THE SPORTS INJURY DOCTOR
FIGHTING FIT FOREVER

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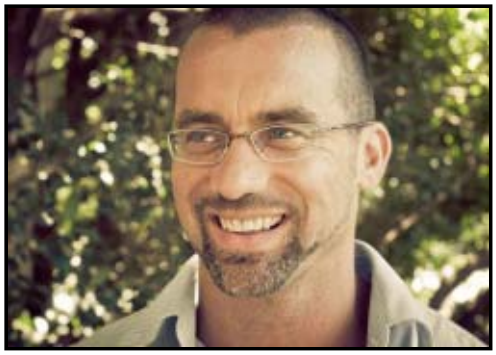
Targeted Stretching



The brief for this week's Sports Injury Doctor is on stretching and the possible benefits stretching may have in reducing injury rates. I am going to resist the urge to make this a debate on the benefits of stretching and whether or not it does in fact reduce injury rates. Enough has been written on the perhaps negative effect of stretching on injury and performance, and vice versa the benefits of stretching on reducing injury. The academic jury is still out on this topic. Instead I am going to focus on what we as clinicians do appreciate. That is that certain muscles in the body have a tendency towards getting tight and restrictive, and these have a direct influence on acute and overuse/chronic injury. Addressing these specific muscle restrictions does have an anecdotal benefit in reducing injury and recovering from injury. This is what we call 'targeted stretching'.

Let us start down south at the ankle and foot. The primary muscle at fault here that may increase ankle and shin problems is the soleus. The soleus is a muscle that is commonly tight in patients who suffer ankle 'blocks' – that is reduced ankle dorsiflexion as well as the common overuse injuries such as 'shin splints'. There are many ways to stretch the soleus however the soleus does also respond to self massage techniques such as roller work. Below are shown a stretch and a roller exercise commonly used to stretch the soleus. The first image is the soleus roller - the technique is self-explanatory. The second image is the soleus stretch. It is important that the knee remains bent as this targets the soleus over the bigger two joint calf muscle the gastrocnemius.

Working up the leg, the next muscle in line that commonly causes knee problems is the ITB. The ITB is not a

muscle as such but a specialised portion of the fascia lata of the thigh that has direct attachments to the knee cap and to the knee. It starts at the hip and runs down the outside of the leg towards the knee. It is so often implicated in the development of knee cap pain and knee pain syndromes. The first image is an ITB roller – roll from the hip down towards the knee. The second image is an ITB stretch – it is important with this stretch to keep the knee behind the hip (hip extension).

In the hip, the two most common muscles at fault are the Tensor Fascia Lata (TFL) and the piriformis. Both have been implicated in not only lower limb injuries but also in pelvic and lower back injuries. The TFL is possibly the nastiest and most stubborn muscle in the body at creating injuries in the lower limb and spine. It is a commonly overused muscle and our tendency to sit for long parts of the day tend to keep it tight. The piriformis sits in the back of the hip under the gluteal muscles. It is a commonly overused muscle in the presence of poor gluteal function. The first image is a TFL stretch (left side) – avoid overarching the spine but instead move the hip and shoulder forward together. Furthermore, rotate the body to the opposite side.

In the lumbar area, the common muscle that is implicated in problems with the lower back, hips and even ribs is the quadratus lumborum or QL. It originates on the pelvic iliac crest and runs upwards towards the ribs. It is usually a muscle that tends to be overactive in patients who do not use the deep stabilising muscles of the core very well.

Bypassing the thoracic spine, let us move on to a commonly injured area – the shoulder. The main muscles that become tight and lead to shoulder problems are the infraspinatus in the back of the shoulder, the pec minor in the chest and the latissimus dorsi which is highly implicated in shoulder problems in overhead sports. All three tend to pull either the shoulder joint itself or the scapula into dysfunctional positions that may then potentially lead to shoulder instabilities and shoulder impingements.

Finally, the most common neck muscles to cause problems are the deep suboccipital muscles (the muscles at the base of the skull) and the levator scapula which is both a neck muscle and a scapula muscle. The suboccipitals are a common source of pain and discomfort due to the ‘poked chin’ posture and are also a common cause of headaches. The levator scapula is a muscle implicated in shoulder and scapular dysfunction.

The first image is a levator scapula stretch (left side). You need to look into the opposite armpit whilst the arm is raised. The second image is a suboccipital trigger using a spikey ball or tennis ball.