

Myofascial/Osseous Release

PT/OT Today

Vol. 5, No. 40

Mind & Body

by John F. Barnes, PT

Nikolai Bogduk, MD, at the American Back Symposium, reported on the importance of a re-evaluation of the anatomy and function of the spinal musculature and fascia, and of the osseous structures that they influence and to which they attach.

“Experimental evidence indicates that excessive strain of muscles results in failure near the myotendinous junction. Sprains of the back muscles should, therefore, exhibit tenderness near the insertions of the affected muscles. However, because of the segmental, fascial anatomy of each myofascial element, a given offending movement may affect only particular fascicles. Thus, rather than involving the muscle as a whole, sprains may occur at selected, specific sites resulting in focal tenderness. Such sites may be misinterpreted or misrepresented as trigger points.”¹

One can visualize how fascial restrictions in random strain patterns can shorten, creating abnormal tensions upon individual or groups of fascicles and the neural, vascular, and osseous structures to which they attach and powerfully influence. These abnormal compressive forces can exert pressure upon the neural structures, creating entrapment syndromes. Fascial compression of the vascular structures can produce ischemic conditions. Shortening of the muscular component of the fascicle can limit its functional, optimal length, reducing its strength, contractile potential, and deceleration capacities. These fascial restrictions can also create abnormal strain patterns that can pull the osseous structures too close together or out of proper alignment. This can result in compression of the facet joints, or disc producing pain and/or dysfunction.

I have found that release of the fascial system also tends to balance and provide more space between the joint structures of the skeletal system. Trial and error led me to see that some joint manipulation techniques are too high in velocity or too short in duration. They tend to elicit the body's protective responses and don't affect the environment of the osseous structures, the myofascial system. So the fascial strain patterns that remain tight simply pull the osseous structures back into positions of dysfunction.

This scenario explains why modalities, exercise and flexibility programs, manipulation, and muscle energy techniques (neuromuscular techniques) and mobilization procedures do not always produce lasting results. I have used manipulative procedures for over 30 years, and have found all of the above techniques to be helpful in certain situations. But we can now understand the poor and temporary results achieved with these methods by realizing that they affect only the osseous structures or the muscular or elastic components of the myofascial complex – the muscular component and the elastic component of the fascia, the cross-links that form in the collagen and the viscosity of the ground substance.

Because of this, I have developed an expanded method of the myofascial release called myofascial/osseous release. Myofascial release is one end of the spectrum where the therapist uses the fascial system as a handle or lever to relieve the pressure on pain sensitive structures and mobilize the

osseous structures. At the other end of the spectrum, myofascial/osseous release focuses on utilizing the osseous structures as handles or levers, to free the skeletal structures and their surrounding myofascia.

The very important difference from other mobilization, muscle energy and manipulation procedures is that myofascial/osseous release techniques are performed very slowly, following the fascial release three-dimensionally. Remember that the fascial system does not release quickly or all at once. Over time, the tissues feel much more like rope unraveling, releasing one strand at a time. This creates change in tension. The sensitive, trained hands of the therapist can follow this change in a three-dimensional manner, as if they were working at untwisting and stretching taffy.

Myofascial release and myofascial/osseous release techniques are safe, easy to learn, and highly effective for reducing pain and restoring motion and optimal function on a permanent basis. These techniques help treat the entire myofascial, osseous complex. Because of this, the most comprehensive approach to restoring the quantity and quality of motion for optimum function should include these procedures combined with mobilization, muscle energy techniques and soft tissue mobilization and manipulation procedures. The addition of appropriate modalities, exercises, and flexibility and neuromuscular facilitation techniques can then maximize and maintain results.

References:

1. American Back Society Newsletter, Volume 7 Number 3, Summer 1991.
2. John F. Barnes, Myofascial Release the Search for Excellence, Paoli, PA.