

Sports Kinesiology and the Spiral Line

By Carl Montgomery

Firstly we must understand the fascial systems in order to greater understand this system. Fascia is a mildly elasticated tissue that envelopes and interacts with all other tissues in the body. Fascia extends from one end of the body to the other. On its way it surrounds muscles and penetrates them to provide other structures of support and operation, namely the Epimyosum which envelopes the entire muscle, the Perimyosum which envelopes the muscle fascicle and the Endomyosum which envelopes the muscles fibres.

It also provides support to organs in the skull, thorax and abdomen, for without the fascial tissue it would all circum to gravity and fall down and slosh around in the respective cavities. This would mean severely compromised function and health. It also aids in the proprioceptive feedback from internal environments of joints, organs and muscles.

As we age fascia becomes stiffer and more restrictive if we don't maintain adequate amounts and correct types of movement. Even over shorter periods fascia can change length either lengthen or tighten depending on the stimulus. If an injury is suffered and a muscle is maintained in a shortened length for a medium to long period of time, then a shortening on one part of the fascia and a lengthening of another is common. Over long periods then this can become extremely dysfunctional and can lead to many problems with movement, health and function.

Fascia helps to maintain posture, displaces and transfers forces from external and internal environments, provides support to tissues and organs, aids in body shape and contours resists gravity and allows significant forms of movement and protection to allow the human to thrive and survive.

Fascia transfers forces from one end of the body to the other and everywhere in between. This is why it is such an important structure to look at. If one area of the body has a pain or dysfunction we could possibly find the cause elsewhere if we follow these structural lines of force and tissue.

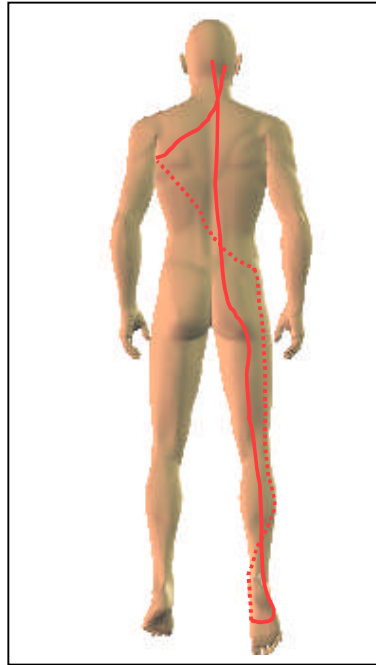
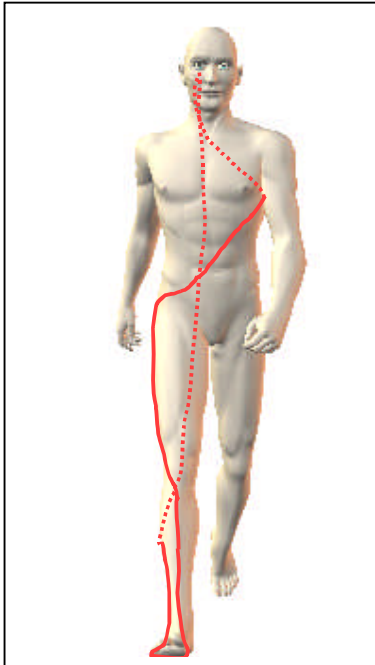
The *spiral line* fascial train winds its way from the Occipital ridge/mastoid process/ atlas/ axis TP's, through the Splenius capitis and cervicis, onto the Lower cervical/ upper thoracic SP's, then through Rhomboids major and minor, connects to the Medial border of scapula, on to the Serratus anterior, then Lateral ribs, External obliques, Abdominal aponeurosis/ linea alba, Internal obliques, Iliac crest/ ASIS, Tensor fasciae latae/ iliotibial tract, Lateral tibial condyle, Tibialis anterior, 1st metatarsal base, Peroneus longus Fibular head, Biceps femoris, Ischial tuberosity, Sacrotuberous ligament, Sacrum, Sacrolumbar fascia/ erector spinae, and finally back to the Occipital ridge.

This structural understanding of the body gives us a wealth of information as to the effects of stresses and other interfering issues can have upon the structural integrity of the body.

If we see a tension develop in ant muscle in that fascial train, for instance the ITB or gastrocnemius. The tension is transferred to other systems in that line.

If the initial stress only develops on one side and directly affects one of the paired trains then we will see a torsional rotational pattern develop. This in turn will create other musculoskeletal imbalances and continue to create potential as well as real chronic and acute injuries.

The Spiral Line



The dotted line represents where the fascial train goes behind the body

Boney insertions

Occipital ridge/mastoid process/ atlas/ axis TP's

Lower cervical/ upper thoracic SP's

Medial border of scapula

Lateral ribs

Iliac crest/ ASIS

Lateral tibial condyle

1st metatarsal base

Fibular head

Ischial tuberosity

Sacrum

Occipital ridge

Myofascial tracks

Splenius capitus and cervicis

Rhomboid major and minor

Serratus anterior

External obliques

Abdominal aponeurosis/ linea alba

Internal oblique

Tensor fasciae latae/ iliotibial tract

Tibialis anterior

Peroneus longus

Biceps femoris

Sacroterous ligament

Sacrolumbar fascia/ erector spinae

So the next question is how can sports kinesiology help in correcting this dysfunction. Firstly we can do a simple series of orthopedic assessments such as a stand and bend and sit and bend test. In these tests we can ascertain if there is a pelvic torsion and dysfunction as one of the PSIS's will rise with the sacrum informing us there is a catching of the sacrum and ilium, producing a dysfunctional sacroiliac joint (SIJ) Next a Trendelenburg test can be administered to see if there is a corresponding lateral stability issue. If there is we will see the angle of the femur relative to the horizontal line of the ASIS decrease or a large shift in body weight to maintain balance. Again we will see this present also in some form of compensatory pattern. A Gillets stork test can also be used to find further dysfunctions in the SIJs' in a different pattern to other tests. Once again we will see if an SIJ is involved. The final orthopedic test is to lay the person on a table and measure the distance from their ASIS to the belly button. Often there is a difference in distance from one side to the other.

How do we define which is the out flaring or in flaring hemi pelvis? Simple. From the previous sit/stand bend tests and Gillets stork test; we will find one of the SIJs' is 'stuck' to the sacrum. If it is the left side that is 'sticking' then we know that the left side is the concerning flare, whether it is an in or out flare.

At this point we could use muscle energy technique (MET) as it often used, BUT do bones just pull themselves out of place? NO muscles pull bones, so what is causing the muscles to be imbalanced in order to pull the bones and joints out of position? And underlying stress, be it another structural issue, biochemical stress on organs and muscles, poor posture, and of course emotions and belief systems can have a dramatic effect upon the body.

At this point we already have a lot of information, but to be thorough we need to look deeper to the underlying causes.

This is the point where Sports Kinesiology really comes into play over so many other systems commonly used today.

A Sports Kinesiologist can ascertain the underlying cause and begin a corrective treatment for the cause.

If we only look at the spiral line in this fascial train as the cause to the problem then we can easily begin our treatment.

Firstly we begin by muscle monitoring each of the muscles directly on this fascial train to ascertain if there are any under or over facilitated muscles.

At this point we can compare which muscles are under and over facilitated and compare them to the findings of the orthopedic assessment. We can find the same muscles are creating similar dysfunctions but sometimes the 2 different approaches can provide very different results. This is normal.

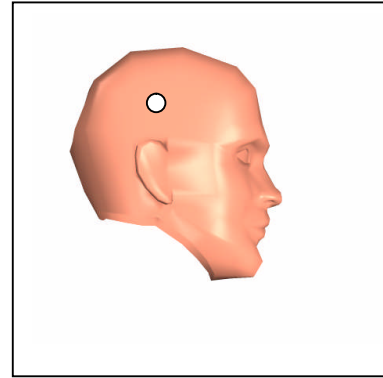
Once this has been performed we can then go back and perform the corrections required to rebalanced the over and under facilitated muscles.

There is a huge array of possible corrections but we can use a method called circuit locating to identify the necessary corrections.

We simply monitor the corresponding muscle via manual muscle testing, then we circuit locate via very specific points on the body that reflect the muscle in question and the correction needed.

For example if we use neurovascular points (also known as Bennett's points, which constitute a very large portion of cranio-sacral therapy corrections) we simply test the concerned muscle in this example the internal oblique on the left side. We know that the neurovascular points for this muscle are located at the parietal eminence, half way between the ear and the top of the head.

We simply have the client place their hand over the point touching it. We then retest the muscle, if the muscle then returns to homeostasis then the previously weakened muscle will correct. This tells us this is the correction for this muscle. To actually correct the muscle we must lightly hold these points and feel for a very subtle pulse in both points. These will often be out of sync so we hold them till they return to an even rhythmic synchronized pulse on both sides. Then we retest the muscles involved. If this that was needed then the muscle will return to its homeostasis as we progress to the next muscle that required correcting. If it didn't return to homeostasis then we proceed to the next correction.



We have a battery of basic corrections to call upon. Here is a list of some of the basic corrections used usually in their order.

- Spinal reflex technique (if bilateral correction required) structural stress
- Neurolymphatic points (Chapman's Points) often a biochemical stress
- Neurovascular points (Bennett's points) often an emotional or belief system stress but these also alter the pelvis as well
- Meridian stimulation - energetic stress
- Origin/ insertion correction- structural stress
- Spindle cell mechanism- (muscle specific) structural stress
- Golgi tendon organ- (muscle specific) structural stress
- Emotional stress release points – emotional stress
- Cerebrospinal technique- structural (fluid) stress
- Tonification/ sedation points- energetic/emotional stress

This list is only a basic one and each correction procedure has its own circuit locating method and reference point system.

Once we have been through the corrections for the muscles that were originally showing as under or over facilitated then we retest the body in the orthopedic assessments we first used. What you will often find is that these areas that were dysfunctional are more likely corrected now. This indicates that the structure of the body has been corrected and often the original symptoms are reduced or have even gone.

These corrections are basic and we can go into a lot more detail for required corrections but to keep this article short and comprehensive we will leave it with basic corrections only as very often these do the job easily effective and maintain the corrections for long periods and even for a life time.

The entire basis for Sports Kinesiology is to identify the areas creating the symptoms then continuing the research to identify the underlying cause then finding the correction that is required then administering this correction and retesting for the causes and

symptoms. This approach is focused on finding the imbalance and correcting it, the body will self correct if given the correct stimulation and information.

If you would like to know more please contact the College of Complimentary Medicine
Melbourne 03 96622378
Sydney 02
www.complementary.com.au

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