

[print this page](#) | [close window](#)

## Article - Self Myofascial Release Techniques

### Self-Myofascial Release Techniques

Micheal Clark, MS, PT, PES, CSCS

Alan Russell, ATC, NASM-PES, CSCS

#### *Would you believe that your client's function could be improved for less than \$20?*

Sound too good to be true? By performing **Self-Myofascial Release** techniques on a simple piece of foam, your clients can improve flexibility, function, performance, and reduce injuries. In a nutshell, your clients use their own body weight to roll on the round foam roll, massaging away restrictions to normal soft-tissue extensibility. And your clients can perform this program at home, maximizing their recovery time.

### KINETIC CHAIN CONCEPTS

For the health and fitness professional to understand how this "magical" foam roll does all that, a basic understanding of the kinetic chain must be acknowledged. The kinetic chain is made up of the soft tissue system (muscle, tendon, ligament, and fascia), neural system (nerves and CNS), and articular system (joints)<sup>6</sup>. The kinetic chain works as an integrated functional unit. All components of the kinetic chain exist interdependently. If one segment is not functioning efficiently, then the other components must compensate, leading to tissue overload, fatigue, faulty movement patterns, and finally initiates the **Cumulative Injury Cycle**<sup>3,5,10,12</sup>. For example, muscle tightness restricts the range of motion that a joint may be moved. Because of muscle restriction (tightness, soft tissue adhesions, and neural-hyperactivity), joint motion is altered, thus changing normal neural feedback to the CNS (central nervous system). Ultimately, neuromuscular efficiency is compromised, which leads to poor movement patterns, inducing premature fatigue and causing injury. The SMFR (Self-Myofascial Release) Program helps your clients improve muscular balance and performance.

#### BENEFITS OF SELF-MYOFASCIAL RELEASE<sup>4</sup>

- Correct muscle imbalances
- ↑ Joint range of motion
- ↓ Muscle soreness & relieve joint stress
- ↓ Neuromuscular hypertonicity
- ↑ Extensibility of musculotendinous junction
- ↑ Neuromuscular efficiency
- Maintain normal functional muscular length

### HOW DOES IT WORK?

A simple review of neuromuscular anatomy is required to apply the neurophysiological concepts. Two basic neural receptors are located in skeletal muscle tissue. These receptors are the muscle spindle and the golgi tendon organ. **Muscle Spindles** are located parallel to the muscle fibers. They record changes in fiber length, and rate of change to the CNS<sup>5,9</sup>. This triggers the **myotatic stretch reflex**, which reflexively shortens muscle tissue, alters the normal length-tension relationship, and often induces pain<sup>1,2,5</sup>. **Golgi Tendon Organs (GTO)** are located at the musculotendinous junction. They are sensitive to change in tension and rate of tension change<sup>2,5,7,8</sup>. Stimulation of the GTO's past a certain threshold inhibits the muscle spindle activity, and decreases muscular tension. This phenomenon is referred to as **autogenic inhibition**<sup>2,4,7,11</sup>. It is said to be "autogenic" because the contracting agonist is inhibited by its' own receptors. Reduction in soft-tissue tension decreases pain, restores normal muscle length-tension relationships, and improves function.

### GENERAL GUIDELINES

1. The health and fitness professional should be proficient in these techniques prior to client instruction.
2. Hold each position 1-2 minutes for each side (when applicable).
3. If pain is reported, stop rolling and **REST** on the painful areas for 30-45 seconds.
  - Continuing to roll when pain is present activates the muscle spindles, causing increased tightness and pain.

- Resting 30-45 seconds on painful areas will stimulate the GTO and autogenically inhibit the muscle spindles; reducing muscular tension and will help regulate fascial receptors.
4. Maintain proper Draw-In Position, which provides stability to the lumbo-pelvic-hip complex during rolling.
  5. Clients can perform SMFR Program 1-2 x daily.

## SPECIFIC SELF-MYOFASCIAL RELEASE TECHNIQUES



### ***ILIOTIBIAL TRACT (IT Band)***

Position yourself side lying on foam roll. Bottom leg is raised slightly off floor. Maintain head in "neutral" with ears aligned with shoulders. Roll just below hip joint down the lateral thigh to the knee.



### ***PIRIFORMIS***

Begin positioned as shown with foot crossed to opposite knee. Roll on the posterior hip area. Increase the stretch by pulling the knee toward the opposite shoulder



### ***HAMSTRING***

Place hamstrings on the roll with hips unsupported. Feet are crossed to increase leverage. Roll from knee toward posterior hip while keeping quadriceps tightened.



**QUADRICEPS**

Body is positioned prone with quadriceps on foam roll. It is very important to maintain proper Core control (abdominal Drawn-In position & tight gluteals) to prevent low back compensations. Roll from pelvic bone to knee, emphasizing the lateral thigh

**TENSOR FASCIA LATAE (TFL)**

Position the body as described above. Foam roll is placed just lateral to the anterior pelvic bone (ASIS).

**ADDUCTOR**

Extend the thigh and place foam roll in the groin region with body prone on the floor. Be cautious when rolling near the adductor complex origins at the pelvis.

**LATISSIMUS**

Position yourself side lying with arm outstretched and foam roll placed in axillary area. Thumb is pointed up to pre-stretch the latissimus dorsi muscle. Movement during this technique is minimal.



**RHOMBOIDS**

Cross arms to the opposite shoulder to clear the shoulder blades across the thoracic wall. While maintaining abdominal Draw-In position, raise hips until unsupported. Also stabilize the head in "neutral." Roll mid-back area on the foam.

**WHERE TO GET THE FOAM ROLLS**

When choosing a foam roll, product density is very important. If the foam is too soft, less than adequate tissue massage is applied. On the other hand, if the foam is too hard, bruising and more advanced soft-tissue trauma may occur, leading to further restriction, initiation of the inflammatory process, decreased range of motion, pain, and decreased performance. The preferred density of foam is available through mail order. Contact MF Athletic Company (800) 556-7464, Cranston, Rhode Island, USA to order the 6" round / 36" long foam roll.

**SUMMARY**

The SMFR Program can help your clients reach their health and fitness goals. Simply by using their own body weight on the rolls, they'll be reducing pain and tension, and restoring normal muscle length and balance. Optimum muscle balance helps to provide optimum joint motion leading to optimum performance.

Try it yourself, and help your clients reach their fitness goals. You will be *AMAZED!*

**SUGGESTED READINGS**

- Integrated Training for the New Millennium, NASM. 2000
- NASM Optimum Performance Training for the Performance Enhancement Specialist educational course
- Clark MA, Russell AM: Low back pain: A functional perspective. [www.nasm.org](http://www.nasm.org)
- Corn R: Neurologic rationale for integrated training. [www.nasm.org](http://www.nasm.org)

**REFERENCES:**

1. Alter MJ: *Science of Flexibility*. Second Edition. Human Kinetics. 1996
2. Basmanjian JV (3<sup>rd</sup> ed): *Therapeutic Exercise*. Williams and Wilkins, Baltimore. 1978
3. Chaitow L: *Muscle Energy Techniques*. New York, Churchill Livingstone. 1997
4. Clark MA: *Integrated Training for the New Millennium*. NASM, Thousand Oaks. 2000
5. Downey J, Darling R: *Physiological Basis of Rehabilitation Medicine*. WB Saunders, Philadelphia. 1971
6. Grigg P: Peripheral neural mechanisms in proprioception. *J. Sports. Rehab.* 3:2-17, 1994
7. Gummerson T: *Mobility Training for the Marital Arts*. A & C Black. 1990
8. Liebenson C: *Rehabilitation of the Spine – A Practitioners Manual*. Williams and Wilkins. 1995
9. Sady SP, Wortman M, Blanke D: Flexibility training: ballistic, static, or proprioceptive neuromuscular facilitation? *Arch. Phys. Med. Rehabil.* Jun:63(6): 261-262. 1982
10. Selye H: *The Stress of Life*. McGraw-Hill, New York` 1984

[Privacy Statement](#) | [Perform Better Policies and Procedures](#)

© 2000- 2009, Perform Better  
11 Amflex Drive | Cranston, RI 02921 | 888-556-7464