

FOCUS

SOFT TISSUE THERAPY

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

Back Pain, Soft Tissue Therapy and You!

The issue of back pain is a bit of a minefield and one too involved to discuss in its entirety in a short article. Furthermore, the issue is so common that when you type *lower* into Google, it instantly offers up *lower back pain*

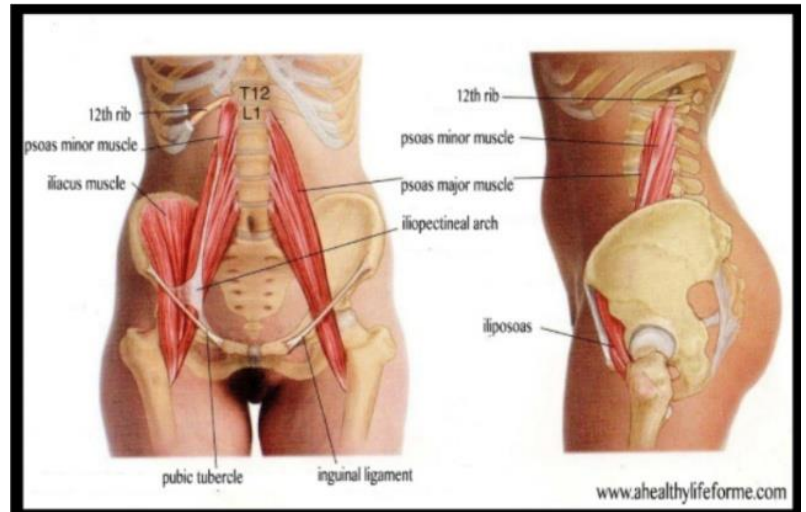
When clients approach me with back pain its crucial to rule out any of the red flag symptoms that may lead you towards a more serious pathology. Likewise, it's important to gain an insight into the client's history of illness and injury. Assuming I am happy to proceed, information regarding onset of discomfort and lifestyle are often the most useful in nailing down at least an irritant to the issue if indeed the actual cause seems more complex, which is often the case. In cases where the issue crept up over an extended period of time with no obvious trigger, lifestyle and subsequently posture are especially of interest.

Posture provides many clues as to where soft tissue imbalances may be found and also how such imbalances may affect the skeletal structure which in turn will have an effect on the way forces are transferred through the body. Subtle imbalances in joint ranges in addition to muscle weaknesses right to left over a long enough period create a *woodpecker effect* whereby prolonged, low level pressure is placed through a structure leading to 'the straw that broke the camel's back!'

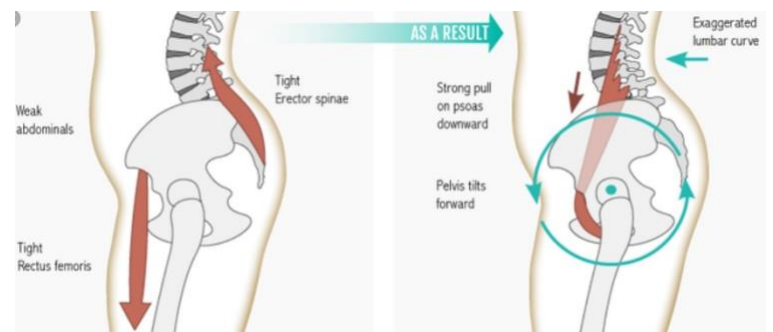
My focus is not only on the soft tissues that surround the spine but also the associated, global soft tissues (tissues you may not immediately associate with the spine) that may lead to the spine as a whole being altered in its alignment and mechanics. The muscles closely associated with the spine may often be altered in their tone as a result of the muscles we are about to discuss...

Key global muscles that can impact the body as a whole would be Psoas major (and Psoas minor to a much lesser extent) as well as Pectoralis major and minor. For any therapist the involvement of Psoas major, often termed the *function junction*, is pretty clear – its origin attaches to the front of the lumbar spine (and a bit of thoracic!) as illustrated below. Often when you tell someone that they have a hip flexor in that region you can hear the cogs turning! Tension in Psoas can pull your lower back forwards creating an arch in your lower back (known as Lordosis) and this

is more often than not associated with an anteriorly tilted pelvis which has a knock on effect for those soft tissues that insert in and around the pelvis!



As mentioned, cases such as this are complex and the *chicken and egg* dilemma can lead therapists to overthink things! For example, Psoas being tight and short may be caused by weak abdominals and tension in Rectus Femoris (the only Quadriceps that flexes the hip) as illustrated below, so my treatments will address the short and tight structures and encourage length with stretching exercises as well as encouraging strengthening of the structures that are weak.....lengthen then strengthen!! Easy!

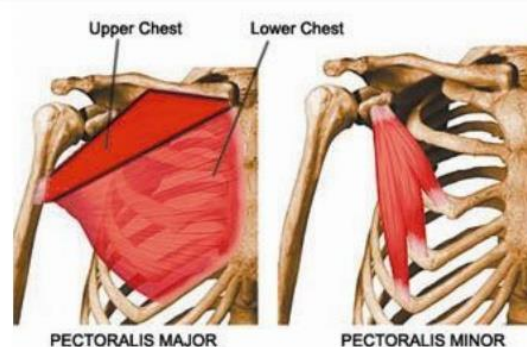


Picture courtesy of PingPingBowenTherap

In the modern day we are encouraged to sit for extended periods at school, at work, in cars and on trains and we are often chin to chest looking at phones and laptops. Such repetitive, low level load over time alters our alignment (he says on his high horse sitting down at a laptop!) and leads to imbalances in strength, range of motion and therefore stability.

Lifestyle factors, such as the ones described above, make life very hard for us. If we live 10 miles+ from our work do we walk? Do we request a standing desk (actually becoming more popular!)? Do we hold our phone exactly in front of our faces (don't, you'll get shoulder pain!)? No, perhaps we don't but can we at least try and combat our external environmental stressors? Yes! and that is where your lifestyle away from all of this can help you.

This leads us nicely to Pectoralis major and minor (see illustration below) – activities that we encounter day to day tend to be in front of us so *our posture is a reflection of how we move, or indeed how we don't!* The computer is in front of you, the steering wheel is in front of you, your book is in front of you....your phone is in front of you! So, our arms are often in front of us and our shoulders often rolled inwards (medially rotated) which shortens the tissues at the front. Pectoralis major attaches to the arm (humerus) whereas Pectoralis minor attaches to the shoulder blade (scapula). Subsequently, chronic shortening of these tissues alters the mechanics of the arm and shoulder as a whole. Scapula positioning is very important as poor alignment can significantly affect shoulder range of motion leading to pain. Also, from a



postural point of view, if the scapula is forced to tilt forwards and inwards (due to the oblique angle of Pectoralis minor) it migrates around the side of your back and is often associated with an excessive curve of the upper back, known as Kyphosis.

To reiterate, deciphering how tissues became shortened, if they are passively shortened as a result of posture or whether they are the root cause can be exhausting. The Lordosis (often associated with Psoas and Rectus Femoris) and the Kyphosis (often associated with the Pecs) are linked as the body strives to be balanced. For example, if the pelvis tilts you anteriorly, the spinal portion above that (lumbar region) must migrate backwards otherwise you'd fall forwards! Subsequently, this opposing shift carries all the way throughout the body to attempt to maintain equilibrium and yes.....this is why busying yourself with *what caused what* can be an endless process! I would quite simply assess your previous injury history, lifestyle and posture and then length and strengthen!

Soft tissue therapy plays a key role in managing posture as it will encourage myofascial balance which in turn supports a more stable posture, subsequently leading to more support and better force transition through the body when you move.

However, Soft tissue therapy alone is insufficient. For example, if I see you once a week for 60 minutes you still have up to 10,020 minutes until you see me again! I'm good but I'm not that good! Therefore, stretching and strengthening exercises are vital additions to your routine. If I release an area I will prescribe stretches to reinforce that release in addition to strengthening exercises often in opposing tissues to support a new, more balanced structure. Strength work is important to me and I try to

work closely with Strength and Conditioning (S&C) coaches locally wherever possible to provide greater expertise for our shared clients. Good S&C coaches understand the need for balanced mechanics of movement and 'good form' when exercising which reinforces good posture and force transition.

It may be that you are reading this article completely free from back pain but keep in mind the *woodpecker effect* – are there elements of your posture that leave you vulnerable? Address them now before they rear their ugly head in the form of back pain! Trust me, you don't truly appreciate how much you use something until you injure it!

I hope this article has been of use in fundamentally illustrating how myofascial and therefore postural imbalance can lead to dysfunction and pain and how this can wreak havoc throughout the body. As mentioned, this article could be a few books long as there are so many more key muscles involved with hip, pelvic and spinal alignment but hey we can't sit down reading all day!

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

Dan Keogh

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