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Myofascial Release

By Warren Hammer, MS, DC, DABCO

For the past six months I have had intermittent upper thoracic pain. I was relieved by spinal adjustments and stretching but the pain reoccurred. I was recently analyzed for fascial restrictions and was informed that my pectoral muscles were tight and tender on deep palpation probably creating tension on the posterior upper dorsal soft tissues. Analysis from the posterior revealed slight winging of my scapulae. After receiving a five minute myofascial release over my pectoral muscles, my upper thoracic pain completely abated and has not returned.

I credit this treatment and other successes that I have seen in my practice to the works of John F. Barnes who has been a PT for over 30 years. He originally learned manipulative procedures from John McM. Mennell in 1963. Besides lecturing on myofascial release all over the world, he runs two clinics: one in Paoli, Pennsylvania; the second in Sedona, Arizona.

According to Barnes[1] "fascia is a tough connective tissue that spreads throughout the body in a three-dimensional web from head to foot functionally without interruption. The fascia surrounds and infuses with every organ, muscle, bone and blood vessel all the way down to the cellular level." He states that fascial strains can slowly tighten and cause the body to lose its physiologic adaptive capacity. Over time, the tightness spreads like the pull in a sweater. Unfortunately, fascia, an elastocollagenous complex, can become solidified and shortened by trauma, inflammation and chronic poor posture. Fascial restriction can create abnormal strain patterns that can pull the osseous structures out of proper alignment or too close together, resulting in compression of the facet joints or disc, producing pain and/or dysfunction.

I feel one of Barnes most important contributions in his discovery that ordinary stretching and manipulation will primarily affect the elastiomuscular component but will not affect the collagenous barrier. The viscous in viscoelastic tissue is part of the ground substance which can undergo a plastic deformation while the elastic portion rebounds. The viscous portion has the capacity to "creep" or progressively deform with a

constant load. Palpation and movement of the skin should reveal equal movement in all directions. Diminished movement in a particular direction usually represents the barrier. The skin may feel warm and the fascial tissue below the skin may feel leathery, tender, or string-like. To create a permanent deformation, Barnes applies a gentle pressure to the restricted fascial tissue. The pressure will stretch out until the firmer collagenous barrier is reached. At this point the practitioner must gently hold this contact without any additional pressure for at least 90 to 120 seconds and sometimes as long as five minutes. The hand will automatically move in the direction of the barriers. The hand moves as the temperature increases; sometimes, because of perspiration, the practitioner must gently press down to prevent sliding. Barnes[1] states that you cannot mechanically overstretch fascia, which has a tension of 2,000 lbs. per square inch. "The improvements seen after myofascial release are probably due to stretching of the elastic component, shearing of the cross-links that can develop at the nodal points of the fascia, and change in the viscosity of the ground substance from a more solid to a gel state. This change in viscosity increases the production of hyaluronic acid and increases the glide of the fascial tissue. There is also a positive effect on the spindle cells and Golgi tendon organs of the musculotendinous component, and the tone of the peripheral, autonomic and central nervous system."[1]

Reference:

1. Barnes JF. Myofascial Release: The Search for Excellence, A Comprehensive Evaluatory and Treatment Approach. Paoli, PA: Rehab Services, Inc. & Myofascial Release Seminar: 1990.

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Editor’s Note: Dr. Hammer will conduct his next Soft Tissue (ST) seminar January 28-29, in Portland, Oregon. You may call 1-800-359-2289 to register.

Click here for more information about Warren Hammer, MS, DC, DABCO.

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