## Myofascial Release: The "Missing Link" in Your Treatment by John F. Barnes, PT

The following article has been altered. It originally appeared in PT Today, January 16, 1995. In this adaptation, the first two paragraphs and final ten paragraphs were deleted to shorten the article.

Myofascial Release techniques are utilized in a wide range of settings and diagnoses; pain, movement restriction. spasm, spasticity, neurological dysfunction, ie, cerebral palsy, and birth injury, CVA's, scoliosis. head menstrual and pelvic pain and dysfunction, temporomandibular headaches, pain dysfunction, geriatrics, sports injuries, pediatrics, chronic fatigue syndrome, fibromyalgia, traumatic and surgical scarring, acute and chronic pain.

## WHAT IS HAPPENING?

The health professions have ignored the importance of an entire physiological system, the fascial system that profoundly influences all other structures and systems of the body. This glaring omission had severely affected our effectiveness and the lasting quality of our efforts. Including Myofascial Release into our current evaluatory and treatment regimes allows us to provide a more comprehensive approach to our patients that is safe, cost efficient and consistently effective.

Fascial restrictions can exert tremendous tensile forces on the neuromuscular-skeletal and other pain sensitive structures. This enormous pressure (more than 2,000 pounds per square inch) can create the very symptoms that we have so long been trying to eliminate. This knowledge frees us from only trying to relieve symptoms and gives us the tools we need to find and eradicate the cause and effect (symptoms) relationship for a permanent resolution of our patient's complex problems.

Trauma, posture, or inflammation can create a binding down of the fascia, resulting in abnormal pressure on nerves, muscles, bones, or organs.

Fascia is a tough connective tissue which spreads throughout the body in a three dimensional web from head to foot without interruption. The fascia surrounds every muscle. bone, nerve, blood vessel and organ of the body, all the way down to the cellular level. Therefore, malfunction of the fascial system due to trauma, posture, or inflammation can create a binding down of the fascia, resulting in abnormal pressure on nerves, muscles, bones, or organs. This can create pain or malfunction throughout the body, sometimes with bizarre side effects and seemingly unrelated symptoms. It is thought that an extremely high percentage of people suffering with pain and/or lack of motion may be fascial problems; but most go undiagnosed, as the importance of fascia is just now being recognized. All of the standard tests, such as x-rays, mylelograms, CAT scans, electromyography, etc., do not show the fascial restrictions.

Fascia at the cellular level creates the interstitial spaces and has extremely important functions of support, protection, separation, cellular respiration, nutrition, elimination, metabolism, fluid and lymphatic flow. In other words, it is the immediate environment of every cell of the body. This means that any trauma or malfunction of the fascia can set up the environment for poor cellular efficiency, necrosis, disease, pain and dysfunction throughout the body.

Other important factors concerning fascia are:

- It supports and stabilizes thus enhancing the postural balance of the body.
- It is vitally involved in all aspects of motion and acts as a shock absorber.
- It aids in circulatory economy, especially in venous and lymphatic fluids.

- Fascial change will often precede chronic tissue congestion.
- Such chronic passive congestion creates the formation of fibrous tissue, which then proceeds to increase hydrogen ion concentration of articular periarticular structures.
- Fascia is a major area of inflammatory processes.
- Fluid and infectious processes often travel along fascial planes.

The central nervous system is surrounded by fascial tissue (dura mater) which attaches to the inside of the cranium, the foramen magnum and at the second sacral segment. Dysfunction in these tissues can have profound and widespread neurological effects.

Myofascial Pain and Dysfunction by Janet Travell, M.D, beautifully illustrates that there is a myofascial element; for every muscle of the body is surrounded by a smooth fascial sheath, every muscular fascicule is surrounded by fascia, every fibril is surrounded by fascia, and every micro-fibril down to the cellular level is surrounded by fascia that can exert pressures of over 2,000 pounds per square inch. Therefore, it is the fascia that can ultimately determine the length and function of its muscular component.

We must be clear that medicine, modalities, muscle energy techniques, mobilization/manipulation, massage and flexibility and exercise programs do not alter the powerful fascial restrictions that occur in a high percentage of our patients. These restrictions are only altered via Myofascial Release.

Myofascial Release is a whole body "hands-on" Approach to the evaluation and treatment of the human structure. The therapist is taught to evaluate the fascial system through visual analysis of the human frame three dimensionally in space, by palpating the tissue texture and various fascial layers and observing the symmetry, rate, quality, and intensity of strength of the craniosacral rhythm. Proper Myofascial Release requires ongoing reevaluation, including the above procedures and observance

of vaso-motor responses and their location as they occur after a particular fascial restriction has been released. This provides instantaneous and very accurate information enabling the therapist to proceed intelligently and logically from one treatment session to the next, to the ultimate resolution of the patient's dysfunction.

When the therapist has determined where the fascial restrictions lie, he or she will apply gentle pressure into the direction of the restriction.

At first the elastic component of the fascia will release, and at some point in time the collagenous barrier will be engaged. This barrier cannot be forced (it is too strong). One waits with gentle pressure, and as the collagenous aspect releases, the therapist follows the motion of the tissue, barrier upon barrier until freedom is felt.

It is felt that each time we experience a trauma, undergo an inflammatory process, or suffer from poor postures over time that the fascial system becomes restricted. These restrictions act like the concentric layers of an onion. These adaptive layers slowly tighten until we begin to lose our physiologic adaptive capacity (our margin of error). Therefore, we slowly tighten, losing our flexibility and spontaneity of motion, setting us up for trauma, pain or restriction of motion. These powerful restrictions begin to pull us out of our three-dimensional orientation with gravity. The goal of Myofascial Release is to help return the individual's physiological adaptive capacity by increasing space and mobility and restoring three-dimensional balance and returning the structure to as close as potentially possible to its vertical orientation with gravity. This equilibrium allows the individual's self-correcting mechanisms to come into play and alleviate symptoms and restore proper function.

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