

## Therapeutic Insight #4

### The Web of Life

I consider the liquid crystalline lattice of the fascia, to be the web of life. Without the fascial web and the fascia's extra cellular matrix (ECM), life would not be possible!

Bob Mollica, PT has provided an important link to and an article titled, "An architect walks into the lab." (<http://www.upenn.edu/gazette/0109/feature1>) The following quotes are comments from Marilyn on my blog titled, "Structure vs. Function". (<http://massagemag.com/massage-blog/myofascial-release/2009/08/17/structure-vs-function/> )

"I liked how the article addressed the importance of the ground substance and acknowledge it has been overlooked by teachers. I love the following explanation and wish I had been taught this concept early on in massage school."

"The average high-school biology teacher probably doesn't spend much time on the extracellular matrix, but animal life would be all but impossible without it. The Extra Cellular Matrix (ECM) is the connective tissue that provides structural support to living cells, giving them a sort of scaffolding to which they can anchor. It also regulates communication between cells, stores and releases chemicals that can trigger a range of cellular functions, and governs the movement and migration of cells through its intricate architecture. The complexity of the system beggars description. The components of extracellular matrices are manufactured inside of their resident cells, which then fall subject to the influence of structural and biochemical changes within the scaffolds they have excreted. The far-reaching influence of the ECM has profound implications. "You could potentially treat diseases and cause cell behavior to change by changing the extracellular matrix's elasticity,"

"This is the benefit of Myofascial Release Therapy. Amazing!"

I combine many massage and energy techniques with acupuncture as I use Myofascial Release, which is a very powerful combination. I initially used a neuroprobe, electronic acupuncture and cold laser on acupuncture points. I eventually flew to Hong Kong to learn as much as I could.

In Hong Kong I learned how to use my fingers on acupuncture points to stimulate the flow of “Chi” (energy) along the acupuncture meridians. I eventually began to apply the Myofascial Release principles to the acupuncture system with great results.

I believe that the acupuncture system meridians lie within and are profoundly influenced by the fascia's extra cellular matrix. The following quotes are from my first book, "Myofascial Release: The Search for Excellence" (<http://www.myofascialrelease.com/store/books.asp> ). Another important component of our mind-body connection is the transmission of our body's bioelectrical currents along the three-dimensional network of the fascial system.

“Increasingly, medical researchers and experienced health professionals are beginning to view the body as a self-correcting mechanism with bioelectric healing systems. According to one author, while some scientists are starting to explore the body's sensitivity to electromagnetic energy, those of the old school still choose to ignore the matter because it upsets their long-held theories. Such an attitude is unwarranted, however, and may also be unhealthy. It is known that electromagnetic fields “trigger the release of stress hormones..., [and] can affect such processes as bone growth, communication among brain cells and even the activity of white cells...”

"Two authors found naturally occurring direct-current signals that they called “the current of injury” (COI). These signals are thought to be transmitted by the sheaths of Schwann and glial cells that surround their neurons. Others, however, consider the body's healing currents to use the microcapillary systems. In this theory, the bioelectric circuits are turned on when membrane conductivity closes down, and the electric flow then takes the path of least resistance through the blood stream. The mechanism had not been determined, but clearly, the body sends electricity wherever its healing effects are required."

"It is not clear if the body interprets the energy of many of our modalities and manual techniques as intrusive and therefore to be resisted. If such is the case, the body recognizes this resistance as important to its survival. Many therapeutic efforts to heal have, in fact, caused patients discomfort. This may begin to show why microcurrents and the gentle, sustained pressures of myofascial release produce results when conventional

modalities and massage techniques have failed. If the body does not view these as intrusive, it is not compelled to resist. Instead, the techniques are accepted as assistive, allowing the organism's self-corrective mechanisms to be facilitated."

"This is not to say that conventional modalities, exercises, massage and other hands-on techniques are not valuable; certainly they are. It means that to treat the body comprehensively, the approaches must be combined, as they go together in a complementary fashion and produce consistent results."

"Copper wire is a well-known conductor of electricity. If copper wire becomes twisted or crushed it loses its ability to conduct energy properly. It is thought that fascia may act like copper wire when it becomes restricted through trauma, inflammatory processes, or poor posture over time. Then its ability to conduct the body's bioelectricity seems to be diminished, setting up structural compensations and ultimately, symptoms of pain or restrictions of motion."

"The diminution of our fascial systems ability to conduct energy may be due to melanin. Melanin is present in copious quantities in the fascia, and neuromelanin is present in the neural structures and brain, which are encased by fascia all the way down to the cellular level. Melanin has superior conducting properties at room temperature and is synthesized in mast cells, also found in the fascia, which influence the immune system. As a superconductor, melanin may regulate firing of nerve cells. It seems centrally involved in control of all physiologic and psychologic activity. The neuromelanin-neuroglial system is the major site of mental organization. The nervous system is made up principally of glial cells. These cells have electrical properties that appear to be a responsible for the piezoelectric phenomenon."

"Piezoelectric behavior is an inherent property of bone and other mineralized and nonmineralized connective tissues. Compressional stress has been suggested to create minute quantities of electrical current flow."

"Like untwisting a copper wire, the Myofascial Release techniques can enhance the function of the acupuncture meridians and the fascia's ability to conduct bioelectricity, thus creating the environment for enhanced healing. They also can structurally eliminate the enormous

pressures that fascial restrictions exert on nerves, blood vessels, and muscles and cells.”

“Myofascial release can restore the fascia’s integrity and proper alignment and, similar to the copper wire effect, can enhance the transmission of our important healing bioelectrical currents within the acupuncture system.”

Recent research has shown that every acupuncture point is a fascial structure and when the needle is pulled out, which is called the “snap”, it stimulates the piezoelectric phenomena that sends “Chi” or energy through the acupuncture meridians.

Piezoelectricity is a Greek word for “pressure electricity”, which is stimulated via Myofascial Release.

I view the acupuncture meridians as the main rivers that carry the important “Chi” through the body. In addition, I feel we have to consider that the billions upon billions of microtubules of the fascial system are the important tributaries of fluid and energy that feed into the main rivers (meridians).

Within each microtubule of the fascial system is fluid and energy or “Chi” that flows through the liquid lattice energizing the entirety of the structure. Myofascial Release adds a significant extra dimension of effectiveness to acupuncture, massage, bodywork, and energy techniques.

Years ago I was the featured speaker at a large TMJ symposium. There were hundreds of TMJ specialists, physicians and therapists attending. I always insist on following my theoretical lecture with a “hands on” workshop. One must experience Myofascial Release to understand it. Without one’s direct feel and experience of Myofascial Release creates an inaccuracy and empty theorizing which only leads down a “blind alley”.

So when I entered the room where the workshop was to be held, to my surprise there were no tables. For a moment I wasn’t sure what to do. All we had were chairs. Having no option, I made up a technique on the spot.

The acupressure point Li-4 (long intestine – 4, which is also called the “Hoku” point) is located in the web between the index finger and the thumb. Try this yourself, slowly push your opposite thumb into the web and you will find a tender, hard spot.

Since this was a seminar for dentists whose focus was TMJ pain and headaches, I instructed them to have their partner sit on a chair, push their thumb into the “Hoku” point (acupuncture) and then add in the Myofascial component by slowly pulling the arm until it is gently taut. You then have the client side bend and rotate their head away from the arm that is being pulled.

The time factor for a true Myofascial Release is very important. Hold the gently taut arm and the “Hoku” point for approximately 3 – 5 minutes.

Try this on some of your clients with arm, shoulder, cervical TMJ pain and/or headaches. Let me know what kind of a response you have in the comment section.

The funny part of the story is that years later in another symposium, a dentist approached me and introduced himself. He explained that he had been in the previous symposium and thanked me. He said that he had gone back to his practice and tried the techniques that I had taught him on the chair with incredible results. Now he and his assistants use it everyday and his patients love it.

I had totally forgotten about that experience. A good lesson, when adversity presents itself, be creative.

Sincerely,

John

**John F. Barnes, P.T., L.M.T., N.C.T.M.B.**, is an international lecturer, author, and acknowledged expert in the area of Myofascial Release. He has instructed over 50,000 therapists worldwide in his Myofascial Release approach, and he is the author of *Myofascial Release: the Search for Excellence* (Rehabilitation Services, Inc., 1990) and *Healing Ancient Wounds: the Renegade’s Wisdom* (Myofascial Release Treatment Centers & Seminars, 2000).

He is on the counsel of Advisors of the American Back Society; he is also on *Massage Magazine's* Editorial Advisory Board; and is a member of the American Physical Therapy Association. For more information, visit [www.myofascialrelease.com](http://www.myofascialrelease.com)