Airing Pain Programme 111: Physiotherapy, Mind, Body and the Social Component

Anxiety and expectations, how 'fear circuitry' affects self-management, and the importance of social prescribing

This edition has been funded by Friends of Pain Concern.

Director of CSPC Physiotherapy in Leeds, Alison Rose, specialises in working with high-level athletes, particularly those with complex injury histories. Rose speaks to Paul about her experience with chronic pain as being subjective for both athletes and non-athletes, explaining it as a unique 'puzzle' that needs to be put together to find the core mechanisms that cause pain. We also hear about the many unexpected physical relationships within our bodies that cause pain, as well as the importance of social networks.

*We then hear from Cardiff University Professor of Medical Education Ann Taylor. Professor Taylor speaks about her work exploring how those with chronic pain perceive non-pain related information, and how this information is processed through 'fear circuitry' which can have detrimental effects on self-management. Professor Taylor promotes more focus on the 'social' aspect of the biopsychosocial model and the benefit of constructive conversations between patients and their healthcare professionals, something which Pain Concern's Navigator Tool aims to do. We hear again from Professor Mark Johnson of Leeds Beckett University, contributor to **Airing Pain** 110, about the importance of delivering healthcare with a social emphasis.*

Paul Evans: This is ***Airing Pain***, a programme brought to you by Pain Concern, the UK charity providing information and support for those of us living with pain and for health care professionals. I'm Paul Evans, and this edition has been supported by Friends of Pain Concern.

Alison Rose: Anxiety of athletes coming up to an event they *will* quite often have something that comes out of the blue and you either see it every single time there's a big race coming up, that they will present in the physio room with an injury, which, when you look at it, there isn't really anything there.

Ann Taylor: If Mr. Jones, with chronic pain, is sitting in front of the television watching the Olympics, what's happening in their brain when they're processing information about people running around?

Evans: From couch potato to Olympic athletes, we all have brains and we all have bodies, but they don't always talk nicely to each other.

Alison Rose is a physiotherapist who works at CSPC Therapy Clinic in Leeds, whose patient list covers the whole gamut of ability from elite athletes, including gold medal Olympians Kelly Holmes, Jessica Ennis and the Brownlee brothers, through to the weekend warriors and yes, couch potatoes.

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Rose: For me, no one should live with pain and I think it comes out of the fact that we've got one body for life and I think these problems are intriguing because they usually have got a really complex nature to them. Obviously the effect on the person is really great and for me, physio is about fitting together a puzzle. I think quite often pain manifests in a certain way but it actually potentially might be the accumulation of any of the little injuries we've had since the day we were born, right up until the point where the body just says 'actually, no, I can't do this anymore'. For me, it's finding the keys to unlock that and to help the person have a more functional life.

Evans: So how do you unravel all those little things…well, they may be little things…that are going on?

Rose: Getting a really good subjective history is super important, so finding out what the pain means for the person, what effect it is having on their life. Sometimes it's that thing between 'oh I've got a bad back', but actually it means 'I can't play with my children'. So there's a really important reason to get rid of the reason why they have back pain, so they can play with their children.

Like I said, it's taking a really good subjective history, so going right back to the point where 'have you had falls off a bike and head injuries and even having teeth pulled out' can make a difference to how muscles sit around your neck.

I do a full body assessment and just tie in symptoms with function and how the person moves. Sometimes, you can get a problem in a certain area but it can be because there's a very large dysfunction somewhere else. For example, you might have back pain because your hip and your foot on one side doesn't work very well, therefore it affects the way you move, therefore you get back pain because that's the area that takes the strain.

Anxiety of athletes coming up to an event, they *will* quite often have something that comes out of the blue and you either see it every single time there's a big race coming up that they will present in the physio room with an injury which, when you look at it, there isn't really anything there. Then, when you get to know the athlete, you realize that this is the pattern that they have, that they will present for physio just before a big event.

I think sometimes it's the anxiety around an event that just they are just more sensitive to things and will report things and I think sometimes, it's just that they want to come in and speak to somebody that they trust and just get little bit of, I guess, confidence from that.

Evans: But that doesn't mean that the problem doesn't exist?

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Rose: It obviously exists for that person. You wouldn't belittle the fact that they feel that, because who's to say that one person feels something and somebody else doesn't? Obviously I'm not feeling that person's pain, so it might be something that I can see and sometimes it just takes time for the person to realize that actually, this is what they do every single time there's a big race coming up, that they will present as something.

Evans: So you have to address the psychological side of things as well?

Rose: Yeah, it really does come into it because pain is something that is… it can prevent you from doing things that you want to do. It can affect how you see yourself and it can affect your perception, it can affect your social life, it can affect how you interact with other people and all of those things will tie in with how this pain affects you.

Evans: That's working with elite athletes, but what about other people with chronic pain conditions who come and see you?

Rose: Obviously those with chronic pain, their end-stage rehab won't be as high a level but I would look at them in exactly the same way. I would examine them in exactly the same way, the same thing with their subjective history. It is finding out what that pain means for them, but if their aim to perform is to be able to get up and down the stairs and be able to take the children to school or go about their business, for me, it's totally the same and I wouldn't change the way I treat those people.

I might be more gentle on those with chronic pain than I would be on an athlete in my treatment, but still I would be looking to get to the bottom of that or get to the point where actually, 'you're moving really well now, I know you're still a little bit sore but actually it's fine and you will not hurt yourself moving forward', so, just kind of get on and go about your business. It is really the same puzzle that I'm putting together.

Evans: What sort of conditions do you see?

Rose: I guess one of the best examples I've got was a lady who'd had headaches for 40 years and she was on a lot of strong medication. Actually the reason that she had that pain was because the bottom of her back wasn't moving very well and she'd fallen on her coccyx. There's a connection, obviously, through your spine from the bottom of your spine right up to your head and your neck, so in getting the lower back to move better, that allowed us to settle down everything all the way up. So we managed to get rid of the headaches that she'd had for 40 years on a daily basis and managed to get her down from the carrier bag full of painkillers that she was having to take - she might take one every so often, but it's [once] in a blue moon now.

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Probably the most difficult areas to treat are pelvic pain, headaches, head pains, neck pains, neural type of symptoms and then quite often we will see people, if they've had surgery for example, [they] may end up…because obviously the scar tissue tightens and there are changes that happen because of a surgery which has been necessary.

Quite often just releasing the soft tissue around there enables the person to move better, which takes the stress off the area. There *usually* is a weak area that is under strain because of something which, if you can change that, it just allows everything to settle and life becomes more manageable.

Evans: Do you deal with people with fibromyalgia?

Rose: Yes. So again, I think quite often those have… your nervous system can get highly sensitized and I think you can really tie in with that. But quite often, those types of people have got a highly sensitised nervous system because they might have had either head injuries or teeth pulled out, or they've had big traumas, car crashes and if you think about the things that we layer on through life from when you're small, to the falls out of trees and the falls off a bike, right the way through to car crashes or slips down the stairs. All of these things, they all sit in your system and I think your brain isn't really good at differentiating between problems, then sometimes it is just unpicking those.

Evans: So what you're saying is that somebody's body, my body, is the product of, say, 62 years' worth of trauma, however light that might be?

Rose: You know, our bodies are amazing at adapting. They will adapt and will adapt because we have to get around in life.

Obviously years ago, you had to be able to move to survive and we will find a way to move in a pain-free way. Sometimes, even falling over will jangle your nervous system around and just upset it and if you do one or two of those too many, things do add up. I think bodies are incredible things and they will adapt and adapt and adapt and I think there does come a day where, whether it's an emotional stressor that comes in or another physical stressor or you become ill and your systems get overloaded, but actually your body just goes "whoa this is enough" I need to actually find someone that can help me sort this out. I think that is where we would come in. Sometimes, it's just unpicking the layers and layers that people have added on through their lives.

Evans: We are the house that Jack built, the extension on the extension on the extension on the extension on the extension…

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Rose: Exactly. I tell people that they're like onions and sometimes you are undoing all of those layers and just helping them to move and function better. Everything, whether it's just tissue that you're rolling through, you are stressing those if you're not moving very well and your body will cope to a certain point, but then will start to complain.

Evans: Now what I hadn't considered as suitable for manipulation were the bones in the head. Alison Rose again…

Rose: I think there's a myth that the bones in your skull will get fused as you grow up and that your head is like a solid bowling ball. Actually it's not fused, it's a system of flat bones that fit together a bit like double-sided tongue-and-groove and they can, with various knocks, end up being slightly twisted.

If you had a solid bowling ball as a head, if you did fall over and hit your head, it potentially could crack, so this system is in place so that you get mobility there, but it is possible to treat those bones. If you think about your head not sitting quite straight on the top of your neck, your body will have to adjust so that your eyes are actually straight in the space because your body wants to have your eyes straight so you can see properly, but other things underneath that might have to adapt.

But I've had people in who presented with double-sided shoulder pain six months after they've had various teeth pulled and braces and blocks put in, and actually that's been because everything around the head has been pulled out, so it's put a lot of stress on the nerves coming down into the shoulders. But having treated those areas, it's got rid of the shoulder pain that they've had. Sometimes, the bits that have been missed are actually [to do with] the fact that your viscera is the thing that isn't moving and we see that so often.

Again, I think with chronic pain sometimes obviously if you're taking lots of pain medication it will obviously overload your liver and it can therefore then make your liver not move very well, which can then make your rib cage not move very well, but the neural interconnections again will hyper-sensitize your system, that's where a lot of the chronic things come in. If you've had a car crash or fall on your bum or, I don't know, you've had a caesarean or surgeries or sometimes it is the other effects, your organs should move on the inside. They have something called motility which is how they move when they function, but also they do need to move inside you. For example, your liver needs to be able to rotate within your ribcage and it needs to be able to flex forward and bend backwards to give you those movements that obviously can be on the outside.

We do see a lot of people who potentially might have had, again it's usually related to a trauma, but sometimes if they've had a lot of medication because they've been ill, that things

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do get overloaded, or they stop moving very well. So, if you can picture a tin of beans which you shake up, obviously the tin of beans on the outside will still look the same, but the inside will be shaken up. So if your organs aren't moving very well on the inside, that will have an effect on the outside and how your body will be able to move, which can then have a knock-on effect on chronic pain.

Evans: I don't understand. I mean I would have thought my internal organs are in the place where they should be and that is that? So how do they move?

Rose: OK so, organs can become less mobile within your system in a variety of different ways. If, for example, you fall over onto your bottom or you're in car crash, your body will move but within you, your organs will move back and forth within your skeleton.

The other thing is that because obviously your organs are innervated by nerves, if your whole nervous system, in particular your upper back (which is related to your sympathetic nervous system and your fight-or-flight) that can have an effect on the blood supply to your organs, in the same way it would if you go into fight or flight because you're feeling anxious or you're being chased by somebody.

So if that's happening in the long term, it can be a mixture of potentially traumas, it can be medication overloading organs which again just stops it functioning very well, or like I said if your whole nervous system is really driven and it's really on overdrive, it can in itself have an effect on causing these organs to just not move as well and go into what we would call visceral spasm.

Evans: So as a physiotherapist, what you do to work on that?

Rose: You learn how to assess how an organ feels. There are different ways of being able to mobilize and they're really, really gentle techniques but they do help the organs to move better within your system, which will then allow you to move better as an entity or it will allow the organs to function better, which again can have a big effect, it just helps to get rid of toxins.

Again I've had patients in who just feel that they're toxic and when you start getting their whole system moving and obviously your liver not moving very well, for example, will have an effect on your diaphragm, which will have an effect on your breathing, which then will have an effect on your thorax and anxiety. So everything again, to me, it's all tied in, you can treat one area of the body and it will have a marked effect on another.

Evans: For somebody with the long term pain condition, what advice would you give about seeking out a physiotherapist or any other practitioner?

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Rose: I think in any profession, there are people that are good at what they do. I think it's really important to not just go to one person and think 'well, actually, physio didn't work for me'. Maybe that wasn't the right physio for you. You should be starting to see a difference within the first two or three sessions and starting to feel that things are changing. I think it's really important to have a physio that will actually check everything and actually not just look at the bit that's sore, because like I said, quite often, the bit that's sore, where the pain is coming from may be because of a dysfunction somewhere else and it's secondary to the other dysfunction. So I think it is really important that somebody is looking at you really, really holistically.

Sometimes it does take two or three times to find the right person. One of the things I treat is chronic groin and pelvis pain and people will travel from all over the UK because actually, I think we do look at that in really holistic way. We do get people better from that but these again are people who've seen many other physios and maybe it just hasn't been the right approach for them.

Evans: So, for somebody who's been in consultations with Dr Google, Dr Yahoo, or whoever, is there something they should look out for as a stamp of approval, if you like, for a physiotherapist?

Rose: You need somebody who is really experienced and has a really wide skill base and also somebody who recognizes that 'actually, this is where my limits are and actually, I do need task for help from potentially a doctor, the pain clinic [or] another practitioner'. We obviously don't have all the answers all the time but actually having a really good network of people around you, that if you do need to refer on because there are certain things that we can't do or we realize that actually this isn't within my skill set. I think it is really important to have that network as well.

Evans: Physiotherapist Alison Rose.

I just need to remind you that whilst we in Pain Concern believe information and opinions on ***Airing Pain*** are accurate and sound based on the best judgments available, you should always consult your health professional on any matter relating to your health and well-being. He or she is the only person who knows you and your circumstances and therefore the appropriate action to take on your behalf.

Now, Alison Rose talked about the anxiety athletes might feel coming up to an important event and how they might present with an injury which, on examination, is just not there. Of course, pain linked with anxiety or other emotions is not unique to elite athletes.

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Ann Taylor is Professor in Medical Education at Cardiff University's School of Medicine. In her doctoral research, she looked at the way people with chronic pain perceived non-pain related information.

Ann Taylor: So we put them in the scanner, showed them a series of pain words and also showed them pictures of activities of daily living and compared with healthy controls that were matched, it showed that they actually use their fear circuitry to process that information. So despite using a self-assessed questionnaire, [where] they said they were not fearful of movement, in fact when it came to looking at how their brain functioned, when they saw these words or saw these pictures, they were actually fear conditioned. So they subconsciously possibly felt, processed, those pain words and those activities of daily living very much using fear circuitry.

So these people were very complex people living with chronic pain, they were on high opioid use, they had lots of mood and physical functioning problems [and] they scored very highly on their pain despite large doses of opioid.

I was very interested in, if Mr. Jones with chronic pain is sitting in front of the television watching the Olympics, what is happening subconsciously? Or what's happening in their brain when they're processing information about people running around? So it kind of suggests that any movement or any pain words that you show people with chronic pain, they will process that through fear circuitry. So it's potential stressor and it's something that subconsciously, probably or subliminally, they're scared of, so it has ramifications for things like self-management. How do you disentangle people's fear conditioning with getting the right messages out there?

Evans: So go on and how do you…?

Taylor: It's about having constructive conversations with people living with chronic pain. So rather than relying on self-assessed questionnaires, which they might be wanting to respond to, to please you, it's actually having conversations about what worries you about your pain, what you find is difficult to manage with your pain, how do you view me telling you need to go and see a physiotherapist or you need to go up to the gym and trying to get them to unpick that because I'm sure if they think about it enough, they will actually start thinking about triggers that trigger this response to pain words or activities.

Evans: The first person within the health profession you will see about your pain is the GP. They don't have time to do that sort of thing, do they?

Taylor: Traditionally no, but a lot of these people that they see with chronic pain, they've had their chronic pain a long time before they go and see the GP. I think it's about, if you first

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came to see me as a GP (which I'm not, I'm an academic educationalist) but it's about saying "look, you've had your pain for a long time. We're not going to solve this overnight, so we're going to have regular 10 minute slots so [that] we can start and unpicking your pain and unpicking how you feel about your pain and then looking at the positives, looking at what you want to achieve and looking at how we can take steps to achieve that. It's about thinking rationally about how you can use those 10 minute slots in an innovative way.

Evans: Well, as if on cue, the results of four years' research and development of Pain Concern's Navigator Tool, is an innovative way to facilitate better conversations between doctors and patients and therefore better outcomes and still within that 10 minute timeframe. Full details, download links and supporting videos are on Pain Concern's website which is *painconcern.org.uk*

Ann Taylor again.

Taylor: We talk about the biopsychosocial approach to pain, but we just ignore the social bit. I've been doing a lot of engagement activities across Wales to see what people with chronic pain, living with chronic pain want from pain services and a lot of it is about social support. I think we should do a lot more in social prescribing and not just rely on 'there is the GP and then there is the pain services'.

There's the whole movement around men's sheds now which is coming forward. Things like support groups, they wanted sessions in the GPs, so somebody could tell them why they have pain, what it means, how they could help or support to look after the wife who's got dementia, so they can actually go and do something.

The people that were responding to our workshops were very much about 'it's the social support we want', and they're doing some work in Llanelli and Ely around time banking. There's a not-for-profit organization called Spice and they will come in and they will set up time banking. So if I was to come and help you with your allotment, you would do the raised beds because you've got back pain and then I would share the allotment produce or I would go and help Mrs. Jones with some activities of daily living because she's got fibromyalgia and as a result, I would get credit so I could go and use a local gym, so we're back to medieval time and bartering, but it's been shown to work very well.

Evans: I think that's fantastic. You know from my history I have fibromyalgia and I can remember my neighbours clubbing together to chop my tree down and this and that and the other, but I felt incredible guilt that they were doing this. But if I could have offered them something back that would've been fantastic.

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Taylor: And I think that's it, this is about social support, so you're no longer a victim, you're a valued member of the community and that's what Spice and time banking and all this social prescribing is about.

There was one story about a man who had low back pain and was very limited and he got support from a family with his garden and it turned out he was a war historian and he was a teacher. So, he would sit with the kids in school telling them all about the war and so he could give back to the community by teaching in a school voluntarily about the information he gleaned about World War Two.

Evans: I mean, the areas you mention, time banking and social prescribing in both those places, there are high-ish levels of deprivation. Is that why these areas have been picked?

Taylor: Yes. You know you go up to the Welsh valleys and you've got five or six generations of people who have never worked, so their great-great-great-great-grandfather worked in the mines and nobody's worked ever since. They have low resilience, they have low self-esteem and so it's about getting activities socially to enhance the community and to support the community, so they can support these people to actually gain more self-esteem. Because there's no point sending these people with massive social problems, low mood, low function [and] very complex abusive relationships into pain clinics or pain management services [because] they're not social workers.

Maybe there needs to be a step where we support them in the community, we help them with their resources, we help them become more proud of themselves and have more self-esteem, so that they can optimize who they are. So that when they go into pain services, they're already primed to make the most of pain services, because if you have a horrible life and you have pain, *I would* blame my pain for my horrible life. I wouldn't want to say my horrible life is due to me and I need to do something, I would prefer to say my horrible life is due to the fact that I've got pain.

Evans: You're a victim.

Taylor: I'm a victim, so if you take my pain away that means my horrible life is my responsibility and I'm not ready to accept that. So it's about how can the community enable people to accept that maybe their horrible lives are partly due to them and to give them some skills and some attributes and some confidence to make some difference and then, when you start making some difference, then they might be ready to relinquish their pain.

Evans: That's Professor Ann Taylor of Cardiff University's Medical School.

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Don't forget that you can download all editions of ***Airing Pain*** from Pain Concern's website. Once again it's _painconcern.org.uk_ and there you'll also find a wealth of material and information about living with and managing chronic pain, including our newly developed *Navigator Tool.*

Now, we'll be returning to the subject of social prescribing in a future edition of ***Airing Pain*** but to reinforce what Ann Taylor was saying, I just want to leave you with the snippets of conversation I had with the Director of the Centre for Pain Research at Leeds Beckett University, Professor Mark Johnson.

Mark Johnson: In the healthcare professional setting, especially in the medical profession, I don't think we give anywhere near enough focus to the social components of pain. We tend to focus on the biomedical initially and then the psychological perhaps but, actually it's the social cueing that goes on that I think is really quite critical as well. I think what the challenge for healthcare in general and healthcare service delivery is, how we manage to integrate those sorts of findings into the way we deliver our healthcare.

For example, patients who have cancer, they often seek complementary therapies and they like to experience those complementary therapies in nice settings. They don't want to be [somewhere] a bit like our laboratory, a white-walled clinical environment, there's no plants in here, there's no photographs on the wall…

Evans: …there's no piped Muzak…

Johnson: …and no piped Muzak, absolutely, absolutely and then the hospice settings have really taken that on board. I mean they're great settings to be in and around and I do wonder whether those sorts of settings would be more amenable again in some of our hospital departments. I am aware they want to do what GP practices have started to introduce little things like gymnasiums and in their settings, just little things patients can do while they're waiting to see the GP.

I think that is absolutely the way forward because you can quite quickly assume a sick role by just entering into some of the hospital settings. I was in a waiting room not so long back in a hospital and I thought 'Gosh, I feel unwell just waiting', and I wasn't a patient, I was a visitor. So I think there's a lot to be done on that side of things.

Evans: I was in St. Gemma's Hospice yesterday and there's an atmosphere of it being like a spa.

Johnson: Yeah, yeah, yeah … I'm a great believer in those sorts of environments for our chronic pain patients in particular. I think we *unfortunately* probably over medicalize some of

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our chronic pain conditions [but] not all of them. If you've got a disease driving the condition, an ongoing disease that does need attention, but we are well aware now that some of the chronic pain syndromes, they certainly do not have pathology in the peripheral tissue that originally started the pain. It's the pathology, if we want to call it that, which has migrated to the central nervous system. If we continue searching for the pathology, we aren't going to find it, so there needs to be complete sort of shift in the way the patients like that are managed. I think that's going to be the paradigm shift in care going forward.

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Contributors:

- Alison Rose MCSP HCPC, Director of CSPC Physiotherapy, Leeds
- Professor Ann Taylor, Programme Director for the MSc in Pain Management at Cardiff University
- Professor Mark Johnson, Professor of Pain and Analgesia and Director of the Centre for Pain Research, Leeds Beckett University.

More information:

- NHS England site on Social Prescribing: england.nhs.uk/personalisedcare/social-prescribing/
- Men's Sheds: menssheds.org.uk/
- Talking to Your Doctor, Pain Concern's Navigator Tool: painconcern.org.uk/talking-to-your-doctor

Contact:

- Pain Concern, Unit 1-3, 62-66 Newcraighall Road, Fort Kinnaird, Edinburgh, EH15 3HS
  Telephone: 0300 102 0162
  Email: info@painconcern.org.uk

- Helpline: 0300 123 0789
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