

2020

Trust me,  
I'm a massage  
therapist

Does massage  
therapy flush toxins?

Pain positive:  
a patient perspective



Association of  
Massage Therapists  
**YEARBOOK**



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# Editorial

By Michelle McKerron



**The yearbook is fast becoming a highlight of the AMT calendar! The following pages hold writings of such excellent calibre that you may even find yourself almost forgetting the year we've had.**

So much of what AMT communicated to members this year was, of necessity, related to COVID-19. So although the yearbook opens with a hat tip to the moment that COVID upset all our apple carts, its main focus is drawing our attention to important aspects of our practice, allowing our direction to subtly adjust and become more balanced.

For most of us, 2020 has been a year like no other, to be farewelled quickly and quietly. But it is worth taking the time to reflect and evaluate your part of the journey, how you have moved through it, and what still motivates and excites you in this arena of life.

Reading these yearbook articles reminds me of the wealth of knowledge and experience we have within the AMT community, and incites me to look forward to who we may discover in the coming 12 months.

My overflowing thanks to the contributors of this yearbook, for your time and willingness to give again of your resources for the betterment of AMT.

Without further ado...

*I promise to make you more alive than you've ever been.  
For the first time you'll see your pores opening  
like the gills of a fish and you'll hear  
the noise of blood in galleries  
and feel light gliding on your corneas  
like the dragging of a dress across the floor.  
For the first time, you'll note gravity's prick  
like a thorn in your heel,  
and your shoulder blades will hurt from the imperative of wings.  
I promise to make you so alive that  
the fall of dust on furniture will deafen you,  
and you'll feel your eyebrows like two wounds forming  
and your memories will seem to begin  
with the creation of the world.*

Nina Cassian, *The Ordeal*

## **Ordeal**

By Rebecca Barnett



Wikipedia explains the famous  
Trolley problem.



This is my favourite poem. And roughly 35 years since the first time I read it, I find myself re-reading it through an entirely new lens. The poem now feels portentous in a way that I have never noticed or experienced previously. Another layer of the onion peels off.

My life could have been very different. More than that, it could easily not have happened at all. My nanna's first husband was a victim of the Spanish flu pandemic in 1919. It took his life when he was in his early twenties. After his funeral service, nanna wandered through the Royal Botanic Garden in Sydney in a deep fog of grief, accompanied by a friend of her late husband, a young Sydney musician called George Vern Barnett.

My grandfather Vern died of a heart attack long before I was born. But, when I was a kid, my nanna often used to tell me her story of walking the Royal Botanic Garden right after the funeral of her first husband with the man who was to become her second husband. As she became more forgetful and other less potent memories faded, she told the story more often. Sixty years on the weird mixture of grief and nascent love was still powerfully present in the way nanna told the story.

I owe my very existence to the 1919 pandemic. The infinite chain of tiny events that led to me being alive hinges on a young man dying in the prime of his life. Perhaps if it hadn't happened there would still be some other version of me wandering the planet, singing in massed choirs and swearing too much. The man who wasn't my grandfather, Mr Trevor-Jones, was a lauded bass singer so maybe a Rachel Trevor-Jones would have walked the planet singing and swearing in my place. (The swearing definitely came from nanna's side – her mother was a prodigious potty mouth.)

*Blog Editor's note: Having met Beck's mother, I can attest that the swearing definitely comes from both sides of her family. She was always fated to be a potty mouth.*

A century later, a new pandemic has me thinking hard about how tenuous a thread our existences hang from. I have never been so conscious of my almost-not-to-be existence and the ordeal of being alive. I am deafened by the fall of dust on furniture.

## The trolley problem

The trolley problem is an ethical thought experiment that goes like this:

There is a runaway trolley barrelling down the railway tracks. Ahead on the tracks are five people tied up and unable to move. The trolley is headed straight for them. You are standing some distance off in the train yard, next to a lever. If you pull this lever, the trolley will switch to a different set of tracks. However, you notice that there is one person on the side track. You have two options:

1. Do nothing and allow the trolley to kill the five people on the main track.
2. Pull the lever, diverting the trolley onto the side track where it will kill one person.

Which is the more ethical option? Or, more simply: What is the right thing to do?

Faced with this impossible choice, most people abrogate the decision. The trolley continues hurtling on and takes the lives of 5 people.

***“Self isolation is not an act of fear – it's an act of love.” Dr Dan Suan***

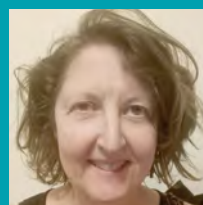
In the early hours of Monday 16 March 2020, the AMT Board stood up and made an impossible decision. Faced with their own version of the trolley problem, they made a choice that they knew, to many, would seem utterly antithetical to AMT's mission to support members. They agreed that it was time to advise AMT members to shut down all direct client contact.

The board fully understood the magnitude and gravity of that advice.

In the early hours of Monday morning, I drafted the hardest email I had ever written. The decision was sealed in the early afternoon, when the email was circulated to AMT members. I don't know how many of you have ever used Mailchimp but there's a high five animation that accompanies the moment you hit the send button for a message. My resulting furrowed eyebrows were two fully formed wounds on a face I am still training myself not to touch. It really didn't feel like a high five occasion.

The ripple made by the Board's brave and gruelling decision rapidly spread out across the globe, like the virus we are battling to contain. It created a chain reaction of similar advice from massage therapy associations around the world. We asked massage therapists from near and far to feel the imperative of wings and, oh, how their shoulder blades are aching.

### About the author



Rebecca Barnett is the CEO of the Association of Massage Therapists. She is following Australian Government advice to avoid congregations at trampoline venues.



**Trust me ...  
I'm a massage  
therapist**

By Tim Clark



Alain de Botton talks about attachment styles.



I've always known that what we do as massage therapists is so much more than 'hands on bodies' but the COVID-19 pandemic really drilled home the importance of one central idea.

On at least three occasions in my first week back after the national lockdown, clients told me that they had considered going elsewhere for a massage while I was closed but decided to wait to see me.

What did they say it was that made them wait?

It wasn't that I offered rebates. Or that my fees were lower. (In fact, I put my fees up to cover my extra COVID-19 measures.) Or even necessarily that my massage was the best.

It's simpler than that.

They said they *trusted* me.

It was a huge vindication of the time I had taken away from work to help prevent the spread of the virus, and of the measures I had put in place to protect against it during my return to work. More than that, it was a vindication of the work I had done over years cultivating and sustaining relationships with my clients that offered them an experience of safety.

You might be thinking, *'We know trust is important, Tim. Tell us something we don't know.'*

I get it. I'm right there with you. I've always known that trust is central to every single aspect of what we do, not only as a foundation for safety but as an aid to healing. But to hear it from my own clients' mouths, especially after the destabilising events of 2020, brought it home in a way that was vivid and real. Trust was right there in the room with us, out in the open – not just an abstract concept but something that we could both feel in the moment.

I got to thinking about what I can do to make sure that my clients continue to feel this sense of trust, and how I can make trust a focal point of my work. There are some really practical things we can do and some things that we can develop in ourselves, based on theory.

## The practical stuff

In his book *The Placebo Effect in Manual Therapy* (2015), Brian Fulton offers a great, evidence-informed overview of how we can help our clients to trust us. Some of the "obvious and not so obvious things" he mentions are <sup>1</sup>:

- "Keep your appointments and all other agreements with your patients."
  - › Breaking agreements breaks trust.
- "Create realistic expectations."
  - › Positive: yes. Unrealistic: no.
- "Help your patient to understand the healing process."
  - › Knowing that healing doesn't always happen on a straight upward trajectory can reduce the frustration people feel when things aren't going well.
- "Explain your plan and strategy."
  - › Don't leave them wondering if they've gotten involved with a treatment plan that might be a financial burden.
- "Carefully explain the patient's role."
  - › Foster autonomy and ownership of the healing process.
- "Avoid making the patient feel diminished in any way."
  - › Even if you're not overtly patronising or critical, your judgements can still be communicated subconsciously, so check them.
- "Don't allow interruptions during treatments."
  - › Undivided attention communicates care.
- "Don't be afraid to admit that you don't know something."
  - › Acknowledging your limits reassures the client you're not afraid to be human.

**PD reflection idea:** What do you do to foster your clients' trust in you? What could you add to this list? Have there been times when you felt like you might have broken trust? What did you do to repair it?

## The theoretical stuff

Fulton notes that people, depending on their history, will have different capacities for trust. He uses attachment theory as a lens for thinking about how easy or difficult it is for people to trust.<sup>2</sup>

Some people find it natural to trust others because their formative relationships (especially with their parents) have left them with the deeply held belief that people are generally trustworthy. In attachment theory, these people are deemed to possess a 'secure' attachment style. A majority of people exist somewhere on the spectrum of secure attachment.

People whose caregivers were unreliable, especially when they were very young, may struggle to warm to you or to relax during treatments. With these people, any breach of trust can register as reconfirmation that others can't be trusted, which means they feel a need to remain constantly alert to external threats and are more likely to withdraw when their needs aren't met. Attachment theory names this attachment style 'avoidant'.



Conversely, some people with inconsistent caregivers respond by crying out or clutching in an attempt to have their needs met. As adults, they can come across as boundary-pushers or overly dependent, both of which can really test our ability to keep relationships appropriately professional. In attachment theory, this way of relating to others is referred to as 'ambivalent' or 'anxious'.

With anyone, though, the principal of trustworthiness is a guiding light. An experience of a safe, trusting relationship can help to chip away, even a tiny bit, at deeply held beliefs around distrust, and even provide a model for how to relate to others in a way that is about authentic connection above all else.

**PD reflection idea:** Think about what you learned about trust growing up. It can even be helpful, if you can, to ask your parents or caregivers about what you were like as a baby. Then learn more about attachment styles [here](#) or [here](#). What might your attachment style be? How might your attachment style impact on how you work with clients? Do you sometimes find it difficult to trust them? Are there clients you think might have struggled to trust you?

It was a gift for me to learn a few years back that I have a predominantly avoidant attachment style. I tend to keep a distance between myself and others because I expect them to respond negatively. It's easy to see how this has crept into my work with clients. Sometimes, especially when a client is new, I expect that I will inevitably disappoint them, which can lead me to overcompensate by trying to be all things to them. It has taken time to learn to be more myself with people, to acknowledge my strengths and accept my limitations, and to let my guard down a little. Of course, this has extended into all my relationships. (I think I'm even doing it a little bit right now!) It has become more about my 'way of being' than about affecting any particular 'professional approach'.

Which leads me to...

## The even-more-theoretical stuff

Feelings of trust are held in our bodies, and neuroscience is helping to bring us closer to understanding how we hold and process those feelings. In particular, the work of Stephen Porges on Polyvagal Theory, which goes back as far as the late 1980s, has done much to unravel the science of human connection.

In Polyvagal Theory, the term 'neuroception' is used to describe the signals we receive from our environment and from our own bodies that tell us we're safe or in danger. It's not only about what's happening inside our bodies but about what happens between our bodies when we're in contact with others. The neuroceptive feedback we get when we're in relationship with other people is constantly updating and shifting. Those shifts in turn affect the other person's shifts and on it goes.


Furthermore, the way we receive those signals depends upon our past experiences, especially traumatic ones.

*"For example, if I raise my hand and you've never been hurt by another person before, you may interpret this to mean that I'll be asking a question or hailing a cab. On the other hand, if you've been traumatised earlier in your life, you may interpret the intention of my raising a hand with a sense that I'm about to strike you."*<sup>3</sup>

One of our tasks as massage therapists is to "track the nuances of neuroception"<sup>4</sup> in ourselves and remain open to them in our clients. This is how we attune to our clients, and how we can monitor the waves of safety and threat that occur when we're in contact, and thereby manage trust.

And when it feels like a client has reacted in a way that we find hard to explain – or indeed that we have had an inexplicable reaction – recognise it not as a reflection on either of you but as one of the inevitable mis-attunements of neuroception that can happen when two people are in contact, each one with their own inbuilt safety-seeking system activated. We can't really explore these mis-attunements with our clients the way a psychotherapist might but knowing that they occur can help take the sting out of experiences when we feel like we're not being trusted or, indeed, if we're struggling to trust a client.

**PD reflection idea:** I've barely touched on this massively complex and illuminating theory here. If you're neuroscientifically minded, consider reading some of Porges' own work. There's a ton of remarkable writing here. What else can you take from Polyvagal Theory into your massage work? What questions does it raise for you that you could explore further?

I hope this has offered some fresh perspectives on trust. There's a lot more to be said on both the theories mentioned here and a lot of potential applications for us in massage therapy that have yet to be explored but it's exciting territory. 

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## About the author



Tim Clark is a Melbourne-based massage therapist and psychotherapist. Tim has offered a free massage to anyone who will write his next bio for him.

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retox

Does massage  
therapy flush  
toxins?

By Rebecca Barnett



Laura Allen demolishes the toxins myth in just over 3 minutes



If you are settling down with a cup of tea to read this article, grab your smart phone, scan the QR code above and prepare for three sublime minutes with US massage therapy educator, Laura Allen.

Go on. Do it now.

I sincerely believe that Laura's bit should be the first and last word on massage therapy "clearing" or "flushing" toxins. And yet, here we are – 9 years down the track since Laura laid down that lore and this persistent toxin flushing claim still gets trotted out in countless mainstream media articles, on social media pages, and on websites promoting the benefits of massage therapy.

When you google "massage and toxins", you'll get about 5,570,000 results in 0.82 seconds. That's a shitload of flushing. When I do that particular keyword search in my intertube device it yields such a delightful mélange of whacky physiological claims that I can sense myself secreting stressotoxins from my fury organs, and find myself dry reaching for my Vodkamatic2000 slow release existential angst detoxinator.\* By the time I get to page 23 of the Google search results, I have gone to a place beyond the help of the Vodkamatic2000.

Do not, I repeat, do not perform an image search for "toxins". This is actual medical advice. Trust me. Humans are not designed to endure that much nonsense.

I wonder if this particular myth is so intractable and enduring because it's a bit tricky to bust: the claim that massage flushes toxins is so ill-defined, broad and vague that it's difficult to know what the parameters are and where to start debunking. Better men and women than me have made cogent and compelling cases, which clearly show that the jury is well and truly in.<sup>1,2,3</sup>

There is no plausible mechanism or evidence that massage therapy flushes toxins.

But I guess I have to start somewhere, so to quote Laura Allen ...

### What exactly is it we're calling a toxin?

Wikipedia defines toxins as "a poisonous substance produced within living cells or organisms". Basically, toxins are biologically produced poison. The term was first used by an organic chemist, Ludwig Brieger.

However, the term also gets more broad colloquial use to describe any toxic substance, including synthetic substances created by artificial processes and pollution, even though these should technically be called toxicants.

### *There is no plausible mechanism or evidence that massage therapy flushes toxins.*

The Wikipedia page on toxins rather witheringly describes this non-technical usage of the word as referring to "any substance alleged to cause ill health. This could range from trace amounts of potentially dangerous pesticides, to supposedly harmful substances produced in the body by intestinal fermentation, to food ingredients such as sugar, monosodium glutamate (MSG), and aspartame".

I suspect that the latter definition is the natural home of our toxin flushing claim. I further suspect we're talking so broad a usage for the word "toxin" that it could conceivably encompass, amongst other things, most ingestible substances that have been shown to be bad for us or we think are bad for us; any kind of ingestion of drugs, be they prescribed, legal or illicit; a vague and ill-defined class of (inevitably evil) chemicals that are an endemic part of the perils of daily living; and a gigantic range of normal metabolic processes that the body will keep doing as part of homeostasis but we seem to want to give it a helping hand or speed it up somehow cause we want people to feel better.

It ultimately doesn't matter which of the vast array of vaguely defined candidates that we're trying to flush out with massage – whether it be metabolic wastes like carbon dioxide or environmental poisons or the byproducts of metabolising pharmaceutical drugs or the ugly aftermath of a hard night on the Vodkamatic2000 – we still need to think about what evidence there is to support the claim and maybe even inject a bit of common sense.

On the common sense front, can you recall the last time you re-certified in first aid and the advice for management of a snake bite or poisoning was to consult a massage therapist STAT to flush that nasty stuff right out? And last time I checked, people with hangovers craved bacon sandwiches stuffed with hot chips and a side serve of lard, not an urgent massage sesh. (Hmm, can we conclude that the cure for toxins is even more toxins?)

### The origin story

*"Falsehood flies and the truth comes limping after it"*

Jonathan Swift

It is difficult to pinpoint precisely where and when this myth took off. What is certain is that, although the idea of flushing bad things from the body has been around for a loooooong time, the concept was supercharged by the hydropaths of the 19th century, who developed a huge set of tortures cures based on the premise that water could heal all bodily ills.<sup>4</sup>

Incidentally, the hydropaths were also responsible for the origin of the “drink 8 glasses of water a day” myth. I highly recommend reading Marketplace of the Marvelous.<sup>5</sup> It will give you a clear sense of just how many of our health habits and behaviours were borne out of the war between regular and irregular medical practitioners, which also helped to define modern medical practice. The ways in which we perpetuate the same narratives and divisions to this day are too numerous to count ... and intriguing.

Although it is outside the remit of this brief article, you could mount a cogent case that the concept of flushing bad things from the body has its roots in religious beliefs that are thousands of years old. The metaphor of Christ washing away the sins of humanity is basically the apotheosis of this.

It seems pretty likely that we took our cue on toxin flushing from 19th century hydropaths who, in turn, were influenced by religious beliefs. We then supercharged the flushing metaphor ourselves with a range of biologically plausible sounding mechanisms of action to support the claim (like massage increasing circulation which has also been questioned).

So we're basically steeped in water and blood.

## The evidence

***“That which can be asserted without evidence can be dismissed without evidence”***

Christopher Hitchens

We literally have no evidence on which to base the claim that massage therapy flushes toxins from the body. It is basically a whacky hypothesis looking for an experiment.

A search for massage and toxins in PubMed yields 35 results. The majority of these concerned the various MSK uses for botulinum toxin and bore no relevance to massage therapy whatsoever. The only relevant citation is actually a 2009 case report of endotoxin exposure at a spa centre, involving two therapists who were poisoned by stored seaweed they used in the course of a seaweed massage (and I didn't even know that was a thing. Next time I am in the surf I'll consciously collide with the seaweed).

***“Organic dust toxic syndrome was diagnosed for two workers who performed seaweed massages at a spa center at which aerosolized endotoxin was measured. In order to minimize endotoxin exposure during massages, it is important to use fresh seaweed or seaweed kept well cooled for no more than 2-3 weeks.”***<sup>6</sup>

I guess we're not going to race to promulgate the message that massage therapy may increase endotoxin exposure on the basis of this case study though.

In the excellent article referred to earlier, Paul Ingraham discusses rhabdomyolysis, the metabolic process which may actually make massage a slightly toxifying treatment. I heartily recommend you read Paul's article – it is a far more comprehensive overview of the terrain than I can manage in this brief overview.<sup>7</sup>

## Conclusion

Our clients seek out treatment for a lot of sound and wonderful reasons. I can't recall a single occasion a client asked me to massage away their toxins. They may have asked for a hangover cure but only in jest. We don't need this toxin myth keeping us tied to an odd 19th century practice of dousing, steaming, dunking, immersing and potation. That particular episode of Nigella's Kitchen was a cracker though ...

\* The author does not receive financial incentives from Vodkamatic2000.

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## About the author



As CEO of AMT, Rebecca Barnett is excited by the opportunities that the massage therapy profession has to purge itself of persistent myths through evidence and education. She also acknowledges that her detox through cheese diet doesn't work but is fun and rewarding regardless.



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**You can't  
give from an  
empty vessel**

By Sharon Livingstone



How to be a friend to yourself.



## If life is all about balance, can we also apply that to kindness?

Massage therapists are quite good at showing kindness to their clients – squeezing them in for an emergency appointment, adding on an extra five minutes, waiving cancellation fees for a sick child or providing a lovely warm table in the middle of winter – but they are less good at showing kindness to themselves.

Why are we so good at giving kindness but crappy at self-kindness?

During the COVID-19 shutdown, I found myself facing a dilemma. I needed help. But I hate asking for help and I don't know how to accept offered help.

Everything was bleak, as it was for a lot of people facing an indeterminate period of time with no earnings and no financial support and dwindling savings. My anxiety was out of control, pinging around the room, bouncing off the walls, hitting me in the face whichever way I looked and even tapping me on the shoulder as I tried to sleep (*hello 4 a.m., nice to see you for the tenth day in a row*).

My attention span lasted as long as a hot chip in a flock of seagulls and with it went some of my boundaries, which is how I ended up responding to a simple “how are you” email from an acquaintance by unloading about my finance concerns and wondering how I'd pay my rent. Within an hour I received a response.

***“I'm going to pay your rent this month. I don't want you to pay me back. I'm offering because I'm in a position to. No use arguing with me. Send me your bank details.”***

What would you do?

OK, so my first reaction was to burst into tears. Nothing else during lockdown/isolation/no-work brought me to tears but that did.

My next reaction was “No way am I letting them give me that much money.”

I am the giver. Professionally, personally, traditionally. I wasn't going to quit being the giver.

But.

But I needed help.

After a solid hour pacing around the living room, I said thank you and accepted that help. It felt strange and unsettling. Although being able to pay my rent was a massive relief. Another kind gift that sweetened the mood.

I was quite lucky during that no-working period - accepting that first act of kindness opened the door to more kindness. Offers of money, coffee beans, a counselling session, a haircut and potting mix were gratefully received. Don't get me wrong, it still felt strange but saying thank you instead of “she'll be apples” became easier.

Knowing that there are kind people in my life filled me with immense happiness. Then came the crunch. It was time to be kind to myself.

### Self-kindness

If you think of kindness being stored in a vessel – a big bucket of kindness – every time we show kindness to others, we take it from that bucket. We give and give and give until we can see the bottom of our kindness bucket. Since we can't give from an empty vessel, how do we refill that bucket? Accepting kindness from others? For sure. What about receiving kindness from the biggest giver we know – ourselves?

***Increasing my prices didn't cause even a tiny ripple of discontent amongst my clients but it enormously supported my self-worth, my self-respect and my starved bank balance.***

Of course, self-kindness might be as simple as giving ourselves permission to take an afternoon off and read a good book or re-watch Sex Education. It might be deeper, such as not thinking negative thoughts about ourselves.

When I have challenging decisions to make, I like to have a discussion with Future Sharon. If I make her life easier, it's a good thing. I don't want to piss her off. I don't want Future Sharon to feel animosity towards Past Sharon.

Reopening after lockdown loomed. I completed the AMT risk assessment tool. There were increased measures to be paid for: cleaning products, storage unit, PPE, signage. There was additional labour allocated to cleaning to get paid for.

Who was going to pay for this? Me?

It was time to call in Future Sharon and ask her how she felt about working longer hours and having more stuff to do and being paid a lower hourly wage.

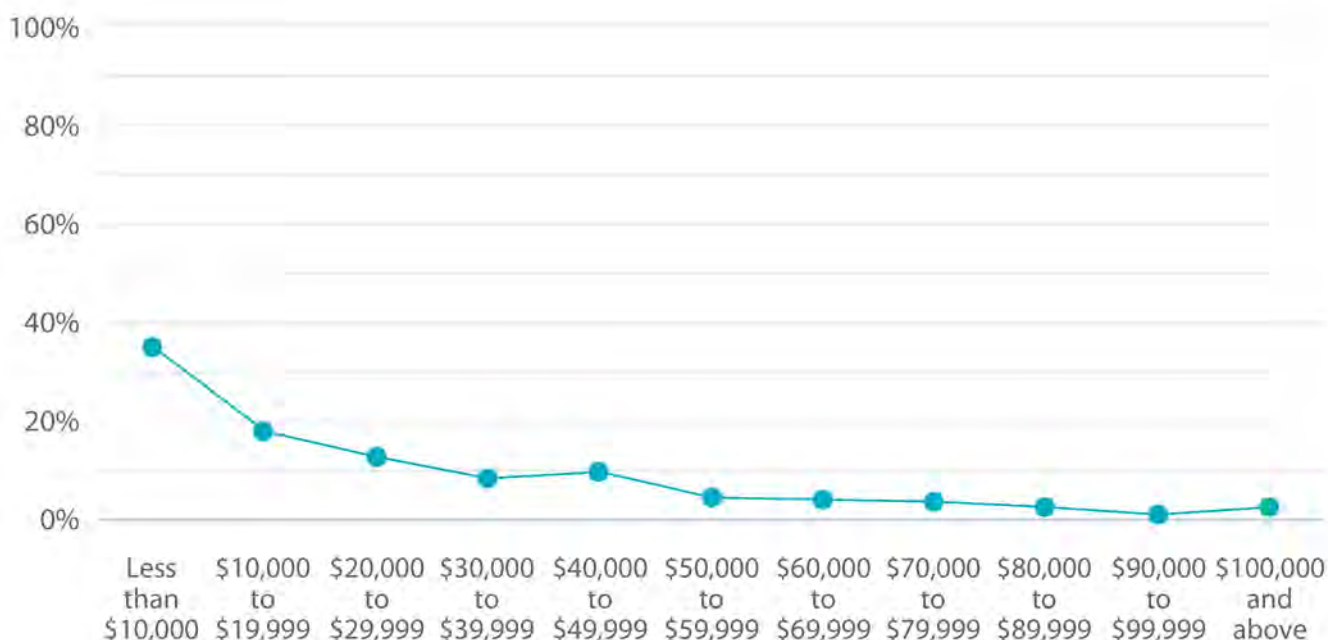
Then I asked her how her plans were going for that holiday she's longing for. Savings building up, Future Sharon?

I asked her how much she was loving paying bills without panicking where the money was coming from. Got that credit card spending under control, Future Sharon?



## Gross earnings for massage therapists

Source: 2017 AMT workforce survey



The median earnings of massage therapists in 2017 was less than \$20,000 (Source: 2017 AMT workforce survey)

The median earnings of Australians in 2017 was \$53,000 (Source: Australian Bureau of Statistics)

I won't use Future Sharon's exact words because she had quite the potty mouth but, to paraphrase, she resented me.

So, who was going to pay my extra wage and for the increased cost of providing massages?

I'm a massage therapist not a wealthy philanthropist. If I needed to apply for and receive government financial assistance to survive, I couldn't afford to absorb the additional costs of doing my job. It would be arrogance or a misguided assumption if I told myself that my clients would be unable to afford to pay a little more. Who am I to say what my clients can and can't afford? If a client approached me and told me that they couldn't afford my new prices, there are workable options like providing a shorter treatment or only providing treatments for that client during traditionally quiet periods of the week.

I made the decision to increase my prices for the second time this year.

It's not such a long time since I made these decisions but I already look back at Past Sharon with gratitude, pride and respect. She made her decision so I could feel that I was earning my worth. To enable me to pay my bills and put some money away for the future.

It was an act of kindness from the biggest giver I know. Me.

Increasing my prices didn't cause even a tiny ripple of discontent amongst my clients but it enormously supported my self-worth, my self-respect and my starved bank balance.

In the end it was an easy decision. By taking the emotion out of it, i.e. worrying that my decision would impact clients/client numbers, it was the sensible thing to do.

Without the kindness of others, I wouldn't have made it through lockdown relatively unscathed. Without the kindness to myself, I wouldn't have been able to return to work as a massage therapist.

I wonder how much kindness we can accept and how much kindness we can give, before we decide to show our greatest kindness to ourselves?

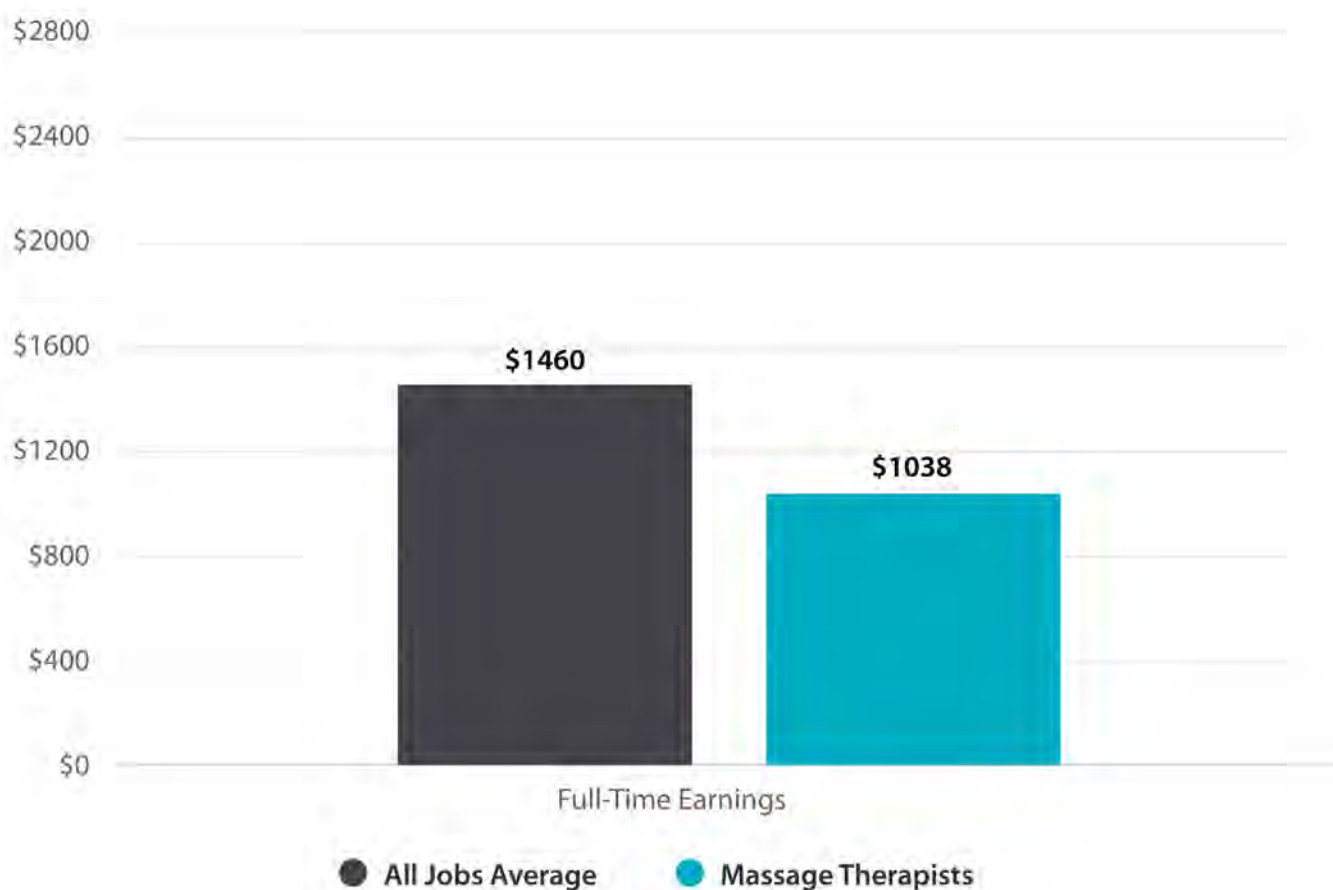
### Further reading

Dave Moore wrote a very good thing. No massage therapist should be without it. "How to Set a Price for Massage". Read it. No, right now. Off you pop.

<https://blog.amt.org.au/index.php/2017/10/30/how-to-set-a-price-for-massage/>

**This data is based on full-time employee earnings. According to AMT workforce surveying over the last 4 years, less than 2% of massage therapists are employed full-time under the Health Professionals and Support Services Award. In September 2017, 8.5% of massage therapists were employed under the Award on either a full time, part time or casual basis. By July 2019, this rate had dropped to 6.5% employed under the Award.**

Source: Based on ABS Survey of Employee Earnings and Hours, May 2018, weekly total cash earnings for full-time non-managerial employees paid at the adult rate.



### About the author



Sharon Livingstone is a massage therapist in Sydney, NSW. A love of sport drew her to the industry but discovering job satisfaction came from helping people live with less pain keeps her in it. Sharon is a writer, keen bushwalker and (very) frustrated traveller who is also a coffee snob.



**Pain Positive:  
a patient  
perspective**

By Leah Dwyer



Why things hurt?



**I was addicted to high intensity spin classes to stay slim and fit. I put myself under enormous pressure to be the perfect mother to my severely disabled son while ignoring a crumbling marriage.**

Then I fell over in a mother's race at my son's school.

I went straight to the gym to do a personal training session and a spin class. When my neck seized up a few days later, a physiotherapist diagnosed me with whiplash and a mild concussion. I ignored his instructions and toughed it out at the gym, which meant 5 spin classes a week.

About 6 weeks later I still had neck pain and restricted range of motion, and had developed an intermittent myoclonic jerk – my head would randomly twitch to the left as if I was being zapped by a cattle prod. I went to my GP and she sent me to a neurologist, who diagnosed me with a neuromuscular condition called Cervical Dystonia (CD). He gave me a script for a mild opioid and an anti-depressant – standard drugs for chronic pain. The neurologist also declared that Botox injections were the only medical solution for the involuntary muscle movements and that if I didn't have Botox, I would most likely be house bound within 5 years.

Wow! Talk about a life changing 20-minute consult.

### What is Cervical Dystonia?

CD feels like waking up with a crick in my neck every morning.

***“Dystonia is a disorder characterized by involuntary muscle contractions that cause slow repetitive movements or abnormal postures. The movements may be painful, and some individuals with dystonia may have a tremor or other neurologic features. There are several different forms of dystonia that may affect only one muscle, groups of muscles, or muscles throughout the body. Some forms of dystonia are genetic but the cause for the majority of cases is not known.”***

**The National Institute of Neurological Disorders and Stroke (USA)**

### Doctors, doctors and Doctor Google

I had Botox for a year; incredibly painful injections at the base of my skull. It did nothing for the pain or stiffness. At the end of the year, I decided to quit the Botox and formulate my own treatment plan. This included remedial massage, strength training, an over-the-counter pain reliever and a good tequila.

Most persistent pain patients try everything and I was no different. One of the therapies that seem to work temporarily better than anything else was remedial massage. And yes, I heard the words, “You're so tight!” many times. As long as the therapist didn't hurt me by trying to force my muscles to relax, I would often feel more mobile and in less pain. This intrigued me and I decided to become a remedial massage therapist.

As part of my constant quest for answers, I saw a pain specialist. Unfortunately, the pain specialist gave me no answers and deeply angered me by declaring that there was nothing on the scans that warranted the amount of pain I was in and he'd like me to see the clinic psychologist. I screamed all the way home.

A fortuitous Google search brought up a TED talk by Aussie neuroscientist Lorimer Moseley called, Why Things Hurt. [Scan the QR code above to watch this video]

I was mesmerised. I watched the video three times. Then I cried.

*It was the first time I felt normal.*

### Pain education

Learning about pain changed everything for me. Knowledge put me back in the driver's seat and changed the route I was on. I learned that pain is complex and multifactorial, that my brain produces the experience of pain that I feel in my body and that pain does not automatically mean tissue damage. I learned that I could slowly rewire my brain and calm my nervous system. I learned about Moseley and Butler's DIM SIM therapy<sup>1</sup> and began seeking out safe activities and thoughts – safety in me (SIMs). I was also more mindful of the dangers in me (DIMs) that contribute to turning up the volume of my pain – stress and catastrophising thoughts. I learned that I had a lot more control over my pain experience than I previously thought. This knowledge gave me more self-efficacy, which changed my life. I sought active therapies such as Cognitive Behavioural Therapy (CBT) and physiotherapy. I tapered off all the drugs and took up sea kayaking, which is more of a meditative workout.

Once I began learning about pain, I wanted to become a consumer advocate by working with Pain Australia<sup>2</sup> and Moseley and Butler's Pain Revolution.<sup>3</sup> I felt it was my responsibility as a survivor to help others find their way. Listening to other's lived experiences of pain is a powerful way to learn about pain.


During my darkest days, I felt so alone. Learning that not only was I normal but that others were going through similar experiences and proactively changing their pain via pain neuroscience education was a revelation.

I'm not going to sugar coat it - this is hard work. As a patient, I have days when I want to just take a pill to make it all go away. As a clinician learning to explain pain to a multitude of different clients has been very challenging but also one of the most worthwhile things I have done as a therapist.

### *Listening to other's lived experiences of pain is a powerful way to learn about pain.*

When you learn how pain works, you begin to understand why you have to change your thoughts, beliefs, emotions and the way you do things every day. Ultimately, this is when the change starts to happen - change that alters someone's pain experience. Moving away from a damaged tissue equals pain model (Cartesian model – named after René Descartes) and towards a biopsychosocial model changed how I thought about my pain and the drivers behind it. I realised that my spin class obsession, my collapsing marriage, and the stress of a disabled child all contributed to a fertile ground for a chronic pain condition.

As a clinician, it taught me that the old structural pathological model that I had been taught was outdated and would often send patients on a wild goose chase full of DIMs. Massage therapy can be a really SIMful experience if the client feels heard and leaves with relaxed muscles and a bit of pain education.

The irony of being a massage therapist with a neuromuscular condition is not lost on me. Work is often physically challenging at the best of times so adding a constant tremor and moderate to high daily pain is, well, a pain in the neck. However, Dystonia is the reason I became an 'explain painiac', a consumer advocate and a much better massage therapist. 

### Read more

- Pain Revolution's [Resources for People in Pain](#)
- [DIM/SIM Therapy – Patient perspective](#)
- [Restricting access to opioids could drive pain sufferers to buy harder drugs on the black market, experts warn](#) (featuring the author)

### References

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- <sup>3</sup> <https://www.painrevolution.org/>, accessed 11 November 2020

### About the author



Leah Dwyer is a Remedial Massage Therapist at Ryde Natural Health Clinic. Leah lives with chronic pain due to Cervical Dystonia and as a result has a keen interest in pain science. Leah is a member of the Pain Australia Consumer Advisory Group, the Pain Revolution Communications Committee and the Agency for Clinical Innovation Pain Network Group. She has discussed opioids, chronic pain and pain management with the media and is currently working with NPS Medicinewise on a series of opioid resources for GPs. She is passionate about massage therapy, educating people about pain, neurophysiology and the simple power of affective touch. Leah is also a mad keen sea kayaker and can be found most mornings looking for dolphins and turtles on Middle Harbour.

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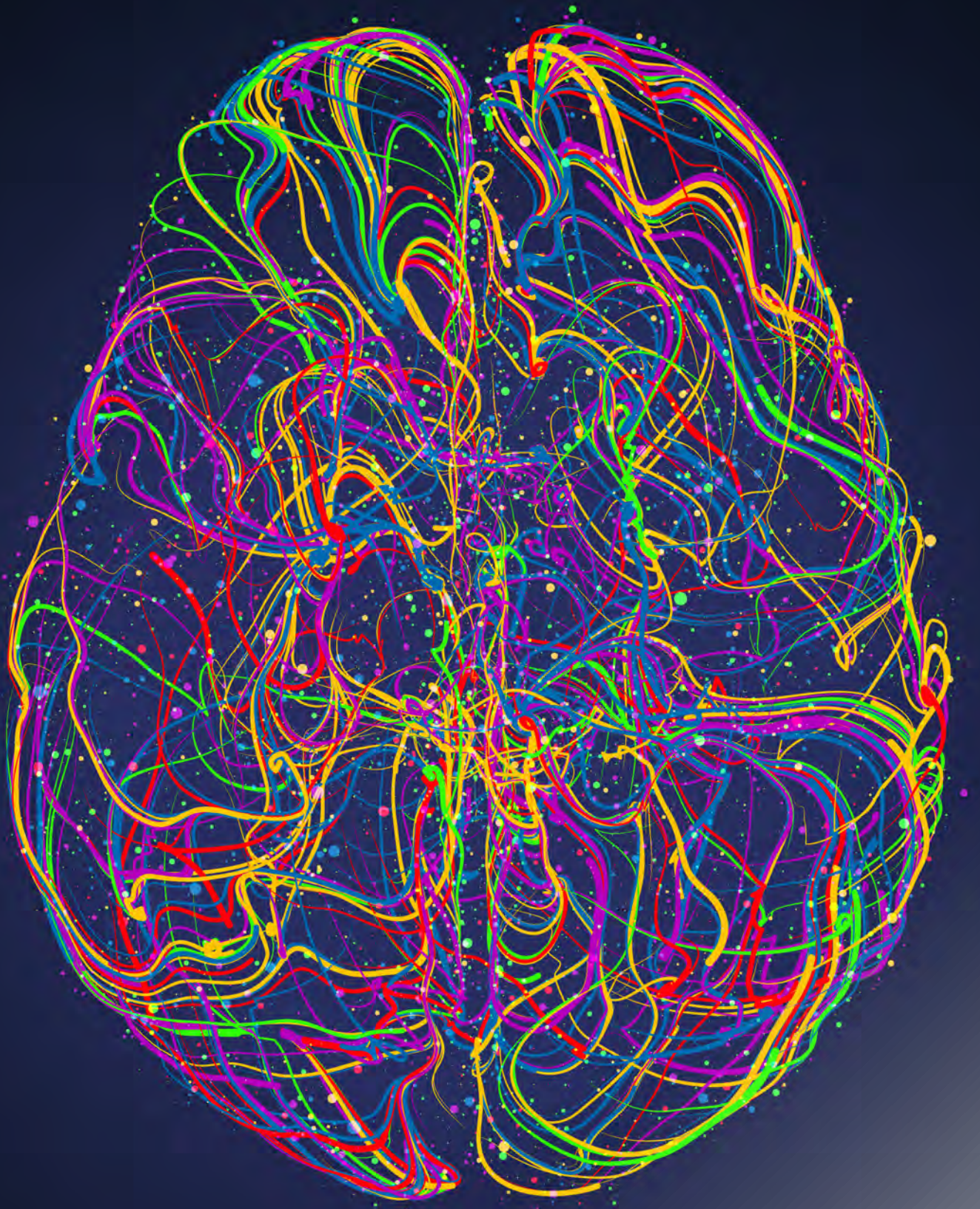
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# Reconceptualising the manual therapy narrative

By Dan Wonnocott



Catch Dan at his plain talking best during the 2020 AMT virtual conference



It can be difficult to reconceptualise traditional learnings to integrate with current understandings. A lot has changed and evolved in our professional space that runs counter to what many of us spent years and thousands of dollars learning.

Our understanding of how manual therapy works might be evolving but that doesn't change the fact that manual therapy is more relevant than ever. In this article, I would like to provide you with an insight into how you likely already possess the skills to address most clinical presentations, even if the narrative frame or explanation of the effects of the work is different from what you learned at college.

### Overview of direct effects of manual therapy on tissue healing

Many manual therapy modalities are aligned with a "corrective" function of a designated "dysfunctional" tissue, with success often measured via a reduction in pain and an increase in function. Reductionist mechanisms of action are often proposed by manual therapy educators and, as a result, therapists have traditionally adopted a reductionist approach to clinical reasoning that fails to account for the non-specific effects present across most modalities.

There are many similarities and overlaps between various techniques and modalities. But no single approach or technique will ever be better than any others, in spite of the myriad underpinning narratives that frequently promote superior results. Understanding the complexities of proposed mechanisms of action gives us the freedom and insight to adjust any technique appropriately to the client in front of us.

Mechanotransduction mechanical load that stimulates healing can be broken down into three main components. Tissue overload from manual therapy or exercise leads to an increased release of Mechanical Growth Factor (MGF). MGF has been shown to activate satellite cells within muscle and is important in cases of muscle injury as well as age-related muscle wasting.<sup>1</sup>

### 1. Mechanocoupling

Shear, compression and tension forces deform tissue cells and create chemical signals. The effect of cell deformation is not restricted to the local area of therapy due to cell-to-cell communication.

### 2. Cell to cell communication

Signals conducted from the treated area spread throughout the wider tissue region, Gap junctions are formed at cellular touch points. Cells can then communicate directly with one another to create an effector cell response.

### 3. Effector cell response

Integrins create a bridge between the outside and inside regions of cells. The cytoskeleton of the cell physically stimulates the cell nucleus. The nucleus signals for beginning of protein synthesis and new protein is secreted into the extracellular matrix, causing it to remodel.

*Understanding the complexities of proposed mechanisms of action gives us the freedom and insight to adjust any technique appropriately to the client in front of us.*

### The art behind the science

Finding the balance between creating a treatment effect without eliciting a protective response from the nervous system as a whole is an artform. It is important to acknowledge that the body has everything it requires to heal without manual therapy intervention. We should be aiming to create a balanced environment within the tissues whilst simultaneously helping clients navigate and engage in the activities and environments they wish to pursue.

The goal is to regulate pain and support the body throughout the journey. Good therapy is about facilitating rather than fixing - the body has the fixing bit covered.

### Tissue healing stages

Different tissues have unique responses when it comes to remodelling and maintaining integrity, but response to injury is rather uniform. Understanding the stages of tissue healing and then targeting interventions that support the process is important.

We need to respect where the body is in its healing journey and look to support it rather than trying to speed it up. Rushing and overworking the tissue will more than likely impair and delay the healing process. It is easy to get lost focusing on pain reduction in the early stages and overwork the area hoping to change someone's pain.



## Injury

- Bleeding ceases after approx 4-6 hrs
- Expect more bleeding in fitter/vascular athletes

## Inflammation and swelling

- Generally lasts 1-3 days (up to 7). During inflammation, the capillary bed opens and blood flow increases
- Increased blood pressure and increased osmotic pressure forces fluid out into the interstitium
- Lymph vessels open to assist in removing additional fluid and proteins
- The pump action of muscle contraction helps remove excess fluid
- Complete resolution occurs in presence of minimal disruption (irritation - not further damage).

Technique selection that supports the above process without further irritating the area is key. Something as simple as light effleurage can be very effective at soothing the nervous system to make it easier for a client to move (pump action). Knowledge of Manual Lymphatic Drainage is a huge advantage as it is gentle, soothing and influences the fluid dynamics of the lymphatic system. Skilful application of kinesiotaping can be a great adjunct to therapy too.

***Good therapy is about facilitating rather than fixing - the body has the fixing bit covered.***

Chronic inflammation may occur in the presence of local irritants, reduced circulation and immune disorders. In this situation more fibrous material is produced rather than swelling, as inflammation and proliferation occur simultaneously. It is often caused by macrophages failing to fully debride the area of foreign substances (dead cells, extracellular blood, dirt). An encapsulating scar known as a granuloma is produced by collagen wrapping around the foreign substance to isolate it from the body.

## Repair

- Fibroplasia which is the production of fibrous material and
- Angiogenesis which is the production of new vessels
- The fibroplasia and angiogenesis processes are instigated by cytokines and growth factors released by macrophages during the inflammatory stage of healing.
- Roughly around day 5 days post-injury, fibrils of collagen begin to appear. External stress dictates how fibres lay down, alignment will influence the stress/strain curve and have an impact on the strength of the tissue.

The lure of manually realigning collagen is pretty powerful but the reality is that the forces we apply are not enough alone to make the magic happen. If your treatment approach to the localised area leaves a client sore and their daily movement is reduced or more irritable post treatment then you are likely reducing your client's ability to apply external stress to the area.

A net reduction in tolerable external stress is the opposite of what we should be striving for at this stage.

## Remodelling

- Overlaps with repair phase and can last 3+ weeks to over 12 months
- Characterised by a decrease in wound size, increased scar strength and an alteration in direction of scar fibres
- At 3 weeks post-injury, the quantity of collagen has stabilised but the strength of fibres is still increasing
- Collagen is constantly being modified and refined to increase functional capacity.

It is normal to be focused and zoom in on the initial site of injury but if we fail to zoom out and look at the bigger picture, we can create hyper-vigilance in the client, which may prove detrimental in the long term.

## Monitoring of tissue environment

Having an understanding of how the brain monitors the tissue environment allows us to select treatment approaches that will lead to favourable outcomes.<sup>2</sup>

### A Alpha fibre (myelinated)

- Conduction velocity = 95 m/s
- Receptor type = muscle spindle and golgi tendon organ
- Provides proprioceptive information

Any treatment that results in changes to muscle tone, resting length, end range or changes in functional behaviour (amongst others) is going to have an effect on A Alpha fibre activity. That's pretty much every manual technique ever invented. Given the friendly and useful nature of A Alpha fibres, keep up the great work!

### A Beta fibre (myelinated)

- Conduction velocity = 50 m/s
- Receptor type = Meissner corpuscle, Merkel receptor, Paccinian corpuscle, Ruffini receptor, Hair receptor
- Provides information relative to proprioception, superficial touch, deep touch and vibration.

If a technique involves contact with the skin or anything below it then it is affecting A Beta fibres. If you apply technique/s in a manner that varies the speed, depth and pressure you are influencing these mechanoreceptors across a broad spectrum. Looks like all techniques are still in with an opportunity for greatness. Go you good [insert modality name here] go.

The brain makes predictive decisions based on multiple sources and helping it explore non-threatening options brings an opportunity for a more balanced response. Through skilful interaction with our clients using touch and movement therapies, we can help draw the body's attention to non-nociceptive information.

### A Delta fibre (myelinated)

- Conduction velocity = 15m/s
- Receptor type = bare nerve ending
- Provide information relative to nociception and temperature (cool)
- Considered the “faster” nociceptive pathway, they are very responsive to intense changes to mechanical and mechanothermal stimulus.

Technique application that causes abrupt discomfort or pain *regardless of intention* will stimulate A Delta fibres. Communication, client feedback and setting expectations is pivotal in most approaches and helps mitigate unnecessary stimulation of A Delta fibres. A Delta fibres are there to remind us that “No pain, no gain” is a pretty meathead manual therapy mantra.

### C Fibre (non-myelinated)

- Conduction velocity = 1 m/s
- Receptor type = bare nerve ending
- Provide information relative to nociception, itch and temperature (warm)
- Respond to multitude of stimuli and are most sensitive to chemicals released from damaged tissue.
- Some C Fibre signals travel to the limbic system (Cingulate Gyrus) and contribute to the generation of emotional responses to pain such as anxiety and fear.

The art of manual therapy application hinges on a therapist’s ability to identify when it is reasonable to intentionally stimulate C Fibres in order to illicit a Descending Noxious Inhibitory Control (DNIC) response which we will explore below.

### A word on nociception

Nociceptors are largely unresponsive to normal stimulation but have a low threshold to mechanical and thermal injury, anoxia and irritation from inflammatory products. Pain is an alarm to perceived threat: pain can exist without any actual damage to tissue. Often we don’t need to manage a healing process, we simply need to address the sensitivity in the nervous system from multiple angles.

## The predictive brain, nociceptive pathways and pain

There are two directions involved with pain production – ‘Top Down’ which relates to the output originating from the brain, and ‘Bottom Up’ which relates to input originating at the tissue.

The human brain is predictive in nature rather than purely responsive. Instead of having hardwired default responses, several parts of your brain continually review all current information, situational context, past experiences and your thoughts about potential future scenarios.<sup>3</sup> It then makes a prediction on the best way to respond, kind of like a never ending group assignment ... what could possibly go wrong?!

Some of the main stakeholders responsible for sharing information include:

- Somatosensory cortex - pain location
- Amygdala (Cingulate cortex and hippocampus) - memories of movement, fear
- Thalamus (Periaqueductal grey) - stress response
- Brainstem – descending inhibition

## Nociceptive pathways

Nociceptive pathways can be broken into three ‘orders’ and each of these can have implications for input and output behaviour.

### 1st order neuron - sensory receptor to spinal cord

#### Bottom up:

- Changes in the tissue housing the nociceptor can affect local interneuron activity e.g. reducing compressive or tensile forces, managing inflammatory process

#### Top down:

- Descending facilitation occurs when output from the brain enhances the signals reaching the dorsal horn. Two common triggers for this effect are catastrophising and fear avoidance behaviour.
- Descending inhibition (decrease) occurs at the Periaqueductal grey. It applies neurotransmitter to suppress primary afferent nociceptors. The main focus of this process is to target the state of excitation of dorsal horn neurons by reducing activity of surrounding neurons. Physical stressors such as exercise, manual therapy and dry needling etc can activate this Descending Noxious Inhibitory Control (DNIC) process.<sup>4</sup>

Demonising normal bodily processes and adaptive responses can act as a facilitation trigger. Education and awareness are key here. Unfortunately, most modality empires are built on exploiting fear and perpetuating falsehoods. Much like the advertising industry, selling modalities works by creating problems and dysfunctions that can then be cured with modality X. This has worked brilliantly from a marketing perspective but it is ultimately detrimental to treatment outcomes.

Be mindful that poor reasoning for treatment intervention partnered with negative messaging may affect the person as a whole and those beliefs will last longer than the time we spend with clients.

### 2nd order neuron - Spinal cord to brainstem

If impulses from 1st order neurons are continually stimulated (C fibre), "wind up" can occur and 2nd order neurons become hypersensitive. This is where tissue-focused treatment without respect for the nervous system can be detrimental. Tissue will generally respond appropriately if the client can move without fear and excessive pain or discomfort.

Modalities usually apply a tissue-oriented thought process to intervention when our ability to influence the nervous system and client behaviour is far superior to any miniscule changes that we may engender at a tissue level via manual therapy.

### 3rd order neuron - Brainstem to cerebral cortex


Stressors such as poor sleep, anxiety, depression, negative beliefs and the like increase the sensitivity of the nervous system. In a normal 'fight or flight' response, pain is decreased via release of noradrenaline and cortisol which inhibit pain.

However, in chronic pain the opposite occurs: the dorsomedial nucleus of the hypothalamus and ventromedial medulla is activated triggering cells that promote nociception and decrease inhibitory cells.

Chronic pain is widespread amongst the community but it is gradually becoming better understood by clinicians. Manual therapy approaches that may be tolerable and beneficial to most clients can be aggravating and painful for those with chronic pain. Unless we acknowledge the changes in top down processing and focus our bottom up approaches accordingly towards sensations that feel good, are non-threatening and help reduce stressors, we are unlikely to create a positive response.

## Conclusion

A shift in understanding has been occurring underneath the feet of traditional modalities for some time now and the shine is coming off. There will always be a place for the artistic application of various modalities but, unless the explanations and claims are adjusted to suit an emerging perspective, they risk setting clinicians up for reductionist lines of thinking, adding unnecessary complications to an already complex situation.

If we are not prepared to learn from the new, we risk getting stuck in the past. 

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## About the author



Dan is a straight shooting, down to earth therapist who is fed up with the bullshit and fairytales that currently populate the professional massage space. He put aside his aversion to reading research and topics that scared him and learnt to check his own biases in order to become a better therapist for the clients who put their trust in him for help. Having worked extensively in clinical practice and elite sport he has seen lots of shiny tricks but also knows how basic things can actually be and still prove effective. With a sense of pride in the value we bring to our clients, Dan has set about simplifying the complex and stripping back all the jargon and grandiose theories in an effort to help therapists of all levels provide practical yet effective care to their clients.



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## 2020 visions: a year in research

By Rebecca Barnett



This is what you get when you search PubMed for “massage therapy”



2020 was actually a pretty big year for massage therapy research. While our attention was focused squarely on COVID-19, a big swag of studies and papers were published covering diverse areas such as post-surgical pain management; alleviation of dementia symptoms; feasibility of screening for melanoma; and management of cancer-related pain and nausea; as well as the obligatory animal model studies, including a glorious one about rubbing the bellies of pigs (oink!). There was also quite a few interesting papers trying to unpack the physiological mechanisms underlying the effects of massage. And it was a surprisingly big year for constipation, which is a bit ironic given that every single massage therapist across the globe probably had the complete and utter shits with COVID.

If you search PubMed for ‘massage therapy’ published over the past year, you’ll be presented with 703 citations or 71 pages of references (last year there was 540 citations, so that’s a bounce of over 30% relative to 2019). Of course, some of those citations aren’t especially relevant or useful for us massage therapists - searching for articles on PubMed is the gift that keeps on giving when it comes to obscure study titles and curious research cul de sacs.

So let’s kick off this article with a long-held tradition of touring the titles of some of those obscure research cul de sacs (established 2019).

**‘Proteomic Analysis of Hydroxysafflor Yellow A Against Cerebral Ischemia/Reperfusion Injury in Rats’.** Honestly, this just sounds like a pretty standard episode of Roger Ramjet, right after he popped a proton pill.

**‘Semen collection by trans-rectal digital stimulation and insemination campaign in goat’.** This year has been a pretty big year for animal studies. And there’s always at least one animal study like this. Sadly, I picture the principal investigator looking like Borat, which just goes to show the insidious impact of racist stereotyping and why I won’t be going to the latest Borat movie.

**‘Common, nonsexual masochistic preferences are positively associated with antisocial personality traits’.** I feel like this is one of those profound “oh der” moments in research.

**‘Effects of Forest Therapy on Health Promotion among Middle-Aged Women: Focusing on Physiological Indicators’.** I do not know what Forest Therapy is but I want to go there.

**‘An Acute Bout of Self-Myofascial Release Does Not Affect Drop Jump Performance despite an Increase in Ankle Range of Motion’.** This is not a research cul de sac at all. It’s highly relevant to massage therapy clinical practice and recommendations. However, the mental image of an acute bout of self myofascial release will be with me forever. I’ve never personally experienced one though.

**‘An Enhanced Robot Massage System in Smart Homes Using Force Sensing and a Dynamic Movement Primitive’.** Hey Alexa, send me a massage robot stat. (Let’s just say I don’t think we’re at risk of being replaced by robots any time soon.)

**‘Bei Patienten mit chronischen Schmerzen scheint die Kraniosakraltherapie einen positiven Effekt zu haben’.** Because the German word for pain rocks. And because I think we should start routinely using ‘Effect zu haben’ too.

**‘Effect of physical stimuli on hair follicle deposition of clobetasol-loaded Lipid Nanocarriers’.** This one sounds like a song from the They Might Be Giants back catalogue. Pretty sure it was on Flood.

But let’s get on with the serious business.

It’s a helluva job figuring out what to select from the massive pool of interesting research. So, rather than featuring some of the types of studies I have in past summaries from well-researched areas like management of cancer-related pain and symptoms, and management of pre and post surgical pain and anxiety (still huge areas of research interest and generation), I have instead featured some of the work on physiological mechanisms, specially since it is likely to shake the establishment tree a little. I have also handpicked a few niche studies precisely because they stand out from the crowd. And I couldn’t avoid constipation this year because the output was, well, voluminous. In fact, it was so voluminous that I didn’t have enough space to include all the constipation studies! Constipation is clearly the new black of massage therapy research.

And forgive me my bias towards the pregnancy studies, which are very close to AMT home.

So here’s my handpicked selection of some of the most interesting research into massage therapy during 2020.

### **Lower limb massage in humans increases local perfusion and impacts systemic hemodynamics<sup>1</sup>**

Hold the phone.

If you're only going to read one paper this year, use SciHub to bust this one from the Journal of Applied Physiology open (sadly, it's not free full text).

Why is it important? Because we've spent the last however-many-years busting the "myth" that massage enhances circulation based on some pretty solid physiological reasoning.

Well ...

To quote Dan Wonnocott, it turns out that "the old wiring and plumbing systems are a bit more complex than we first thought".

This study is incredibly interesting for so many reasons so it's hard to know where to start with an overview. First of all, only one very specific technique is tested – effleurage - so we don't have a confusing cavalcade of modalities, brand names and general noise to wade through. Secondly, the experiment involved applying effleurage to one leg in both proximal and distal directions (ie towards and away from the heart), which will help us start to unpack another potential myth about the importance of stroke direction. I am not going to give away the result. You're just going to have to read the study.

I will, however, give away this nugget from the 'new and noteworthy' section of the study.

"When applied in a sole limb, massage increases skin microcirculatory flowmotion not only locally but also beyond, affecting systemic hemodynamics. This observation is an interesting example of the efficacy of cardiovascular integration mechanisms involving distal microcirculatory homeostasis."

If you're a massage therapist and you don't want to rip into this study now, are you even alive?

This is also worth dipping into if you're heading down the circulatory rabbit hole now – 'Studying Changes of the Effective Radius in Blood Vessels after Exposure of Lower Extremities to Periodical Mechanical Vibrations.'<sup>2</sup>

### **Physiological Responses Induced by Manual Therapy in Animal Models: A Scoping Review<sup>3</sup>**

Ok, so if you can extend yourself into reading two papers over the summer break, let this be the second one. And it's even full free text so ... winning.

The authors of this paper have done us a massive solid (yeah, turns out constipation has seeped into my subconscious now) by summarising the physiological responses to massage demonstrated via animal model experiments.

Yes, they are animal models but the work still provides vital signposts for some proposed mechanisms for the effects of massage therapy.

The authors have even kindly classified experiments into intervention type to consolidate the insights.

The conclusion?

"Pre-clinical research supports an association between massage therapy physiological response and multiple potential short-term massage therapy (MT) therapeutic mechanisms. Optimization of MT delivery and/or treatment efficacy will require additional preclinical investigation in which MT delivery parameters are controlled and reported using pathological and/or chronic pain models that mimic neuromusculoskeletal conditions for which MT has demonstrated clinical benefit."

### **Tissue Stiffness is Not Related to Pain Experience: An Individually Controlled Study in Patients with Chronic Neck and Back Pain<sup>4</sup>**

The aim of this study was to investigate whether myofascial stiffness, measured by a myometer, is related to pain experience in patients with chronic back and neck pain.

It's not.

### **Effectiveness of deep tissue massage therapy, and supervised strengthening and stretching exercises for subacute or persistent disabling neck pain. The Stockholm Neck (STONE) randomized controlled trial<sup>5</sup>**

In massage terms, this is a large, randomised controlled trial - 619 adults with subacute or persistent neck pain took part. In fact, the size of the RCT is one of the strengths of this study with the authors stating that it is the largest ever conducted on the effectiveness of massage for the treatment for subacute and persistent neck pain.

The purpose of the trial was to compare the effectiveness of deep tissue massage, supervised strengthening and stretching exercises, and a combined therapy (exercise followed by massage), collectively referred to as index groups, with a control group consisting of advice to stay active.

The massage group comprised 145 adults, exercise 60, combined therapy 169 and advice 147. Primary outcomes measured were minimal clinically important improvements in neck pain intensity and pain-related disability and secondary outcomes were perceived recovery and sickness absence, measured at 7, 12, 26 and 52 weeks.

Thirty therapists provided the massage therapy and the deep tissue work undertaken was described thus:



“Deep tissue massage therapy included techniques tailored to pain symptomatology. The massage targeted the painful area (upper back and neck, and if indicated, also jaw and/or chest) and was delivered to tolerance, so that it was perceived as beneficial without reaching pain intensity exceeding 5/10. Techniques varied from effleurage to firm motion involving compression and pressure release, and deep muscle/fascia massage to areas that produced concordant signs. Sessions lasted 45 minutes, including 10 minutes for anamnesis.”

The sessions were clearly tailored and individualised based on some history and assessment (anamnesis is a fancy way of saying client history). This makes this trial quite rare and interesting in the sense that the deep tissue massage was provided in a more real world manner than most trials, rather than highly protocolised or standardised.

Improvements in pain intensity favoured massage and combined therapy compared to advice at 7 weeks, 12 weeks and 26 weeks. Exercise showed higher improvement of pain intensity at 26 weeks. Perceived recovery was lower in the advice group at all follow-ups. There were no consistent differences between groups in pain related disability or sickness absence. However, at 12-month follow up none of the index therapies were more effective than advice in terms of pain intensity in the long term or pain-related disability in the short or long term. The index therapies led to higher incidence of improvement in pain intensity in the short term, and higher incidence of favourable **perceived** recovery in the short and long term compared with just advice. In other words, people felt like they were doing better with massage and exercise even if the outcome measures used in the trial didn't reflect that perception.

### Massage therapy as a complementary alternative treatment for Parkinson's disease: A Systematic Literature Review<sup>6</sup>

The aim of this review was to assess the evidence for the efficacy of massage therapy in improving the quality of life and managing the motor and non-motor symptoms of Parkinson's disease. Twelve studies were included in the analysis.

Like most systematic reviews of massage therapy, the authors of this review found a grab bag of heterogeneous 'types' of massage therapy (deep tissue, Traditional Japanese, Traditional Thai, Tuina Na, neuromuscular therapy, tactile) and rather pragmatically concluded that there is basically two broad categories of massage – deep or light pressure on soft tissues! Perhaps it is time for the massage industry to take a mature look at whether the multitude of modalities we attach various claims to is helping or hindering our capacity to investigate and understand the effects of massage therapy? Is it just needlessly complicating things to attach so many “brands” to massage therapy?

(It is interesting to note, though, that the authors found that Tuina combined with acupuncture resulted in worse motor scores. Perhaps we should be looking not just at deep and light pressure as broad categories of investigation but also fast/slow paced (this makes sense when you think in terms of the divisions of the nervous system)? It's worth pausing for a minute to think about music and music notation here. In spite of the glorious complexity of music and music styles, the available options can be boiled down to a small suite of choices – softer / louder, higher / lower, faster / slower, all of which can be captured in notation. And yet we get symphonies and Frank Zappa from those basic ingredients.)

Along with an overview of each of the massage styles included in the study samples, this paper includes a brief discussion of constipation, which is one of the commonest non-motor symptoms found in Parkinson's. Based on a small sample, the reviewers concluded that abdominal massage does not seem to significantly alleviate constipation in Parkinson patients but it can be safely used as a treatment option in addition to other well-established lifestyle changes. This finding runs against the flow of every other study produced this year. I promise I am not even trying to make these puns. They're just coming out automatically.

There is also an interesting discussion of the potential underlying mechanisms of the effect of massage in Parkinson's. The following are posited as possible mechanisms: increased production of neurotrophic factors; regulation of hypothalamus – pituitary - adrenal (HPA) axis; effects on dopamine, serotonin and Substance P; immunological; and vagal stimulation.

The authors concluded that, despite the methodological concerns regarding the included studies, there is a wide range of massage techniques that have beneficial effects on motor and non-motor symptoms of Parkinson's.

“A personalized approach for PD patients should combine massage therapy techniques with conventional medicine. Although their effectiveness is rather modest, the seemingly absence of serious side effects allow us to encourage their use in addition to standard treatments.”

The need for longitudinal studies to establish optimal “dosage” – frequency and intervals of treatment – and cost effectiveness was also flagged by the review authors.

### Massage therapy for symptom reduction and improved quality of life in children with cancer in palliative care: A pilot study<sup>7</sup>

You found me out ... I said I wasn't going to feature any cancer studies and yet here we are.

This is a very small Canadian study involving 8 children with cancer and one of their parents.

The children received a massage once a week from a registered massage therapist with experience in palliative care.

The study found that massage therapy led to immediate decreases in pain and worry in children with cancer but that the effects were not sustained long term.

The study authors provide a detailed discussion of the challenges in trying to follow what they believed to be a feasible study protocol for a small sample: recruitment was slow and challenging; the unpredictable and declining nature of participants health; other critical appointments interfered with the scheduled massage; and participants feeling too unwell to complete questionnaires.

All of these challenges would equally apply to the use of massage therapy outside a formalised study: in spite of the positive short-term effects of massage therapy, many patient-centred considerations may impede its utility as a treatment for pain and worry.

### **The effectiveness of aromatherapy, massage and reflexology in people with palliative care needs: A systematic review<sup>8</sup>**

Here is another example of a study where heterogeneity of the evidence in relation to massage therapy is not our best friend. It included 22 trials involving 1956 participants. Four included studies evaluated aromatherapy (massage with pleasant smelling oils, my parentheses), eight massage (massage) and six reflexology (foot massage). A further four evaluated massage compared with aromatherapy (massage compared with massage using pleasant smelling oils. Aaarrgggh!).

Due to the heterogeneity of the various studies included in the review, the authors concluded that no new clinical recommendations could be made based on current evidence.

Again, what price are we paying for our complicated branding of slightly different ways of applying massage?

### **Effect of abdominal massage on constipation and quality of life in older adults: A randomized controlled trial<sup>9</sup>**

And here we come to the motherlode ... where things become unstuck.

Constipation is a really big health issue for older adults with significant quality of life implications. It can cause back and waist pain, rectal pressure, loss of appetite, incontinence, nausea and vomiting, urinary dysfunction, fissure, rectal prolapse, hemorrhoids, intestinal obstruction, and syncope ... so finding treatments that relieve it is a big deal. One might even say it would take a load off.

In this study, 35 older adults (>65) were recruited from residents in a nursing home. The intervention group received massage through gentle movements with slight pressure for 15 minutes a day, five days a week over eight weeks. Massage application time was between 10.00 and 16.00 hours and 30 minutes after the meal. A control group received no intervention.

The study found that is massage is effective in constipation management with constipation quality of life measures also improving. In terms of relevance to clinical practice, the study authors emphasised that older adults could use abdominal massage as part of a self care regime to minimise or eliminate the problem of constipation. Yes, they really used that exact wording.

### **Evaluating the Efficacy of Massage Intervention for the Treatment of Post-stroke Constipation: A Meta-Analysis<sup>10</sup>**

Eleven randomised controlled trials with 1045 patients were included in this meta-analysis. Compared with controls, the massage intervention groups had markedly reduced incidences of constipation and four symptoms of discomfort related to constipation. The frequency of defecation on day two and day three in the massage group was significantly higher than that in the control group as well.

The study authors identified the following advantages in using massage therapy for constipation management in post stroke patients: it is a simple and easy-to-learn; patients have no other discomforts leading to high compliance; there have been no reported side effects; and it is a low-cost treatment, which can reduce medical costs and thus reduce social burden.

As with the RCT above, the authors emphasise the fact that abdominal massage can be self-administered.

### **Effect of abdominal massage on bowel evacuation in neurosurgical intensive care patients<sup>11</sup>**

This was a trial involving 80 neurosurgical intensive care unit patients. You guessed it ... results were positive.

"Our study results show that the risk of constipation is high in NICU patients, and abdominal massage is an effective nursing intervention to shorten the time of return of bowel sounds and the time of the first defecation". The end.

### Comparison of Connective Tissue Manipulation and Abdominal Massage Combined With Usual Care vs Usual Care Alone for Chronic Constipation: A Randomized Controlled Trial<sup>12</sup>

Actually, no. One more for the road. Yes, massage really does give you the shits, but in the best possible way. Sixty patients with chronic constipation can't be wrong.

(This isn't even all the studies on massage and constipation but I have run out of space in my mental colon for all this constipation focused research).

### Brain plasticity after peripheral nerve injury treatment with massage therapy based on resting-state functional magnetic resonance imaging<sup>13</sup>

I am not even going to write this one up because you need to go read it. Now.

Not convinced? The experimenters used a sham massage control intervention on rats. Really. They did.

Still not convinced? The authors are proposing a hypothesis for how massage therapy might promote myogenesis through neuroplasticity.

"We found that massage therapy facilitated nerve regeneration following sciatic nerve transection and repair in rats, and the model was a typical peripheral nerve injury (PNI) model that allows the evaluation of neuropathic changes and nerve regeneration. According to our previous study (Ma et al., 2016), we confirmed that massage can promote the proliferation of muscle satellite cells, regulate the expression of related myogenic factors, accelerate the recovery of muscle fibers, improve the structure and morphology of skeletal muscle after sciatic nerve transection and repair, and delay the atrophy of skeletal muscle. Our conclusion was similar to that of Wang et al. (2019). In another study (Wu et al., 2018), **cortical remodeling occurred** in the same PNI-model rats, but these authors used a different intervention method to us. We inferred (hypothesized) that massage therapy might also cause neuroplastic alterations in the brain, but our understanding of brain remodeling mechanisms after massage is still imperfect due to the limited literature."

This is a whole lot more exciting than toxin removal.

Caution: in a rat model.

### Massage therapy utilisation by Australian women: Prevalence and determinants<sup>14</sup>

In my humble opinion, we don't have enough utilisation studies – they're often pushed into the background in favour of efficacy trials.

But understanding what health conditions motivate people to seek massage therapy would go a long way towards helping us define and prioritise relevant research questions, and it wouldn't do our advocacy agenda any harm either. (Knowing how people use healthcare has a large influence on policy.)

The authors of this paper have previously done a number of other studies on utilisation of massage therapy and found that it is increasing in popularity, with women being the key drivers. Previous studies in Canada, the US and Australia estimated the prevalence of massage therapy use as being 79%, 56% and 64% respectively amongst women. Users of massage therapy tend to be female, married, have a tertiary education, be employed, have health insurance, and have greater ability to live on their income. Women who use massage therapy are also more likely to be more health conscious, pursue healthy lifestyles and engage in positive health related behaviours than those who do not use massage therapy.

Drawing again on the data that is coming out of the Australian Longitudinal Study on Women's Health (ALSWH), the authors report on the prevalence and characteristics of young and middle aged women who consulted a massage therapist in the previous 12 months. Established in 1996, the ALSWH is a longitudinal study involving over 40,000 women, followed over a 20-year period. The aim of the ALSWH is to investigate the health and wellbeing and associated practices of women categorised in 3 cohorts, being 'young' women (born 1973-1978 aged 18-23 years), 'middle-aged' women (born 1946-1951, aged 45-50 years), and 'older' women (born 1921-1926, aged 70-75years).

The data analysed in this study was obtained from a survey conducted in 2012 from 7993 young women (i.e. Survey 6, when they were aged 34-39 years) and a survey conducted in 2013 from 9102 middle-aged women (i.e. Survey 7, when they were aged 62-67 years old.). The study authors found that 42.4%(!) of young women and 25.2% of middle aged women had consulted a massage therapist in the past year. This seems like good news for the future of massage, with a new generation of women seeking out our care as they enter middle age.

The data showed that women from both age cohorts are more likely to consult with a massage therapist if they have been diagnosed with an anxiety disorder. In the middle-aged cohort only, those women who those have been diagnosed with 'other' arthritis are more likely to consult with a massage therapist, whereas those women who have been diagnosed with diabetes, heart disease, and/or hypertension are less likely to consult with a massage therapist.

The three main findings of the study were:

1. Women who were more likely to use massage therapy were also more likely to use conventional treatment such as physiotherapy as well as various other forms of CAM.
2. Women who use massage therapy are less likely to engage in risk taking behaviour and demonstrate positive choices in relation to managing their health.
3. Women with chronic illness who use massage therapy typically use it to complement other treatment. That is, massage therapy is not used as the solitary form of treatment for chronic illness.

The challenging bottom line for us is that the women who seek out massage therapy are more likely to already be healthier **and** more health conscious than those who don't: they are less likely to smoke, are low risk drinkers of alcohol and are unlikely to be obese. Overall, they are perhaps more health conscious as they are less likely to engage in health related risk taking behaviour than women who do not use massage therapy.

Not surprisingly, the findings indicate that massage therapy is more commonly used for musculoskeletal treatment in women rather than chronic illness. This is in line with other studies that have found that women with diabetes and hypertension are less likely to consult with massage therapists perhaps because they consider that conventional treatments are more suitable for systemic conditions. Maybe this is an opportunity for us to think more holistically ourselves about the role massage therapy might play in chronic, non-musculoskeletal illnesses.

#### **Massage therapy in the breast imaging department: repurposing an ancient anxiety reducing method<sup>15</sup>**

I have included this little niche study in my overview for a couple of reasons. First of all, it is an example of massage therapy in a highly integrated context with conventional medical care. Secondly, it includes some analysis of the impacts of offering massage on screening compliance and even profitability of a radiology service.

Over a 10-week period, 113 breast imaging patients who desired a hand or shoulder/neck massage were given a 10-minute treatment by a licensed massage therapist either before, and/or during, or after, or in between imaging tests. The study authors observed a significant decrease in perceived anxiety following massage, with 99% of respondents also reporting an improved patient experience. They concluded that providing massage therapy within a screening department may even improve imaging compliance and be a selling point for the service:

Further, they posited that massage therapy may also increase the return rate of patients to a radiology department thereby having a positive impact on continuity of care.

"We found that massage therapy services increase the likelihood that patients may recommend a radiology department to family and friends, and that patients are willing to pay for such service. A massage therapy program, therefore, might be self-financed. This suggests that implementing a massage therapy program could not only be a sound, but a potentially profitable business decision for a breast imaging department. In our study, a majority of patients would be willing to pay at least \$5 for a massage accompanying their breast imaging appointment, similar to what they received."

Fancy that – massage therapy being used as a selling point within an imaging service!

#### **Effect of sports massage on performance and recovery: a systematic review and meta-analysis<sup>16</sup>**

This is one of those inconvenient studies where the findings run completely counter to what we intuitively "know" or believe, especially when you consider how deeply embedded sports massage therapy is within protocols for athlete recovery and rehabilitation, and the powerful narrative that underpins this embeddedness.

This review is the largest examination of the effects of sports massage undertaken to date, with 29 eligible studies and 1012 participants. The study authors found no evidence that massage improves measures of strength, jump, sprint, endurance or fatigue, though massage was associated with small but statistically significant improvements in flexibility and DOMS. Yet again, the issue of heterogeneity of evidence reared its ugly head with the authors stating that the array of different massage protocols used across various studies made the task of defining optimum treatment protocols highly complex.

The authors found no evidence to justify inclusion of sports massage with the expectation of direct improvement of performance in strength, sprint or endurance.

Is it possible that much of the benefit of sports massage arises out of psychological effects rather than reductive measures of physical performance?

This review is available as full free text so I highly recommend having a read. It goes into some depth summarising the studies in connection with each of the physical measures of performance.

### Safety and Pregnancy Massage: a Qualitative Thematic Analysis<sup>17</sup>

It's always a tiny bit weird trying to comment on research that you've personally been involved with so I am just going to encourage you to read this full free text paper that AMT actually supported with a small amount of funding.

However, I would like to note that one of the major themes that emerged from this qualitative study is that the lack of continuity and consistency in the industry's messaging around the safety of massage therapy during pregnancy has impacts on pregnant women's perceptions and experiences of safety, somewhat unsurprisingly. We need to get our house in order.

*If you're interested in pregnancy and treat pregnant women you should also read 'The effectiveness of massage for reducing pregnant women's anxiety and depression; systematic review and meta-analysis.'*<sup>18</sup> And 'Australian massage therapists' views and practices related to preconception, pregnancy and the early postpartum period.'<sup>19</sup> And 'Maternal mental health and partner-delivered massage: A pilot study.'<sup>20</sup> And 'Pregnancy-related Pelvic Girdle Pain and Pregnancy Massage: Findings from a Subgroup Analysis of an Observational Study.'<sup>21</sup>

AMT member Dr Sarah Fogarty has had a huge year for publishing pregnancy massage research. Kudos to you Sarah. We're so freakin' proud of your output and influence.

### Comparative efficacy of non-pharmacological interventions on agitation in people with dementia: A systematic review and Bayesian network meta-analysis<sup>22</sup>

There has been a lot of positive evidence emerging in recent years over the use of massage to ameliorate the symptoms of dementia, particularly agitation. It's not surprising then that this systematic review of 65 RCTs showed that massage was associated with substantial reductions in agitation in people with dementia. For the record, so was animal therapy. I am totally fine with this comparison.

I wrote more extensively about dementia and agitation in last year's overview. There was a lot of studies this year too so it's still a significant area of interest for researchers and points to a more embedded role for massage in aged care.

### Don't forget the case studies!

Some recommended case studies to read during the Christmas/New Year break because I don't have space to cover them in any detail here. They're important for a number of reasons, not the least because we need to monitor and be aware of adverse effects of treatment, not just fool ourselves into thinking that it's all good news:

- A Series of Case Reports Regarding the Use of Massage Therapy to Improve Sleep Quality in Individuals with Post-Traumatic Stress Disorder (PTSD)<sup>23</sup>
- Massage Therapy for Dystonia: a Case Report<sup>24</sup>
- Remedial Massage Therapy Interventions Including and Excluding Sternocleidomastoid, Scalene, Temporalis, and Masseter Muscles for Chronic Tension Type Headaches: a Case Series<sup>25</sup>
- Leg massage during pregnancy with unrecognized deep vein thrombosis could be life threatening: a case report<sup>26</sup>
- Laceration of the transverse mesocolon in an old man with a habit of abdominal massage for constipation: a case report<sup>27</sup>
- Rhabdomyolysis After the Use of Percussion Massage Gun: A Case Report<sup>28</sup>
- 'A 61-year-old woman with chronic leg lymphedema managed with complete decongestive therapy'<sup>29</sup>

### Conclusion

This really has just been skimming the surface of the massage-related output during 2020. I encourage you to dip into at least a few of the papers featured here and also conduct your own independent search of PubMed based on your practice interests.

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