

## **The Amazing Fascial Web, Part I**

By Leon Chaitow, ND, DO

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*Author's note:* Research information summarized in this article has been drawn from content in the 2nd edition of my book, *Clinical Applications of Neuromuscular Techniques: Volume I* [Churchill Livingstone, 2001], due for publication early in 2006.

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I don't know about you, but "wow" moments seem to be on the increase for me.

I guess we all have our own sense of what's exciting, important, "new." For me, it is when different strands of our knowledge-base collide as a result of new research or insightful observations; when connections are made between apparently different aspects of what we know and do, as we attempt to assist our patients/clients towards better health. My intention in this short communication is to share a few of the most recent of these synchronous pieces of information, in the hope that you might experience some of the excitement that research into the way the body functions appears capable of regularly delivering.

Helene Langevin, PhD, is a research scientist working at the University of Vermont. What she and her colleagues are doing is nothing short of revolutionary, and we owe gratitude to them for the new vistas that are opening as a result. Another researcher of importance in this story is Donald Ingber, PhD, whose work on bone-density problems in astronauts, on behalf of NASA, is part of a marriage between ancient Chinese concepts, modern molecular research, and the space program!

Let me start somewhere else, and to then try to bring the focus back to the work of Drs. Langevin and Ingber. Many years ago (early to mid 1960s) as a young-(ish) osteopath working in London, I completed my acupuncture training, and found myself experiencing a sense of deep frustration at my inability to integrate traditional Chinese medicine (TCM) concepts with my understanding of anatomy and physiology, based on Western scientific tradition. The solution for me was to write a book on the subject (*Acupuncture Treatment*

*of Pain*, Healing Arts Press, 1976).

I have often found that when a subject confuses me, or when I have partial knowledge of an area of my work, the best way of really getting to grips with the problem is to write a book about it - a process that virtually guarantees sufficient research and study to really understand it by the time the book is finished!

To be sure, the writing of the acupuncture book and of a number of "soft tissue manipulation" books did offer some enlightenment; however, there remained until recently a gray area of confusion surrounding just where fascia and myofascial trigger points fit into the acupuncture/TCM story.

Most people nowadays are aware that acupuncture points in TCM are thought of as being linked along invisible lines (meridians) that apparently connect anatomical areas and organs, and along which energy (*chi*) is thought to travel. Obstructions to this flow, leading to areas of congestion or deficiency, are seen as contributing to health problems, and that these can be relieved by appropriate needle application (or manual treatment of the points - as in shiatsu). Please forgive this simplistic outline of what is in fact a far more complex theoretical construction, but it may help in my attempt to eventually get to the "wow" moments from Vermont and outer space.

Apart from the hundreds of "official" acupuncture points, lying on these meridian maps/lines, another class of acupuncture point has always fascinated me. This is the so-called Ah shi point. These are areas that become spontaneously tender/painful in response to local problems (strain, draughts, etc). They (*ah shi* points) become "eligible" for treatment in acupuncture (needles or acupressure) when they are sensitive. Now anyone who knows very much about Simons, Travell & Simons' (1999) work on trigger points might be forgiven for thinking that these points sound like those points...if you see what I mean?

Since we already know that approximately 80 percent of the main trigger point sites lie on points located on the meridian maps (Wall & Melzack 1990), the conjunction of these two areas of study (TCM/acupuncture points and myofascial trigger points) should not come as a surprise. Indeed, many experts believe that trigger points and acupuncture points are the same phenomenon (Kawakita et. al. 2002). Whether this is so or not, it suggests that in trying to understand trigger points better, we need to pay attention to research that tries to explain the processes of acupuncture, and the structural aspects of these invisible points.

Dr. Langevin and her research colleagues have helped to clarify the situation, having shown that acupuncture points, and many of the effects of acupuncture, seem to relate to the fact that most of these

localized "points" lie directly over areas where there is a fascial cleavage, where sheets of fascia diverge to separate, surround and support different muscle bundles (Langevin et. al. 2001).

It seems that the meridians may, in fact, be fascial pathways. This is not too surprising, since we know the fascial network represents one continuum from the internal cranial reciprocal tension membranes to the plantar fascia of the feet. Now we know that acupuncture points (and it seems the majority of trigger points) are structurally situated in connective tissue, but how does application of a needle or pressure in one part of the fascia translate to distant sites? How does the fascia communicate with other parts of the body?

Well, the Vermont researchers have also shown that connective tissue is a sophisticated communication system, of as yet unknown potential:

"'Loose' connective tissue forms a network extending throughout the body including subcutaneous and interstitial connective tissues. The existence of a cellular network of fibroblasts within loose connective tissue may have considerable significance as it may support yet unknown body-wide cellular signaling systems. ...Our findings indicate that soft tissue fibroblasts form an extensively interconnected cellular network, suggesting they may have important, and so far unsuspected integrative functions at the level of the whole body." (Langevin et. al. 2004)

Are you are experiencing minor "wow" tingles? I know I am just writing about it again!

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*Editor's note:* Read part II of Dr. Chaitow's article in the June issue.

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