INSTRUCTOR TRAINING SERIES

MUSCLE RELEASE for Cycling℠

Optimal Recovery ▶ Peak Performance

Myofascial Release Techniques
Using the Thera-Roll® Foam Roller

Decrease Muscle Pain
Decrease Joint Stiffness
Decrease Stress
Increase Mobility
Improve Posture
Improve Recovery
Increase Relaxation
Increase Athletic Performance

Presented by

Thera-Roll®

The Original Textured Foam Roll

Stage 5 CYCLING

Coaching and Training for Cyclists

What is Muscle Fascia?

Fascia is a tough membrane of varying thickness which envelops and separates everything in the body from whole muscle groups and bones down to each individual cell, providing protection and communication. It is like a three-dimensional net, reaching right through the body, surrounding individual muscle fibers, tendons, ligaments, nerves, organs, lymph vessels, blood vessels and capillaries. Fascia is entirely continuous throughout the body and a restriction in one area can affect every other area.

Not only is each muscle and muscle group enveloped and separated by fascia, each muscle fiber has a fascial binding which functionally links muscle and fascia.

Why is Myofascial Release Necessary?

In its normal, hydrated, healthy state, fascia has the ability to stretch and move without restriction. However, when injuries or imbalances exist in the muscles, the muscle fascia will tighten and dehydrate. Restrictions in fascia can result in muscle pain and may give rise to tendonitis.

In addition, nerves and circulatory vessels are wrapped in fascial membranes. Restrictions in these and surrounding fascia can greatly inhibit movement and circulation hindering muscle recovery. Furthermore, the restrictions, inhibited movement and decreased circulation will effect a rider's overall and peak performance.

A "Deeper" Look at Muscle Fascia

Fascia is composed mainly of collagen (40%) and lubricating ground substance. Both muscle with its fascial sheaths and ground substance are 70% water - fascia acts like a sponge. With physical and emotional trauma it dehydrates - water is pushed out - rendering it hard and gel-like, thus reducing the lubricant qualities of the ground substance between the collagen fibers, decreasing the distance between the fibers.

This leads to the collagen fibers shortening, thickening, and sticking together. This puts pressure on the adjacent structures (muscles, nerves, blood vessels). When this happens more collagen fibers are produced, to help take the strain, leading to more density of hard fascia in that area (fascial networking).

Myofascial Pain and Discomfort

Fascia which is shortened and hard compresses capillaries and nerves, causing pain, imbalance and discomfort, and resulting in decreased cardiovascular flow which further compromises the muscles ability to recover.

The pain resulting from myofascial restriction is often described as deep, sharp, dull, burning, diffuse, heavy, or 'like toothache'. Since fascia is continuous throughout the body, it can be difficult to pinpoint the exact origin of the pain. If the cause is not treated and wider areas of fascia become affected, the pain can become generalized, making it more difficult to locate the source.

Myofascial restrictions can play a large part in pain syndromes. Fascia which is restricted can be extremely painful itself and cause surrounding fascia to harden protectively. Structures around restricted fascia cannot move without friction, compounding the problem.

Myofascial Release Techniques

Myofascial Release (MFR) is the term referring to a collection of techniques for separating layers of fascia, releasing restrictions, restoring elasticity, conductivity and hydration. Myofascial release can be accomplished using a variety of techniques including gross or 'cross-hand' stretches, focused stretches, 'windmill' or J-stretches, fascial glide, deep 3-dimensional stretches and skin rolling.

Why Thera-Roll®

There are a number of foam rollers available which all have a smooth surface. Although these rollers can provide some muscle release, their blunt (larger surface) area of contact is not effective for deep, focused muscle fascia release. The textured ridged/ribbed design of the Thera-Roll® allows for a more precise target of tight and sore areas of the body to more effectively break up scar tissue and restriction within the muscles. Its deep textured design also provides stability and reduces the rollers tendency to slip during use.

Stage5 Cycling's goal is to provide the most effective coaching and training concepts and techniques. Because of this, we recommend Thera-Roll®.

Standard Foam Roller

Thera-Roll®

Foam Roll Techniques

Quadriceps

Targeted Muscle(s)

Rectus Femoris, Vastus Intermedius, Vastus Lateralis, Vastus Medialis

Release Technique

Lie in the plank position and place the foam roller under the quadriceps. Roll over foam roller, concentrating on the area from the top of your knee caps up to the front of your hips. You may also focus on the inner and outer aspects of the front thighs.

NOTE: Don't roll over your knee caps, as doing so will cause irritation.

Variations

Single Leg

For sore and tender muscles, place one leg on the roller to better control the amount of pressure.

Cross Leg

For a deeper release, place one leg over the other.

Hip Flexors

Targeted Muscle(s)

Sartorius, Iliopsoas, Pectineus, Rectus Femoris

Release Technique

Place the foam roller on one leg under the front of the upper thigh. Concentrate over the small area of tissue in the pelvic area.

NOTE: Don't roll over the bony point of the hip, as doing so will cause irritation.

Illiotibial Band (ITB)

Targeted Muscle(s)

Tensor Fasciae Latae, Iliotibial Tract, Vastus Lateralis

Release Technique

Place the foam roller under the upper thigh and lie on your side. Roll over the tissue on the outer thigh between the hip and side of the knee.

NOTE: Don't roll over the outer bony point of the hip or the bony aspects of the knee, as doing so will cause irritation. Taller individuals may find it easier to rest on the forearm instead of fully extending the arm.

Inner Thigh

Targeted Muscle(s)

Adductor (Brevis, Longus, Magnus), Vastus Medialis, Gracilis

Release Technique

Lie in the plank position on the floor and place your inner thigh over the foam roller. Roll over knotted or tight muscle tissue between the inner knee and just below the groin.

NOTE: Avoid rolling over your knee cap or any other bony prominence of your knee.

Shins

Targeted Muscle(s)

Tibialis Anterior

Release Technique

Rest the foam roller under your shins and place your hands on the floor. Roll up and down between the area just below the knees and above the ankles.

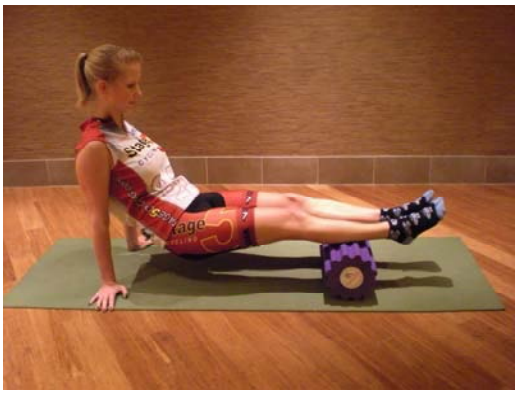
NOTE: Don't roll over the knee caps or any bony prominence of the knees. Use caution when using the firm 4 lb. density roller on the tibia.

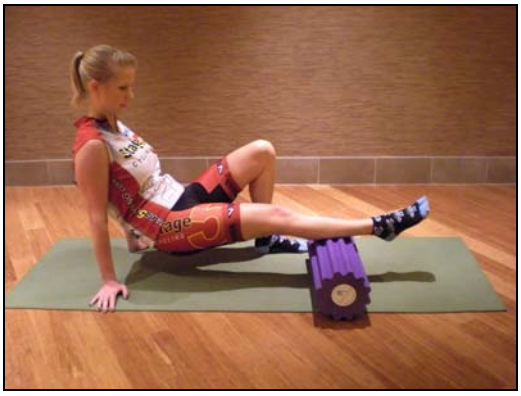
Variation

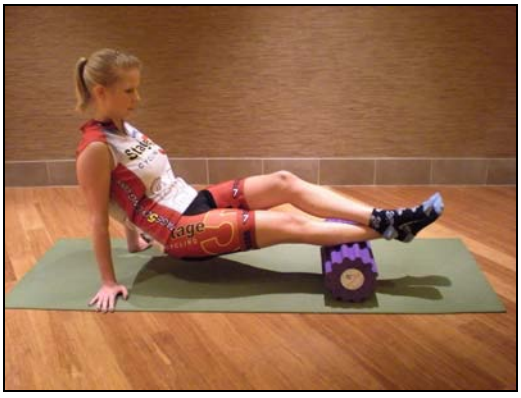
One Leg

For sore and tender muscles, place one leg on the foam roller to better control the amount of pressure.

Calves







Targeted Muscle(s)

Gastrocnemius (Medial and Lateral Head), Soleus, Achilles Tendon

Release Technique

Place the foam roller under your calf and roll up and down the calf in a controlled fashion. Focus on knotted tissue and/or exceptionally sore areas.

NOTE: For a deeper calf massage, increase pressure by placing one leg over and onto the other. Avoid rolling over the bony process of the hind foot.

Variations

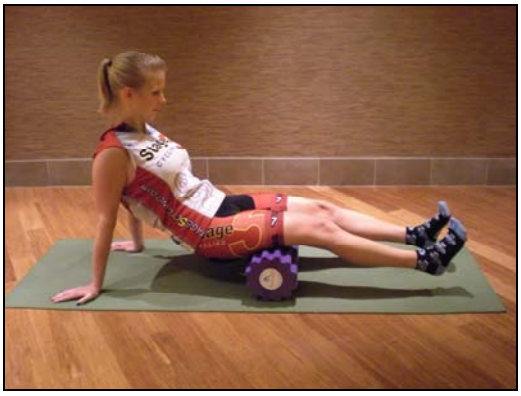
Single Leg

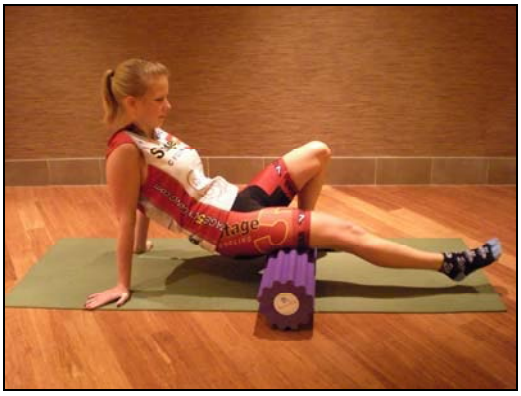
For sore and tender muscles, place one leg on the foam roller to better control the amount of pressure.

Cross Leg

For a deeper release, place one leg over the other.

Hamstrings





Targeted Muscle(s)

Biceps Femoris (Long and Short Heads), Semitendinosis, Semimembranosus

Release Technique

Sit on the foam roller and roll up and down over the muscle tissue located between the back of your hip and the back of your knee, as well as side to side. Because the muscles of the hamstrings are both lengthy and thick, more time may be required to effectively release the tissue.

NOTE: Exercise caution when rolling behind the knee, as to avoid injury to nerves and vascular tissue.

Variations

Single Leg

For sore and tender muscles, place one leg on the foam roller to better control the amount of pressure.

Cross Leg

For a deeper release, place one leg over the other.

Glutes

Targeted Muscle(s)

Gluteus (Maximus, Medius, Minimus)

Release Technique

To release tightness and knotted areas in your hips, sit on the foam roller, move side to side, and roll up and down. Focus on one hip at a time for a more intense muscle release. If needed, place a pillow or a foam pad under your hands.

.

NOTE: Don't roll over your Sacroiliac joints, located in the back of your hips, as doing so will cause irritation. Avoid rolling over bony prominences of the Sacroiliac joints.

Variation

Assisted Glute Stretch

A second person holds the feet above the floor while maintaining the same flexion (angle) of the hips.

Hip Rotators

Targeted Muscle(s)

Piriformis, Gemellus (Superior, Inferior), Obturator (Internus, Externus), Quadratus Femoris

Release Technique

Sit on the foam roller, crossing one leg over the opposite knee. Roll over the gluteal/hip rotator region with small, deliberate movements.

NOTE: Be careful to release the tissue slowly, as the Sciatic nerve is exposed in this bent hip and knee position and can become sore with overly aggressive rolling.

Lumbar Region

Targeted Muscle(s)

Internal / External Obliques, Erector Spinae, Latissimus Dorsi, Quadratus Lumborum, Transversus Abdominis

Release Technique

Lie on the foam roller at an angle with one leg crossed over the opposite knee. Allow the ridges of the roll to penetrate the muscle tissue running parallel to the spine. This muscle group becomes particularly tight due to lifting, twisting, and having to support the upper body.

NOTE: Exercise caution when rolling over the tips of the lower ribs, as aggressive pressure and friction can cause injury.

Rhomboids

Targeted Muscle(s)

Rhomboids, Lower Trapezius

Release Technique

Lie on the floor and place the foam roller under your shoulder blades. Open up the shoulder blades by folding your arms across your chest. Place your feet flat on the floor, bend your knees, and elevate your hips as needed. Move over the tight and sore spots of the muscles between the shoulder blades.

NOTE: Stabilize your neck in a comfortable position without allowing your head to fall backwards towards the floor.

Thoracic Extension

Targeted Muscle(s)

[Facilitated Stretch] Erector Spinae, Pectoralis (Major, Minor), Rectus Abdominis, Serratus Anterior, Internal / External Intercostals, Anterior Longitudinal Ligament

Release Technique

Lie perpendicular on the foam roller with the roller positioned just below the tips of your shoulder blades. Slowly lean backwards toward the floor and stretch your arms up and out to each side as high as you can.

NOTE: Those with Spinal Stenosis should avoid this exercise. Move slowly to increase the intensity of your stretch gradually. Avoid any bouncing when performing this stretch.

Arch of the Foot

Targeted Muscle(s)

Intrinsic Muscles of the Arch / Foot

Release Technique

Stand and place the foam roller on the floor in front of you. Roll the arch of your foot over the roller. This technique is excellent for loosening the heel, arch, and ball of the foot.

NOTE: Smaller fascial release devices, like the Thera-Roll® 3”x8” roller, is recommended for effective plantar fascial release.

Transverse Arch

Targeted Muscle(s)

Intrinsic Muscles of the Foot

Release Technique

Stand and place the foam roller, parallel with your foot on the floor in front of you. Stand on the roller and position your foot with the second toe centered on top of one of the ridges to release tension in the muscles surrounding the metatarsal bones and restore the transverse arch

.

Authors

Kipp Dye, MSPT. Orthosports Medical Services, Inc. / OrthoSportsMED™ Physical Therapy (www.osmed.net)

Tom Scotto, USA Cycling Coach, Stage5 Cycling, Inc.

About Thera-Roll®

Thera-Roll® is the product line created by Orthosports Medical Services, Inc (OSMED). OSMED and the Thera-Roll® product line were created by Kipp Dye, MSPT. The Thera-Roll® foam rollers have been thoroughly tested in a clinical environment and used to facilitate rehabilitation, as well as, enhance athletic performance.

About Stage5 Cycling™

Stage5 Cycling is a training and coaching company created and led by certified USA Cycling coaches and fitness and medical professionals. Stage5 Cycling coaches work with individuals and athletes on all fitness and skill levels. In addition to personal coaching, workshops and clinics, Stage5 Cycling offers VO2 and metabolic testing, biomechanic services and indoor cycling instructor certification.