

# FOCUS

## SOFT TISSUE THERAPY

---

*'...our posture is a reflection of how we move, or indeed how we don't!'*

### **Pain, Mental Health and Soft Tissue Therapy**

This article will highlight how we experience pain and how sometimes our pain experience can get hijacked and thus amplified which can sometimes lead to chronic pain. I will also offer some insight into how long term pain and injury in both everyday people and elite athletes can lead to a spiral in both physical and psychological symptoms and also how Soft Tissue Therapy can help remedy such lengthy and stressful cycles of pain.

Melzack and Wall (1965) offered up a potential mechanism for how the body senses pain suggesting that a 'gate' may in fact open to allow pain signals up to the brain via the central nervous system (CNS) or indeed close, preventing such signals from reaching the brain.

According to Melzack and Wall the 'gate' mechanism can heighten, reduce or as mentioned completely block pain signals from reaching the brain and this is certainly something I have experienced both as someone who has played sport as well as having witnessed with athletes in the throes of battle. Often people in adrenaline fuelled activities may not experience pain until afterwards. Thus, the physical damage to the tissues is very real which should trigger pain receptors (nociceptors) to report back to the CNS via peripheral nerves. However, the brain is preoccupied with other stimuli and doesn't get the memo.....until after!

Another relatable example comes when we bump something and we rub it better! Sounds silly when you say it out loud but it actually does feel better....reason being is that the nerves that are responsible for transmitting signals of touch have the ability to close the gate on the smaller pain transmitting nerves, thus the brain registers the touch of the rubbing hand and not the pain!

Crucially, in the pain gate theory it appears that the brain has a role in how we perceive pain, therefore many factors influence the way we experience pain such as; our current psychological state, our previous pain experiences, nurture, beliefs and values, age, sex and sociocultural influences.

Since becoming a Dad I have unashamedly gender stereotyped my son in to playing Rugby and Football and as a result he has the odd bump or fall. My response to a minor incident is usually one of the following; 'come on you, up you get' or 'you're ok, it's just a bump' or 'let's rub it better!'. This illustrates to me the effects of nurture and thus past experience on how we process pain – having seen other parents over react and dramatize situations, I can't help feeling that their child's pain experience is heightened as the child's brain reinforces that 'people are concerned when I fall', 'falling must be really bad', 'falling must be painful'. For legal reasons my son is ok by the way!

There are many different types of pain;

**Nociceptive Pain** - described above which involves some tissue damage and a feedback system to the CNS.

**Neuropathic Pain** – pain caused by abnormalities in the network that interprets our pain and such abnormalities can be within the nerves, spinal cord and/or the brain. Such abnormalities can lead to the key structures not processing pain normally often leading to heightened pain sensation.

**Psychogenic Pain** – this type of pain often stems from very real physical cause but can be intensified by psychological factors.

Professionals in the field often distinguish between whether pain is acute (short lived) or chronic (longer term). Acute pain is often experienced as a result of a one-off injury or disease which passes naturally over a relatively short period of time. However, chronic pain is a much more complex beast – so much so it is often considered a disorder in it's own right rather than being a symptom of injury or disease. In chronic pain the signals transmitting pain can often become sensitized and pain receptors become too easily activated. In cases where there is physical damage, nerves may not heal fully and therefore function abnormally.

During my time in top level sport I have been involved with lots of athletes who have suffered serious injuries and therefore have been side-lined for lengthy periods of time. For elite athletes this can be devastating on several levels. Firstly, the physical pain experienced as a result of a high grade muscle strain, a bone break or a tendon rupture (amongst many others!) can be severe and debilitating. This acute stage of injury can completely alter the way in which an individual lives their lives – are they still able to drive? Are they mobile? Do they need crutches? Things such as a getting dressed and bathing can be exhausting and the accumulation of such factors can strip someone of their independence in amongst what is already a stressful situation.

Further pressure is added when we consider lengthy injury in elite sports people as they temporarily (sometimes permanently) lose their position in the team. They must watch on as someone else takes their spot and sometimes makes it their own. The timing of injuries can also be catastrophic – is the player nearing the end of a contract period and looking to impress to gain a contract extension or a move to another club? Is the player also in the international squad? Will they miss out on a tournament? A World Cup?!!

In the medical departments that I have worked with it was always important to be upbeat and positive with injured athletes and try to prevent them from feeling isolated, however logistically this is difficult. When the training group arrive in the mornings its crucial that the Medical and Strength and Conditioning provisions prioritise them in order to prepare them for the days sessions. Thus, injured guys may be in for a similar time and eat with the training group but they will not be in and around the camaraderie and 'banter' (I use the term loosely) and this can create a sense of isolation which can heighten the many stresses associated with long term injury and of course pain.

Long term injury and chronic pain are not the same thing at all and the vast majority of long term rehabs that I have been involved with follow a relatively predictable path and the athlete is able to manage themselves well and not be affected by chronic pain. However, one case springs to mind. An athlete suffered a back spasm whilst on a preseason camp and the ensuing rehab process was challenging for all. The spasm was real, I was a part of the treatment process and you didn't need to have extensive experience in palpation to feel that the back was tight. However, following pain relief the symptoms didn't alter too much and this remained the same for an unusually long time. The athlete's mobility was affected severely which affected his day to day life and this appeared to spiral. His awareness of the pain he was experiencing had been heightened and this was his primary focus. Everything within his day was hindered by this pain and for me the worst part of the cycle was his anticipation and apprehension of pain. This is true for all people who experience some form of pain or discomfort and it is human nature to avoid such pain but actually it's very common for us to over protect

areas which causes the issue to worsen. I will often encourage clients to move as much as their body will let them whilst going to the 'doorstep of pain' to ensure that they don't overprotect the region and suffer further, unnecessary movement loss.

The case of the athlete and his back was slightly more complex than an over protected spasm although his heightened awareness of the area would certainly have led to pain apprehension and also heightened sensitivity. Other factors were present though; it was a stressful and transitional time in the athletes life and his mental health had suffered for a few months prior to the incident which could have contributed to what was a lengthy rehab due to the way he processed the pain.

Interestingly, research suggests that people with chronic pain are 3 times more likely to develop symptoms of depression or anxiety and people with depression are 3 times as likely to develop chronic pain. Thus, as much as chronic pain can have associated physical elements it also has a strong emotional/psychological element that can be the driver for lengthy periods of both physical and emotional stress and discomfort.

Everyday people suffer with chronic pain and often don't have the luxury of Medical, Nutrition and S&C experts assisting them with this on a day to day basis. So, as much as the complexities of pro sport add a huge heap of pressure, this is a real issue that can affect us all with equal and if not, more pressure. Pain may stop us from working which may last for an extended period leading to restrictions on sick pay and maybe leading to disability benefits which some people still stigmatise (wrongly in my opinion). If you are in too much pain to work you are likely in too much pain to socialise or exercise. You are now isolated from friends and colleagues and often trapped in your own bubble with very little to excite you. When you look at chronic pain in this light it makes perfect sense that your mental health would take an absolute pounding...so how do we break the cycle? Honestly, if I knew the exact answer to that question I'd be writing this article on a beach somewhere! However, there are some strategies I would offer up; accepting that mental health and chronic pain can impact one another, dealing with your mental health by talking, doing as much as your body will allow you to do and setting realistic, short term goals, breaking the cycle of monotony, make plans and have something on the horizon to look forward to!

Obviously a lot of chronic pain is associated with actual physical injury or disease, however in light of what we now know it is logical that once mood is improved, pain could also improve along side that to some degree.

Admittedly I am biased but Soft Tissue Therapy can play an important role in breaking the cycle of longer term and chronic pain. The 'pain gate' theory suggests that offering an alternative stimulus allows the pain sensation to be replaced, thus hands on therapy can generate this through techniques such as massage/myofascial release/trigger point therapy. Such techniques amongst others also allow tissues to be manipulated with a view to optimising their function creating healthier and more functional tissues which of course will help in reducing pain. Soft Tissue Therapy can also have a positive impact on mental health. When applied appropriately, relaxation can be achieved via slowly administered, deep tissue massage which helps stimulate the parasympathetic branch of our autonomic nervous system (the part of our non-conscious nervous system that helps us to regenerate, digest and relax). Furthermore, I have had clients who felt less pain and greater levels of positivity by simply choosing to have physical therapy and take ownership of their pain.

In summary, it is clear that pain in all its guises has both physical and psychological elements to it and when empowered with this knowledge we can therefore alter our approach to managing it more successfully.

*Thank you for reading and there's much more to come!*

*Dan Keogh*

*Owner at Focus Soft Tissue Therapy*