same rate as if you'd seen them in clinic? Is an appointment in there for it? It costs an appointment's worth of money?

- No, the rates I chose were slightly less. But the way I feel is that this is again this is a question about expertise and the broader discussion about I think it's

got to be a very personal decision. But I think generally if someone's taking time out of your time, you're delivering a professional service.

- I think we all.

- And expertise.

- We just feel a bit guilty, don't we when we're taking money. We all feel guilty taking money anyway.

- Well osteopaths do. Osteopaths do. I had the pleasure of working with I probably shouldn't say this but I had the pleasure of working with some amazing practitioners in the World Athletics Championships in London in August.

- Yeah.

- And I worked alongside some chiropractors and was thoroughly impressed with their first as clinicians, but I also in the way they communicated.

- Really?

- Yes. The way they communicated. And I think the osteopaths need to potentially learn from chiropractors. Because we do, we have the skill. We are here to help and we are here to serve but ultimately we also are, we have to survive as well.

- So we got some time left. The chiropractors who are watching at the moment. Send something in, tell me. Is this guilt drummed out of you in college or is it just something that you learn over the course of your time as practitioners? Another question is. Would you use any of these techniques, these exercises for people with low back pain or disc problems?

- Not in the acute phases, no. But, what I would use with people is say for instance, well I have used with people in an acute phase is visualization of pain-free movement from day one.

- Right.

- That's more again, bearing towards the more elite people I've worked with, but you know visualization and observation of normal function without pain from day one. Because what you want to do is with mirror neuron. Thus mirror neurons, you say with mirror neurons you're lighting up certain elements of the same part of the brain that you'd be lighting up as if you were moving without pain. So if you get up and stand up and walk around that's one thing, but if you cannot because you're in a cast if you're watching a video of yourself moving around and performing well or even watching

someone else, it doesn't have to be you moving around. Then that's beneficial to those neurons because it's those neurons. In for instance, the sensory cortex that you want to keep firing in a positive way.

- I always assumed a visualization meant imagination.

- It can.

- So you can actually.

- It can, but the mirror neurons can also be activated via actually watching.

- Yeah.

- So right now if you were to move your hand a certain amount of the same neurons that you took to move them, would light up in my brain.

- Really?

- Yes.

- Okay.

- So that's fascinating stuff as well. I mean it's.

- Yeah. And lighting those neurons up has a long term or a longish term.

- If you did it with an acute patient.

- Yeah.

- Then it has a beneficial effect because what you're trying to avoid is it becoming chronic. And what you don't want to do is just lay in bed if you have a fracture or something where you can't move because it's not just your muscular skeletal system which is detraining.

- Yeah.

- It's your neural system, it's also detraining and putting yourself at risk of it becoming a chronic neuropathic problem.

- Yeah. I like this question. I want to come onto your video at some point because I think that's quite useful to watch. But I like this question that's just come in because you may have an opinion on this. It says, sorry if it's off topic but they have a patient with functional dystonia. Have you ever come across that?

- Yeah.

- Yeah.

- Yeah.

- Probably worth us looking at the recording of our last discussion on that one, isn't it?

- I think so, that's perfect.

- Yeah, and there are articles that you've written. Two articles now in the Institute of Osteopathy's magazine.

- Indeed.

- Osteopathy Today.

- Yeah.

- And yeah, so again we'll. I don't know if I can put those articles up. I'll check with the IO but I can certainly make the reference to those articles available. And if you look in our CPD library the previous interview, the previous discussion with David talks about functional dystonia. In particular, in the elite musician that we were talking about earlier on.

- Yeah.

- Should we have a look at this video?

- I am Federico Bitti and I'm an Italian journalist. I'm here in Toronto to have this therapy with Joaquin Farias because I have this condition called focal dystonia. Dystonia is a movement disorder which can affect different muscles. In my case, it all started with the neck. I remember my first real symptoms. I was interviewing this guy. You know, we were just sitting like this and I had to look at him towards that direction and I just felt this enormous strain to look at the other side and I couldn't, I couldn't stop it. And they were filming the interview so I had to use my hand just to pretend that I was still looking at him. But with all my strength, with all my energy I had to watch the other side. And when the interview finished, I was like oh my God I need to see a doctor, I need to see, I was so scared. And I don't know they've been like ten terrible years. They've been really good doctors who believe in what they do and the buttocks injections. But sometimes they just don't work for you and that's what I loved about the Joaquin approach because sometimes you just have to use the body as a tool to get to your brain.

- When I first met him, he was considering DVS. That is a neuro surgery. He was devastated psychologically. Okay, go to this side.

- I couldn't drive, I couldn't eat by myself. I couldn't drink my glass because my head just went on moving.

- Follow me. Okay, he can do this. That was, it seems that it's simple but this was impossible some weeks ago.

- So I was just walking. I was just walking with my headphones on. So there was Vogue playing. You know Vogue, the hit from the 90's. And as I followed the beat, the music I realized that my walking was better. The day after, I told Joaquin. Joaquin, you know what, I made this, I wanted to show him. I wanted to show him. So I got home, I just filmed myself dancing and I showed it to him. And he was like oh my God, this is your treatment. This is your treatment. I mean, you are another person when you dance. ♫ You're a superstar ♫ Yes that's what you are you know it ♫ Come on vogue ♫ Vogue ♫ Let your body groove to the music ♫ Groove hey hey hey

- Everyday has been a discovery. Everyday I discovered something different. I discovered new movements. I discovered that I could be in charge of my body again. It has to be loud for me to work, okay. And I've always known that dancing is good to me. But still you know, no doctor would tell me Federico just dance.

- The reason why dancing works for Federico is because he loves it. So he's stimulating certain areas in the brain and also he needs to focus and he needs to plan ahead. So this increased pre frontal activity.

- At the moment, I think that we are starting to understand what is going on. And we are starting to understand what works really for patients affected by dystonia.

- That's quite an entertaining video and it's taken from YouTube. And obviously we'll put the link up to YouTube afterwards or as part of the recording. But what I saw there, was first of all a chap going through therapeutic exercise in a clinic, in front of a mirror.

- Yes.

- Full standing ones being shaken around by his dystonia therapist.

- Yeah

- And then finding dance.

- Yes.

- As you brought up earlier on as a mechanism.

- Yeah.

- No juggling, I was disappointed to see. But yeah, I mean. Is that the sort of thing that you've done with your own patients?

- I, whatever way you can find to engage them with helpful movements. You noticed actually, I mean that guy could really move.

- Yeah. Federico, what a mover firstly. I loved that because also the music's great. But I, just an uplifting story because you could see how severe his symptoms were.

- And you pointed out when he was dancing.

- That his symptoms are disappearing.

- His symptoms have disappeared.

- And you often find people with starters when they sing the same thing happens. And it's fascinating to watch him in movement because there's a lot of cross-hemispheric movement. When he's really moving freely, he is, he almost looks like he's doing prescribed movement but he's not, he's just ad libbing. I just think he emphasized and he said himself using your body as a therapeutic tool to have an effect on the brain.

- Yeah.

- What we often do is we think that it's kind of top down in terms of, we must do something here to have an effect down here. But there's a pathway ascending via the movement that we can prescribe. So we have that ascending movement which is beneficial.

- Yeah.

- Yeah so I think that, I really enjoyed seeing that.

- It is a good video isn't it?

- Yeah.

- Just to wind up. We've had, as part of your protocol we had Movement X, which is the cross-hemispheric stuff. We've had education of the patient. We've had neural multitasking. We've had.

- Daily practice.

- Daily practice, I'm not finished yet, daily practice. I'm gonna try and remember all this from what I read earlier on. And then you've got empowerment.

- Yes.

- How does that differ from all the other things?

- Well, it's subtle isn't it? But I think via education in terms of giving someone the framework that then leads to empowerment. And I think when you have more control back. I was probably just looking for something with an E actually, to be.

- To make up the acronym the mnemonic acronym.

- Yeah.

- Because the final one is diligence, which means.

- Well, as a clinician you've got to be diligent. If you're doing something more on the specific injury or specific neuropathic pain then you've got to be diligent in firstly understanding neurology.

- Yeah.

- As one of the viewers said this can, as much as it's beneficial you can also have some. You have to know what you're doing in terms of what you're prescribing. And just diligent in also just trying to push the boundary slightly. So that that's what I was talking about with the musician. If a level does trigger a response you have to know to come back down and then stay on that level until he masters it again. So diligence. But I was looking for a D as well.

- Yeah, you've got a good mnemonic to cover things. A few final comments. I have one here that says I think lots of chiropractors have this guilt too. In brackets, I'm a guilt-ridden chiropractor. I'm glad to know there are guilt-ridden chiropractors out there and not just osteopaths. Dawn has said, oh totally awesome video. Really enjoyed your common sense talk, thank you very much. And we had one question about someone who can't stop fidgeting because they're anxious, both with their hands and feet. Can what you do help, yes or no?

- I'm going to say potentially.

- Potentially, good. We've run slightly over time. That's been brilliant, as it was last time David. Thank you very much for coming in.

- Pleasure, nice to see you again.

- The recording will go up as soon as we can. Along with all references that we can muster to back this up. I think you'll agree that that not only is a useful educational discussion towards what we can do in our own clinics but he backs up so many of the previous discussions we've had. And it also looks forward to the ones were having in the future. The ones that are about rhythmic movement, about sleep and so on. So I hope we can see you again in a few weeks' time. Don't forget the lunchtime CPD sessions, the case-based discussions, that's all we've got time for this evening and hope you can join us next time. Goodbye.