

## **Myofascial Release - An Introduction for the Patient**

Gary D. Keown, PT and Tim Juett, PT of South Umpqua Physical Therapy Services in Winston, Oregon have extensive experience in Physical Therapy and Myofascial Release. The integration of the Myofascial Release approach into their Physical Therapy practice has greatly enhanced their success. Their reputation for excellence and resolving difficult cases has led to the growth of four very successful Physical Therapy facilities in Oregon.

Tim has just completed our advanced Myofascial Release III seminar and said he would like to share some case histories with you which constitute a very valuable patient introduction to Myofascial Release. I suggest you modify this to fit your facilities particular requirements and print it as a handout for your patients and referring physicians and dentists.

### *Introduction*

Myofascial Release is a relatively new addition to the armamentarium of the physical therapist. Because it is somewhat different from traditional physical therapy, many patients ask questions such as "What is it?" and "How does it work?" Myofascial Release is generally an extremely mild and gentle form of stretching that has a profound effect upon the body tissues. Because of its gentleness, many individuals wonder how it could possibly work. To help you understand, we are providing you with this article.

### *Fascia*

Fascia (also called connective tissue) is a tissue system of the body to which relatively little attention has been given in the past. Fascia is composed of two types of fibers: A) Collagenous fibers which are very tough and have little stretch ability. B) Elastic fibers which are stretchable. From the functional point of view, the body fascia may be regarded as a continuous laminated sheet of connective tissue that extends without interruption from the top of the head to the tip of the toes. It surrounds and invades every other tissue and organ of the body,

including nerves, vessels, muscle and bone. Fascia is denser in some areas than others. Dense fascia is easily recognizable (for example, the tough white membrane that we often find surrounding butchered meat).

### *When Fascia is Injured*

Because fascia permeates all regions of the body and is all interconnected, when it scars and hardens in one area (following injury, inflammation, disease, surgery, etc.) it can put tension on adjacent pain-sensitive structures as well as on structures in far-away areas. Some patients have bizarre pain symptoms that appear to be unrelated to the original or primary complaint. These bizarre symptoms can now often be understood in relationship to our understanding of the fascial system.

### *Anatomy of Fascia*

The majority of the fascia of the body is oriented vertically. There are, however, four major planes of fascia in the body that are oriented in more of a crosswise (or transverse) plane. These four transverse planes are extremely dense. They are called the pelvic diaphragm, respiratory diaphragm, thoracic inlet and cranial base. Frequently, all four of these transverse planes will become restricted when fascial adhesions occur in just about any part of the body. This is because this fascia of the body is all interconnected, and a restriction in one region can theoretically put a “drag” on the fascia in any other direction.

### *Treating Fascial Restrictions*

The point of all the above information is to help you understand that, during myofascial release treatments, you may be treated in areas that you may not think are related to your condition. The trained therapist has a thorough understanding of the fascial system and will “release” the fascia in areas that he knows have a strong “drag” on your area of injury. This is, therefore, a whole body approach to treatment. A good example is the chronic low back pain patient; although the low back is primarily involved, the patient may also have significant discomfort in the neck. This is due to the gradual tightening of the

muscles and especially of the fascia, as this tightness has crept its way up the back, eventually creating neck and head pain. Experience shows that optimal resolution of the low back pain requires release of the fascia of both the head and neck; if the neck tightness is not also released it will continue to apply a “drag” in the downward direction until fascial restriction and pain has again returned to the low back.

Muscle provides the-greatest bulk of our body’s soft tissue. Because all muscle is enveloped by and in grained with fascia, myofascial release is the term that has been given to the techniques that are used to relieve soft tissue from the abnormal grip of tight fascia (“myo” means “Muscle”).

The type of myofascial release technique chosen by the therapist will depend upon where in your body the therapist finds the fascia restricted. If it is restricted through the neck to the arm, he/she may apply a very gentle traction to the arm, very slowly moving the arm through range as restrictions are released, If it is restricted in the back (more superficial than deep) he may apply a very gentle stretch on the skin across the back, with the use of two hands. If the thoracic inlet, deep transverse fascia is suspected of being restricted, the therapist may place one hand on the upper back and one over the collarbone area in front and apply extremely gentle pressure.

A key to the success of myofascial release treatments is to keep the pressure and stretch extremely mild. Muscle tissue responds to a relatively firm stretch, but this is not the case with fascia. Remember the collagenous fibers of fascia are extremely tough and resistant to stretch. In fact, it is estimated that fascia has a tensile strength of as much as 2000 pounds per square inch. (No wonder when it tightens, it can cause pain).

However, it has been shown that under a small amount of pressure (applied by a therapist’s hands) fascia will soften and begin to release when the pressure is sustained overtime. This can be likened to pulling on a piece of taffy with only a small, sustained pressure.

Another important aspect of myofascial release techniques is holding the technique long enough. The therapeutic affect will begin to take place after holding a gentle stretch and following the tissue three-dimensionally with skilled, sensitive hands.

Myofascial Release is gentle, but it has profound effects upon the body tissues. Do not let the gentleness deceive you. You may leave after the first treatment feeling like 'nothing happened. Later (even a day later) you may begin to feel the effects of the treatment.

In general, acute cases will resolve with a few treatments. The longer the problem has been present, generally the longer it will take to resolve the problem. Many chronic conditions (that have developed over a period of years) may require three to four months of treatments three times per week to obtain optimal results. Experience indicates that fewer than two treatments per week will often result in fascial tightness creeping back to the level prior to the last treatment. Range of motion and stretching exercise given to you will, however, keep this regression between treatment minimal.

Frequently there is increased pain for several hours to a day after treatment, followed by remarkable improvement. After, remarkable improvement is noted immediately during or after a treatment. Sometimes new pains in new areas will be experienced. There is sometimes a very light-headedness or a feeling of nausea. Sometimes a patient experiences a temporary emotion change. All of these are normal reactions of the body to the profound, but positive, changes that have occurred by releasing fascial restrictions.

It is felt that release of tight issue is accompanied by release of trapped metabolic waste products into the surrounding tissue and bloodstream. We highly recommend that you "flush your system" by drinking a lot of fluid during the course of your treatments, so that reactions like nausea and light headedness will remain minimal or nil.

If patients have any questions or concerns that arise concerning myofascial release, they should be encouraged to discuss them with the therapist.

### *Case History—Chronic Low Back Pain (Post Surgery)*

A 32-year-old choker-setter had a lumbar laminectomy in 1983, followed by decompression surgery at the same level in October, 1985. Five months after his second surgery he was referred to physical therapy by his surgeon for three weeks of treatment for chronic low back pain and bilateral anterior thigh pain. His treatment included hot wet packs with concurrent interferential electrical stimulation, a home exercise program and myofascial release to the low back area as well as to the surgical scar itself. After two treatments there was no further leg pain and only mild low back pain with movement.

After four treatments, the patient called and cancelled further appointments because he no longer was having any pain and had returned to his job as a choker-setter. Following up by telephone three months later, he reported having low back discomfort at times and never any leg pain. He is very pleased with his ability to continue his strenuous job. This is the most dramatic improvement I have experienced with any patient having similar symptoms after two or more low back surgeries. The only difference in treatment with this patient was the addition of myofascial release.

### *Case History — Chronic Dislocating Patella*

This 15-year-old female had a history of a chronic dislocating right patella for three years. At age 11 she fell and hit a curb on the lateral aspect of the right knee. Approximately one month later her patella began dislocating. Dislocations gradually become more frequent. She stated that with “just normal walking” the patella would dislocate and she would fall. She had been having constant pain at the lateral aspect of the knee for the past two years. Originally, her patella dislocated about twice per week, and this progressed to daily for a year prior to coming to us for therapy. The only treatment given her was quadriceps and hamstring “sets,” and a trial of two types of braces until she came to see us in June of 1987.

The physician’s referral to us requested SLR quadriceps strengthening and iliotibial band stretching. We treated her five times with ultrasound to the lateral

retinacular area of the right patella, followed by myofascial release of the iliotibial band and lateral retinaculum. She was also given straight-leg raises against theraband with some external rotation of the hips, so as to emphasize strengthening of the VMO.

After the first treatment she had no further dislocations, even when running up and down stairs at home. Follow-up with this patient nine months later, she reported having no further problems at all with her right knee.

This patient was a possible candidate for surgical release of the lateral retinaculum of the right knee. Because she had done exercises in the past without reduction of chronic dislocation of the patella, we feel that the rapid resolution of her problem was due primarily to the non-invasive release of the scarred and adhered lateral retinaculum with manual myofascial release techniques.

#### *Case History — Myofascial Syndrome, Status Post Open Heart Surgery*

This 73-year-old patient had open heart surgery on January 25, 1988. She came for physical therapy on March 29, 1988 complaining of excruciating pain at the sternal surgical scar region and spreading up the left sternocleidomastoid and into the left upper extremity to the elbow. She also complained of paresthesia of the left side of the face. Episodes of dizziness, difficulty breathing when tilting the head back, and lack of pulse in the left side of the neck.

A total of four treatments were given in a ten day period. They included moist heat, myofascial release and a home program of stretching the neck and shoulders.

Myofascial release was performed over the surgical scar, left chest, left neck, cranial base and left side of the face. Left "arm pull" was also performed. At the end of the fourth and final treatment, she reported feeling "100% improved." She had no pain. She could feel a pulse again in the left side of her neck, breathing was unrestricted with cervical extensions, and there was normal sensation in her

face and no further episodes of dizziness. Her six standard cervical motions had improved a total of 40 degrees, including a gain of 15 degrees of extension.

Upon follow-up by telephone exactly four weeks following her final treatment, she reported feeling as well as after the last treatment. She only had "soreness" in the left neck and left axillary region when stretching while doing her home exercises, which I had recommended that she continue daily.

#### *Case History — Status Post Right Mastectomy and Radiation Burn*

This 73-year -old woman came for her initial physical therapy treatment on July 14, 1987. She had a right mastectomy in January, 1986. She received one year of chemotherapy following surgery, then six weeks (30 treatments) of radiation therapy. She had irregular shaped radiation burn with hypertrophic scarring over the distal third of the sternum (of approximately 6-7 mm. diameter). The right shoulder was drawn forward. The right shoulder and chest were extremely hypersensitive to mild touch and minor movement of the right shoulder. The radiation scar still had a small area of scab. She was referred to us as soon as the physician felt that the burn was sufficiently healed to begin physical therapy. Right shoulder external and internal rotation range of motions were within normal limits. Active flexion and abduction (standing) were respectively 0-130 degrees and 0-97 degrees.

She was given a home program of cane exercises and treated a total of 15 times (ending August 21, 1987) with moist heat and myofascial release to the chest, right upper extremity and neck. At the final treatment she had 160 degrees of motion of both right shoulder flexion and abduction (equivalent to the contralateral motions). She had no further discomfort, except for mild tenderness when pushing her range of motion exercises to the end of range.

On follow-up with this patient over seven months later, she had maintained her range of motion and reported no limitations of function and no pain. She felt fully recovered in every way other than "some tightness at the site of radiation." She expressed how thoroughly grateful she was for the remarkable increase of

motion and reduction of pain which occurred with such gentle and relatively painless techniques.

**Tim Juett, PT**

**Roseburg, Oregon**

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Tim is a very caring and highly intelligent health professional who believes in a multi-facted approach treating the whole person.

I would like to thank Tim and request anyone else interested in sharing anything of this nature, else histories or their experiences to feel welcome to write me. I look forward to hearing from you.

**John F. Barnes, PT**