

MONTHLY FOCUS

NOVEMBER 2020

THIS MONTH:

- Hand Dominance a& Scapula Position
- My Story
- The Boxer's Muscle

References:

McFadyen (2001)
Hnan Dominance and its Effect on Resting Scapula Position

Oyama et all (2008)

Asymmetric Scapula Posture in Healthy Overhead Athletes

Yi-Fen Sheh (2011)

Influence of pain location and hand dominance on scapular kinematics and EMG activities: an exploratory study

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Left or right?

Now this is really getting into the nitty gritty of the Physio world. When we assess a patient for a neck, thoracic or shoulder issue, we often view from the front, side and back; so what does this tell us? Well quite a lot actually!

I've mentioned previously how symmetry is not actually realistically achievable or 'normal' within the human body, especially if we consider the shoulder complex.

Most people have a dominant and non-dominant

arm (except 2% who are ambidextrous), and this affects the resting position of the scapula. Have a look at the picture; can you see how the right shoulder is lower, and the scapula (indicated by the dots) is further away from midline with also an increased angle of rotation? This would be the dominant arm! The muscle balance and finely tuned interac-

tions are strengthened over repetition and daily tasks so if you use one arm more than another, it's going to affect the muscle use, recruitment, bulk, and overall movement pattern; cool isn't it?



But That's Not All.....

However! Multiple studies over the years have found varying differences in the actions of the scapula in dominant vs non-dominant upper limbs; I was so interested in this that it was my dissertation topic when I completed my degree! 10,000 words and 20 years later, suffice to say that the dominant side achieves greater movement and is statistically different in both its resting scapula position AND movement pattern.

There is a BUT though.....We also have to consider the individual who the scapula belongs to! Are they an athlete? What kind of sport? What's their occupation and what movement patterns do they regularly undertake during the day? Because all of this makes a difference too.

Additional studies have gone further to consider the effects of different activities on shoulder motion and

scapular mechanics, and again this is important in terms of what we see as a Physio; overhead athletes (volleyball, bowlers, swimmers) tend to have more inward rotation and upper inward tipping of the scapula. This makes sense (well, to me!) when you consider the thoracic extension that is needed to achieve movement of the arm above shoulder/head height. In contrast, tennis players have a different resting position so it's all about the individual; as if there was any doubt of that!

My Story

In 2012 I underwent shoulder surgery for a troublesome ACJ, originally sustained from a direct fall onto it whilst surfing. After 4 cortisone injections I finally had the distal end of the clavicle removed after an unhealing fracture was found, so I no longer have an ACJ; just the ligament support. This is known as trauma-lysis.

Interestingly, I injured my SCJ on the same side in a car crash 10 years prior, and subluxed (partially dislocated) the joint..

Add the fact that I'm an ex-competitive swimmer, where my favoured events were butterfly and backstroke (think about the huge shoulder movement I performed on a regular basis!) and my shoulders definitely have some mechanical issues!

If you've an eagle eye you may have picked up on the difference I have in shoulder height and how tee-shirts sit....isn't the human body a wonderful complex thing?

DID YOU KNOW?

The Boxer's Muscle

Serratus anterior is a major scapula stabiliser and controls movement of the scapula on the chest wall; drawing it laterally (outwards) and round the rib cage.

In doing this, it effectively lengthens the reach you can achieve through the arm, and is hailed as one of the reasons Muhammed Ali had

such a powerful and far reaching punch. Also known as 'The Boxer's muscle' it is fan shaped, originating from the top 8 (or in some people, 9) ribs and extending diagonally backwards and upwards to attach to the scapula.

It helps control 'winging' of the scapula, compressing it against the chest wall which is particularly effective when weight bearing e.g. with a press up or when pushing up through the hands (to get off the floor or out of a chair)

