

Fascia, Chinese Medicine Meridians & Trigger Points

Lines in the body are not mystical, they are where forces balance -
Ida Rolf

The Chinese Meridian system originated over 2000 years ago and forms the basis of Traditional Chinese Medicine (TCM). The meridians represent the channel where the invisible Qi or energy flows. Qi (or Chi) is the life force or energy, obstruction of the flow of Qi can cause imbalance in the body. It is also used in Japanese (called Ki) and in Thai (called Sen Lines). There are 14 meridians, and along each meridian there are Qi (or acupuncture) points, where Qi can be manipulated to restore balance. These points can be manipulated using needle (acupuncture) or thumb/ finger pressure (acupressure).

Trigger point is a "highly irritable localized spot of exquisite tenderness in a nodule of palpable taut band of muscle tissue" (Travell & Simons, 1997). Myofascial trigger point can create referred pain. Some researchers have shown that most of the trigger points coincide with the Qi points or lie within the meridians.

Is it coincident that some of the myofascial lines of Thomas Myers' Anatomy Trains coincide with the Chinese meridians? (e.g. the Superficial Back Line = Bladder meridian, Superficial Front Line = Stomach meridian, Lateral Line = Gall Bladder meridian).

So what is the relationship?

Research has provided a hypothesis that the main connection is the fascia network. Fascia is a seamless web of connective tissue that covers and connects the muscles, organs, and skeletal structures in our body.

Helene Langevin a research professor of neurology from University of Vermont found that most of the Qi points are located in the areas of intermuscular or intramuscular connective tissue planes. In other words the Qi points are located in areas where fascia planes or network converges. They showed that acupuncture points mostly lie along the fascia planes between muscles or between a muscle and bone or tendon. When a needle is inserted along the fascia plane, it will first penetrate through skin's dermis & subcutaneous tissue, then through deeper interstitial connective tissue. They hypothesized that the Qi meridians are the representation of a network of fascia. A blockage of Qi can be viewed as an alteration in fascia composition. Acupuncture points correspond to the sites where fascia network converges. Thus needling or pressure at the acupuncture or trigger points will have more prominent effect because a point represents convergence of several fascia plane or lines. Thus manipulation produces changes in the cellular level that can propagate along the fascia network (Langevin & Yandow, 2002).

A model explaining physiological effects of acupuncture (after Langevin & Yandow, 2002)

TCM	Anatomy & Physiology
Accupuncture meridians	Fascia planes or lines.
Accupuncture points	Convergence of fascia planes.
Qi	Body energetic phenomena (e.g. metabolism, movement, signal transfer)
Meridian Qi	Fascia biochemical signals
Blockage of Qi	Altered fascia composition leading to altered signal transfer
Resotration of Qi	Cellular activation leading to restored fascia composition & signal transfer.

Helene Langevin's group further studied the physiological effect of fascia stretching, which is the main objective of myofascial release. Their research (Lagevin et al., 2005) showed that when fascia is stretched, its cell size and shape changed. The fibroblast (the main cell type in fibrous connective tissue) of a stretched fascia looks like a "sheet" while a "shortened" tissue's cellular morphology looks like "dendritic". So when a therapists apply myofascial release, the changes go down to cellular level. The morphological change in the cell can alter the biochemical processes as well.

James Oschman in his book "Energy Medicine" explained that:

The fascia fabric is a semi conducting communication network that can convey the bioelectric signals between every part of the body and every other part. This communication network within the fascia is none other than the meridian system of traditional Oriental medicine, with its countless extensions into every part of the body. As these signals flow through the tissues, their biomagnetic counterparts extend the stories they tell into the space around the body.

The European Fascia Group (Schleip et al., 2006) showed that fascia behaves like a sponge, when fascia is stretched there are longitudinal relaxation changes in the collagen fibers and the water is squeezed out. Within a few minutes the collagen fibers recover their original state, and water continues flooding into the tissue to an even higher percentage than before, substantially increasing the elastic stiffness. Fascia seems to adapt with very complex and dynamic water changes to mechanical stimuli, to the degree that the matrix reacts in smooth-muscle-like contraction and relaxation responses of the whole tissue. So when we stretch the fascia, the tissue response we experience may be due to the sponge effect of fascia, like squeezing and refilling effects in the semi-liquid ground substance.

As Dr. Ida Rolf said "Lines in the body are not mystical, they are where forces balance."

References

- Langevin HM, Bouffard NA, Badger GJ, Iatridis JC, Howe AK (2005). Dynamic fibroblast response to subcutaneous tissue stretch ex vivo and in vivo. *American Journal of Physiology-Cell Physiology* 288:C747-C756.
- Langevin HM and Yandow JA (2002). Relationship of acupuncture points and meridians to connective tissue planes. *Anat Rec.* 269:257-265.
- Schleip, R, Zorn, A, Else MJ, Klingner W (2006). The European Fascia Research Project Report.
<http://www.somatics.de/FasciaResearch/ReportIASIyearbook06.htm>

Links

- [Helene Langevin](#): Mechanism of acupuncture, connective tissue research
- [European Fascia Research Project](#)
- [The Amazing Fascial Web](#) by Leon Chaitow, [Part II](#)
- [The Architecture of Life](#) : Articles on Scientific American by Donald E. Ingber
- [The Ingber Lab](#)

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