



Airing Pain 153

Can nature and mindfulness help pain?

This episode is produced in partnership with the British Pain Society.

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, our family and supporters, and the health professionals who care for us. I'm Paul Evans, and this edition of *Airing Pain* is funded by grants from the Nancie Massey Charitable Trust and the Royal Company of Merchants of the City of Edinburgh.

What does nature mean to you? Do you just love being outdoors in the countryside? And does this sound [bird song] bring a wave of calm coming over you? Or does it set your nerves jangling? You see, not everyone likes the great outdoors. It's the dawn chorus. I got up very early to record the spring equinox, when the days start to become longer than the nights at the end of March. To me, it's nature's symphony. To some, it's a cacophony. But in this edition of *Airing Pain*, I'll be looking at the former: how exposure to the natural world can be beneficial as part of a self-management strategy for living well with pain.

The science first, Doctor Sam Hughes is a Senior Lecturer in Pain Neuroscience at the University of Exeter, and this is his area of study.

Sam Hughes

If you speak to any clinician or anybody who is interested in chronic pain, they will say, oh, well, we say to our patients, go and spend some time in nature. But actually, if you go and look at the literature, there's very few

clinical trials that have been done on green social prescribing for chronic pain. And even before clinical trials, there's been very few mechanistic studies done on how nature impacts pain processing.

That's what we're particularly interested in at the moment. We've had a few studies published recently where we've shown with virtual reality what is going on in terms of pain mechanisms, which has helped us to understand more of the fundamental science that we need to get a better grasp of before we can then start to translate this into something more evidence-based for chronic pain.

When we talk about nature, we often think of it from an environmental psychology perspective. So how can we use some of the key principles that we've learned from a different discipline in the context of pain, and chronic pain, that might be relevant? When we talk about nature, we often say that it's restorative. What we mean by restorative is that it can help us feel refreshed. Particularly after a long day at work, if you feel like you've got this cognitive fatigue, having a walk in nature is supposed to help improve that, and that can relate to chronic pain as well.

Paul Evans

Sam Hughes of the University of Exeter.

So from lab to woodland, Elly Kinross is a Woodlands and Greenspace Officer with Edinburgh and Lothians Greenspace Trust. She runs the Craigmillar Castle Park Engagement Project, offering opportunities for nature connection, walks and outdoor learning within the community. I joined her and the group on one of their Monday walks for wellbeing.

Group

...Hiya, how are you doing? Hi, nice to see you... We've got some people that we haven't seen for a while... Hi, Geraldine... Not you, used to seeing you [laughs]... Hi, Marilyn...

Elly Kinross

Edinburgh and Lothians Greenspace Trust is a charity that works across Edinburgh and the Lothians. Elements of our work are very much about building and establishing new parks, new green spaces. So those capital

projects are the background to a lot of the work that we do. Then we have a whole team of people who are working on the engagement side of things. We're working to introduce, broaden access to and support people's enjoyment of spending time in the outdoors. Regular nature walks, regular wellbeing walks, are a real cornerstone to that. It's a very accessible way of spending time in nature.

Sam Hughes

There's changes in the way that our central nervous system processes pain that nature seems to interact with. Nature itself induces a series of cognitive and affective or emotion-based changes in the brain. It's these changes that interact with those fundamental pain-processing mechanisms. If we've spent some time in nature and it ticks the boxes for it to be restorative or have stress reduction, that will in turn activate these networks in the brain that are involved in activating our in-built pain suppression systems that we have. It's these that we think are being activated to help reduce pain symptoms.

Elly Kinross

Nature offers us so many opportunities for connection and so many models for connection.

We know that we have responses within our body when we spend time in nature. There's a health and wellbeing element to that. There's the exercise, fresh air.

Then there's the more intangible elements of this sense of being part of something beautiful and having a place of belonging. When people come to our activities, they have the opportunity to meet people locally, to spend time with other people. There's something about being outdoors with people. There's a calmness to those interactions.

So there's our bodies, there's our community. It also gives us an opportunity to respect and appreciate the places. This park is here because, we're in the middle of a city, but this park is here because people need it to be here and that offers a space for wildlife, it offers space for trees. The more access and the more engagement and the more enjoyment we have with the parks, then that has a knock-on effect for the environmental biodiversity of the whole city as well.

Sam Hughes

We have sat down with people living with chronic low back pain, and we've asked them, what is it about nature that you prefer? What we thought was the right thing is often wrong.

People often refer to forest bathing and things like that. When we went to our focus group and we spoke to them about this, they said, well, actually forests aren't really where I want to spend my time, I find that they go against what I would consider as restorative, and they actually provide more of a threatening environment for my condition. Because of that, we started to move further towards coastal environments, which seems to be much more preferred by the population that we were working with on this.

I think there's so much more research that we need to do in this area, particularly how people from different communities, parts of the UK, whether their preferences are all the same or whether they differ around the UK. It's a real unexplored area in terms of how we can deliver people's preferred choice of nature to them in the right way, whether that's in virtual reality or whether that's through real social prescribing interventions, getting the right preference of people who have got the different types of chronic pain that we're interested in.

The experiments that we do at the moment are a combination of the more qualitative research, where we talk to chronic pain patients and we get their lived experience about how nature impacts them and how it forms part of their own self-management strategies, and the more quantitative research, where we do experimental models in healthy participants.

These are just people who have no previous history of chronic pain who come to the lab. We can induce models of pain in these people, which mimic quite closely some of the symptoms and the mechanisms that are associated with chronic pain conditions like neuropathic pain. So we look at whether or not virtual reality can start to interact with some of the mechanisms that we can measure in this healthy population, which we think can provide a foundation for then saying, okay, well, if it works on this process, which is very similar to what we see in a chronic pain state, then the next step is to say, how does this work in chronic pain?

Paul Evans

Lots of people use mindfulness techniques in exactly the same way. Is this just a development of that?

Sam Hughes

They are different concepts in a way. With nature we often are trying to explain how it works from a neuroscience perspective. When we talk about how nature impacts chronic pain, what we think is happening is that there's an interaction between our cognitive and affective (emotional) processes, but also there's a really strong physiological effect.

This makes it very different to the whole idea of mindfulness, because when we're talking about nature-based therapies there's a number of different factors that are happening which can manifest as a reduction in pain, which is a distinct mechanism to mindfulness-based practices.

There's definitely elements of mindfulness that could feed into it. You could do it alongside the nature-based experiences. The nature is more of a restorative intervention, whereas the mindfulness-based stress reduction is more of a distinct psychosocial therapy that can go alongside that.

Elly Kinross

Okay, guys, so this is our regular Monday nature walk. Most of you are regular. It's lovely to see you folk and people are, like, Pam's been away. It's nice to have people back. We also have some visitors from Pain Concern today. We have Paul who's from Pain Concern. One of the things that they do is make podcasts about things that can support people who are living with chronic pain. So that's why Paul's here today. We also have Cath, who's here today.

Cath Ashby

Yeah. So for a long time I've worked doing similar things to Elly but with children at the Botanics. My passion is nature and getting outside and all of the things that you love doing, but on the side I also teach some mindfulness courses for Pain Concern because I've got lived experience.

I've come to do mindfulness because I've had chronic pain for about twenty years. So yeah, it's really nice. This combines my two loves, being mindful in nature, noticing nature, noticing the changes in nature, and being outside. A great combination.

Paul Evans

Well, Cath Ashby's introduced herself. Really, but just a word. She's a trained and accredited mindfulness teacher. She has chronic pain and discovered mindfulness through an NHS pain clinic, and now facilitates sessions mainly for people with chronic pain or conditions like Parkinson's. I'll give you details of the free, online mindfulness courses she runs for Pain Concern that she's already mentioned, later.

Cath Ashby

Some people think that mindfulness is about clearing all of the thoughts from your head, that it's getting rid of thoughts, but it's actually not. It's all about finding techniques and things that you can anchor into that bring you back into the present moment.

Because what our minds tend to do is they're jumping forward into the future. They're way back in the past. They're reliving things, they're worrying about things they're planning. A lot of the time, we're not actually present in the moment that we're at. We might be eating something, we don't even realise we've eaten it. We might be walking somewhere, we've not seen anything along the route.

So it's just using quite simple techniques, like bringing attention to the senses or the breathing or movement or sensations in the body, to remind us to come back into the present moment when we're caught up in thinking. It's almost like bringing focus, clarity, attention, presence, so that we enjoy more of the moments that we're in.

Paul Evans

I think of things like driving down a motorway, going from junction thirty-eight to junction forty-one and not knowing anything about what's happened in between. So where was my mind then?

Cath Ashby

It's so common that we're on autopilot so often that our minds, their natural state is that they want to keep the thoughts coming whether we want them to or not. They can be so random. We can be daydreaming. We could be planning our next holiday. We could be listening to music or having a song going over and over in our heads. Then it's almost like we wake up. We're like, oh, wait a minute. Ten minutes have passed and I don't even know what I was doing.

Mindfulness is just these small reminders. It's a training thing, so it is a practice. The more that we do it, the more able we are to be reminded, oh, I'm distracted or I'm away in the future. Oh, what's it like just to come back to the here and now. And then we come back to the here and now, we can reconnect with our body. We might realise how tired we are or that our feet are really sore, or we need a drink, or we need a rest, or we want to do something different, and we can start making active choices as well about how we go into our next moment.

It also gives us the ability to recognise when we're off in our habitual pattern. We might have a tendency to worry and be anxious. Or we might have a tendency to get sad about the past and what's changed and the things that we've lost. So we begin to recognise the typical places that our minds like to go. We might love to analyse things and get lost in the news, or scrolling for hours, or needing to know exactly why something is happening.

Mindfulness is about dropping that for a while and pausing, coming into the body. Okay, so how do I feel right now? What do I notice about my experience? Maybe noticing the external environment, but also the internal environment. How does my breath feel? Is it fast? Is it tight? Is it –? Can I deepen it a little? Can I feel my feet on the ground or my body on the chair? Are there any emotions? What sensations can I feel in the body? And then we might bring our attention to the breath or sounds around us. And suddenly we find ourselves in this moment. We're not in the future. We're not in the past. We're right here.

...Hello everyone. I'd just like to say thanks so much for having us today. It's an absolute pleasure to be out. This is just an invitation, you don't have to take part if you don't want, but if you'd like to join me just for a few minutes, and literally just a few minutes.

So what I like to do when I arrive in a place is just to stop for a moment, and I like to feel my feet on the ground. I'm connecting with the ground like my feet have got roots. And you know, we might like to move as well. You can do this actually moving, just tuning into the movement of the feet. We don't have to be dead still. Just take a look around. You can move. What kinds of things can you see? You might see birds flying and do a bit of cloud watching. Yeah. There's so much around us, isn't there, when we open our eyes? We can start hearing the birds, the wind in the trees. And what can we feel on the skin? We might feel breezes, warmth of the sun.

So thanks for that. That's just a way for really me to arrive in a place and feel like I've fully taken it in. You can do this anytime, when you're walking anywhere. You can even do it, I was walking down to Cameron Toll from the bus this morning, and I could hear a bird, and I just stopped for a moment and was taking things in. So thank you. We can have a wander again. But yeah. Thank you.

Group member

You're quite calm.

Cath Ashby

Yeah. And the senses can do that for us. You know, if we're just focusing on one sense at a time, we're actually really not thinking about much. It's a really good way into being mindful.

Paul Evans

Going through my mind, my active mind, what can happen next? Am I going to miss my flight tonight? Rather than thinking, I'm here in a lovely environment, I'm talking to you. That is the present. But as you were talking about the breathing and things like that, I was doing that. I closed my eyes and things changed.

Cath Ashby

How did they change for you?

Paul Evans

My breathing slowed. I wasn't particularly concentrating on my breathing. I was concentrating on what he was saying. My shoulders dropped and I felt, well, you said, being in the present. And I was in the present, I was here and now, not in the future, in Edinburgh Airport.

Cath Ashby

Yeah, yeah. Isn't that interesting as well, how you notice the physical response in your body when you're just allowed that really short pause. We're so often caught up in a tension, like an inner tension. And particularly if we experience pain regularly, we can just become so focused, hyper-focused on that one aspect of our lives.

I can completely get attached to the pain in my feet and hands right now and my back. And then I can go, wait a minute, okay. How do I feel right now? Where am I? What can I see? What can I feel? What can I hear? I can hear the birds. Oh, my breath is slowing. Oh, my shoulders are relaxing. I'm not thinking about my feet as much anymore. I'm actually thinking about the other bits of my body that feel fine. I'm enjoying the breeze on my skin.

It's all of these things. Our stress response can get so easily activated and that's a natural thing, it's an evolutionary thing that helps us survive. You know, we need to know if there's a car coming. We need to be able to get to the airport on time. You know, we need to plan our lives. We need to make sure we've got enough food in the house and all of those things.

But we get tied up in that so much that it becomes our default. We miss the small moments and the small moments of joy and those opportunities to rest in the present with the breath or the sounds or the sensations. Those small little breaks can really help calm our nervous system. Give us little mini breaks through the day that help us stay focused on tasks when we do them. Help us plan that airport trip better when the time's right. But just for a moment, can we just be here?

Sam Hughes

One of the key things that comes up with our research is that accessibility is often an issue. When we talk about nature being a useful form of self-management, often that comes with difficulties for the chronic pain

community, because a lot of different nature spaces are difficult to walk along, the terrain might be uneven, there might be inaccessible paths, things like that, which basically means that, for some, the restorative benefits of nature are hard to access.

We need to think about how we can bring those benefits to certain communities. We do it through virtual reality headsets. These are headsets that you can buy from any high street shop that sells these types of things. You can deliver immersive three-sixty videos through those. Once you put the headset on, you can sit there and you get transported straight away to a different scene, which has all the different elements that we need in order for that environment to be considered restorative.

We put a lot of thought into those environments, because you can't deliver anything that might actually tip people from being restorative to being non-restorative. Some environments are considered to be less restorative. For example, urban city environments are not restorative, nor spaces where there might be lots of people walking around or there's a lot going on, which tips it over from being what we call softly fascinating to more hard fascination. So the difference being, soft fascination has elements that capture our attention without any effort. Things like bird song, water flowing, wind rustling in the leaves, these things all capture our attention without any effort. It has to capture those aspects.

Elly Kinross

Some trees have buds with leaves and flowers in the same bed, and others have separate ones.

Group member

These green things, that's –

Elly Kinross

Yeah, that's the flower. These are the flowers. Do you see the pollen there?

ELGT

Yeah, yeah I do actually.

Elly Kinross

Yeah. But tree flowers are great because they come and go, like it's been great noticing them hasn't it? Because they're, you know – no, exactly – they're something, you can blink and miss them. They're quite specific to this time of year.

Paul Evans

We're on this walk today with the Edinburgh and Lothians Greenspace Trust. It's a beautiful day. It's an early spring day, so it's cold ish, but nice. For people who can't get outdoors...?

Cath Ashby

It's really important to address that because I've been in that situation. When I was first ill, I couldn't really get out. I didn't have any energy.

It can be as simple as I love houseplants, I'm a plant person, I've got lots of houseplants, and taking time to connect with them.

Maybe if you've got a window that looks out at a tree, there is research to show that if you have a hospital room with a view of greenery, that your recovery will be faster. Using your windows or looking out at the sky, just taking time to sit and look at the sky, if you can see the sky from your window, see how it's changing.

If you live in a flat, we've got a window bird feeder. I love that, you know, seeing the birds coming and going, listening to bird song, and recordings of that are equally as beneficial as being outside listening. Bird song is known to calm us and help us feel better, although not all bird song: there is research about different kinds which activate us in different ways, and it might be quite a personal thing.

We can bring to mind places that we've been in the past that we can't visit anymore. We can remember what it was like to be there and almost relive that memory and bring it to life through mindfulness, through remembering what it was like with the senses. We can get the benefits still, if we're just imagining something.

I really like carrying something natural, I always have a stone in my bag, always, that I like to hold. I'm that kind of girl. I collect feathers, sticks, rocks, shells, you name it, I've got it. But I have some special stones with connections that mean something to me that I hold at times. Where I need some support from nature, can be anywhere. Finding something that you love that helps you feel connected, that you can just hold, can be really powerful.

And watching nature programmes, again, there's research to show that watching nature programmes is beneficial as well.

...Did you get to hug your trees yet? Right, well, we think this is a really nice spot. Let's try and do it mindfully, which means basically you're going to go up and really love, get to know your tree a little bit, knowing that you're breathing the air that it's giving out. So, you might, I'm going to choose a tree [laughter].

Group member

Are you meant to go down to the waist or does it matter?

Elly Kinross

I don't think it matters. Whatever feels good [laughter]. Well, you're beautiful.

Paul Evans

How did you come to mindfulness in the first place?

Cath Ashby

I dabbled through the years because I'm that kind of person. I was interested in that anyway, but I'd never found a way in that suited me. I thought I couldn't do it right because my mind wouldn't stop. I got frustrated and tense.

Well, about nineteen years ago, I'd been through quite a long process with my friend who was in the process of dying with cancer, and I got very ill. I had a complete crash. I got an autoimmune disorder, I got

chronic fatigue, depression, anxiety, all of the things that can go along with a diagnosis and a bereavement. I saw multiple different specialists and was trying different medication.

Then I was asked if I was interested in doing a mindfulness eight-week course through the pain clinic in Edinburgh, Astley Ainslie. I said yes, and it was the best thing I ever did because it gave me an opportunity to really explore mindfulness in a step-by-step way that made sense.

I could see it making a difference to how I was relating to the pain, how I was dealing with the distress of being quite young and worried about the future. You know, will I still be able to work? All of those worries that we can have. How bad is this going to get? I can't cope.

I started learning more about how my mind was working. Those eight weeks gave me lots of techniques and different attitudes as well about what was happening.

From there on, that was it. I was very lucky. I found the Mindfulness Association, who are an amazing training organisation, and ever since then have gone through the different levels of their courses until I trained to teach. It's been absolutely brilliant to come back full circle and teach mindfulness to people that are suffering and living with chronic pain.

Paul Evans

Well, you've been teaching a course, an online mindfulness course with Pain Concern. I've just done the eight weeks and I found it eye opening, really.

Cath Ashby

The eight-week course is quite a big commitment. You need to choose it at a time of your life where you think you've got the resources. It's not great to do it when you're maybe in a real crisis or your mental health is unstable, you don't have the support around you. It's really important to say it's not something to turn to instead of medical help, but alongside medical help.

Sometimes when we feel we've tried everything else, well, why not give it a try? An eight-week course introduces you to all of these different

techniques and builds a whole programme. Usually there's something for everyone. You know, you might not like everything that you experience. You might think, oh, I'm not sure about mindful movement or I didn't like the body scan, but it helps you find things that will suit you.

A good course, and this is important to say, is with somebody that's well trained, that's well supported and is trauma informed because, you know, it's not always a beneficial thing to do, mindfulness, at times. It can help you skilfully try all of those things out.

Then you can come away from that eight-week course and think, well, okay. Yeah, I realised that was tough. Some of it may be of benefit and then keep going, keep going, keep going, because mindfulness is a personal journey.

It can take a long time. You might do the eight-week course twice. You might do different versions of mindfulness and just find what suits you. And you might think, well, that stuff doesn't really suit me, I prefer doing Tai Chi. That's mindfulness. It's just mindfulness through movement, and it's still using all the same processes of being here and now and present.

So really, that's what mindfulness is. It reminds us it's not just about meditating and sitting on a cushion or a chair for hours. It's about bringing it into daily life and making changes. Finding what suits you.

Paul Evans

One thing that occurred to me during the course with you is we were around eight participants, and I was the only man. Is there something that men are missing here?

Cath Ashby

I think so, and I can understand why women are more drawn to it. It's definitely portrayed as that fluffy, lovey dovey, touchy feely, come-and-learn-how-to-be-kind-to-yourself compassion. That's not really a side that's encouraged by society and societal upbringing in men.

I can see why they might worry that it's going to make them feel more vulnerable or soft. Evolutionarily, of course, it was like the strongest and

the fittest wins. There's a lot of that stereotype still around. But there are ways in for men, if you can find that way in.

It might be through a men's shed, I know that mindfulness is being brought into boxing clubs and men's sheds and other places where there's more support for men, and the approach maybe suits them better, because not everybody wants to join a mixed group as well, knowing that they're going to be in a minority.

But let's face it, through the contemplative traditions in Buddhism, where mindfulness originates, there's a lot of men [laughs]. There's a whole monk tradition.

And seeing it as a mind training, I think it's the way that it's seen that is maybe the issue. It's about clarity. It's about focus. It's about discipline as well as the soft parts.

Paul Evans

I follow rugby, I'm Welsh, so I'm a little bit of a loser, but I do follow it and it's always intrigued me. Kickers taking penalty goals or conversions, whatever, the mental processes they're going through to get that ball through a pair of sticks. I'm sure that must be mindfulness. Here and now, concentration, everything else out of your mind, discipline.

Cath Ashby

Absolutely Paul. It is used an awful lot to train elite athletes and sports people.

There's still a lot of research being done. People have been looking at how the brain changes with people that do regular mindfulness practice, how different parts of the brain get switched on. It has been found that the pain intensity might lessen.

A lot of these studies are early days and it's quite hard to measure. But the NHS do include mindfulness as one of their five ways to manage pain, particularly linking it to mental wellbeing. And let's face it, a lot of pain includes this mental health cycle of worry, anxiety, depression, regrets for what we are no longer able to do.

We can't separate the body and the mind and the environment that we're in, they're always interacting with each other. If we can learn ways to calm our nervous system, notice when we're getting overwhelmed or overanxious, bring a technique in to calm it down, it stops the pain ramping up.

The more anxious we feel, the more pain we can feel. The more pain we feel, the more anxious we get. It's like this vicious cycle. Research is showing that just some of these practices can cut that loop.

It can be a really useful self-management tool, but it brings more benefits than just managing pain. It brings every benefit to life that I can imagine.

Paul Evans

Cath Ashby, who runs Pain Concern's free mindfulness courses. To get more information and the availability of those courses, go to painconcern.org.uk/free-mindfulness-courses-2025-26/. All those details are on Pain Concern's website, which is painconcern.org.uk.

For more details of Edinburgh and Lothians Greenspace Trust's wealth of community activities like we've been on today, go to their website, which is elgt.org.uk.

And just to remind you, as I always do, that whilst we at Pain Concern believe the information and opinions on *Airing Pain* are accurate and sound, based on the best judgments available, you should always consult your health professionals on any matter relating to your health and wellbeing. They're the only people who know you and your circumstances, and therefore the appropriate action to take on your behalf.

And do bear in mind that the mindfulness practices Cath has guided us through in this edition of *Airing Pain* have all been in the natural environment of Craigmillar Castle Park. Please don't try these while driving or operating machinery, or any environment in which you need full concentration on the task at hand. Cath adds that short mindfulness in daily life practices can be beneficial for our wellbeing, but mindfulness is not a substitute for mental health treatment. If you've recently or are currently receiving treatment for an ongoing mental health problem or are going through a traumatic life event such as bereavement, it might not be

the right time to start mindfulness practice. So please get advice from your health professional.

Now, it's important for us at Pain Concern to have your feedback on these podcasts so that we know that what we're doing is relevant and useful, and to know what we're doing well, or maybe not so well. So do please leave your comments or ratings on whichever platform you're listening to this on, or the Pain Concern website, and once again it's painconcern.org.uk. That'll help us develop and plan future editions of *Airing Pain*.

Cath Ashby

So I just wanted to finish with one thing, and this is a small practice that you can do at any time, and it literally could take about twenty seconds. Rick Hansen, who's a positive psychologist, calls it taking in the good. It's a gratitude appreciation practice.

From today or something that's happened recently, you're invited to bring to mind, thinking of something on the walk maybe, anything that you're grateful for that brought a moment of joy or peace or made you feel warm inside or got you excited. It might just be one small thing. It could be quite ordinary.

Then what we do is we bring it to life in as much detail as possible. Were there any sounds at the time? Did we touch something? Could we smell anything? What were the colours and shapes? What was said. If it was somebody that we were grateful for. Then we just stay with it for twenty seconds, and three in-and-out breaths for me is about twenty seconds.

If we just stay with this feeling, of being grateful for this moment, for three in breaths and out breaths, there is science behind that. That practice is that if we dwell on something for twenty seconds and bring it to life, it forms more of a deeper memory, and we can recall it at times of difficulty, or, you know, when we need a boost. We can bring it back: oh, remember that time that I felt this. You can do this at the end of your day. When I'm lying in bed I quite often do three things and just spend twenty seconds with each in that way and soaking it in. It helps build our positive, our reserves for when things are a little bit rough as well.

Thank you everyone. Great, great.