

Acupuncture and Fascial Planes: The Power of Non-Local Needling

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Recent advances in our understanding of the anatomy of fascia reveal a high degree of correlation between fascial planes and acupuncture meridians. Taking an anatomical approach to understanding how connective tissues are organized between muscle groups, can give acupuncturists additional insights into treatment strategies and outcomes.

The effects of non-local needling often offer quick results in treating pain and other symptoms. Distal needling is also useful for avoiding healing reactions, and helps prevent aggravating damaged tissues and inflammation. Distal needling is practiced in TCM, and is used extensively in the Balance Method and Master Tung-style acupuncture. Taking an anatomical and fascial approach to understanding why non-local needling is so effective helps acupuncturist to refine their treatments and get better clinical results.

The Fascial Lines and Planes

Research by Tom Myers, as presented in his book *Anatomy Trains*, offers an anatomical basis for the acupuncture meridians.¹ According to Myers, muscle groups, fascia, and connective tissues are organized in structural and functional systems. Based on his extensive research in anatomy, he has identified 10 fascial lines that mirror the meridians.

What he calls the Superficial Back Line (SBL) begins in the plantar fascia of the heel, and extends through the calves, hamstrings and paraspinals, terminating in the occipital fascia. This fascial line essentially runs the same course as the urinary bladder meridian, and reveals some interesting things about the anatomy of meridians, as well as the effects of acupuncture.

Tensegrity = Tension + Integrity

A key concept discussed by Myers is the principle of *tensegrity*, which describes how compressed parts are held in nets of tension. In the human body, the compressed parts are the organs, muscles and bones, which are surrounded by fascial nets and connective tissues. Acting like a net, the fascia provide structural and functional support while connecting distal muscle groups together. Tensegrity can also help us to understand why distal needling can be so effective.

As tensegrity explains how tension is transferred through a system, we can consider how imbalances in one part of the body can get transferred into symptoms in a distant location. Referred pain is an example of this, and this kind of pain occurs in musculoskeletal conditions, as well as with coronary artery disease and angina, hepatitis and shoulder pain, and in neurological conditions that impact the nerves.

Tensegrity can also be applied to understanding why distal needling works. Research by Helene Langvine, MD, has demonstrated that when acupuncture needles are twirled, it causes a stretch in

the fascia.²⁻³ This stretch may also get transmitted through the fascial lines, and alleviate tension in distant locations from where the needle site is. Understanding how acupuncture may effect the fascial lines and connective tissues gives us a scientific and anatomical basis for understanding the effects of non-local needling.

Master Tung's Points on the Achilles Tendon (77.01 - 77.03)

In Tung-style acupuncture a group of points on the Achilles tendon (77.01 - 77.03) are used for neck pain and sprains, hydrocephalus, brain tumors, and occipital headaches.⁴⁻⁵ These points are near the terminal end of the UB meridian, and are used to treat conditions on the opposite end of the meridian in the region of the neck and head.

This method of treating points on the opposite end of the meridian, as compared to where the symptoms are located, are common in many forms of acupuncture.

Integrating the fascial line models of Tom Myers with the principles of tensegrity and Tung-style acupuncture, we can begin to appreciate how the points in the Achilles tendon can be so effective for conditions of the occipital region, head and brain. When needles are inserted into the Achilles tendon, they transmit mechanical signals through the connective tissues that are part of the UB meridian and SBL fascial plane. These same principles can also be applied to other acupuncture methods that use distal needling along various meridians.

The *Tai Yang* Meridians, Fascial Planes, and Tensegrity

The point SI 3 is the confluent point for the DU meridian and is indicated for neck and back pain. It is also closely associated with the Master Tung points 22.08 and 22.09. The SI meridian is also similar to what Myers calls the Deep Back Arm Line (DBAL), which consists of the hypothenar muscles, ulnar periosteum, triceps, rotator cuff muscles, rhomboids, and levator scapulae.

Interestingly, the terminal muscles on this fascial line connect to the thoracic and cervical spine, and provide insight into why points like SI 3, 22.08 and 22.09 can be used for spinal disorders. When needles are inserted into these points, mechanical fascial signals get transmitted through the DBAL or SI meridian, and will influence associated areas. According to the principles of tensegrity, needling SI 3 will have an influence on releasing tension held in the levator scapulae and rhomboid muscles.

The SI and UB meridians are also related and referred to as the *tai yang* channels. In fascial line anatomy, the DBAL (SI channel) and the SBL (UB meridian) meet at the attachments of the levator scapulae and rhomboids to the spine. As the SBL includes the sacrolumbar fascia and the paraspinal muscles, we can understand through tensegrity how needling points like SI 3, 22.08 and 22.09 can benefit the back and spine. The points 22.08 and 22.09 are also indicated for other conditions that involve the SBL, and applying fascial plane anatomy and tensegrity to acupuncture therapy provides us with a basis for better understanding how acupuncture works.

In addition to the fascial planes mentioned above, there are a total of 10 fascial lines which overlap with other meridians. For instance, the Superficial Front Line (SFL) mirrors the ST meridian, while the Lateral Line corresponds with the GB channel. Additionally, the Deep Front Line (DFL) relates to the LV, SP and KI meridians. When we continue to map the fascial lines with the 12 regular meridians and acupuncture points, we can gain a deeper understanding of non-local needling and how acupuncture works.

References

1. Myers T, Chambers G. *Anatomy Trains: Myofascial Meridians for Manual and Movement Therapists*. Churchill Livingstone, 2014.
2. Langevin H, et al. Biomechanical response to acupuncture needling in humans. *J Appl Physiol*, 2001;91:2471-78.
3. Langevin H, et al. Mechanical signaling through connective tissue: a mechanism for the therapeutic effect of acupuncture. *FASEB J*, 2001;15:2275-82.
4. Lee M. *Master Tung's Acupuncture: An Ancient Alternative Style in Modern Clinical Practice*. Blue Poppy, 1992.
5. Young W-C. *Lectures on Tung's Acupuncture*. American Chinese Medical Cultural Center, 2008.

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