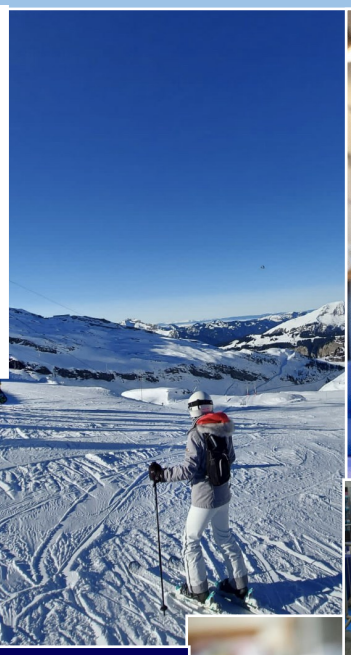
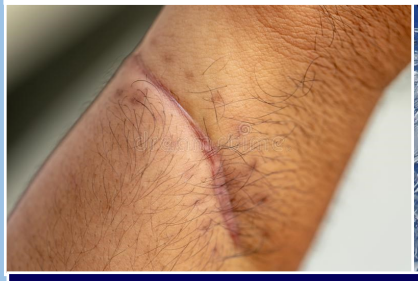
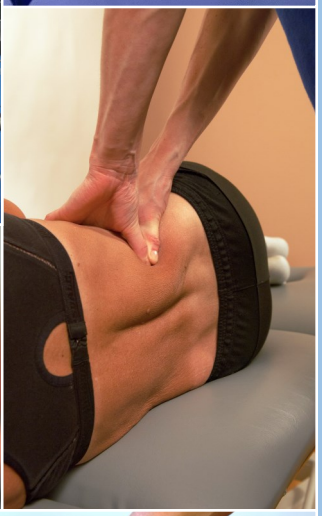
ISRM NEWSLETTER

February 2023
– Issue 40

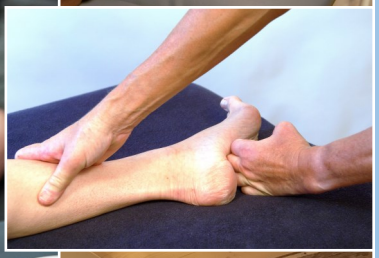
I.S.R.M
INSTITUTE OF SPORT
& REMEDIAL MASSAGE







In this Issue...



Times may be tough now, but we have a positive future

— By Mel Cash and Anna Maria Mazzieri

2022 has been another tough year for our country and the world, with the war in Ukraine causing a terrible humanitarian crisis and severe economic fall-out, while closer to home, we have experienced political turmoil and continue to face cost of living hardship. In addition, it has become clear – if it weren't already – that our NHS is not coping with the current pressures placed upon it.

Meanwhile, behind the scenes, we at ISRM have continued to develop our training programme with improvements to the online coursework, our Diploma course syllabus, and by placing a greater emphasis in our teaching on presenting a more evidence-informed biopsychosocial model as the central underpinning framework of Soft Tissue Therapy. It has become a high priority for ISRM that we, as a profession, strive to bring our core principles and our practice in line with evidence-informed methodology to ensure we follow best practice and try to be as effective as possible.

In order to help all our members to refresh their knowledge, we are continuously updating our video library and developing the ISRM Facebook Forum, where we often host free webinars on a range of topics to support them in upskilling and learning a more current narrative and approach.

Outside the ISRM, however, when looking at the wider industry, we have been seeing changes in some training which are rather disappointing and concerning: some Sports Massage training providers are making their courses shorter, with a greater part of the tuition now done online, and as usual there are the short intensive courses that can take as little as a week. And let's not talk about the all-online courses which are completely unacceptable!

In addition, we have also seen first-hand some decline in the theoretical components and a lack of training in clinical reasoning in the training programmes of some providers. While such courses may possibly just about qualify therapists to give a fair massage, we do not believe they adequately teach students the key skills that would enable them to provide the all-important clinical support and advice that clients really need. Why? Because they do not have sufficient classroom and practice time to develop the fundamental knowledge and understanding that can only be gained through a comprehensive and well structure course. Content can be delivered in one week, but is that content being learned, understood, and applied correctly in the required situation? We don't think so.

Therefore, we are working hard and will continue to do so in 2023, to advance Soft Tissue Therapy as a separate profession from Sports Massage that provides good, safe, and effective care for minor musculoskeletal injuries and pain, based on sound clinical reasoning. In this way we can distance ourselves from the Sports Massage sector, which is often perceived as little more than a random, and often brutal, 'treatment'. We know that client care is more complex than 'just providing massage', and this is reflected in our skillset.

We are proud to say that over the last three decades, we have been the catalyst for change in our industry. We created one of the first qualifications in Sports Massage in the UK which we then developed into the more clinically based Sport and Remedial Massage Therapy Diploma and from this, in 2017, we create the unique Soft Tissue Therapy Diploma.

These qualifications and training are built from the knowledge and skills acquired through real clinical experience. In this way we created vocational training which truly delivers the skillset needed to provide the treatment and care that people need and deserve.

As our help is sought more and more by people with injury and pain, we need to ensure that our knowledge rests on reliable research-based findings. That is why we have further enhanced the qualification by incorporating 'Evidence-Based Practice' (EBP) into the syllabus as the core of our approach, in line with mainstream healthcare professions. We are proud that we recognise the needs of our clients and the industry at large and are leading the change.

ISRM is well recognised for this across other professions too, in fact we have been asked to run special extracurricular courses for some Osteopathy students because their professional training no longer includes massage and hands-on soft tissue techniques; the same is true of Physiotherapy degrees, from which these were also removed several years ago, yet these are the techniques that many people want when seeking relief from and support for their pain and injury. This, we believe, is why we are going to see more and more people seeking our help, especially now that the NHS is really struggling.

So, with our knowledge of injury, pain, therapeutic alliance, and the value of touch, we feel we are perfectly placed to succeed in this ever-changing healthcare landscape.

Editorial

— From Tanya Ball

Welcome...

A very warm welcome to this rather overdue ISRM Newsletter, which should have reached you no later than end December 2022, and a special welcome to any new students or full members for whom this is their first Issue.

ISRM's Newsletter goes 100% paperless

Following consultation of and discussions with a few key people last autumn, it was unanimously agreed on both economic and environmental grounds that the ISRM newsletter would henceforth only be published electronically with immediate effect. The sharp rise in paper and printing costs together with a growing consensus towards 'going paperless' made this an easy – some might say overdue – decision.

One mixed blessing as a consequence was that, on the positive, this removed the need for and cost of an external professional designer, but on the negative, it sadly brought to an end over 23 years of enjoyable, fun, and friendly collaboration between QP Printing Director Glyn Rees and me. I would like to take this opportunity to say an enormous 'thank you' to Glyn for all his skilful layouts, imaginative designs, exceptional patience, for instance when copy was delayed or last-minute changes were requested, and marvellous sense of humour when the pressure was on or, occasionally, when the wheels came off. I shall definitely miss those jokes often shared at seriously unsocial hours!

As some of you may have noticed, this Issue (No 40) comes with a new-style cover and slightly more varied presentation, as the switch to a paperless-only newsletter also brought about an exciting opportunity for me to take responsibility for its design as well as its editing. I have therefore drawn on my mostly self- and occasionally Google-taught experience of MS Publisher gained over the years, and benefited from invaluable advice from Website Manager Martin Docherty to produce this inaugural ISRM-only created edition. Any comments, suggestions, constructive criticisms to improve it going forward are most welcome!

***** Reminder *****

Please always use tanya@tmb-src.co.uk as my editorial email address (my former Windows Mail 'editor@theisrm.com' is now defunct), thank you. **Please email me anything you would like included in the next Issue at any time!**

In this Issue...

Breaking News – **Mel Cash** and **Anna Maria Mazzieri** have teamed up to reflect on another highly challenging year globally, nationally, and for our profession. Despite the ongoing economic strain reflected in consistently much lower student intakes and more frequent deferrals on the Diploma course across the schools, much of this update focuses on the positive developments that have been going on behind the scenes at ISRM, in order to 'continue to advance Soft Tissue Therapy as a separate profession from Sports Massage that provides good, safe, and effective care for minor musculoskeletal injuries and pain, based on sound clinical reasoning.'

The article also flags up the questionable existence, in the wider context, of increasingly abridged and remote-based sports massage courses, with a decline in both theoretical and hands-on content, the prime concerns being whether (a) such courses genuinely, fairly equip students adequately to make a viable living following qualification, and (b) graduates can be assured of having been trained to a safe level to practise. It also sets our specific role in context of the enormous pressures incurred by the NHS, concluding on the optimistic suggestion that 'with our knowledge of injury, pain, therapeutic alliance, and the value of touch, we feel we are perfectly placed to succeed in this ever-changing healthcare landscape.'

Our profession and its future

In a frank and candid first-person style, Imi Testa presents a refreshing evaluation of our profession and explains why she is 'proud to call [her]self a Soft Tissue Therapist', highlighting the distinctive, and finely tuned intuitive as well as reflective skills we bring our clients. Without in any way dismissing the value of knowledge and scientific research, she emphasises the essential importance of our skill of touch, in particular 'knowing and adapting how we touch each client in each moment with them to help facilitate positive changes'. A must-read for those among us all too often tempted to think of ourselves as 'only' a Soft Tissue Therapist'!

Feature Articles

If you tend all too often to feel overwhelmed by challenges or even defeated before 'giving it a fair go', then don't miss **Jane Bradshaw's 'Une saison en hiver'** – an all at once captivating, vivid, and honest account of her tough experience as a Soft Tissue Therapist in a French ski resort. From being snowed in (temporarily believing her car would not reappear before the spring), then setting off to swap her unsuitable tyres for proper 'pneus à clous' (tyres with protruding nail heads for grip), to the fun and laughter shared with clients and colleagues, she tells an inspiring story of self-discovery that concludes with her insightful appraisal of what her experience taught her... and is ready to do it all over again!

Next, **Steven Sheppard** explains his motivation and ongoing journey towards **becoming a 'plastic-free champion and running a "green" clinic'**, inviting us to join him in questioning how we run

our clinics and which products we use and, where possible, exploring more environmentally friendly alternatives. Steven's argument is punctuated by some sobering – I would say appalling – statistics and expresses the hope that 'this single account will start a conversation whereby we can support one another along the way as we go forward', concluding, 'let's get to work, there's no time to waste!'

Post-COVID Event Work update

Unfortunately, a limited involvement in the 2022 London Marathon was the only highlight on ISRM's calendar last year, with the reduced intake of volunteers and consequential smaller team sizes not reflecting at all the amount of time and effort invested in coordinating the event! On a more positive note, as indicated below, applications to volunteer for the 2023 London Marathon on Sunday 23rd April are currently open on the ISRM Event Work page.

Scientific Research and Clinical Practice

'With the help of modern media,' says **Nicola Ralph** in her thought-provoking article entitled **Gut Feelings**, 'we all have much better awareness about how to nourish ourselves and our gut biomes, but we don't often think of how manual therapy might benefit gut health.'

It is a fact that, rightly or wrongly, abdominal massage – alongside hand and foot massage – is generally a poor relation compared to the standard therapeutic treatments delivered across Asia, for instance in Thai, Ayurvedic, or Shiatsu massage. While the historical reasons for this may be multifaceted and complex, Nicola explores the various contributing factors to this body area being neglected and, most importantly, puts forward a range of convincing arguments calling for a radical change in attitude among our profession in general and ISRM STTs in particular. She accurately refers to the complex and intimate anatomical, physiological, neurological, and emotional connections between our gut and various other structures and organs, not least the central nervous system, and provides details of the anecdotal benefits of abdominal massage reported by her clients. Given the limited time devoted to this element in our Diploma course (there is so much to fit in!), I would for one strongly support ISRM delivering CPD workshops on the subject – ideally tutored by Nicola if she is willing!

Book Review

'Have you ever wondered why you get aches and pains that do not improve even when you are following the common recommended advice?' asks LSSM graduate Adam Dowsett in his title **If it Hurts DON'T Stretch It.**

His aim is to demonstrate how the common advice to stretch what hurts can at times exacerbate rather than relieve pain, and he proposes four principles applicable to all body areas to encourage Soft Tissue and other Manual Therapists to investigate less obvious potential causes or contributing factors to common acute and chronic ailments and injuries, as well as learn and develop effective strategies to resolve these and prevent recurrence. I can recommend reading the Book Review in this Issue, and better still, reading the book itself.

Expand your knowledge, enhance your skills (CPD)

In our stimulating profession as Soft Tissue Therapists (STT), there is a tendency to present (as tutors) and regard (as students/ practising STTs) scar tissue as a 'bad guy'. In the wider Western biomedical world, 'scar tissue' is likewise mostly viewed as or referred to as an undesirable, movement-impairing structure that in severe cases should be surgically removed. But are these negative attitudes towards this frequently maligned substance entirely justified? It is my intention through my modest article **Scar tissue: 'good guy', 'bad guy', or both? – Myths and truths about myofascial scar tissue**, to plead the case of the incalculable merits and critical importance of scar tissue for all healing and restoration, and to encourage a more balanced appreciation of it as fundamentally a (very) 'good guy'.

Future Continued Professional Development (CPD) courses: as previously, members will be notified of forthcoming 2023 courses and workshops in subsequent Newsletters, via the ISRM FB forum, website, and/or by group email as they become confirmed.

Good news reminder for all ISRM Members!

Make sure you CAREFULLY check the last two pages of this Newsletter for a range of preferential offers to members including:

Physique Management Company: 10% off sports injury treatment and massage products

Journal of Bodywork and Movement Therapies (JBMT): 15% off annual subscriptions.

You will find an assortment of new/recent deals, including free access to the excellent **Kenhub** online 3-D anatomy learning tool to the **Sports Injury FIX** listing. This is complemented by a fully updated list of useful websites, links, online videos, and other educational resources, which will continue to be reviewed at regular intervals.

Newsletter contributions – please get writing now!

My grateful thanks as always to the various contributors to this Issue. Please would *everyone* (i.e. not just 'other people'...) make an effort to ensure your newsletter remains a stimulating, thought-provoking, and motivating forum by writing *your* piece for the next Newsletter. **Thank you!**

It remains for me to wish you all an enjoyable and informative read, and continued good health and spirits, professional growth, and personal fulfilment in 2023 and beyond.

Why I am proud to call myself a Soft Tissue Therapist

Frank thoughts from an experienced practitioner – By Imi Testa

'I do think we have lost the respect for vocational craftsmanship and non-academic skill that we once had. (...) The skills that we bring are not in the modalities or styles of touch, but critical thinking, the nuance of reading body language, of listening to our clients (<u>really</u> listening)...'

I quite often read or hear in therapy forums, blogs, or podcasts, how other therapists can be 'more than just a massage therapist/soft tissue therapist', or how manual therapy is passive and of little value. I see massage therapists aspiring to be Physiotherapists and saying (and I am absolutely guilty of this) 'I'm *just* a massage therapist'. Others advocate for our training to become a degree qualification and consider that the fact that we don't hold a degree means that we are of lesser value. I disagree.

Here's why: whilst I absolutely bow to the fact that Physiotherapists, Chiropractors and Osteopaths have a much higher level of training and responsibility than we do and that we absolutely need higher levels of regulation (although not as high as chartered professions as we don't hold as much responsibility), I do not believe we need degrees and I do believe we add enormous value to the industry.

Degrees are expensive in both money and time. This makes them prohibitive for many. It also raises the charge that those having them may ask for their services once qualified. Many people who work as massage/STT's work part time alongside other jobs or childcare commitments. The cost of a degree would not make this an attractive option.

It is a vocational job. Whilst we must follow in our practice and narratives the latest evidence and continue to work to update and expand our knowledge, being able to read, digest and argue the minutiae of academic papers is not essential for us. Does this mean we are less than – no, the skill set we bring is just different. I do think we have lost the respect for vocational craftsmanship and non-academic skill that we once had.

The chef who can turn everyday produce into a delicious meal, the care worker who can meet the needs of the most challenging patient with kindness and dignity, the artisan craftsman, the hotelier who can anticipate the wants of their guests before they ask.

The skills that we bring are not in the modalities or styles of touch, but critical thinking, the nuance of reading body language, of listening to our clients (<u>really</u> listening), customer service, assessing

(not diagnosing), and ruling out red flags and referring if needed, networking so we have the absolute best list of practitioners to refer to, being able to work together with many different people with whatever priors they bring to our clinics and building that precious balance of therapeutic alliance rather than either dictate treatment or not earn their confidence and trust. And the touch itself. Yes, I believe there is huge skill in this, not in any modality, but knowing and adapting how we touch each client in each moment with them to help facilitate positive changes. Being able to make touch feel safe, good, non-threatening, confident, calming. Yes, this should be alongside assessment, safety, movement and supporting self-efficacy.

For many of the "worried well" who make up the majority of our clients this is all they need. Reassurance, validation, as Greg Lehman would say 'calming s**t down and building s**t back up again', cheerleading and installing confidence and resources in their own capabilities for self-management. This can save the time and resources of those higher qualified than us to help those who have more complex needs or who only have the financial option of the NHS. So yes, I am going to work much harder at not saying I am 'ONLY' a Soft Tissue Therapist.

Une saison en hiver (A Season in Winter)

Because I want to look back on my life and think "I can't believe I did that"

By Jane Bradshaw

' "Just get through the next hour" I told myself. "You chose to be here. Fix your problems". I had no snow boots, just flimsy trail running shoes, and was convinced I wouldn't see my car again until the snow melted in March. From normally being a pretty calm, rational person, I was finding myself in a constant state of fear.'

To set the story – I qualified in June 2016 and set up my own practice in south-east London, which was pretty successful pre-pandemic. However, I had often seen adverts for sports massage work in the mountains and always knew that one day, when my children were grown up, I would spend at least one season there - working, skiing, and 'living the dream'. With the implications of Brexit pretty clear, I moved in December 2020 to the holiday house we have had in south-west France for 8 years, which allowed me to retain my right to live and work in another EU country. The intention was to set up a massage therapy business there and also apply for a position with a physio or sports massage clinic for the winter season of 2021-22.

After just six weeks in France, I was knocked off the pavement by a speeding car and dragged under the wheel, which crushed my lower leg, causing a spiral fracture from the top of the tibia

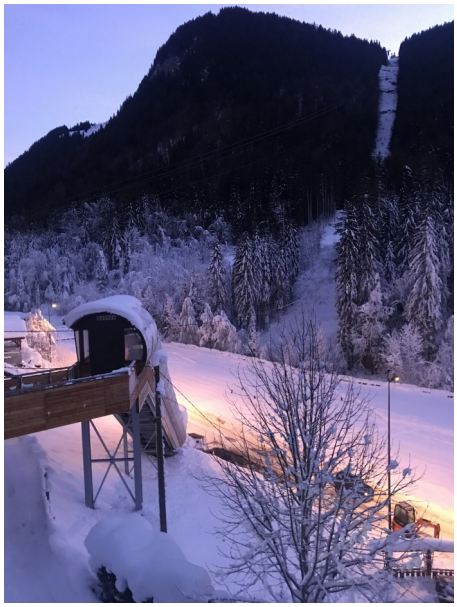
to the ankle. My leg was nailed and pinned, and I faced months of rehabilitation. The goal of working in the mountains kept me focused and in June I applied and was accepted to work for a massage therapy company in Morzine, a popular ski resort in the French Alps.

Because life is never straightforward, once I had almost recovered physically from my injuries by about August, I started to experience many symptoms of post-traumatic stress disorder (PTSD). With my 'professional' hat on this greatly interested me; it was as if my body was waiting to recover physically before the psychological trauma manifested itself. By the time late November arrived and it was time to leave and start my new job, I was pretty fearful of cars, tyres, and suffering another serious injury. Driving in the mountains in winter is never easy and the conditions when I arrived meant it was definitely a case of 'feel the fear and do it anyway'.

Here's my story of that extraordinary winter.

'I'm a massage therapist, get me out of here!'

Standing on the little balcony to my tiny flat, gazing at the thick snow which covered the front entrance by up to a metre, I was beginning to realise that working in the Alps was nothing like being on holiday there. This was the end of the 2nd week of just a few 'difficulties'. The snow that ceaselessly continued to fall, and which wasn't being cleared because the resort was officially closed until December 18th, the treacherous mountain routes which brought back horrible memories of being runover in the road, the fact that my 'winter



tyres' were only winter tyres if you lived somewhere like Lyon and certainly not in the mountains. It was 8:30 AM on my 2nd Saturday in December. Friday night had been spent watching YouTube videos made by Alaskan

Ice Truckers: 'How to dig your car out of 2m of snow'. My little car was buried because the snow the day before had made it impossible to negotiate the steep narrow lanes to the garages. Outside my apartment even, the snow was up to my waist. A perfect winter wonderland but a complete nightmare at the same time. 'Just get through the next hour' I told myself. 'You chose to be here. Fix your problems'. I had no snow boots, just flimsy trail running shoes, and was convinced I wouldn't see my car again until the snow melted in March. From normally being a pretty calm, rational person, I was finding myself in a constant state of fear.

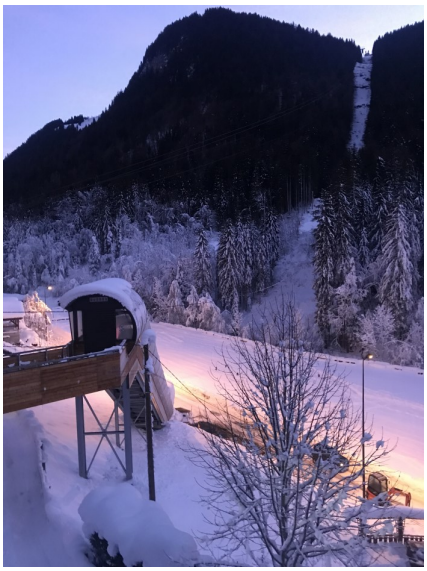
Living in fear. Fight or flight. Adrenaline. I loved sport and competition and was used to adrenaline. But these were no longer my friends after almost two weeks. I couldn't leave the flat or my car (on the few occasions when I could actually drive it) without checking ten times that I had my keys. Scared of the dark in the basement to the garage. Flashbacks of tyres and road accidents from being hit by a car nine months ago. When you are fearful you tend to make foolish decisions, and I made plenty. Such as adding *three* sets of winter tyres to your basket and pressing the 'pay' button. Also driving to the *carrosserie* (car repair centre) in a blizzard to get my tyres fixed, even though the garage owner who had lived in the mountains all his life had told me that conditions were '*pas bonnes*' – not good! Then, after not being able to drive to the shops to buy enough supplies, when I did eventually arrive, forgetting what I needed, so that I ate only omelette and pasta all weekend and ran out of shower gel and other basic stuff.

When the going gets tough...

Luck had also not been on my side: The early season snowstorms, the snow boots I had ordered arrived two sizes too big, the Alpine tyres took two weeks to be delivered. On the first Friday as I left work training in the

dark, the snow was falling heavily, and the temperature was around -13◦C. Five very lovely *pompiers* (firefighters in the UK) stopped to help me fit my snow chains onto the car wheels and told me exactly what tyres to order ('*Goodyear pneus Alpins avec des clous*' - Alpine tyres with nails!) Driving up the *Vallée de la Manche* I was convinced I would arrive home unscathed. I even negotiated the sharp right-hand turns into narrow lane which led to the garages IN 2nd GEAR AND IN ONE GO! You avoid 1st gear if at all possible when driving in snow. The lane was suspended above a steep drop to the Nyon car park, which usually had me so scared, but that night I decided I had already almost died once that year and wasn't ready to do it again. Reversing into the tiny garage, I heard a horrid nails-on-slate crunch. There was a grid across the entrance that I hadn't seen due to the snow. The snow chains were wrapped tight around the wheel axles, and they were not going to come off. My hands became so painful and stiff trying to remove them that it then took me five minutes to insert the key in my front door, to the point that I thought I would be spending the night in my car. That grid crunched through two sets of snow chains (again, when you panic you tend to make mistakes) until my little Peugeot from the sunny Charente Maritime finally received four new tyres. PLUS, I was now a pro at

jacking up a car and changing the wheel. We were both ready to start the season!



Ready for the challenge!

Four themes dominated that fast/slow season: skiing, work, running, and loneliness. Although they were closely intertwined and impossible to separate, I have tried to write about them one theme at a time. What I *can* say is that I spent many weeks skiing alone, only speaking with clients, arriving home at nearly 10:00 PM every weekday night during February and March, falling straight asleep only to wake four hours later with my body hurting everywhere from giving five to five and a half hours of massage. If I thought about this too much, it wasn't good for me. But what I did find was that the solitude, the need only to focus on strapping on my skis or driving to and from the many different chalets and homes for work was, in a way, easy. No cleaning, no gardening, no looking after anyone else, no socials to arrange, no need to think, just go to work and ski. There was something intangible, immense about the beauty of being genuinely alone in that vast landscape – to have to rely on myself to fix my problems, to actually get to know myself, and enjoy my own company. Of course, my work mates gave me a lot of support, but they had their own lives and families too, so it was up to me to crack on.

Work - I absolutely love my work as a Soft Tissue Therapist and am very lucky to be in a profession that makes me want to get up in the morning. To take care of people, to be able to make someone feel better, to help them understand their aches and pains and perhaps be less afraid of them. To respect the human body as something that its owner absolutely should have autonomy over regardless of age, condition, size, race, or sex. It is a privilege that I try never to treat with complacency. This was a fortunate position to be in as there was plenty of work – I clocked 270 hours between New Year and Easter. For almost all the holiday makers, this was their first break abroad, and definitely on skis, for almost 3 years due to COVID. Sore

calves, quads, backs, and necks as well as the stress of months of isolation and the toll the pandemic had taken, especially on their children. Many were keen to talk, but what they needed most was simply to be taken care of and to relax, even if for one little hour. Often this meant many long, slow strokes or what clients referred to as "traditional" massage. Coming from a clinical and sports background, I found this difficult at first – the urge to "fix" people and to impose my way of working on them was strong! But if someone simply wants a "relaxing back massage", then that's (more or less) what you would do, because if it makes someone feel better, then your job is done. I also soon understood that this ski resort context was different from working autonomously and running your own clinic. Around 85% of the clients I treated, I saw just the once and they were asked to leave a Google review at the end of the session. So, treading the line between client expectation and what your professional judgement and experience were telling you was tested almost every time. This was a fantastic challenge and so beneficial to my development – I had to think, analyse, if necessary, educate, but above all communicate what I was doing and why with every client.

There were a few occasions when I failed to do this or when I really had to reign in. Clients who lay on the couch and promptly fell asleep, snoring, or who told me about their special 'masseuse' back home – a couple of times I was asked if I did 'anything else', and it was pretty clear what this meant. That's when they 'accidentally' received a little too much pressure to the soleus/gastrocnemius junction... Often, I would be massaging in a tiny bedroom, having first shifted the bed and noted that my client could not even have been bothered to pick up their used underpants off the floor. Why would anyone not do that? One of my funniest evenings was when I

was treating a female university student when six of the guys arrived back from *"pres"*, several beers in, and proceeded to shower and change in the same room – there was nowhere else in their budget chalet. I could not stop giggling as they were all around my sons' ages and reminded me so much of my boys. Mostly though, I met many, many interesting people from numerous different professions. Social workers, surgeons, human rights lawyers, CEOs of well-known financial companies, business owners, athletes competing at elite level or former internationals. I even treated a midwife who was on shift when my second son was born in 2003! Plus, the chalet hosts, ski instructors, chefs, bar staff, etc. There was definitely a sense of the shared bond that we were all working our butts off, all suffering from extreme mid-season fatigue, but then when Easter arrived and green pastures appeared where the snow had lain, we could not believe it was almost over.

The "off duty" bits – skiing and running – there was plenty of opportunity to practice! Running in the mountains is exhausting and enthralling at the same time. The challenge of the ups and the downs – there is nowhere flat. The altitude and the scenery, both equally breath-taking. Every Saturday I met with the Morzine Run Crew, who became a lifeline for me, the one time in the week that I got to chat with people I neither worked with or who were a client. Plus, we talked about all things running and skiing and I learned a lot about the discipline of mountain running and the local area. I also ran solo at least once a week because the beauty and the silence – with just the rush of the stream and sometimes the torrent that ran just outside my flat, from the mountains all the way to Lake Geneva – was like nothing I had ever known.

"Sometimes you will be so tired, it will be very tempting to stay in bed, but get up and out onto the mountain first thing , you will feel so much better," said my boss on the first week of December. She wasn't wrong, it was always worth the effort. I love to find ways to improve on most things I do, and I was also pretty keen to avoid another serious injury. So, I studied the technique of the ski instructors, the young ski-racers, watched the winter Olympics and the ski World Cup series. The first few warm-up runs were always to practice – concentrating on one technical aspect at a time. Then I would try not to think at all and just "feel" my skis, let them wander. Without realising it, I quickly improved. One Sunday, as I was descending a steep north-facing red route into Châtel, I realised I was up there with a group of girls in their *Ski Club du Châtel* jackets, closely following their smooth, effortless tracks. But most of all, to be the first one on the ski-lift, to make fresh tracks where no one had yet skied that day, to be gazing out on *Les Aiguilles du Midi*/the *Mont-Blanc* by 9:30 AM on a Monday morning was a privilege I will never forget.

Epilogue...

As all things, the fast/slow season finally came to its conclusion. What I can say is that once it ended in late April, after the excitement and expectation of driving the 800 km west back to the grand skies and flat lands of *Charente Maritime* which I had missed so much, I was completely exhausted. It was requiring a huge effort for me to achieve even the smallest of tasks. It also took several visits to a fantastic fellow ISRM therapist, who came out of retirement to sort out my body after it had been in forward flexion for so long, for me to recover.

I often reflect on that time and although it was so tough, for many weeks afterwards it felt as if I were almost withdrawing from the experience, as though nothing else would ever quite match up to it. Sometimes images are as strong as the flashbacks from when I was run over, but in a positive way, because the road accident nowadays only rarely replays over in my head. Of course, there are certain aspects of my time in the Alps I do not miss – like the minuscule shower where I turned off the tap with my butt each time I bent over to wash my feet. Or not having an oven for five months and trying to make pizza in a microwave which promised it had a "crispy" setting. But I had made a deliberate choice to live there, and I could afford to keep my little flat warm. Too many people do not have choices. Going without basic supplies, making do with limited space (if I left the washing up or was trying to dry all those massage towels, the place would look like a tip), were useful reminders of privilege.

Lastly, a massively deserved THANK YOU to my work mates for everything they did for me as well as my family, for putting up with my wildest adventure yet, although they did gain some decent ski trips out of it! Life is fleeting – everything you know can be taken away in an instant. *Une saison en hiver* was one of the toughest things I have ever done, but I am so glad I did it!

My journey to becoming a plastic-free champion and running a 'green' clinic — By Steven Sheppard

'I imagine most of us diligently recycle at home, try not to fly or drive too much, and avoid wasting food. I wonder though how often this attitude is applied in our businesses.'

We soft tissue therapists tend to be a caring bunch of people. After all, it's part of the job. In most cases I'd wager that this extends to a sense of care for our wider environment. I imagine most of us diligently recycle at home, try not to fly or drive too much, and avoid wasting food. I wonder though how often this attitude is applied in our businesses. I've been asking myself recently if there's more I can do as a business owner to be part of the solution, rather than adding to the many environmental problems we face.

Early steps and some sobering statistics!

My journey to running a more sustainable clinic began in earnest in 2019 when I partnered with the local voluntary group *Plastic-Free Peckham* (PfP) to eliminate 'disposable' plastic from my practice. PfP are one of 718 community organisations affiliated with *Surfers against Sewage* who are trying to reduce the amount of single-use plastic in their neighbourhoods. It's shocking to think that even if we put plastic in the recycling bin, it tends to end up being shipped around the world to countries with less stringent regulations in place.

In 2021, 60% of the 2.3 million tonnes of plastic packaging waste produced in the UK was exported, with most of it going to Turkey. Some of it is recycled into lesser quality material, but a large amount

is either incinerated, causing pollution, or finds its way into the water system where it becomes a danger to marine life. Studies off the coast of California have shown that blue whales consume approximately 10 million particles of microplastic a day, almost entirely via the fish and krill they eat. It's estimated that in more polluted seas like the southern Mediterranean, whales could be ingesting as much as 150 million microplastic particles a day. Against these figures, avoiding bringing more plastic into being was for me an easy decision.

Following a PfP audit (a fairly informal chat with a representative) and armed with some advice, I set to work. My first win was to find out that *Songbird* sell their massage waxes in compostable tubs. Next up, I switched from using wet wipes to a spray and cloth for cleaning. For the spray, I have a glass bottle that I fill up at my local refill store. If you don't have one near you, there are online options available such as *Raindrop*. Using an old-fashioned bar of soap was an easy switch. My pens made of cardboard for filling out client consultation forms raise a few eyebrows but are just as durable as a Biro. Pencils might be better as they are completely plastic-free but this isn't about being perfect, more about practical compromises.

I must admit that finding couch roll that doesn't come wrapped in plastic has so far eluded me. I did buy a box of 'Econatural unbleached' couch roll recently but this was also wrapped in plastic and seemed to have been imported from Italy. On balance perhaps not the most eco-friendly option.

'What towels to use' is a thread that pops up now and then on the ISRM Facebook forum. Micro-fibre ones are often recommended as they are quick drying, but unfortunately these shed micro-plastics into the water system so are a no for me. I prefer the lightweight Turkish style ones although these too come at an environmental cost – not least the vast amount of water used to produce cotton. The key then is to make sure they last as long as possible and washing at lower temperatures helps with this.

The official ISRM guidelines advise washing at 60 ◦C, but I think it's time we changed this. At the height of the pandemic, there was a need to be seen to be taking all possible measures to reduce the risk of infection. The trouble is there's no evidence to support the view that washing at higher temperatures helps with this. Sure, if someone comes in with a contraindicated (dressed!) open wound then it's a good idea to use a hot wash cycle for any fabrics they touch, but this is rare. Not only does it cost us all more financially to routinely stick a load on at 60 ◦C, but the extra CO2 emitted as a result makes it increasingly hard to justify.

Other considerations in 'greening up' your clinic include how you travel to and from it. I'm fortunate enough to be able to cycle to work and most of my clients either do the same or make use of the good public transport links available in and around London. This isn't something we can easily change but can be factored in when choosing a new premises.

I did change rooms a few months ago and managed to kit out the new one with mainly second-hand furnishings, including reclaimed wooden flooring from a skip. It's amazing what you can get for free, or at least second-hand, in SE London. I did spend some money on materials for a new plasterboard wall to cover a metal shutter, but this allowed me to insulate between the two, so was in my view a justifiable investment to keep the heat in and conserve energy.

For me as well as all of us, there's always going to be room for improvement. For individuals, businesses, and society at large, the transition to greener ways of doing things is and will remain an ongoing journey. If we were ever to reach the destination, that would be awesome, but in the meantime let's just commit to making things better.

Individually, we may not be able to make much difference, but if we can improve collectively as an industry, that would definitely add up. If we were also to inform our clients and make embracing eco-conscious practices part of our professional brand, this could go a long way towards shifting attitudes in our communities. Hopefully this single account will start a conversation whereby we can support one another along the way as we go forward. So – let's get to work, there's no time to waste!

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Post-COVID Event work update – By Tanya Ball

2022: the impact of national and global challenges on event work

Only a handful among the numerous sports event organisers and/or not-for-profit organisations whom ISRM had been consistently providing onsite STT services to for many years until 2019, approached us last year.

Most of these were from the pool of long-standing, 'faithful' charities keen to thank their fundraising London Marathon (LM) runners as part of a complimentary post-race reception.

As readers may recall, due to the continued COVID restrictions in UK until summer 2021, the LM date for that year had been moved from April to October, and the event had been downsized to a small field of elite/ international athletes in all categories, along a modified, multiple -lap course. This had obviously removed any opportunity for charities' involvement, and hence, for our STT services.

The ongoing uncertainty about the various new COVID variants and their potential risks meant that the next event was scheduled for Sunday 2nd October 2022. Because, as mentioned above, demand was reduced compared to pre-pandemic times (fewer charities, often with fewer fundraising runners), I was concerned about ending up with too many STT volunteers and potentially having to turn some of them away, unintentionally causing disappointment. Fortunately, but at the same time unfortunately, this situation did not materialise. Instead, recruitment proved slow and exceptionally poor. Despite several further appeals, volunteer numbers remained insufficient to meet the various 'ideal' team sizes required, which meant having to reduce the allocation of STTs accordingly. The reasons had nothing to do with any lack or loss of enthusiasm on the part of either students or qualified therapists, but were rather due to the unfortunate combination of a marked drop in student intake across the various Diploma courses, not least in London (obviously the prime catchment area for LM), some of the groups having class on the LM weekend, and the prohibitive rise in costs of living, including fuel and energy, making donating a day and free work economically unviable for many.

Post-event feedback from charities and students alike was disappointingly limited, but positive, and sometimes 'success' can only be measured by the absence of complaints! My grateful thanks once again to all volunteers and team leaders who stepped up to the task and relieved numerous valiant runners' tired and sore muscles.

2023 events

At the time of writing, only the 2023 London Marathon is a confirmed event, which members are eagerly invited to sign up for via the

Event work—cont.

ISRM event work web page (see instructions below). Please keep an eye on that same page for other future events, which are posted as and when confirmed, usually between early and late spring, thank you.

How to register for ISRM-organised event work (this features in each Issue)

Would all members, and specially new student members for whom this is their first ISRM Newsletter, please kindly note the one and only Event Work registration process below, thank you.

Registration for any/all ISRM event work is available **exclusively online**. For logistical reasons, there can be no exception, and because the Event Work web page is understandably accessible to members only (as ISRM fund the associated administrative costs), it follows that applicants/participants must be ISRM members. Unfortunately, I intermittently receive e-mails from people unable for some technical reason to access the page, or... because they are not/no longer ISRM members. In the former case, I can only advise people to ask to borrow someone else's PC; in the latter case... I can only suggest that they (re-)join the ISRM and reap its many benefits!

IMPORTANT — PLEASE NOTE:

- To qualify for ISRM event work, Professional Indemnity and Public Liability (PIPL) insurance at the appropriate level (student or graduate) and valid at the time of the event is mandatory. No exceptions can be considered.

- Students must have successfully passed their Weekend 5 General Massage assessment to be considered for ISRM event work. Very rare exceptions may be considered at ISRM's discretion.

How to apply for Event Work:

1. From the ISRM home page (www.theisrm.com), login

2. Click on 'Your ISRM' and select 'event work' from the drop-down menu

3. Follow any (very easy) instructions to view the current list of events

4. Click on your chosen one

5. READ CAREFULLY the information in red below the event, and ENSURE that you are available on the date of that event

6. Please, please, PLEASE ensure that you enter **ALL** details/fields including your 'status' ('student', 'recent graduate', etc).

7. Please, please, PLEASE only apply (click) **once** for a given event! Some people have managed to click as many as seven times for the *same* event...

Duplicate entries are difficult for me to spot due to the automated system.

If you cannot 'view' the event you are looking for but know it was previously on display on the web page, the most likely reason is that I have 'closed' the event because applications have reached full capacity. Please therefore do not e-mail me individually to ask if you may be included – events fill on a first come, first served basis and it is therefore up to members to 'jump in early' if they want to secure a place. Please note however that sometimes a 'closed' event may re-appear 'on view' nearer the date if withdrawals mean that new places have become available, so it is a good idea to keep checking.

Should you encounter problems that you suspect to be website-related, **please contact the ISRM/ LSSM office** and not me, as this is completely outside of my remit, let alone my skills J! Thank you.

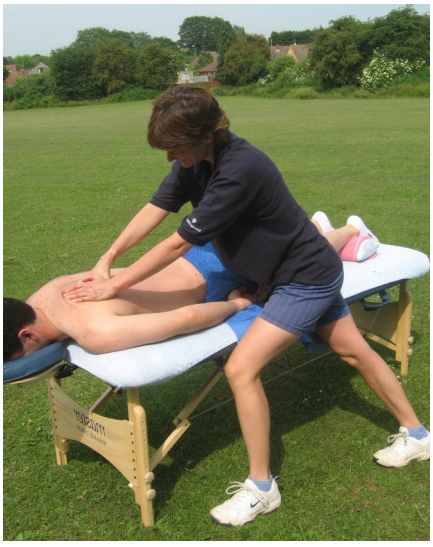
Once again, a very grateful thank you on behalf of ISRM to all who have supported/are supporting ISRM events over the years. In contrast, if you have never attended an event and/or are currently studying on the Diploma course... **what are you waiting for?** Here are selective examples of the numerous benefits that could be yours in return for 'giving it a go':

Skills enhancement, consolidation, new techniques from watching others.

Significant gain in self-confidence from achieving a successful 'day' involving 'thinking on your feet' and receiving genuine, positive feedback from recipients.

New ideas, tips, lasting friendships, networking, etc. from meeting and mingling with like-minded fellow therapists.

A huge sense of achievement coupled with an urge to find out: 'When is the next event?'!

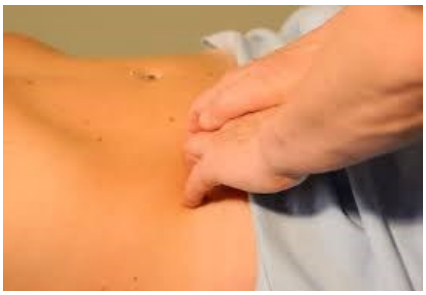


Gut feelings — By Nicola Ralph

'With the help of modern media, we all have much better awareness about how to nourish ourselves and our gut biomes, but we don't often think of how manual therapy might benefit gut health.'

Why would you have abdominal massage?

I have been giving an increasing number of abdominal massages lately, which got me reflecting upon what a crucial area of the body it is. Our gut is not only responsible for digestion, but it is a sensory organ, assisting in assessing external threats, communicating with the brain, and preparing us for action (Nick Potter, The Meaning of Pain). It is no wonder that we talk about "gut reactions" when you consider that the stomach is lined with a thin layer of brain cells (the enteric system).

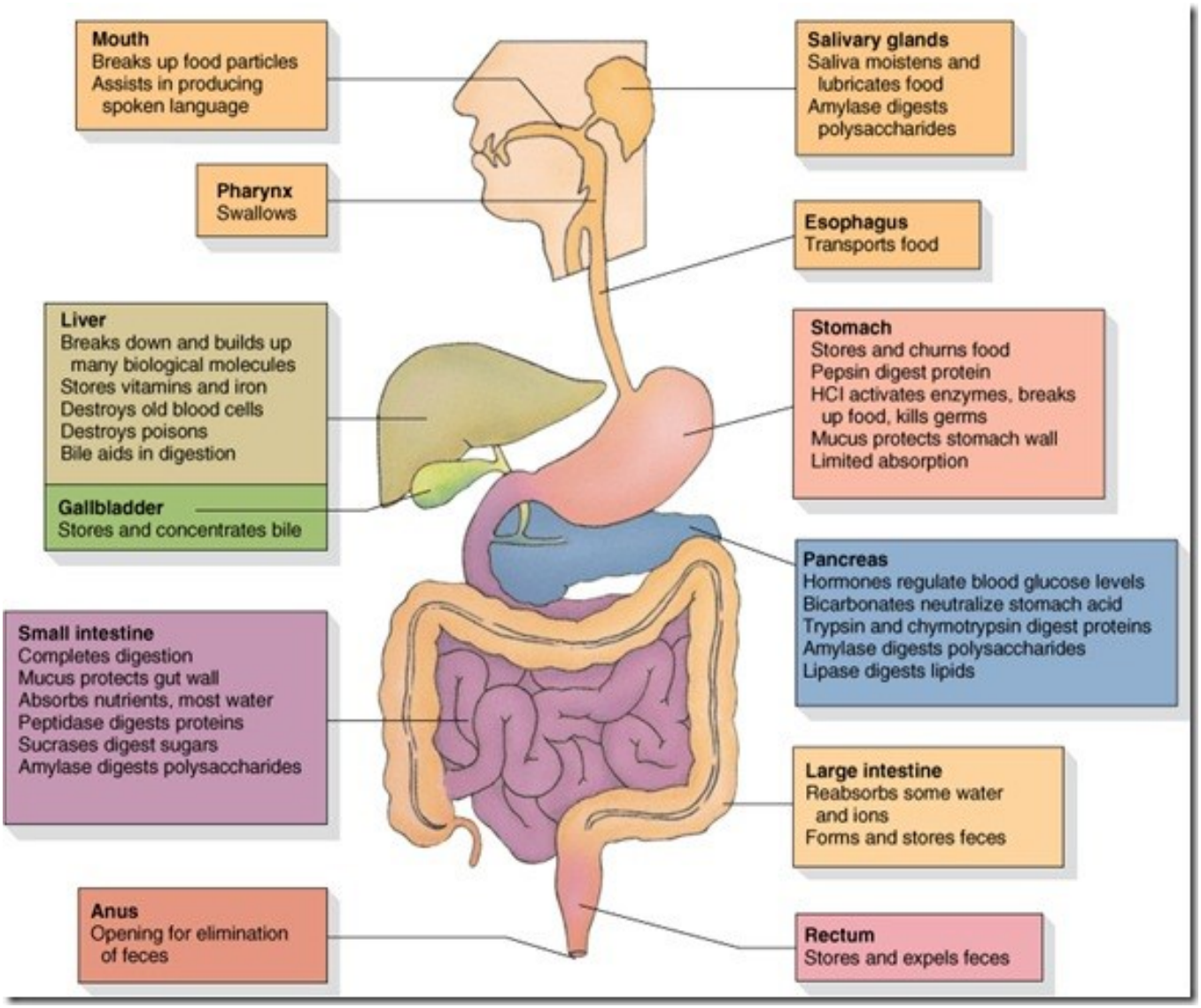


According to Dr Michael Mosly in The Clever Guts Diet, 'There are over 100 million neurons in the gut, as many as you would find in the brain of a cat' (well, if my cat is anything to go by, her stomach is definitely her most valued organ!).

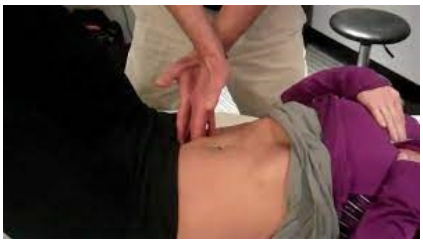
The gastrointestinal tract, home to a wonderfully diverse gut biome, is also a key player in the body's immune response, so if our gut health is suffering, there will be ramifications throughout the rest of the body. With the help of modern media, we all have much better awareness about how to nourish ourselves and our gut biomes, but we don't often think of how manual therapy might benefit gut health.

A neglected area

If our abdomen is so central to our wellbeing, why is it such a neglected area? We rarely pay



any attention to our gut unless it goes wrong in some way. Conditions such as IBS (irritable bowel syndrome) often arise following periods of prolonged stress, where the nervous system remains in a hyper-aroused state of the sympathetic "fight or flight" component of the autonomic nervous system. A common response to such symptoms is to ignore them and hope they go away.



Many people are uncomfortable about their stomach, not helped by societal pressure to hold it in and look slim! Not letting your abdomen relax, increases abdominal tension, and puts pressure on internal organs, including the diaphragm, which in turns affects our breathing, displacing it further up into the chest cavity (one positive outcome of the first Coronavirus lockdown was in my view that tight waistlines were abandoned in favour of lounge wear, allowing the belly to relax!).

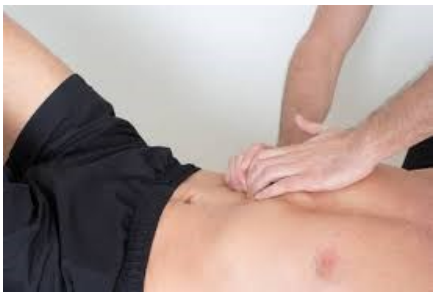
What are the benefits of abdominal massage?

Typical benefits in my experience include:

- Improving digestive function, getting 'everything moving', or indeed calming the digestive tract down.
- Boosting the immune system by stimulating the lymphatic and circulatory systems.
- Improving posture – relieving anteriorly held tension helps correct misalignment or holding patterns.
- Decreasing PMS (premenstrual syndrome), menstrual, and menopausal symptoms – gentle work can help alleviate tension, bloating, water retention, and feelings of distress.
- Encouraging abdominal breathing by giving the diaphragm more freedom to move.
- Decreasing stress and anxiety by stimulating the parasympathetic 'calming' component of the autonomic nervous system.
- Providing deep relaxation and feelings of well-being.
- Improving overall body awareness by tapping into the 'second brain' promoting emotional healing.

What I have learnt from giving abdominal massage

Anecdotally, I have found that after abdominal massage, clients report feeling much more comfortable in their digestive tract, particularly those experiencing IBS symptoms. In some clients



there is an emotional release (demonstrating how much emotion we hold in our stomachs!). All my clients who have received abdominal massage say they feel completely relaxed afterwards.

In my experience, abdominal massage also leads to better awareness about breathing patterns and I often practise belly breathing with clients afterwards. Clients are then empowered to use their breath as a tool to both energise and relax the body rather than allow shallow breathing to perpetuate feelings of tension.

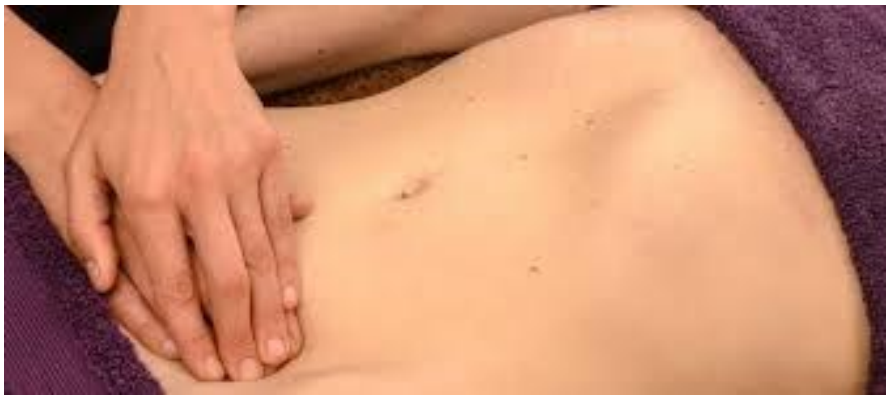
I have witnessed how abdominal massage can lead to an upward spiral in self-care, whereby the client feels more inclined to eat healthily.

What do clients say?

This is what a few of my clients who have been receiving regular abdominal massage report:

'Abdominal massage left me feeling that my stomach and brain were connected in contentment – which complimented the restored suppleness and movement in my legs. I also slept very well.'

'I've always had a negative connection with my tummy, feeling extremely self-conscious about that particular area, but recognised that there was so much more to that part of my body. Whilst having an abdominal massage with Nicola, I felt her calming and nurturing energy and felt extremely comfortable and somewhat empowered by allowing her to massage my tummy. I was able to openly express how I was feeling whilst she was massaging me and shared that my tummy is actually pretty amazing and beautiful, as it housed my son for nine months. It helped me to have more of a positive connection with it and enabled me to continue accepting it the more massages I had. It actually helped to heal a part of myself, and I wanted to treat myself with more kindness, so became aware of what I ate, how I saw myself,



speaking to myself with more positivity and kindness. It's such a gentle, nurturing, and emotional experience. I highly recommend you experience it too.'

'Nicola's intuitive, graceful approach to myofascial work has brought untold healing, and experiences of blissful release. The abdominal massage I have received has been especially transformative, and I would recommend her to everyone.'

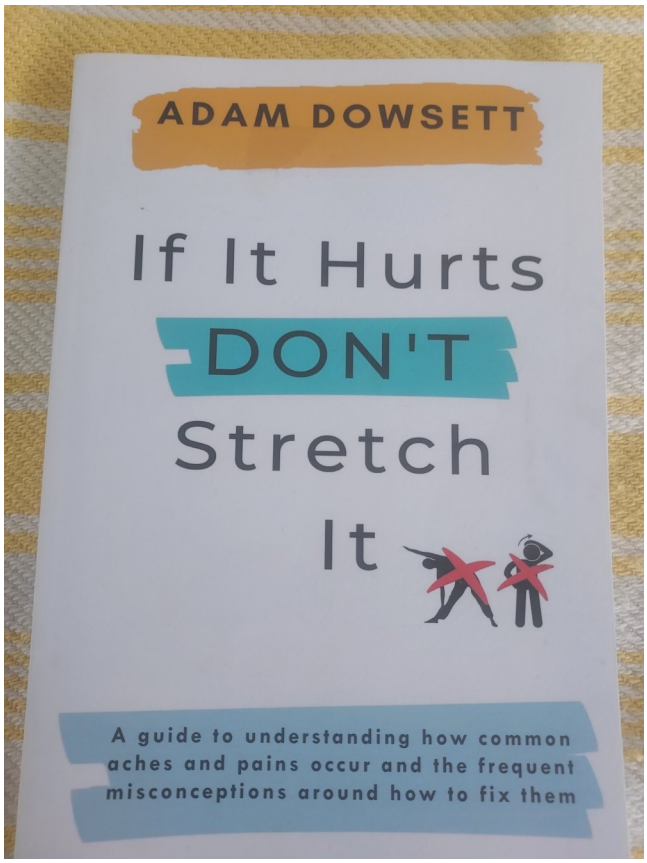
'Experiencing Abdominal Massage for the first time was a revelation. The Solar Plexus and Sacral Areas are where I have been holding stored emotions. I always knew that stress, anxiety, worries, emotional shock and upset made a bee line for these areas and then stuck there!

Symptoms presented in other ways such as disturbed and uncomfortable digestion, oversensitivity to certain foods, IBS and poor-quality sleep. These have been the physical manifestations of these stored experiences and exposures.

Abdominal massage as part of Nicola's overall treatment plan, progressively released layer upon layer of these emotions and blockages, thus easing the physical symptoms along with a core benefit of simply feeling better!'

I knew that abdominal massage was useful, and I am really pleased at how beneficial my clients have found it. As these client testimonials demonstrate, the abdomen is more than just soft tissue and digestive organs – it is linked to the processes of the nervous system and mental, emotional, and psychological states.

Book review



'Have you ever wondered why you get aches and pains that do not improve even when you are following the common recommended advice?' asks LSSM graduate Adam Dowsett in his title *If it Hurts DON'T Stretch It.*

His aim is to demonstrate how the common advice to stretch what hurts can at times exacerbate rather than relieve pain, and he proposes four principles applicable to all body areas to encourage Soft Tissue and other Manual Therapists to investigate less obvious potential causes or contributing factors to common acute and chronic ailments and injuries, as well as learn and develop effective strategies to resolve these and prevent recurrence.

This very handy size paperback in my view scores 11/10 on at least four counts:

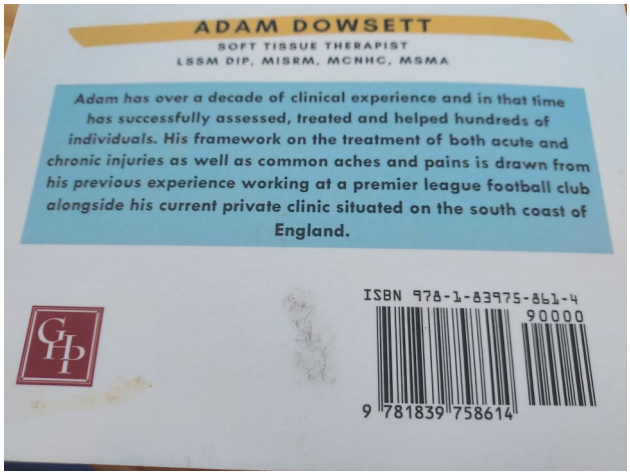
1. It is written in a refreshingly direct, approachable, 1st- and 2nd-person form

2. It is highly reader-friendly in both style and format, with each chapter in turn further subdivided into bite-size sections under separate headings

3. It is packed with valuable observations and reflections, with each section ending with useful (even if sometimes obvious) tips

4. The content is firmly based on the reliable foundations of common sense and a wealth of first-hand clinical experience.

In summary, *If It Hurts DON'T Stretch It* would make an excellent practical companion to a wide range of Soft Tissue Therapists as well as Movement-orientated Instructors such as Yoga, Pilates, and other Manual Clinicians.



Scar tissue: 'good guy', 'bad guy', or both?

Myths and truths about myofascial scar tissue

By Tanya Ball

Introduction

In our stimulating profession as Soft Tissue Therapists (STT), there is a tendency to present (as tutors) and regard (as students/practising STTs) scar tissue as a 'bad guy'. This view is reinforced when clients present with old, often repeated injuries that have left a legacy of unyielding, dense, often bound down fibrotic tissue adhered to adjacent structures, restricting free movement, and predisposing the area to re-injury. Understandably, from such a perspective, scar tissue is seen as the enemy of efficient function, an unwelcome substance that we should aim to reduce, if not eliminate, by encouraging local fibre realignment, regeneration, and appropriate morphological transformation into 'normal' myofascial tissue via a range of usually uncomfortable hands-on techniques. Likewise, in the wider Western biomedical world, 'scar tissue' is mostly viewed as or referred to as an undesirable, movement-impairing structure that in severe cases should be surgically removed – arguably, in my view, at the risk of generating more scar issue.

But are these negative attitudes towards this frequently maligned substance entirely justified? It is my intention through this modest article – and the further reading recommended at the end of it – to plead the case of the incalculable merits and critical importance of scar tissue for all healing and restoration, and to encourage a more balanced appreciation of it as fundamentally a (very) 'good guy'.

What is 'scar tissue'?

To answer this question fully and fairly, we need to remind ourselves of the main stages of the wondrous way our bodies respond to physical trauma/injury – which I believe we all too easily take for granted.

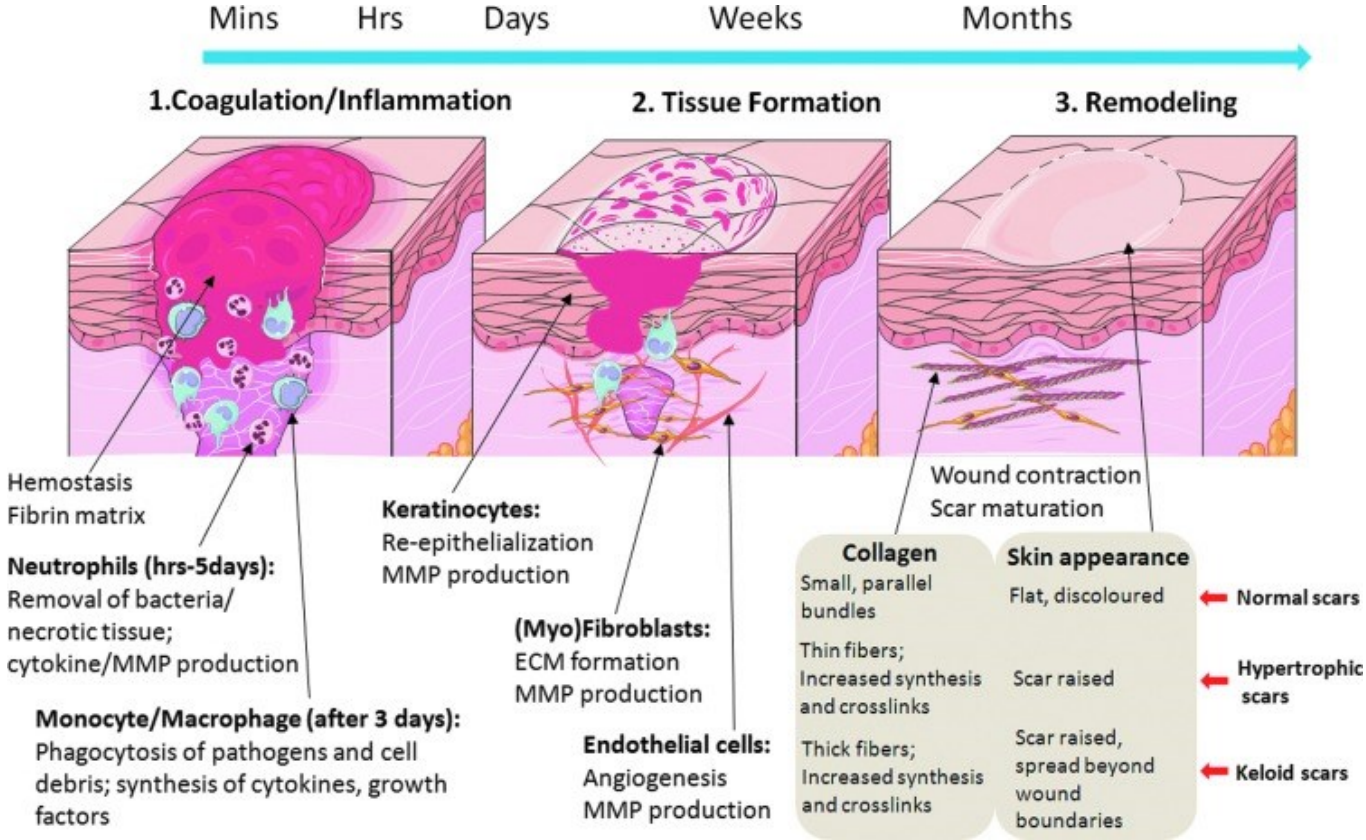
Virtually any injury, whether minor or severe, to any structure, involves soft (and sometimes bony) tissue damage in the form of torn fibres, including those of blood vessel walls, which means that bleeding occurs. Irrespective of location and degree of trauma, the normal pattern of response and repair of the organism can be subdivided into three partly overlapping stages:

A – Inflammatory (acute) phase

B – Proliferation (subacute) phase

C – Remodelling stage

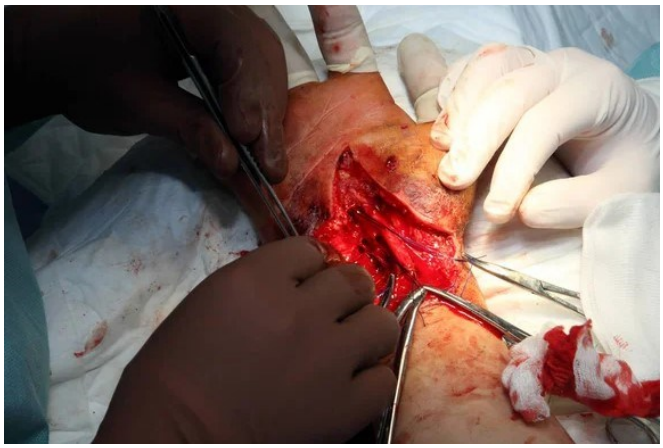
Below: Diagram of the three classic stages of cutaneous wound healing. Source: Xue and Jackson (2015)



A – Inflammatory (acute) phase

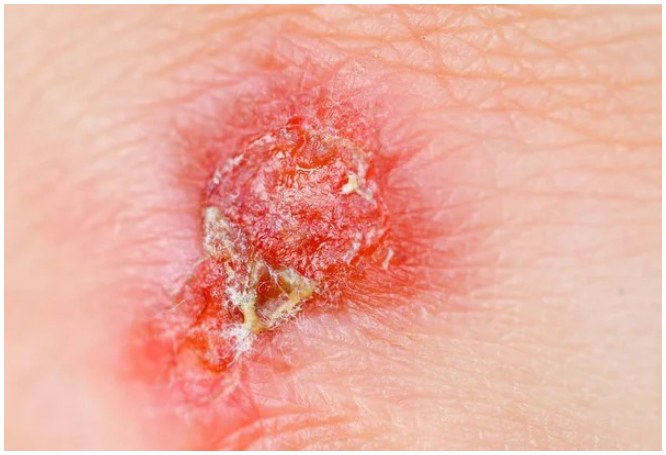
As part of the well documented range of overlapping inflammatory responses to acute injury that intervene immediately or very early, which are not being repeated here, are the following:

Capillary contraction – damaged blood vessels are instantly directed by the autonomic nervous system (ANS) to close, constrict, and/or 'collapse' to prevent further blood loss.



Open surgery to palmar aspect of hand and wrist showing significant trauma to local tissues, but also limited blood loss due to capillary constriction.

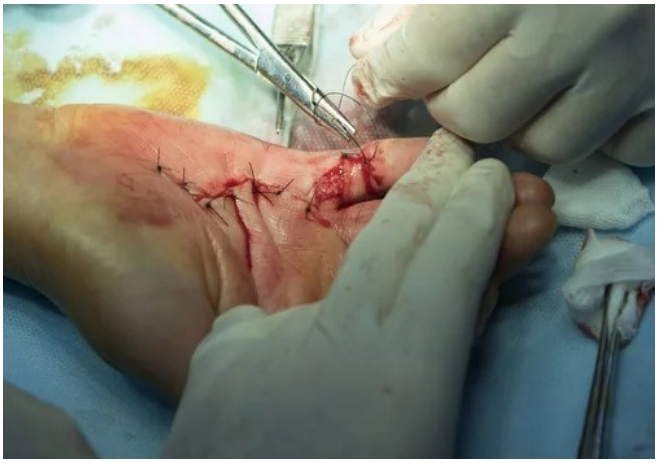
Coagulation – local platelets immediately start adhering to the damaged borders of the blood vessels to initiate clotting, whilst also releasing biochemical substances to attract further platelets to the site



Early repair stage of a graze injury: after coagulation, a fibrin-containing matrix has formed over the wound and attached to the surrounding undamaged tissue. WBC-rich transudate is visible and can be seen to be active in separating and eliminating dead cells/debris ('slough') from the living, repairing tissue. Early signs of granulation tissue formation can be observed around the wound borders, including the way in which these are being drawn inwards.

and add to the coagulation process, thereby forming an effective plug – a *precursor to scar tissue*.

Securing of the clot – the blood-borne protein fibrin (contained in fibrinogen) also substantially contributes to this 'control the bleeding!' emergency response by <u>forming a preliminary matrix through and around the clot</u>, attaching to adjacent tissue cells to keep it in place – a further *precursor to scar tissue*.



Post-hand surgery stitching: continued coagulation, very early fibrin-rich matrix formation, and transudate permeation.

Infection prevention – concurrently, the 'transudate' (clear liquid made up of water, salt, and proteins) leaked from local blood vessels that causes local swelling not only contributes to controlling the bleeding by compressing the area, but also supplies key infection-fighting/preventing white blood cells (WBCs) and other repair cells to, and removes metabolic debris from, the injury site.

B – Proliferation (subacute) phase

Granulation tissue formation – biochemical signals from platelets and WBCs (macrophages) generate fibroblasts (tissue-building cells produced by red blood cells) that migrate to and proliferate at the injury site <u>to form a new, collagen-rich matrix that gradually replaces the earlier fibrin-based one</u>. This matrix –*new, immature scar tissue* – fills and strengthens the wound from approximately days 2-3 following the injury, aided by the specific wound-shrinking action of fibroblasts that 'grip' to the wound borders and draw these inwards.

Extra-cellular matrix (ECM)[2] formation and revascularisation – as part of the proliferation phase, collagen and other proteins within the granulation tissue – immature 'extracellular matrix' (ECM – see definition at the end of this article) – generate new capillaries to supply it with essential oxygen and nutrients and infection-fighting WBCs (leukocytes).

Four critical points to note regarding this immature scar tissue formation phase are that:

1) The rapidly propagating ECM molecules are laid down <u>indiscriminately</u>, in all directions, <u>forming a three-dimensional tangled and disorganised web of 'cross fibres'</u>, the prime emphasis being on 'closing the gap' over resilience against any particular directions of stress.

2) As a result of that random process, <u>some of</u>

the new fibres 'erroneously' adhere to adjacent structures, forming microscopic bonds between anatomically and functionally distinct tissues.

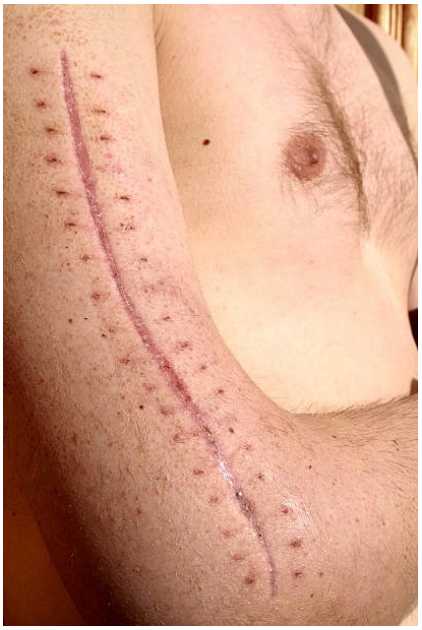
3) Throughout the proliferation phase, the new cells forming the repair ECM remain generic and undifferentiated, which means that they neither yet 'know' what precise type of tissue cell they will mature into – for instance, muscle, tendon, ligament, organ, bone, other – nor which specific directions of stress or tension they will need to resist and build resilience against.

4) The three points above mean that this immature scar tissue, which includes an infinity of fragile new fibres bathed in abundant viscous fluid (hence the thickened, spongy feel on light, careful palpation or a recent injury site), remains highly susceptible to further damage.

Once the wound closing process has stabilised and acute/subacute symptoms have settled (3-5 weeks post injury/surgery depending on severity), the tissues gradually become ready to enter a cautious, progressive, remodelling or maturation stage.

C – Remodelling stage

Collagen fibres gradually remodel (from 'type III' to 'type I' fibres) and, 'informed' by sensory receptors (proprioceptor nerve ends), align and consolidate along whichever lines of tension they become subjected to as local joint mobility and global activity resume and increase. As this realignment progresses, surplus fluid is reabsorbed, which enables the fibres to approximate and form stronger cross-links, thereby improving tissue resilience as well as reducing scar tissue thickness.



Early remodelling stage: surplus fluid has been reabsorbed — no visible swelling — enabling the fibres to approximate and form stronger cross-links.

According to an insightful Paper by Meilang Xue and Christopher J. Jackson [1], written in the specific context of skin healing time frames, "Generally, remodelling begins about 21 days after an injury and can continue for a year or more. Even with cross-linking, healed wound areas continue to be weaker than uninjured skin, generally only having 80% of the tensile strength of unwounded skin." While other sources might cite slightly reduced recovery time frames, I personally find the above guidelines quite sobering in relation to how we, as STTs, treat and advise our clients, and guide them as safely and effectively as possible along their journey towards optimal long-term recovery – and prevention of recurrence!

So – what are the therapeutic implications of the above for us STTs?

Improved understanding = more effective care = best outcomes for our clients

The better we understand the neurophysiological processes of these overlapping, evolving scar tissue stages and the remodelling/maturation stage in particular, the more effectively we can select and deliver the most appropriate hands-on treatment and remedial plan in accordance with the safest, evidence-based recommendations. Let us therefore pause for a moment and ask ourselves what the opening sentence of the preceding 'Remodelling stage' section actually means for us – specifically:

- What do these 'sensory receptors' 'inform' the collagen fibres about?
- How do the collagen fibres become 'subjected to lines of tension'?
- How do they 'learn' in which direction(s) to align and consolidate?

Proprioception is key, BUT it prerequires a stimulus.

Our virtually omnipresent (sensory) proprioceptive nerve receptors enable us constantly to perceive our position and motion in space. They notably instantly and constantly inform our central nervous system (CNS) about features such as joint position, myofascial length, degree of exertion, how efficiently or not we are resisting gravity, maintaining balance, controlling or overreaching a given movement, and so on. Under 'normal' healthy/uninjured conditions, within milliseconds the CNS in turn issues instructions to relevant myofascia to adjust, or if necessary, rectify our position to maintain our centre of gravity (CoG) in place to avoid a fall or harmful impact. BUT: these 'afferent' (nerve ends-to-CNS) messages only occur with the stimulus of gravitational or some other force or 'loading', however slight, which requires a static (isometric) or dynamic counterforce. In other words:

No loading – no tension-generated proprioceptive stimulus.

No tension-generated sensory stimulus – no corresponding afferent message to the CNS.

No afferent message to the CNS – no information for the CNS to process and respond to.

No response – no 'efferent' instruction for the CNS to issue to the collagen fibres to '(re-)

align and strengthen' along one or more specific lines of tension.

These realities lead to <u>three decisive implications</u> to be aware of in our treatment and remedial plans:

1) Loading is indispensable for scar tissue to remodel and mature in a healthy manner.

2) Equally critical are the timings and nature of loading.

3) Consideration of the direction(s) of loading is essential, which should be as functional as possible as soon as this is safe to implement.

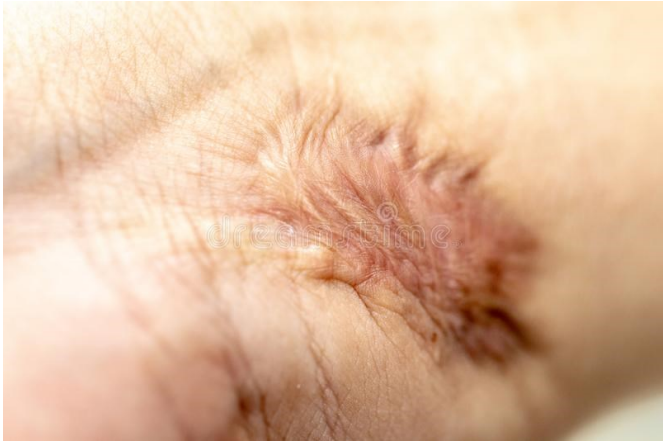
How do these implications translate into practice?

Together, these three facts establish that:

The key to enabling all-important immature, undifferentiated scar tissue to remodel into increasingly resilient, differentiated, role-specific tissue with optimal vascularisation, innervation, and viscoelasticity, is therefore gradually to subject it to carefully measured, repeated and/or sustained stress.

Merely 'resting' an injury or wound for a period before returning to normal activity levels will NOT achieve this. Why? Because inadequate stimulation and challenge will impair the ability of early established scar tissue to adapt to functional demands and morph into the specific tissue type(s) of the structure undergoing healing. Instead, the mass of undifferentiated, indiscriminately bound repair cross-fibres will mostly mature into non-specific, fibrotic, thickened ('lumpy') tissue lacking adequate (i) innervation (and hence proprioception), (ii) vascularisation (and hence oxygen/nutrients/elimination of metabolic waste), and (iii) viscoelasticity (and hence functional resilience).

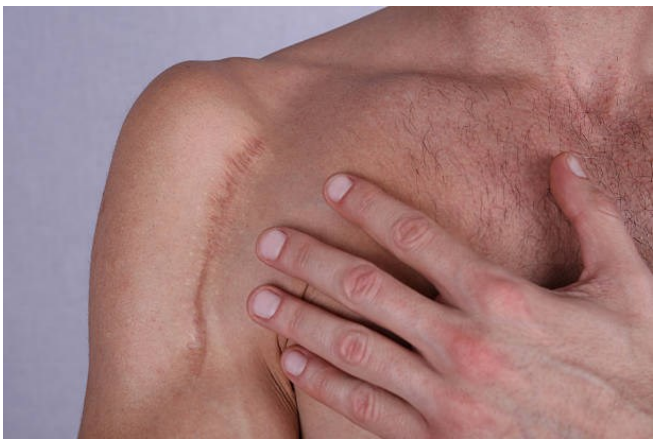
Over time, such fibrotic scar tissue will tend to harden and lose elasticity as surplus fluid is reabsorbed, leading to the distinctly palpable cord-like or bubble-wrap-like texture our fingertips can discern, compared to 'normal' adjacent tissue.



Mature, but undifferentiated, fibrotic scar tissue. Although this wound has healed, the repair fibres have not been subjected to direction-specific, functionality-specific loading, resulting in a mass of inelastic, thickened, indiscriminately bound cross-fibres.

Moreover, poorly matured, fibrotic scar tissue can and often does predispose to injury recurrence, most commonly precisely at the interface between itself and functionally healthy adjacent tissue.

It is THIS type of ill-adapted, non-resilient scar tissue that we should be regarding as the 'bad guy' and do all we can to (i) prevent the formation of when treating clients with recent injuries, or (ii) seek to reduce and encourage the replacement of by encouraging tissue regeneration addressing clients' badly healed old injuries.



Bringing it all together: a few practical guidelines

On the assumption that graduate ISRM members will have acquired some basic myofascial techniques specifically aimed at preventing the formation of, or releasing established 'bound down' scar tissue, cross-fibre adhesions, and generally 'working with' mature fibrotic restrictions (and student members will be learning this in the latter part of their Diploma course), I have deliberately focused the discussion below on the remedial advice/exercise aspect, most of which I have personally trained in outside ISRM, almost entirely through Kinetic Control ® postgraduate physiotherapy courses over the past 23 years (see Recommended reading and Acknowledgements at the end of this article).

'Loading' – what does this mean?

In the present context of post-injury or wound (e.g., post-surgery) healing, 'loading' means gradually and cautiously subjecting the repairing tissues to controlled, measured tension and/or stress according to a graded programme, in line with the pace of the healing process.

Best loading options for subacute stages

RI-based MET

Once the acute phase, during which the principles of RICE (Rest, Ice, Compression, Elevation) should be applied, has evolved into the subacute phase, and cautious mobilisation is introduced (MICE – Mobilisation, Ice, Compression, Elevation), loading could typically be introduced in the form of <u>strictly</u>

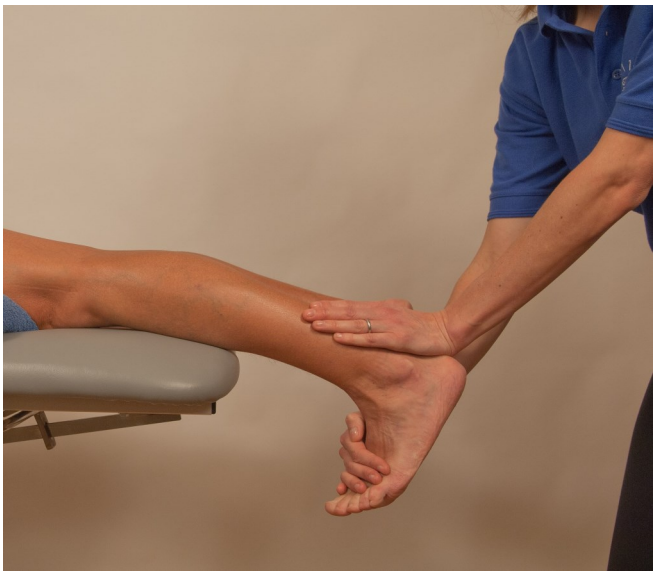
active Reciprocal Inhibition-based Muscle Energy Techniques (RI-MET) to the injured site. Why MET, why RI, and why 'active'? Because:

1) Unlike common forms of passive/static stretching, which tend to involve an external resistance which MAY, in the early stages of healing, exceed the cohesive strength of the fragile, immature collagen fibres and ECM, MET (as taught within the ISRM L5 Diploma course) is NOT about end-range stretching, but about strictly and only lengthening tissues to the 'barrier', or the 'first sense of increased soft tissue resistance', or the point when 'all the available soft tissue slack has been taken up'.

2) When opting for RI (as opposed to PIR – Post isometric Relaxation) MET, the active/contracting tissues are the antagonist(s) to the injured structure (s), which means that no active engagement of damaged myofascia takes place, thereby avoiding any risk of further injury to the latter as it is being gently lengthened.

3) Ensuring that the entire technique application is active (on the client's part) is a further valuable safety measure as it excludes any external force (e.g., from the therapist), so that the only lengthening tension the injured area is subjected to is that provided by the force of its concentrically contracting antagonist(s). The intensity and extent of lengthening actively produced by the client engaging his/her antagonist(s) will not overload the repairing tissue.

4) Last but not least, active RI MET is a valuable self-mobilisation method, in my view making it an ideal early home exercise to give clients for all the above reasons.

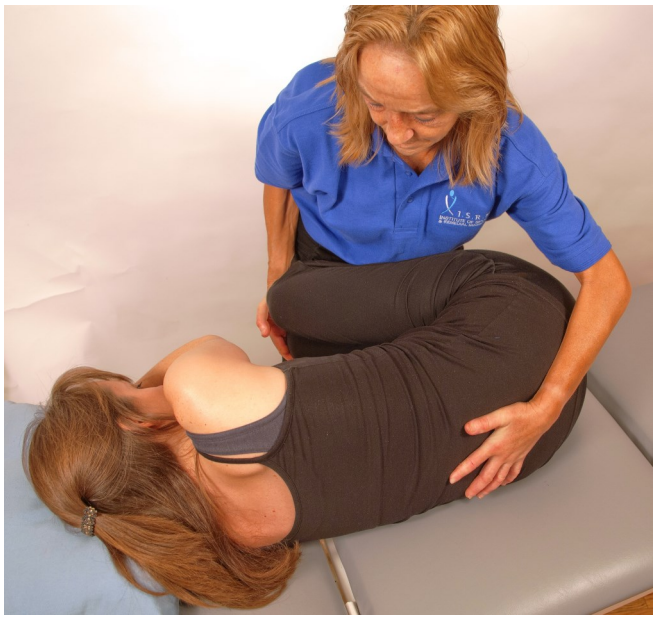


Reciprocal inhibition (RI)-based Muscle Energy Technique (MET) to gastrocnemius.

Early proprioceptive stimulation

This usually requires a partner at this still non-weight-bearing remedial stage: with the client lying down and either blindfolded or keeping his/her eyes closed, a partner lightly touches any one aspect around the injured area. The client's task is, as instantly as possible, to move the associated joint in the direction of the 'touch'. For example, in a post-ankle sprain scenario: client lies supine, eyes closed; therapist/partner lightly touches either the dorsum, plantar, medial, or lateral aspect of the foot, and the client attempts as quickly as possible to dorsiflex/plantarflex the ankle or invert/evert the foot according to which aspect was touched. It is advisable to start the exercise on the uninjured side for a valuable comparison of the speed and accuracy of the proprioceptive responses.

Adding low load isometric toning to proprioceptive training



Slow, controlled, low load agonist (here: lumbar extensors) activation through pain-free range: client gently engages muscles to extend lumbar spine with therapist's touch biofeedback (left hand) and support (right hand).

Gentle, non-weight-bearing/'open chain', pain-free, static (isometric) agonist activation can also be introduced for stimulation. 'Open chain' means that the distal extremity of the limb or body part is not fixed and can move freely (for example, the foot or hand is off the ground/not resting on/holding any support). The client is instructed to repeatedly contract the injured tissues in mid-range, at a low (5%-10% of maximum force) intensity, and to hold the contraction for, say, five seconds on each repetition. Progression over time would be to work over a greater (inner and outer) range and increase the holding intensity and/or duration, always within pain-free limits.

Introducing low load dynamic, through-range toning to proprioceptive training

Assuming all is well, 10 days to three a weeks later (again, depending on the injury and client's recovery), SLOW, CONTROLLED non-weight-bearing/open chain RI-based, pain-free, through-range self-

mobilisation can be introduced: the client carefully and slowly repeatedly moves the injured tissues through their present pain-free range of movement (RoM). This increases the RI-based lengthening as well as requires limited, safe concentric agonist recruitment. Progression would include improving control/reducing shaking, improving movement quality, endurance, range.

As the subacute phase and remodelling phase begin to overlap, increased resistance can be introduced using external devices such as Thera-Band® or similar resistance bands, partial weight-bearing or limb extremity fixing, light weights, and so on, and increasing RoM to allow 'mild discomfort'.

***** When introducing 'mild discomfort', repetitions should initially be limited and at least one, possibly two days should be interspersed between this type of stimulation in order to monitor for any potential excessive or adverse reaction. *****

Remodelling phase

From self-RI MET and initially light isometric stimulation, progressing to slow, controlled, concentric/eccentric movement strictly within a pain-free range, additional proprioceptive and functional challenges can gradually be introduced as the tissues mature and respond to the retraining, such as:

a) Prioritising motor control/coordination/proprioception over 'strengthening'

b) Increasing the focus on functional, and therefore more integrated, movement retraining

c) Increasing speed, resistance, complexity and directions of movement, number of repetitions, isometric holding times, etc.

Motor control (MC)/coordination/proprioception retraining

Generally speaking, the simplest way to prioritise MC over 'strength' training is to ensure that retraining exercises are asymmetrical. Why? Because as soon as asymmetry is introduced, adjusting to CoG changes to maintain balance is more challenging, and in particular, rotation control is called for. This means that far higher levels of afferent messages from the sensory receptors mentioned earlier are sent to the CNS, with a corresponding far wider range of efferent stimuli to relevant tissues to maintain balance and form. **These are precisely the types of stimuli required to facilitate healthy scar tissue remodelling.**

For example: introducing controlled, limited RoM (as necessary) lunges as opposed to squats will be both far more (i) beneficial in retraining balance (including rotation control), and (ii) functional, as virtually all ambulation and most daily activities and actions are asymmetrical. Single upper or lower limb retraining movements whilst keeping the trunk neutral and still will once again prioritise MC and quality of movement over the unintentional and often hidden compensatory 'cheating' (see sample scenario below) that occurs with premature post-injury 'strengthening'.

Prioritising MC over 'strength' furthermore ensures that appropriate, desirable tissue repair stimulation is achieved so that optimally efficient, minimally stressful functional movement is restored:

- Pain and impairment following injury or trauma such as surgery forces us to adapt how we move in order to continue to function.

- While such compensation strategies are initially essential, they can become detrimental if maintained beyond the period when they are needed.

- It is very easy for a formerly necessary, but no longer required change in a movement pattern to become habit, and eventually to feel 'normal', at the risk of potentially becoming harmful in the long-term.

- Such adaptations invariably involve transferring the action/movement made painful by the injury to a same action/movement at one or more nearby asymptomatic joint(s).

- From a scar tissue remodelling perspective, this becomes detrimental at the remodelling stage as the under-used repairing tissues fail to receive the stimuli essential to their maturation into healthy, differentiated, functional structures.

So, how can we help clients overcome and 'undo' such acquired compensations? This subject is vast and complex, so I will limit myself here to a few principles. One answer to the question is to introduce 'dissociation' exercises.

Reversing compensation: 'dissociation' exercises

What are 'dissociation' exercises? In the present context, these involve observing/assessing, in relation to the client's recovering injury:

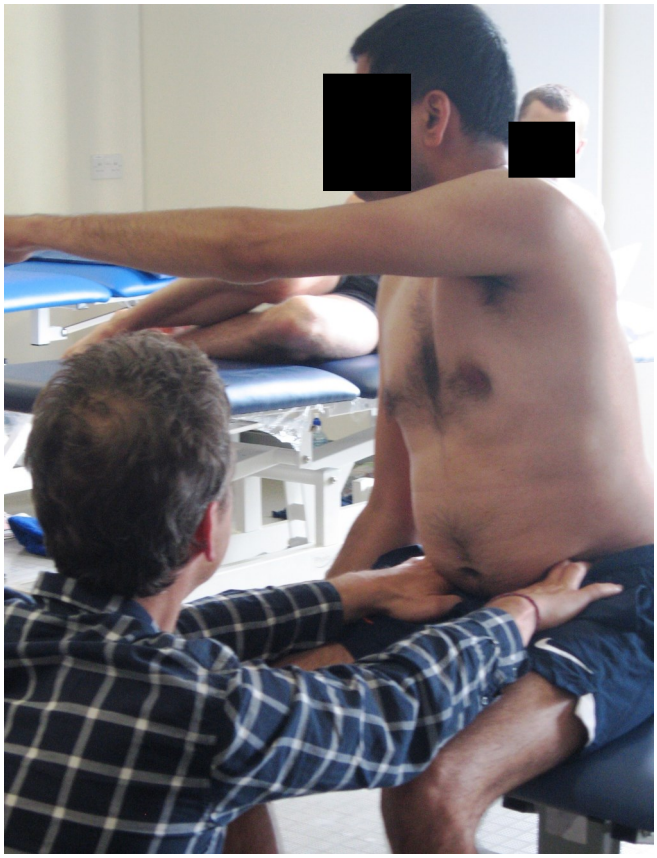
- Which movement(s) have been stopped or impaired by the injury at which joint(s), including noting the direction(s) of movement (such as flexion/extension; add/abduction; medial/lateral rotation)

- Which joint(s) the client has learned to compensate with, in the same direction(s) of movement.

Once the above has been identified, the dissociation exercise(s) should involve coaching the client initially to:

- Completely stop the compensating movement(s) at the compensating joint(s), whist at the same time

- Re-learn to move in the formerly painful direction (s) of movement at the original joint(s).



Slow, through range thoracolumbar rotation dissociation exercise (L —> R trunk rotation guided by left upper limb. Therapist is providing tactile biofeedback to ensure pelvis remains still.

Example: a client's left proximal hamstring tear two months ago has prevented trunk flexion from the hip joints, which involves a degree of anterior pelvic tilting. The client has subconsciously leaned to compensate by increasing thoraco-lumbar flexion to reach down in front of him/her, keeping the pelvis in (relative) posterior tilt to protect the painful upper hamstring area. A further possible/likely secondary compensation may be to allow a little anterior rotation of the uninjured (right) side ilium only, thereby creating left rotation in the mid-lumbar-to-sacral region with flexion.

While this may be a judicious short-term strategy to retain trunk flexion without pain, if not reversed during the remodelling stage, it will mean that the repairing left hamstring myofascia is denied the stimulation required to re-learn its role of providing eccentric control of the pelvis (specifically, the left ilium) when bending forward. Longer term, it may result in chronic left hamstring shortness, 'uncontrolled' (unconscious) left lumbo-pelvic rotation with flexion, adding stress to associated lumbar discs, facet joints, soft tissues, and excessive eccentric loading of the thoracolumbar erector spinae with flexion – potentially leading to secondary issues in that area.

Appropriate dissociation exercises in such a scenario could include:

Standing thoracolumbar versus lumbosacral + hip flexion/extension dissociation

With the client standing with his/her back to a wall, heels far enough away from wall for malleoli to be under great trochanters, femurs and tibia vertical, buttocks, mid-thoracic and only if possible back of the skull areas touching the wall: coach the client to perform slow, controlled anterior/posterior (A/P) pelvic tilts WITHOUT any part of the trunk losing contact with the wall – in other words, the gluteals/posterior pelvis 'rolls' a few cm up and down the wall, increasing/decreasing the lumbar lordosis but with NO head, cervical, or thoracolumbar flexion or 'peeling off' the wall.

These movements are effectively 'reverse' hip joint and lumbosacral flexion/extension without ANY thoracolumbar flexion. Progression over time would be reducing jerkiness and subsequently removing the biofeedback of the wall.

Seated thoracolumbar versus lumbosacral + hip flexion/extension

With the client seated, feet hip-width apart, parallel, on floor, ideally facing a mirror for biofeedback:

Instruct client to fully flex/extend the trunk a few times and then stop at the (approximate) mid-point, i.e., the 'neutral spine' starting position.

Without allowing ANY dropping/lowering of the sternum at any time, coach the client to perform slow, controlled A/P pelvic tilts. Keeping the sternum still will guarantee that only lumbopelvic movement (i.e., 'reverse' hip joint flexion/extension) is taking place, to the exclusion of any thoracolumbar movement. Progression would be reducing jerkiness.

Once more familiar and more easily performed, the above exercises could be progressed to:

The 'Standing bow'

With the client standing with feet parallel, hip-width apart, spine 'neutral' (as described above), arms crossed over chest, ideally in front of a mirror for biofeedback:

Instruct client to perform a mild anterior pelvic tilt with NO thoracolumbar movement.

From this starting position, coach client to flex forward at the hip joints ONLY, keeping knees extended, to approximately 45◦ WITH NO thoracolumbar flexion – mimicking a small stage performer's bow.

Client slowly returns to starting position, then relaxes pelvis, before repeating.

Check that spine remains 'neutral' throughout, and that there is no lumbopelvic rotation (biofeedback can be provided by the therapist/a partner lightly placing fingers of each hand over the front of both ASISs – any increased contact against the fingers on one side will indicate rotation to the opposite side.

The same exercise can be taught/performed seated, depending on the client's functional needs.

Mini lunge dissociation

In turn, the above 'bow' exercise can be developed into a mini lunge, ensuring that flexion only occurs at the hip joints and the spine remains 'neutral'.

Integrated movement retraining

Once pain-free and fear-of-pain-free hip flexion has been restored, more integrated, functional flexion can be reintroduced that involves harmonious combined flexion at the hip, lumbopelvic, and thoracolumbar regions. This will continue to promote the remodelling of the originally injured hamstring tissues, and once correct, integrated, efficient movement has been restored, THEN will come the time to assess whether any targeted 'strengthening' training should be incorporated – by which time it will be performed with balanced, synergistic myofascial involvement.

Adapting these principles to other scenarios

With a little clinical reasoning and adequate anatomical knowledge (this can always be looked up on a case-by-case basis), dissociation retraining along the above principles can be adapted to the specific injury/trauma scenario concerned. Following this up with functional, integrated retraining will optimise the remodelling process and optimally prepare the local and global systems to adapt safely and efficiently to any additional higher load conditioning required for an optimal return to sport and a hopefully injury-free future.

In conclusion, I very much hope to have persuaded readers that, provided that it is understood and managed correctly, 'scar tissue' is most definitely an indispensable 'good guy' in the long process of post-injury or trauma recovery.

Recommended further reading

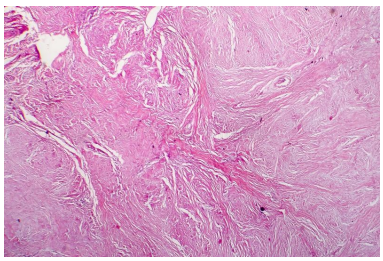
[1] Xue M and Jackson CJ. Extracellular Matrix Reorganization During Wound Healing and Its Impact on Abnormal Scarring. Adv Wound Care (New Rochelle). 2015 Mar 1;4(3):119-136, doi: 10.1089/wound.2013.0485. PMID: 25785236; PMCID: PMC4352699.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4352699/

[2], Caroline Bonnans, Jonathan Chou, and Zena Werb. **Remodelling the extracellular matrix in development and disease**. Nat Rev Mol Cell Biol. 2014 Dec; 15(12): 786–801. doi: 10.1038/nrm3904, PMCID: PMC4316204, NIHMSID: NIHMS657542, PMID: 25415508

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4316204/

Extracellular matrix definition cited from Bonnans et al. (2014), p. 786:



Scar tissue micrograph: the twisted lines of 'drawn in' fibrous cells can be seen.

"The extracellular matrix (ECM) is a highly dynamic structure that is present in all tissues and continuously undergoes controlled remodelling. This process involves quantitative and qualitative changes in the ECM, mediated by specific enzymes that are responsible for ECM degradation, such as metalloproteinases. The ECM interacts with cells to regulate diverse functions, including proliferation, migration and differentiation. ECM remodelling is crucial for regulating the morphogenesis of the intestine and lungs, as well as of the mammary and submandibular glands. Dysregulation of ECM composition, structure, stiffness and abundance contributes to several pathological conditions, such as fibrosis and invasive cancer."

For motor control rehabilitation-related clinical information, guidance, training, etc., visit:

https://www.comeramovementscience.co.uk/team/mark-comerford

Acknowledgements:

My ever-grateful thanks to and appreciation of Kinetic Control corporately and Mark Comerford and Sarah Mottram in particular for the wealth of invaluable clinical knowledge and skills gained on their courses over 22+ years.

I.S.R.M

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