

362R- Scar Therapy with Hannah Poulton

Steven Bruce

World. Good evening. Good evening. Welcome to yet another evening of great CPD from the Academy. Now, I don't know about you, but I have really been looking forward to this evening show. Treating scars is one of those areas where I've always wondered about the evidence and I wonder what the benefits actually are to the patient. Well, this is our chance to find out. I have Hannah Putin with me in the studio. She's a chartered physio who specialises in women's health and in the treatment of scars, that connection obviously being C section, hysterectomy, mastectomy and so on. Hannah has got 20 years or more experience as a physio she's also an acupuncturist, a proper one, not one of the dry needles. And she's a recent. He's into a first year of a PhD. Course researching his area and scarring, Hannah, good evening.

Hannah Poulton

Good evening, Steven.

Steven Bruce

You're into physiotherapy. But what got you into this whole business of treating scars? Why?

Hannah Poulton

Yeah. Well, it's really interesting because obviously, as a physio you're taught in a certain way, aren't you Orthopaedics. You have all these people coming into scars? And to be honest, I didn't really give it any thought until I had my first son 11 years ago, and I had a vaginal birth and I had lots of tearing, which of course, yes, needed to be repaired. So I had a couple of reconstruction surgeries to repair and then unfortunately, I herniated my bowel. So I had to have keyhole surgery. And then I had a miscarriage which resulted in more surgery. So more keyhole surgery and clean out. Then I had a C section birth with my neck surgeon, then I fell over and broke my arm. So all within the space of four

years, so I'd count myself as not not so lucky in those four years. I definitely didn't buy lottery tickets Excellent. Yeah, they definitely they definitely they definitely plan no Point Did anyone say in that journey? Actually, you've got quite a lot of scarring. And you know, you're having abdominal pains that there's changes in your cycle in your posture in your movement. And it was actually after 11 years ago, when I put a person on my first lesson, that was when I started to think, hang on a moment, how does scarring impact the way we move, the way we feel? Not only about our bodies, but also about the scar itself, how trauma can be wrapped around in the scar, and how it impacts your function. And what goes on underneath. So it was that I started long winded answer to your question, Stephen, I'm sorry, started my journey into scarring. And in physio was at the top of my tree as the clinical lead for physiotherapy around large teams. So I set up clinics for breast scarring. So for ladies who have had mastectomy, because I was working in oncology, predominantly at the time. And it was there was phenomenal results, phenomenal results. So ladies, that would come to me to say, You know what, I've been given this medication I've been, you know, that the physios didn't great, and I've done all my range of movement, I just can't get the last bit of range of movement. So it's like, well, let's have a look at treating the scar and see if that allows more movement, freeze off the scar, whatever that means. But also the psychological benefits. Because I'll be guarantee, if you start treating scars, you will literally be the first professional that goes I had, how do you feel about that scar? Or how does? How does that scar impact you? Your client, just your clients will be shocked that you're starting to ask these, these deep questions about it. Because no other health professional will they'll just say, Oh, you've got a scar well done. That's what you get from surgery. Even though we

Steven Bruce

can gloss over those sort of things in our profession, don't we? Because we do see quite a lot of scars with the rescue mascara. And we take them for granted. Yes. A lot of people probably aren't taking them quite so much for granted when it's their own personal school.

Hannah Poulton

No, absolutely. And this is the thing for almost, you know, 1112 13 years, I'd been blase about scoring, you think of all the 1000s of people that I treated within the NHS over that time, where, you know, maybe if I cheated the scar, would it have impacted their final result? Possibly, obviously, well, we'll never know we'll weigh but for the osteopathic chiropractors, your physios watching this. I'm not saying that the scar is the only part of your treatment now you need to be focusing on but it's a small part of the big picture. And I think that's really interesting to

Steven Bruce

somebody at the top of his game was it in I think it was in rowing. And it was and it was all about you know, you, you don't make progress through great big leaps. You make it through tiny adjustments in all sorts of different areas. And to get that full picture for your patient. You it's not all going to happen just because you've clicked a joint or muscle or stuck a needle in somewhere there all those things will combine. And that's that psychological aspect is so important, even if it's just to come to terms with a limited range of motion. That's no you don't I presume that I mean, you you focus on

women's health, you treat scars other than those sorts of scars. So you're getting success with all sorts of things. Yes,

Hannah Poulton

absolutely. Um, I used to say so when I started out, obviously, you know, you start out you you think you know what you're doing and you start and you do it and you get the good results. And then you start learning more I don't know anything actually I might need to change my practice. I used to think there was a cut off for scars so that people would come and maybe their scar was five years old 10 years old. Okay, maybe in that range, we might make a difference scar takes two years to reach maturity anyway. So would we would we make a difference? You know, within that time, I'm treating a 27 year old brisker and a 30 year old appendix scar currently in my clinic with phenomenal results in terms of how the lady with with the with the brisker you know how she's feeling how she's moving what she's feeling about herself now she can wear bras, it's, it's absolutely fantastic to see. So I thought there was a cut off but now I'm saying absolutely not. I think I have her photo as well on. Okay,

Steven Bruce

just just before we go to that. How speaking as someone who rarely wears a bra it's not unheard of. That's in my past. How was the scar affecting her wearing a bra?

Hannah Poulton

So you might be able to see on the on the screen now. And it's heard this has taken on her own phone. Hence, that's why the picture is a little bit grainy. So because the breast is so pinned in, of course, wearing a bra, the bra didn't fit the shoe itself. So of course, she tried to pad it out with padding, so it felt like it fitted and it wasn't rubbing. But you'll see on the picture below the fullness of the breast and how the scar isn't so pinned in. Now, you think for 27 years, Steven, she's been like this and it's hurt. It's uncomfortable. She didn't like the way it looked, obviously affected intimacy, you know, how you feel about it, but the pain inside the pulling. And I hear this all the time. And this is no criticism on any health care professional. But you you might have surgery, and then go back and say, No, I'm not happy with mascara and it hurts. What do you want to do about it? It's?

Steven Bruce

You don't know. It seems to me rather a shame that there are a lot of people around who don't know about what you do given the success you're telling.

Hannah Poulton

The best kept secret?

Steven Bruce

Yeah, I mean, I think there are probably plenty of scars to go around for people to treat. Just I'm gonna go back a stage here as well to we're not back. So you we talked about you doing a PhD? Yes. What's the PhDs are normally quite tightly focused on this. So what's the focus of your,

Hannah Poulton

so it's going to be Zairian scarring in women. So they've only had one Caesarean scar within the first year. And I'm looking at manual therapy techniques and how that influences scar tissue. And also, the negative pressure device how that influences scar tissue. Now interesting.

Steven Bruce

Vacuum, yes, basically,

Hannah Poulton

yes. I'm going to ultrasound and we're going to be looking at the ultrasound that I'm using later, but ultrasounding scars, treating them real ultrasounding and seeing the difference in what's going on underneath. Yes, I can show you and across all my social media, you'll see a catalogue of before and after photos and how amazing things look. I'm not in the aesthetic business. I'm not a beauty therapist, I am interested in knowing what's going on under the surface. Yes, you'll get aesthetic changes, because of course, you well, you know, yourself, you'll get increasing vasodilation you know, better perfusion, lymphatic drainage, yes, you will get changes in scar. But is that function of feeling under the scar that I think as manual therapists we need to be looking at. So that that's what I'm influencing? And hopefully, with the PhD, I'll actually show what I'm doing, because I'll be honest with you. Sometimes scars change. People come into clinic and say, No, I came in with 10 out of 10 pain. Now I've got three out of 10 pain, and I don't know what you've done. Sometimes I think I'm not sure what I've done. But I'm very pleased.

Steven Bruce

Despite this, the growing drive for evidence based medicine, sometimes stuff just happened. And you think I'm really pleased it happened and I had the good, good intentions when I did it. I'm really pleased it worked. Yes. But there's some evidence behind what you do. But before we get to that sort of thing, just talk us through the basics of this. So talking about the physiological changes in scar formation. And how that develops over time. Because you said you two years you assumed a scar is now irredeemable. It's, yeah, it's fixed.

Hannah Poulton

Well, you will, we're led to believe and it's true physiologically, how the scar forms and heals. So obviously, that that early phases, the four stages of healing, those early phases of when the scar is cut, blood flow restriction, how you get the maturation phase, how you get the proliferation phase, and then of course, that remodelling phase, which is where we're talking about that two year period. Now, now, I believe what we influence on I worked on cadavers last year, which I know is not living

tissue, but we were looking at the spaces underneath the skull and how the scar restricts in the deers and restricts that range of movement in the joint. I believe as manual therapists when we're starting to treat the scar and around the scar, we get that vasodilation. Underneath the tissues, we get that increase in blood flow circulation, lymphatic drainage, but I do believe we almost create space within the fascial connections within the tissues underneath and within the scar itself, as you're using manual techniques, and I know we'll be looking at some of those techniques later. Rob, it's I don't actually know, until I've done my PhD. So ask me the same question in five years, what is going on under the surface for? I would say, 99.9% of my clients to come back and say, I don't have that pain anymore. It doesn't pull as much. I've got better range of movement. I'm not. I feel physically and emotionally better about my role. Yeah, my bro on Yeah, that those kinds of things that might seem, you know, you might have a client on your books that you've been treating for ages. And now, you've noticed that they've got a scar? My My advice is, why don't you have a look at the scar and the relationship and how that impacts that person on a physical and emotional level? Because I believe you have to treat both to have that holistic approach. What Why? Why don't you have a look at that squat and just see if it has a relationship with what you're trying to achieve?

Steven Bruce

I think you'll be singing to the converted, singing, or whatever the most of my audience here, most of our audience here will be thinking, Yeah, we were on to this. We'd like some new ideas about treating holistically treating the whole problem, not just the specific tissue. Yes. But on the subject of specific tissues. Is there a big difference between the adhesions that you get within the body from from time to time and the scars adhering to the underlying fashion? Because in the deceptions that we've done, we've found that despite what people imagine adhesions, they don't come apart, they are very, very, very fixed and very, very difficult to move.

Hannah Poulton

No, absolutely. And this is where I'm really unsure with what difference I am making under the surface of the skin. I'll be completely honest with you, are we making a difference to the adhesions or actually around the adhesions, so it is not the actual anchor site is still there, but actually around it feels better. However, interestingly enough, when I was working on cadavers last year, we we saw underneath how the keyhole surgery, and you know, when you're doing your consultation with the client, and any past medical history, no, nothing at all, and then they take the top off and you're like, oh, all that scarring is? Oh, yes. So I, you know, had my appendix out and a habit in your excellent letter document that those small keyhole surgeries on the gentleman that we were working on, formed a tent underneath. So it came in where obviously we would presume the instrument rented, but the scars tented out like this, and not only had it gone through his rectus sheath, but through the parietal peritoneum over the bowels and stuck onto the bowels. So as we lifted the skin up, the bows came with us. Now, I thought it was fascia because I'd missed the keyhole said because it was it was so small. And I said always this the fascial connections that are going through the layers and how it all interact, and they'll absolutely not that scar tissue. So we looked on the skin and found the original incision. So never underestimate when your client comes in and went, Oh, it was just a keyhole surgery. Yeah, I had no problems, no infection, it was fine. Just think I wonder what's going on into the surface. Because those huge scars that we have your double mastectomy as your huge, you know, laparotomy with multiple C sections, emergency C sections, hysterectomy, invasive surgical procedures present never to me, like all the pain is right on the scar. They always present.

You know, it's in my hip. It's up into my chest. It's rounded to my back, actually, it's my shoulder. And that's where I think the fashion

Steven Bruce

I'm beginning to wonder if you're having a heart attack

Hannah Poulton

I find it fascinating.

Steven Bruce

I will admit to not being terribly familiar with C section surgery. So typically how large is a modern C section incision and what tissues are damaged? Yes.

Hannah Poulton

So it's about 20 to 30 centimetres, but interestingly enough, there are no standardised procedures across the UK for C sections. So yes, they form a certain pattern, obviously to get into the amniotic sac. However, how the surgeon might close what thread he uses stitches, Staples instruments to open up there is not a standardised procedure. But what they will do is so they make an incision through obviously the skin. Normally it's a Pfannenstiel incision. Share, which is the most common incision, there are four different sub incisions one of them is in right in the bikini line. So it's an incision into the bikini line, best in terms of evidence for closure, less infections and healing. So a good healing time. So through your skin, they cut them through obviously your fascia which will be obviously connected. Your tissues, your fat, part of the rectus sheath.

Steven Bruce

So minimal damage to the muscles. Yes, yes.

Hannah Poulton

So yes, Part B as part of the rectus sheath through the parietal peritoneum C, covering your organs through the uterus into the amniotic sac to get the baby out, right. So it's interesting, because there's lots of things on social media and people say, oh, you know, it's the easy way out, you're to push to push or you didn't have a natural delivery. And it's, I find it, I'm a C section mum, myself. But also, my mums that come in feel like they've failed, that they took the easy way out when it most certainly is not the easy way out. Now, the professionals watching here today might have a patient or client and whatever they call them coming into the clinic that's have that has back pain, and you do all your assessment and they say, Oh, I've had a C section. I wonder if that C section is influencing their back pain? I'm not saying it's the main cause. But I wonder if that plays a part in their back pain? Because of how deep you go? Yes. And then of course, do you have an emergency C section

where you weren't prepared? You've been in labour for two weeks, you know, two weeks, two days, you might have lost blurred? X, Y, and Zed, you might have had a massive infection afterwards. All these things, huge infections, inflammation, wound healing. I'm surprised in my own clinical practice, I didn't ever think, Oh, you've got back pain at the CSET or wonder if those two are linked in any way? I'm looking at your yes.

Steven Bruce

But given what you've just described, is that is that the most invasive sort of surgery? Is that the one that's basically who wants you to cause the most scarring and damage that you see generally?

Hannah Poulton

Yeah, I, I am flabbergasted now because I have people that come in that may have had a double mastectomy may have had a deep flap, which means they basically give you a tummy tuck. So they cut from hip to hip, take out a whole eye of skin and use that to reconstruct your breasts. And so that huge hip, the hips go in this. And actually, the scars have healed really well. They don't have massive amounts of power,

Steven Bruce

signalled by the underlying the number of layers of tissue they've had to go through is minimal. They're over. Imagine there's some, but with a C section, they're going pretty deep decoding different things. Yes.

Hannah Poulton

Like hysterectomy is absolutely a radical hysterectomy is but also then interestingly enough, you can have these smaller surgeries like the keyhole surgeries with huge, huge pay at huge you can feel the tightness it really restricts their range of movement. And they've had a small incision opener

Steven Bruce

to me that one because as you said, I'd always assumed Oh, keyhole surgery. Virtually no damage was done a week round missile, the tissues squeak out whatever you're working out or what have you. And then it's all over. I've got a long question or observation here. So forgive me, I haven't read it. So I'm gonna read it out. Verbatim. It's from Lou Cinderella. What a great name Cinderella. Hello, want to get my question in? Hope it's right over I'm watching and learning. My young son has a 16 month old third degree 8% surface area schooled burn scar graft was not an option for him in the last 12 months. He's had one post I laser, three fractionated co2 lasers, and one combined of the two. In the last year the scar has grown in depth by 13 millimetres it remains red and itchy. He wears compression garments as oat based cream and silicone gel cold packs and has a concoction of medication service discounted ultrasound. The service we're under has reached out to others. They've suggested Botox, I'm worried about how thick it's getting prematurity have been sold roughly two years post injury. What are your thoughts on this in particular Botox? Have you had an

experience of scars are present like this and use different protocols and above? I really need some lateral thinking. So Cinderella, from our holistic community. Yes,

Hannah Poulton

so huge now, burn scars do present very different to the scars like a C section scar in terms of the thickness of the burn and how that impacts the tissues around it and pause it. Now I'm not sure if silicone has been used so you can have silicone pads over it. You can have steroid injections into the scar to help try and almost soften, flatten the scar because it stops that neuromodulation of the scar tissue. So a steroid injection, I'm not sure if that's that's an option, as well. I would also see it, have you done any manual scar therapy on the scar in terms of to help almost soften what's going on in and around the tissue as well. I do use a range of devices in clinic that potentially could they, they they can alter the changes of the scar, the dynamics of the scar. I'm happy to talk about that. Yes. With with the lady off. Yes.

Steven Bruce

This is interesting. I'm not sure where maybe we should just elaborate here. I don't know how old the young son is, but the scar is 16 months old. But it's described as a third degree 8% surface area. So 8% of his surface area is a lot. And third degree means full thickness. So it's gone through all the layers of tissue possibly down as far as the bone itself where where the scar is. That's and that's an astonishing thing to have survived, let alone Yes. And are we treating I feel for new Cinderella and her young son? Absolutely. Absolutely. Well, anyway, let's Cinderella can come back to us if you'd like more information on some ideas there. Because yes, I've never got one that says SOS exclamation mark. This is amazing. I carried out my dissertation on abdominal scar adhesions benefiting from manual therapy visceral osteopathy 11 years ago, I got laughed at by the University team at the time, but based on personal experience, I continued my dissertation and 11 years on I continued to treat patients weekly in this way ever since with huge success in pain reduction. Yes. Which I mean, that's going to be reassuring to a lot of people and we're going to see some techniques later on. And I don't know obviously you can do further training for people who want to come to a specific training with you.

Hannah Poulton

I might be citing that paper in my PhD. If

Steven Bruce

I can find out who SRS

Hannah Poulton

Yes, absolutely. There is a growing body of evidence that suggests mobilising scar tissue affects structural changes underneath and surrounding the scar. Yes, more evidence is needed, as we say about everything. But yes, there is a growing body of ever show

Steven Bruce

you're a physiotherapist. We get so used to a physiotherapist just handing out the little exercises from the box. And I know that most of the profession hates that. Because the reputation This is great. I feel

Hannah Poulton

I feel a bit embarrassed that yeah, it's the physio exercises. But that's it. You see, Steve, we've especially as we've been taught in a certain way, but you have a frozen shoulder, do your exercises. On your way back actually, you know that massive scar that's all around from the surgery because you've had it reconstructed. We'll ignore that. And we're just giving you an exercise. No, no, no, we're manual therapists. osteopathy and chiropractic. You are so much better than getting your hands on am I almost feel as physios maybe I think we're taking a step back. And I'm not into that at all. I

Steven Bruce

think it's happening across the professions. Yeah, I think I think we're seeing it in the osteopathy school as well that they're well certainly they're moving away from high velocity techniques. Hopefully not from manual techniques completely. But that's that's a that's a whole that's a whole new thing. Lauren says he's heard tell that castor oil is good for helping breaking down scar tissue. Is that correct? Evidence for that one? Yes.

Hannah Poulton

Now interestingly enough, that is a an age old thing and lots of people's How are you can rub it on. That's great. Now, interestingly enough, I wonder what's in the castor oil itself? Or actually is it the mobilisation of the tissues that you're seeing the difference? There are lots of and I'm not sure if I'm allowed to mention some brand names on heavy candle. Things like Bio Oil that are on the shelves that it's quite pricey for what you get. That is great marketing. What do you have a skirt we put Bio Oil on it? No. So it's derived from petroleum. So petrol base just like Vaseline is surgeons recommend it midwives recommend it. But actually you might as well just rub cooking oil on it.

Steven Bruce

Whether you use chip forever so it's basically because

Hannah Poulton

what what you need for a product to work is what's called a humectant which means you don't ask me to spell it. It drops through the layers of this tissue. So things you get a lot in boots and beauty products literally on the surface of your skin and they'll make it all nice and shiny and soft and you'll feel better about it. But what you need is something that is going to nourish deep through the

layers. The lady with the sun with her burns. We need a product that is that goes deep with in the tissues, what

Steven Bruce

is the whole mechanism she

Hannah Poulton

elected, it basically means that it's research tested on products that are able to transcend through the skin barrier. So not just sit on the on the top, and lots of natural products that you can have jojoba oil, vitamin D, in some cases, pure aloe vera can really help nourish underneath the skin. So there's lots of products you can buy on the market like Bio Oil, that that potentially doesn't affect underneath the skin, but makes it look pretty on top.

Steven Bruce

So I'm not quite sure are you saying Bio Oil is one of those? We'll make turns? No, it's not. It's no so don't fly by a woman.

Hannah Poulton

Now, you know, somebody probably works for Bio Oil watch this might never see me again.

Steven Bruce

Okay, so Imran says, What alternatives are there for scar tissue healing post tkr? As many patients especially females ask us what can be done at home?

Hannah Poulton

Yeah, absolutely. And this is it. And we'll definitely talk about this later on as well. It's all about giving good advice and empowering the patient. So they can be with you in clinic for an hour. But then what do they do for the rest of the two weeks before they can see you again or week or what have you. So I developed scar rehab programmes for clients. So tkr is yet knees, hips. And what I'm going to do is now teach you how to touch the scar because the scar is going to feel different than what your normal tissue is 70% dense textile structure rather than 100%. So the difference in collagen fibre lay downs. So I'm going to teach you how to massage your scar yourself teach what products to use, teach you to look at the scar because you'll find a lot of people will massage the scar like this because you don't want to touch it or look at it. So look at the scar as well to engage in that area. Talk about drainage techniques as well to help with the swelling around the scar and different techniques of mobilising the tissue pulling and pulling circles, slide and glide up and down zigzag formation. None of those techniques are evidence based. Those techniques that you use with your hands are just mobilising the tissues in different ways. But once you once you understand how the

scar lays down, you understand which technique is going to get the best results. That's the difference. And interestingly enough, then I teach my clients this, I write it down for them in a programme, the product, obviously give them their exercises, physical exercises as well as scar exercises to do. And I find I find the combination of both the exercises good hydration, nutrition scar mobilisation, I feel that scar part is that missing that missing link that missing part to get really good overall healing.

Steven Bruce

I can feel a certain sense of expectation in the audience. So I said let's get over to the treatment table. So we will do that in a minute. Yeah, there's a few things what this one is a bit off the the path that we're going but why my wife had some scarring, she won't mind telling you this because it's something we've discussed on a case based discussion, because some fool crashed a motorbike when she was riding on the back of it and she had a double fracture and and it took ages to heal. But so she had scarring where the screws were put in. But if you touch that side, she felt the scar the sensation on the opposite side. And this is why this is off the track because she had acupuncture I think the acupuncture is still wrong and it changed and it went back to being pretty much sensational. How the hell does that happen?

Hannah Poulton

Tonight, acupuncturist for 12 years and I'm even doing a course on it, Steven. I still didn't know how Yeah, we can influence that from. I do know, however, that if you've got a scar on your knee, I do treat away so treat round the hip a treat round the whole leg as an acupuncturist as an acupuncturist and as the scar therapist as well. Because of course the relationship between the scar and the fascia underneath and the connection as we know as therapists you're out the whole body plays such a massive part altogether. Well, I have no idea about the acupuncture.

Steven Bruce

There's gonna be some, some woowoo theory about how it works, but he did. Yes. I've been put back in my box by Lawrence Hanna says, just recovering from shoulder surgery and I'd like to say that I've had some great physical therapy from my physio is no frozen shoulder there. So we'll chalk one up for the physios good for that. Yeah, and last question before we go across the treatment table. Mole says you got any thoughts on hematite? tumours post C section.

Hannah Poulton

Yeah. Now I don't trend Don't sorry, tend to treat hematomas directly after, after surgery, I almost say let's wait until that settle down dispersed I, I am more interested in the relationship of the scar and the scar tissue with the surrounding structures, I would never treat hematomas or seromas just because of the symptoms, the unpredictable nature of how what's going on underneath. So I'd always be careful for contraindications for myself. For scar massage therapy, I say treat around four to six weeks when the scar is fully closed, there's no infection stitches, staples, hematomas, Roma's,

or openings within the scar? Because I think we we have to respect the body and how it's healing as well. Rather than, you know, we want to fix everything, don't we? There's clarity.

Steven Bruce

I suppose there's also a note of caution that if anything does go wrong in those early stages is probably when it's most likely to go wrong. You don't want to be connected to

Hannah Poulton

it. Yeah, absolutely. Not at all. And also to respect how the body is healing, even if it's healing in, you know, either a really slow way, a painful way. Lots of collagen lay down, you know, okay, we can work with that. But in that safe zone, right.

Steven Bruce

Okay. Let's go and have a look at Rachel, shall we brilliant. After you,

Hannah Poulton

thank you.

Steven Bruce

Now Hello, this is Rachel, Rachel is one of my team here. And she's eager as healthy to have a look at all her scars.

Hannah Poulton

Thank you so much. Brilliant. So I've obviously never met Rachel before, apart from Reno half an hour ago. So thank you very much. Return it. Just before we have a look at your scar. Just tell me about the scars that you have on your abdomen. Okay, so

Speaker 1

I've got an appendix scar just here from about 15 years ago. It's slightly longer than a normal appendix scar, because it was a bit complicated when they opened me up the appendix looked normal. So they opened me up a little bit more to see what else was kind of going on. And I had sort of a massive infection around my womb and stuff like that. So they took my appendix out anyway. And that left me with quite a lot of issues, which I'll probably go into in a bit. But there was some long term issues as a result of that. I've also got a smaller scar on this side, just to keyhole one that was from some hernia surgery that was also as a result of all of this. And I've got a C section scar, as well. Yeah.

Hannah Poulton

And you have a scar from reconstruction.

Speaker 1

I've got yeah, I've got three scars on that, on that foot, the two on the side of the hill, one on the on the front of the foot, from yeah, having my foot reconstructed. And I've also got some keyhole ones around this hip from cartilage surgery to this hip. I've got my head my foam that was chopped off. So I've got multiple scars everywhere. And I've I've got a few on my head as

Steven Bruce

well. You point to the bits that aren't

Speaker 1

right, yeah, it'd be Yeah. might take a while otherwise, that's the main abdomen ones anyway. Yeah.

Hannah Poulton

So do any of those scars impact anything you do?

Speaker 1

The C, section one, obviously, after, for a period of time afterwards, yeah, if you would move a certain way you could feel it, you know, you could feel it pull in and things like that, obviously. And that just settled down over time, or I found that that did settle down over time. And you know, it's well a week on Sunday, it will be six years old. So and it's kind of a don't notice it now, you know, before you could always sort of see it, the colouring of it and things like that. And, you know, you'd go to put you know, bikini, whatever on and you're kind of aware it was there. But that again, has subsided over time. So I don't notice that one as much. It doesn't cause me much. This one's a bit different because I had such a lot of issues there as a result of this scar that went on for a long, long time. And I had multiple surgeries afterwards, through issues with this scar and damage to all the nerves in my abdomen as a result of that. So it I still get discomfort around the scar but but every now and then, it's not every day like it was for a long time. It was every day. And that has settled down. I guess Yeah. It's just it's it's not the prettiest thing to to look at. So but it Yeah, it's just more that it lets me know it's there every now and then just when I do certain things. Yeah, absolutely.

Hannah Poulton

So it would have been it'd be interesting to see Rachel you know, six weeks after having the scar the appendix scar especially especially with you know, delayed healing and see and how it affects you to see a Obviously, if we could influence that, during that time to speed up the healing to help with the pain in less pain, obviously, I know we can't. But yeah, yes. And do that

Speaker 1

that's how I knew sort of several weeks after the surgery. That's kind of I knew some it wasn't right, because it was the scar was so painful. And that whole site, you know, two, three weeks post surgery, and I kept thinking I'm supposed to be going back to work and I'm, you know, meant to be getting better. And actually, it was so painful that I knew something still wasn't right. But it took a long time to sort of figure out Yeah, yeah. In

Steven Bruce

a case like this, and these girls are getting on a bit. Would you still expect that you might be able to get results if there was some obvious symptomatology? Yeah,

Hannah Poulton

absolutely. And if you know if Rachel presented to me in clinic and said actually, whenever I you know, stretch up to the cabinet, I can feel it pulling you know, I, I'm I treated Olympic athletes, you know, and I need to get my personal best and I can't throw the disc because of course, it really hurts whenever I do it and stop doing those kind of objective markers, which is great. Okay, you want to run and your personal best is this many hours, but actually, it's starting to impact you. Let's see, let's see if we can treat the scar and influence and influence that. Of course, today with Rachel It's, it's not impacting you as much today. Hopefully, she'll

Steven Bruce

be a bit taller, we're

Unknown Speaker

gonna be achievable. Not miracle work.

Hannah Poulton

So but what I would do, and obviously, we won't do it in full today, what I would do is in clinic, obviously get Rachel in underwear, so I could see how the scar presents as she moves. So just for the purpose of today, Rachel, can I ask you just to lift your T shirt up and tuck it underneath your bra hair. Now we might you might see is and just put your hands down by your side as you normally would. Of course we see the scar hair and there are different types of scars. So a trophic scars, hypertrophic scars and keloid scars. Now, the ATA fix guys like this, it's flat and wide. You can see it

pins in in various places, you'll never get the same scar all the way through, it would always be different pinning in one part raised in another tight in another part. So this is what I find so fascinating. The scar itself tells a story. So yes, but Rachel scar is lovely. It's a trophic is pinned down, you're looking at the surrounding areas as well. You're looking for stretch marks, you're looking for red blemishes, you're looking for how it calls in interacts within the sphere of where you're working. Now a hypertrophic scar is where the body lays collagen on top of collagen that stays within the scar borders. And that looks like you know, a red rope or a red boot lace 50% of all scars become hypertrophic. So chances are, you'll see a lot of those on your clients. You have to treat those with care, you work within the scar borders and on the edge of the scar borders to try and work and then of course around the scar. And last but not least is the key Lloyd scar where you get collagen lay down on the top, but then it grows around the scar as well.

Steven Bruce

We've just had a question from Bernie asking What help can you do? Can you give per kilo? Yeah, so

Hannah Poulton

kilo scars still the gold standard is silicone, silicone plus mild compression. So let's say it was this scar was key Lloyd it'd be raised, you'd have the collagen outside this scar borders as well. I'd get silicone strip over the scarf you to work around that for weeks, as long as the scar is closed, which is still silicone is a transdermal water loss barrier. So basically a fancy term for stopping the moisture coming out of the skin. So it's an inert substance goes over the top of the scar stops that yet the transdermal water loss. But also what it does is as you add mild compression and I say if it was a scar here, maybe where some leggings, pants get to give, you know a bit of compression over that Oscar. What it does is try and block that collagen production. So if you can get it on the scar within that four to six weeks, as long as the scars closed, you have a better outcome in terms of blocking that collagen lay down. But also steroid injections can be helpful for keloid scars, longer

Steven Bruce

term. Does that sort of thing that you do. Can that help? Yes, absolutely. So we can was never uploaded? Yes,

Hannah Poulton

absolutely. And what I say is keloids are by far my most trickiest scars, scars to treat. However, I know on the slides we had horrific C sections go and you'll see that it's around the tissues. It's lumpy, it's raised. You can see the scar is really quite thick on there. And then the next slide after that you can see the difference that we've made on those. They take time that we're talking months to heal and change, but it can yes, they can. And you work within the scar borders during

Steven Bruce

those so and we're distracting you from your with your your case your patient. But during those months, how often are you seeing your patients?

Hannah Poulton

So yes, because I'm so busy in clinic, unfortunately, I can't see clients is every four weeks that I that I see them. So once we get once every four weeks. Ideally, if you have a keloid scar scar, that is quite tricky to do, and you know it's impacting the body. I'd like to see them once a week for the first four weeks if I can, and then stretch out the treatment as the skull progresses. And as the client progresses as well. Interesting things like outcome measures very quickly. I use things like fast, you know, scale of nought to 1010 being the worst pain ever from your scar. If you imagine when you were Yes, back in those early scale pain, you might have rated it, you know, a 10 out of 10. And then use that when they come back asking the same questions. There's outcome medical, the scar Q, which is really interesting to us and all the breast scar Q,

Steven Bruce

which is purely for breasts.

Hannah Poulton

Yes, yes, absolutely. And the scar Q is for any scar, it looks at the psychological symptoms of it, and also the appearance of the scar as well. And we you rate it between, you know, naughty doesn't bother you and five, it bothers you.

Steven Bruce

So I think that answers jolly local Kim's question, which is does this treatment have to be done within a certain period of time? Or can you treat after a number of years, we've already said, so up to 2527 years?

Hannah Poulton

Absolutely. So there is no doubt that if you get to a scar early, so within that, you know that six weeks, I normally start treating at between four and six weeks, you're going to see the most amount of changes, you know, the scar is healing, the scar is changing, it's in that recovery phase. And you're going to see the most changes. There's the scar lady, the breast scar that we talked about before 27 years old, takes a long time. So I've probably due to you know quite a few times,

Steven Bruce

you're also confident that those changes are far greater than would have occurred anyway. How do you not interfere? Intervene, intervene? Know you carry on into

Hannah Poulton

clinical professions. And here the CSP calling you tomorrow? So yes, so. So what I would do, interestingly enough, I would also, you know, document on my notes, the different scars, and obviously, the slight hernia and how they impact because you can have a scar over here and the scar here. And you know, with your fascial connections, how that might pull across the body, your midline fascia I know we have fascia everywhere. But looking at your slings and looking at posture and movement and how important that is. Scars play a huge, huge part in how they react and interact with each other. So you know, you've got multiple foot foot scars, how does that act and how you put your foot flat on the floor or not flat on the floor? And does that impact in you know, and how you do tastes like and heel strike and X, Y and Zed the relationship with the knee, the hip. We know all of this. So what by document about scars and how they're interacting with each other. Now, what I would do, Rachel is get you to raise your arms for me. And I might can you come up on your tiptoes as well for me, which is lovely. So just stress the body just a little bit, just to see if that changes at all with the scar, and then come down for me and put your arms down. And what I would do as well in clinic, I would get you you'd have to do it now. But lunging, squatting, bending, lifting everything we do in everyday life, but look at how the scar pins in how it restricts how it pulls. Because I get a lot of clients saying I can't I can't bend down because actually that's where it really hurts. And so you think actually that there's something going on there. That's that's deeper down. So I would get normally made sure to do that. But for the purpose of this, I will not get you to do a full workout. But may ask you to lie down on the couch. Yeah. And actually what we're going to do is look at Rachel lying down. So normally in clinic, my treatments lasts about an hour. And I yes, they last about an hour. And I do a full assessment as you would normally as a professional, you know, range of movement, your past medical history, red flags, all of what you'd normally do. And then of course I get to see them moving and how they move and then document that as well. And obviously do your outcome measures as as you would normally within your profession this this nicely, yes bolts. Do you want me just to explain?

Steven Bruce

straightaway? No, yes,

Hannah Poulton

yeah, I'd

Steven Bruce

love to know what all these

Hannah Poulton

so it's an ultrasound. So as part of my PhD, and I mentioned it before, I'm going to scan scars, and then take an image of them. And I can do that with this button here. And if I'm not sure if No, I won't do that, I'll do that in just a moment. You can take photos here, you can take videos, and you can store them. You can freeze the screen as well. So I can take images of the screen. And we might do

that later on chatting about it. You can also use these buttons to obviously zoom in and zoom out, create patient data there. And then of course, export to this

Steven Bruce

great team. So this is a great reason for the kid who's not essential to your treatment. This is really not prone to analyse.

Hannah Poulton

And I've only just got there so I'm definitely not. So no refer or yes, I'm this isn't my expertise. But I thought it'd be interesting, because as part of my PhD, I'm being trained to look at what's going on to the surface. And to see, are we making a difference? No, I hope we are. Yeah, I'll tell you that in five years time. Okay. Yes, that's okay. So I'll pop that there. And what I'll do is just coming back to Rachel's abdomen, so as she lies down, you actually see that the scar doesn't really impact the abdomen at all. It's now not pinned in, it's nice and flat and smooth. It's an a trophic scar, so that nice white flat scar, which is lovely. The scar on this slide, which you might not be able to see the keyhole surgery scar is also a trophic. And it's white and flat and cross we've got the C section here. Now, sometimes with clients when they lay down, you can see the scar pinning in you can see it pulling you can see the tissues stretching. And what I'd always say is you assess around the scar. As women house physio, I'd normally assess the abdominal wall as well for diastasis. I'd normally possibly do the external pelvic floor check as well. But what I'm looking at is around the scar hair. And what I'd say to all the professionals watching, have a look around the scar document what the scars doing what it looks like, no fancy way, just say what you say or write it down. And then I would start manual techniques, sweeping my hands over the scar and feeling how that scar is pulling. Because sometimes you can maybe think, wow, that's super tight. And wonder if that's, you know, the scar was impacted in there. Or actually you start working around here and the client said that's that's too much, but actually really hurts. Now, you'll find some manual therapists who don't have any oil on their hands. I love having oil and cream on my, on my hands. And of course, I just find if you're going to moisturise the skin in the sky, you might as well have good oil and cream on your hands. So yes, so lots and lots of really nice light sweeping, we call this feather light sweeping. And I would start to engage round that area. And then of course, I might start to treat the scar. So pinning and pulling across the scar like so, circles across the scar like so bracing and rubbing out like so.

Steven Bruce

Are you just being driven here by instinct? Do you have a routine?

Hannah Poulton

Everything is holistic. So I never treat the same person the same. All of them are holistic treatments. And like we touched on before, once you understand how the scar is pulling how it's restricting. I have clients that say actually the scar is fine, but actually is a pair. Right, you know what I'm going to do, I'm actually going to work underneath the ribs, I'm going to work on the diaphragm around here. I might do the same. I might do circles, I might do pitting and pulling. I might do bracing and rubbing

over that scar. And what are we doing? I do believe we're influencing the tissues and creating a space underneath creating that vasodilation creating also a really nice endorphin response. So the client is more relaxed, less pain and how they interpret pain is different. So yes, and what I'm saying to therapists watching, I don't expect now you to start doing this with everyone's scars wherever they are on their body. But actually even if it was just okay, I'm gonna make note of that scar. I feel it might be impacting your range of movement might be impacting your pain. Let me have a look to see how I'm going to start treating that scar and I'm going to see if it makes a difference. If

Steven Bruce

you if you So we talked earlier on about the lack of treatment for scars post surgery. And so if you were to go to an obstetrician who's just white your squealing, living being out of a hole in Rachel's abdomen, yes. I said, Well, I'm just I didn't have a plan for this. I'm just gonna sweep and pinch and circle and how are you going to convince him that this is worth doing isn't just somebody selling wound medicine? Yes, no,

Hannah Poulton

absolutely, because the evidence is there. So there is huge growing body of evidence about scar mobilisation, and mobilising the scar, early interventions in scar management, coupled with good hydration, good nutrition, you know, engaging with that scar, but also in my clinical practice over the last 11 years plus, since incorporating scar treatment. I have searched good outcomes, I don't think it's just me, I think it is now acknowledging the scar. Because let's say you've had life saving surgery. And now you've come to see your therapist, and you know, and you've got shoulder pain. What wouldn't it be? Wouldn't it be helpful if I actually asked you, so how does the scars make you feel? Or how do they impact you? Because if you're walking around like this, because actually you hate them, and they hurt, yeah, but that's probably going to cause some of your shoulder pain. So let's, let's look at that. And I'm not saying that we have to be, you know, now trained counsellors and CS. Now we're doing XYZ. But just to acknowledge that they're there, I think is the first step. And

Steven Bruce

the research that you talked about. Yes. Is that I don't use the term credible research. But everybody talks about, you know, randomised, placebo controlled, blinding. Yeah. Is it that quality of research,

Hannah Poulton

very few limited studies are randomised controlled trials. And the ones that I've been reading use a very small sample size. So we're talking 10 2050 patients with the the PhD that I'm doing, I'm looking at about 150 to 200 C section clients that I want to treat to see a difference. I know, in my own clinical experience. I don't know how many 1000s of guys that I've treated now. But with now with scarf therapy, I find significant improvements in their outcome

Steven Bruce

will be a control group in your Yes. This lot. Yes.

Hannah Poulton

Absolutely. So some of the clients who are going to have, I will do scar massage on them. And some of them are do scar massage and use the negative pressure and see if there's a difference. And yes, of course, I have clients that potentially will come to me and I say, oh, here, let's just give you a programme and see how you get on with it and see the difference between intervention and no intervention at all. What

Steven Bruce

about What about just doing manual techniques which had nothing to do with the skull? Yes,

Hannah Poulton

I could, I could do that. I don't want to do that as part of my PhD. I want to I do believe there is there is enough evidence out there to say actually working on the skirt and using in the research a lot of the evidence at the moment sorry, it says standardise mobilisation take techniques. I'm still yet to find the original paper that standardise the scar techniques because I haven't found it yet. If anyone's listening and they want to send it to me, that would be great because you'll save me months of digging through the papers. But there is no standardised way. It's it's how the scar is presenting and then how you work around that scar. I think that's the key. If you can get anyone just whipping a scar but actually understanding it. I think that's the key.

Steven Bruce

The negative pressure device you talked about, is this a highly sophisticated piece of kit or could we use could we be using acupuncture and cups for example.

Hannah Poulton

Now, interestingly enough, so it's the lymphatic device, which is yes, which uses negative and positive pressure on the scar so lifts and lowers the skin which is great. You're getting that lymphatic drainage, and that's what it was originally used for, which is which is fantastic. And what we're finding is it's almost separating the scar tissue to allow that lymphatic drainage to almost soften the scar so we can work on it and we get great results, which is good. You can use things like cups, cupping cupping, but of course you you don't know what pressures you're using over the scar and how long to last them for and of course, they're very stationary within that area, whereas I can cover the whole the whole body. I do have some slides that show acupuncture. With scars. We needles in them. And I'm doing courses with acupuncture and scars because there's also a growing body of evidence to say very small to say needling into the scar, can help obviously create that micro trauma to help with that blood flow to help with the scar healing. So don't worry, Rachel, I will not be acupuncture you today. Have you been demonstrating? Absolutely, yes, I'm sure time is yes, time is ticking. So pop this on here. So you should see on the screen and I'll stand this side. So it's a little bit

easier here. And what we're going to do is just go transverse over Rachel's scar here. Now I just start by saying this is in centimetres, so one centimetre, two centimetres, three centimetres. So you can see actually how, you know, we're not going through very deep. Now, if I hold this here and press the frozen button, Can I point on this? Yes, on this so lovely. So here we're looking at your skin layer. So you've got your dermis, your epidermis and your hypodermis. So let's call it the sandwich of skin, just in this layer. Here, you can see it's only about a mil thick. So that's how thick your skin is. Then underneath here, you'll have pockets of adipose tissue, you'll also have your fascial connections running through, not only with your adipose tissue, but also starting to go through into your muscular structure and the hair. And we can probably with Rachel, if I press a bit harder, we might even see your bowels moving as well into me, please don't move your

position. But you might be able to see as we come forward to the rectus abdominus as well, you might be able to see the rectus underneath and I can go down your rectus abdominus to have a look at that as well. But interestingly enough with Rachel's scar, and of course, we're going to just slide over Rachel scar here, you notice in the top layer of the skin, you've got like a little gap, like a little hole in the tissue healing. And I want to say it's right in the bits that dips into your scars when you stand up, you have a little dip. So it just shows that there is almost like a little pocket that potentially hasn't fully closed. What does that tell us? Absolutely nothing at all. It's a 12 year old scar. But interestingly enough, what I want to do is work around, round that scar, if that was causing pain problem, and then re ultrasound and see if we're making any difference underneath.

Steven Bruce

I'm really disappointed we're gonna have to wait five years. This is fascinating.

Hannah Poulton

Now with Rachel Scott, as I'm sliding a lot on, you can't see any changes within the skin above. But you notice just here there's almost like a black line that goes through. Now interesting that that's really interesting. Because I know now I've moved it. But you can see almost this line that goes through here. That's what we're seeing in the scars is that they're not healing when you've had lots of trauma in terms of either infection, reopening, lengthening scar, blood loss, that delaying in healing multiple years after the

Steven Bruce

original insertion is a discontinuity in the tissue. So let's go three centimetres. Yes, absolutely.

Hannah Poulton

Now, of course, if I change the parameters, which I'm not going to do, because I've saved them from my study, but I'm not going to, but I went if I went deeper, it'd be interesting to see. Actually, does this go all the way through to Rachel's bows, does it does it impact her? Now Rachel is not telling me that, obviously the scar is affecting her at all. But on people that do have problematic scars, we're

noticing the separation of the tissues, the disruption of the tissues. And of course, I wonder if this is actually what's what's what's starting to look at pains where you're feeling the pain. I also scan away from the scar as well to see if there's any scar tissue linking up the scars. Interesting. My husband's in insulin dependent diabetic, so I scanned over where he injects and he's got like a solid, round limpid, looks like a scar tissue underneath. That's always where he gets the PE in. So he doesn't inject any more. So it's It's just interesting. It's interesting to say, do you need this in your clinical practice? Absolutely not. You can treat scars with your hands. You don't need any, any gadgets at all. However, I do believe the medical devices that we use, do it improve scar healing and recovery. And of course, for my PhD, it's imperative. Having a good outcome measure an objective mark, which is interesting. And also scan your home. Is that dark? Dark? I'm sure we might be running out of time. Oh,

Steven Bruce

yeah. We've got a few more minutes. more minutes. Yes. Yes.

Hannah Poulton

Now, interestingly enough, so your rectus abdominus. So, obviously, yes, I press the button. Button. Press A Yes. No. Yes. So this part here? Part of your six pack your exes on that side, as well hidden? No, no, not at all. Not at all. I can clearly see that. And then if I scan over to the other side, let me just get my job the right way. Let's get back here. So yet part of you sick but one of the rectus abdominus. There and then on the other side? You can see it. You can see Hang on a moment. That so yes. So one of your abdominals on that side. And you'll notice the white connecting tissue, the linea alba between two of the lines between the rectus abdominus. In the middle here, that thin white line, as I'm scanning all the way down, all the way down. And then of course, as you get to your belly button, you'll see the black line seems to be about starting to move underneath, which is lovely. But you see that those two black lines? It's just showing where the hernia is. Right. And the gap. That's yeah. Yeah. Nothing at all to do with scarring. I just thought it might be interesting. Yeah, it is. It's

Steven Bruce

out of curiosity, and I'm not suggesting that anybody's gonna think that they must get one of these machines.

Hannah Poulton

is pretty tough. Yes. This is not too bad. No, if you're going to use it all the time. This is the pinion IQ IAT there are obviously other ultrasounds on the on the market. You can you can you can use. Yes, I think I think it might be around 19,000 During

Steven Bruce

virtual democracy. Somebody Okay, Rachel, thank you very much.

Hannah Poulton

Thank you, thank you.

Steven Bruce

We, we did have a for some reason, we think we've had a bit of freezing going on with the video feed to some people. So I might have to ask a few questions again, once you're comes in. But Alex has asked, he said that you mentioned steroids for scarring. Do you mean steroid cream? oral meds or injections or injections?

Hannah Poulton

Sorry, yes. If I wasn't clear on that, I never use them as the first line of treatment. But if you've got especially a keloid scar that is growing quite rapidly, and your manual techniques and the devices that you use and silicone and not helping, you can get a steroid injection into that. And what we're finding now is some surgeons with C section scars when the members come back for the second C section, and they've cut out the keylite they're actually injecting into the skin as they're closing it. And using a finer thread, which helps prevent waste helps reduce the amount of college and build up. Okay, yes. So

Steven Bruce

Jess has asked whether you have any favourite creams and she uses Vitamin E for scars is that?

Hannah Poulton

Yes, Yep, absolutely. That's great. I use the nakki. So it's na Qi they've got a skin optimising oil and the skin repair oil. I find both of those good because they contain amigas in there and rose hip oil and Alanna lick acid which helps with discouraging

Steven Bruce

nivia Because it smells nice. Yeah.

Hannah Poulton

I forgot to bring the creams with. But yes, there's Alhaj drown which is an aloe vera base and it's got the jehovahjehovah oil or how have you Yes, I would like to pronounce that. These are evidence and research tested products. So for specifically for scarring. What are

Steven Bruce

the ones that claim to do things that don't? You've mentioned one Oil already which was remembered, remind me again the Bio Oil. But of course we do see lots of advice. Yes, I imagine there are lots of adverts for rejuvenating creams and rubbish on the older ones out there you say we're looking to avoid this because despite what it says it ain't going to do any good. I mean thinking for scar treatment, not ageing or any of that sort

Hannah Poulton

of stuff. Yes. I always say I never I never like to yes to, to, basically yeah, poopoo anyone with with products that they're the advertising or using, I was always say, just look to see if it's been actually researched, tested on scars, because you can get aloe vera gels, which is great. But she a lot of the cheapest stuff is the aloe vera powder. So they strip the aloe vera. They then freeze dry it in the powder, and then they transport it to the next country where they put it in the cream and then they sell it to you. So by the time you get it, it's got a small concentration of aloe vera. If you can get one that's stripped directly from the leaf, like the L Hydra M is yes, it's more expensive, a lot more expensive. But it's it's going to be good. So

Steven Bruce

be evident from the contents. Percentage of aloe vera.

Hannah Poulton

Yeah, absolutely. But vitamin E. Yes. Yep. There are research papers out there that says no for vitamin E for scars. But actually, I've used it. I don't have any problems with aloe vera.

Steven Bruce

Christina says her oncologist 33 years ago, I was impressed by her treatment of the scar and the burns from radiotherapy. And lavender oil for the burns pure jasmine oil on the cut. expensive but well worth it. The scar is soft and barely visible and has been since the first weeks. Again, lavender and Jasmine

Hannah Poulton

yet. Absolutely. Now, is there any evidence to support those particular ingredients? I don't know that there. There is, however, that early intervention and using natural organic products. Absolutely. But yes, they are expensive, but that they are pure products rather than them being you know, covered in petrol and

Steven Bruce

very interesting question from Lawrence here oversee what we have over there was an ultrasound scanner, which you're using to show the results of what you do as part of your PhD. Can ultrasound be used therapeutically to treat scars?

Hannah Poulton

Now, I don't know the answer to that question. Because I've never used ultrasound to treat scars. Yes, there is some evidence out there to say that it could influence scar healing and recovery. But I'm I'm yet to use it personally. So I actually I I wouldn't like to comment on that. There

Steven Bruce

is some logic behind me it's a physical therapy, because it's so it's a pulsation app, the tissues.

Hannah Poulton

Absolutely. And I use electrotherapy devices in clinic to help with in in flux in terms of cellular activity. And so I use the WIM back device, so ticker therapy. So you have that that current going through that relationship, obviously with the cellular activity and changes and die for me. So yes, potentially ultrasound absolutely not the diagnostic but the Yeah, the treatment ultrasound. We Yes. And

Steven Bruce

you know, what about the other Wizzy bits? Okay, what about laser? What about Shockwave? And so on?

Hannah Poulton

Yes. Now, I'm thinking of investing in shockwave devices? Well, I need to save a few pennies, first of all, to get that. But interestingly enough, laser therapy, yes. And there is a huge body of evidence to say about lasers and scars. I'm very interested, though. And I'll always say this, and we've said it before about what is going on under the surface. And does laser therapy just change the aesthetics of the scar. But five years down the line, that scar tissue underneath is gonna get so tight. And actually your client is going to come back saying, Gosh, I've got pet the scar looks great. But underneath I've got paid, are they I don't know the long term effects. Are we just changing the aesthetics of the scar with lasers? Are we making a difference underneath?

Steven Bruce

Right? But as simple outcome measure as well? Is that pinching that you saw beforehand, any less? Can you have you got a greater range of motion? The bigger test is is that range of motion is still there after six months a year and longer but because that's a very difficult thing to monitor patients, they might come back just to do research.

Hannah Poulton

And as part of my PhD study, we're following them up six months after treatment, to say how has it impacted you You know, is it still painful? Did you have to have more treatment less to, you know, how have you gone back to work? Can you still do X, Y and Zed? Because there isn't research out there to say, Okay, after you're better or your treatment is ended? What is the impact long term? Yes.

Steven Bruce

And I'd be really interested to know the effect of laser. And I've been, I'm sure lots of people are interested in the aesthetics of it. We use K laser and identify, we've got several people using the K laser in my own clinic. And it has brilliant results in all sorts of ways. But I hadn't thought about its possibilities in terms of improving all sorts of outcomes who lead through scar tissue treatment. And

Hannah Poulton

it'd be interesting if the lasers that you're using in clinic if you do use them over scarred, does it change the scar at all? And how, you know, just does the person feel about that? Now, it doesn't look so bad or yes, yeah,

Steven Bruce

given this such a quick treatment is, it's definitely worth trying. Margarita says Hi, not sure if I missed this, but does the treatment change? Depending? Does the treatment cheese depending on how long the scar has been there? Is it more effective if the scar is relatively

Hannah Poulton

new? Yes, yeah. So yeah, if a scar takes up to two years, so you've got that two year window, I would say if you can get to a scar within that, first four to six weeks, I normally treat around the six weeks because the risk of infection is slightly lower as well. You can treat round that six weeks when the scars fully closed, no stitches, staples, hematomas, aromas and, and no infections, then you're going to see the most amount of changes. However, there's Yes, I cheat now, clients with any long term scar, if you have pain, if you have mobility issues, and it's what we think is related to the scar, I say, let's, let's give it a go. Let's treat it. Okay, we'll give you a couple of treatments. If it's not, then fine. But I genuinely find with nearly all my clients some kind of benefit, in terms of I feel better, I look better, the scars better, I feel better underneath. It doesn't hurt as much he doesn't pull as much he doesn't restrict as much all these things

Steven Bruce

because of that placebo effect you talked about earlier? Well, I mean, in fairness, it could. And it does lead me on to another question in terms of to what extent are you able to market what you're

doing? And I don't mean mark is in a nasty sense. I just mean, can you put on your website that I can do something to treat your scars? Is that acceptable to the AASA? Well, interestingly

Hannah Poulton

enough, I have a website and it's full of before and after photos is full of videos, it shows exactly what we do a huge social media across Instagram and LinkedIn and facebook.is

Steven Bruce

hard to get before after photos on Facebook, isn't it because they automatically blocked?

Hannah Poulton

I don't know why but they seem they seem to seem to be okay. So far. Yeah. Now, no, no. Probably get shut down now. But yet so. So I have Yes, I have a lot of cross across my social media. But I always say, say it again, I'm a physiotherapist at heart. And I want to make sure that I don't lose that physiotherapy, profession and knowledge and skills. I use scar therapy as part of my overall yes assessment. So if a mum comes in with a C section, and she says a C sections are main problem, excellent. Still gonna take your diastasis still gonna check your pelvic floor still gonna check your range of movements, they're gonna look at all those, you know, economic factors, your hydration as well, your nutrition, still gonna look around the sky, your skin changes. And I'm going to look at the scar and treat the scar as well is part of my holistic assessment.

Steven Bruce

Right. We've still got a bit of time. Could you take us through some of those images? You've got the other treatments that you've done? You've got something acupuncture, you've lost?

Hannah Poulton

I suddenly realised that can I go and get it? I think

Steven Bruce

Rachel, could you see if you can find the clicker for the ultrasound. Joe. Glad we got Rachel and

Hannah Poulton

Rachel, thanks. Thanks for right. Yes, thank you. Absolutely.

Steven Bruce

Yeah. So talk us through some of these other before and after. So you go here and what you did there and what the effect wasn't? Yes.

Hannah Poulton

So the first Scott, this isn't my client. This is just a na trophic scar. So when the white flat doesn't look as though it's, you know, is doing anything. I would say about 60% of my clients come in with these lovely white flat scars that show nothing at all. But they're telling me actually, I've got pain and right underneath but really high up is that is do you think that could be related to Musker. Let's treat the scar injury around the scar and say So just because a client has a lovely white flat scar, you don't think anything's going on, but they're telling you they've got Hey in near it, let's have a look at scars impacted. This is a hypertrophic scar. So like we said, you know, 50% of all scars become hypertrophic, you will also notice that it's not the same all the way through the scar. So you've got raised parts, you've got a flat part, white part, pulling parts. Now, interestingly enough, obviously, I teach a lot of the scars, with sometimes with silicone, sometimes manual therapy, sometimes with both sometimes with compression. And they respond very, very well to treatment. And of course, looking around the scar as well and working around the scar, my before and after photos. This is a keloid scar, you can see it's obviously wider and thicker. And you can see obviously, where the potential staples were as well. This is the scar that we were briefly touched on before. You can see the skin changes the tissue changes as a C section is a keloid. It's raised it's it's it's an awful scar for this lady and a really traumatic story, which I believe is all wound within the scar and how the patient moves feels whole themselves. X, Y and Zed. We made it like this scarf. So it's barely visible. But actually look at the skin changes around it. So the tissue changes the colour of the skin perfusion of the tissues, the changes in the scar. Now, yes did this take, I think about nine treatments in total, spread across about five, six months, maybe slightly longer actually. But look at look at the different look at the different. Now what obviously you don't see on a photo is what's going on underneath, there's changes underneath the scar. But the emotional impact of this for this client outweighs anything that we're seeing on the screen in terms of looking, because I

Steven Bruce

have to ask again, and you'll imagine you're fairly confident that this change wouldn't have happened if you hadn't treated this girl.

Hannah Poulton

Yes, this is the thing. This is why we want to do the randomised control trial in the PhD again, because would it now I don't think so. Because in this case, especially the way she was moving and hold it, but the emotional damage of having a scar like this, and the tissues and her and how that was as close with her fingers. She was getting to the scar and touching it. I doubt that she'd ever have made any changes. And of course, going back to the surgeon saying, I'm not happy with my scar. I doubt it would ever have got to this stage surgeon would almost certainly say

Steven Bruce

yeah, had to cut. That's what happened. And

Hannah Poulton

I find it really interesting because of course I approach surgeons and they know about me and I know I work very closely with some surgeons and they refer after you know, their clients and other surgeons do not want to know me at all because they think it's a slur on what they've done that now they need the client need scar therapy. And it's not that at all. We've

Steven Bruce

we've looked here at the the abdomen, the front of the body, and we imagine all those people who have been for diskectomy is or whatever, but scarring around the spine. There's possibly an awful lot of work we can do to improve their movement, their pain.

Hannah Poulton

Absolutely, absolutely. You think of the invasive nature and you think of the inflammation that you think of how that heals it, and how how your spine moves, how it's constantly Yes, you've got to bend left calf laugh, go to the toilet, you've got to deal with those things. You know how that how that impacts the scarring? You know, you'll hear some patients say, I've been to the surgeon, they say I've got a lot of scarring. It might be that they've ultrasounded and seen that scarring or they might think that's maybe what's causing this ongoing pain. I have some interesting photos. So this gentleman has a 30 year old appendix scar and looking at that this is bigger pinprick if it weren't catastrophically wrong. So you know, Rachel said she had had her eyes open because they couldn't actually see it. And they had to go a little bit what this was even Yes, even more severe. Now, obviously, this is first time I cheated him on the right and then he came back for treatment and I took a photo. Can you notice any difference? Slightly the scar may be not so pin dead. There's not so bulging across the top. He had a marked difference in pain. So this was he came to me as eight out of 10 pain. He works at his desk he's in pain or days using heat pads is gone. And you know, he's been trying to do X, Y and Zed and I treated him and you can't see really any difference in the sky. at all, but what was going on under the surface, whatever we were doing is making it is making a difference. Now, here's a scientist by background and he sat down at my table and said, You want my last resort? I don't believe you can help me. Do whatever you want. I'd like to, I'd like to prove myself wrong. So I always love a challenge. Right?

Steven Bruce

Well, actually, sometimes those last resort patients, I mean, they're quite good because you, you can't. Everyone else's. A few more questions. Find me? Yes. Mickey says I have deep long term scars from bowel, liver and lung surgery. Superficially, the scars don't bother me now after long term massage treatment, etc. But if I don't stretch regularly, after a few days, I feel the deep tissues pulling. I think it's important to give the patients or clients exercises as well to help with the contraction and tightening. Yes,

Hannah Poulton

yes, yes. This is a simple part of a big picture. Don't underestimate the the importance of self management for the patient. So why would say like the gentleman said about the knee, I would say right, let's mobilise that tissue and I'm going to show you how to do it. Let's do stretches. Specially when you've got any abdominal wall scars. I love doing the cat, the cat, the child's pose, Cobra, getting up stretching, yes, that scar in a gentle and controlled way. Let's have a look at hydration and your nutrition. But let's have a look at you touching the scars, physically touching the scars, how they feel to you. But yet you've you've got to design a good rehab programme for the scars as well. And that would be the stretching the move thing.

Steven Bruce

complicated to do that because it's just logic, isn't it? Yes.

Hannah Poulton

Yes, absolutely. And that just proves that if you don't do it for this individual, you can feel that restriction and tightness. So it is it's an ongoing, I still massage my C section scar, it's seven years old, I'm brushing my teeth, right?

Steven Bruce

Charlotte says How long would you use silicone patches on scars. And also would you allow it to breathe or keep it covered 24 hours.

Hannah Poulton

Now, it depends what kind of silicone you're getting. I work with medical grade silicone, it's 100% silicone, which means it's not anything else has been added within it. And with that you wear it for 23 hours a day. So I say to my clients, and let's say C sections for example, have a shower, dry the scar, put the silicone on, wear it all day, take it off in the evening, do your scar massage, because I still want you to engage with that scar. And then of course, wipe off any excess oil, put your silicone on asleep in it, but allow that scar to breathe, you will notice a lot of products on the market of silicone that say just keep the silicone on for three days. The evidence doesn't lend itself to you occluding the scar that amount of time, it actually says the silicone products to where up to a year to get the results, which is a long time. My ladies that come in specifically with C sections. And they need silicone. So it's those hypertrophic and keloid scars, which really respond well to silicone. I say a good four to six months of wearing silicone you to achieve really good results

Steven Bruce

for what length of time and how long is the breathing probe. So,

Hannah Poulton

so wearing it every day, 23 hours a day, all day, take it off at night, do your scalp massage, allow the skin to breathe, wipe off any excess oil, wait an hour, pop the silicone on asleep in it, and then rinse and repeat the next day. Okay, great.

Steven Bruce

John has asked how you're going to quantify changes during your research. Yes.

Hannah Poulton

Oh, fantastic, John. Yes. So changes in terms of physical changes and the scars. So I'm looking at research papers on how to set my parameters on the ultrasound machine with current research. To then take photos of the scar before I've treated it and videos, and then treating the scar and then coming back in and taking the same images of the scar using the same device on the same couch in the same situation is exactly the same light, same same parameters to measure that and to see the spaces within the tissues changes. But that is one part of my outcome measure. Also, I'm using the scar cue. So that's looking at appearance symptoms, and also psychological changes on a scale of note doesn't affect you five, it affects you very much. And I'm using the VAs. So if people say yep, it's painful 10 out of 10 pain. I asked the same question Is it paying for how well how would you rate it? Not no pain tend to the worst pain ever when they come back, it's got the VAs, I've got scar tissue, I've got the ultrasound, and then we're going to follow them up six months after with.

Steven Bruce

So it's gonna be good stuff. We

Hannah Poulton

were totally

Steven Bruce

ashamed. We gotta wait so long to hear that. I do. We have in ourselves, at least two people, and I can't believe there's only two. But there's two people that owned up to already treating scars. And both of them would really like to see more people doing it because the results are so good. So the obvious question is, how can you teach them to do this better? Or where else can they go to learn how to do it better? Absolutely.

Hannah Poulton

So I run courses all over the UK, I do face to face courses, where you can and you know, spend a day with me, across the UK, we get real clients. And so real people and real scars. Coincidentally,

Steven Bruce

we've managed to put up your website, the web address, yeah, we've done that already. Discount Code that people can use, which gets 150 quid off the cost of the course. Yes. Kind of thinking, Oh, no,

Hannah Poulton

just Yes. Just for your professionals who are watching, I have an online course which you have access for life. It's got over 21 videos, but I update it regularly because there's no point buying an online programme which you do spend a lot of money. And then of course, you know, year it's out of date, isn't it? So I'm trying to update it with my new evidence and new research I'm finding with especially with my PhD. So yes, I'm giving you a huge 150 pound discount off off that you have that for life. I do face to face courses across the UK. So you can come and spend a day with me and clinic.

Steven Bruce

Claire has already said on the basis of this. We're going to do a case based discussion on the scar treatment sometime in May or June, we might give you a ring and say could you take part in that for us as well? Yeah, I can see lots of observations from people coming in. Denise what a fabulous improvement over one of the pictures Lawrence. This is incredible. Annabelle from Annabelle for a long time. So she's brilliant. Isn't she love her energy? Fascinating subject. Thank you so much. That's just one of many, many, many comments are coming. Thank you. It's been great fun. I'm really, really reassuring for us all that we can get some benefit from 3d scans. Yeah. Thanks.

Hannah Poulton

Oh, you're welcome. Thank you for having me, Steven.