

Trigger Point Management

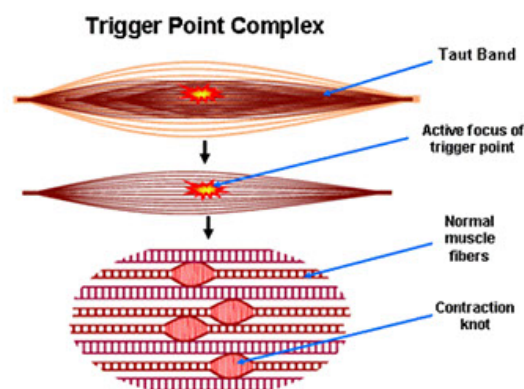
What is a Trigger Point (TrP)?

- A trigger point is a hyperirritable spot located in a taut band of skeletal muscle. They may form following a sudden trauma or may develop on a more gradual basis.

Active Trigger Points	Latent Trigger Points
<ul style="list-style-type: none"> Starts with some impact to the muscle, such as injury. 	<ul style="list-style-type: none"> Can develop gradually without being active first; often times, you don't even know they are there.
<ul style="list-style-type: none"> Typically caused by poor posture, poor body mechanics, repetitive use, nerve root irritation. 	<ul style="list-style-type: none"> Present in most people, and can be easily converted to active trigger points.
<ul style="list-style-type: none"> Will refer pain or other sensations, leading to decreased range of motion 	<ul style="list-style-type: none"> No pain will be present, however, may have decreased range of motion and weakness

Characteristics of a Trigger Point:

- Tenderness, knots, and tight bands in muscle
 - When pressed, trigger points are very tender.
- Weakness, muscle fatigue, joint stiffness
 - The presence of trigger points can lead to weakness and loss of coordination.
- Referred pain
 - Pain may travel to different parts of the body than where the trigger point is located.



Helpful i-pad applications and websites

- Trigger Points by Real Bodywork - \$2.99: has info on common trigger points, referral patterns, recommendations on management
- Trigger Point Charts – Free: has muscle specific trigger points and referral patterns
- The Theracane site has a manual of TrP techniques: <http://www.theracane.com>
- The Pressure Pointer site has excellent info about referral patterns, causes, and self-care: www.pressurepointer.com
- National Association of Myofascial Trigger Point Therapists website symptom finder: <http://www.myofascialtherapy.org/symptom-checker/>

Gadgets for working trigger points:

- **TheraCane**, info available at www.theracane.com. \$29.95 on Amazon;
- **Pressure Pointer** at www.pressurepointer.com. \$19.95 on Amazon; the web site has excellent information about different trigger points under their Pain Reference Chart.
- **Reflexball** is a knobby ball you can lie on or roll into. \$8.99 and up on Amazon.
- **Foam rollers and massage sticks**
- **Common household items that can be used:** Tennis/lacrosse balls, dryer balls, rolling pin (use like massage stick), eraser points (for small muscles in hands and feet)

List of Muscles Included

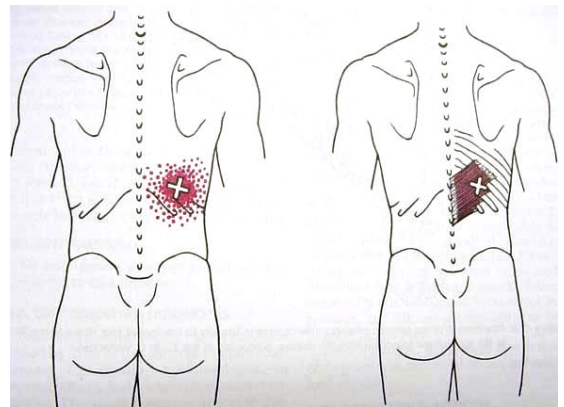
- Serratus Posterior Inferior
- Quadratus Lumborum
- Iliopsoas
- Piriformis
- Tensor Fascia Lata (TFL)
- Rectus Femoris
- Hamstrings
- Gastrocnemius/Soleus
- Foot Intrinsic Muscles

Back, Hip and Lower Extremity Trigger Points

Serratus Posterior Inferior

Function: Assists with trunk rotation and forward bending at the waist

- **Causes**
 - Straining of the back during activities that involve lifting, twisting, reach overhead
 - Improper ergonomics and body mechanics
 - Chest breathing or coughing
 - One leg longer than the other
- **Management**
 - Practice proper lifting techniques
 - Bend with your knees, not with your back
 - Hold objects close to body
 - Learn proper breathing techniques (diaphragmatic breathing)

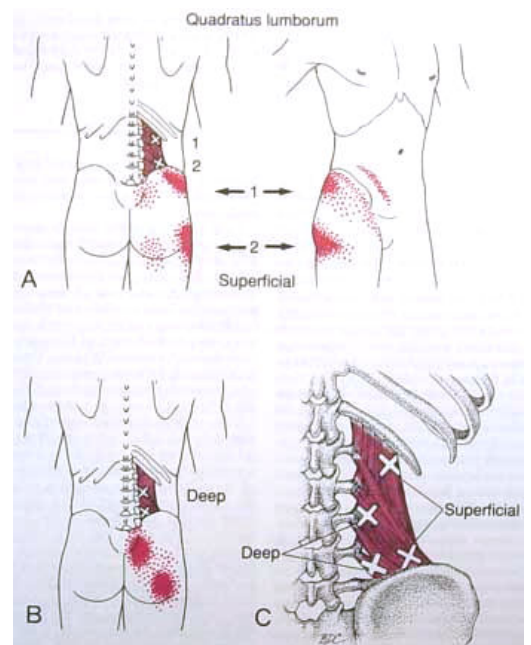


Quadratus Lumborum

Function:

1. One side assists with stabilization and side-bending at the waist, or hikes one hip
2. When both sides are used, assists with standing from trunk flexion, assists with forced breath exhalation

- **Symptoms**
 - Deep aching pain in low back, sitting or standing
 - Limited forward flexion or side bending the trunk
- **Causes**
 - Awkward movements that involves trunk rotation (ex. Lifting an object while turning simultaneously)
 - Repetitive strains from frequent bending
 - Sitting with misaligned pelvis
 - Activities and positions that require excessive forward lean
- **Management:** See lumbar spine injury handout



Iliopsoas

Function: flexes hip

❖ **Symptoms:**

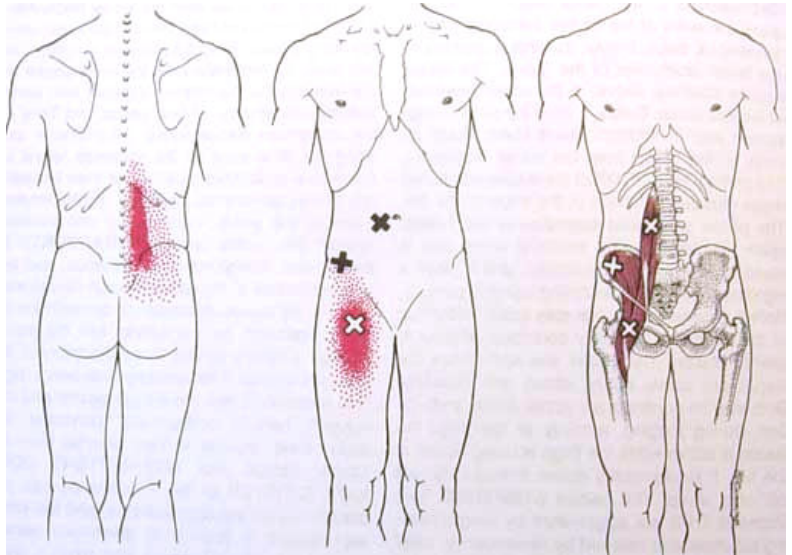
- Increased thigh or low back pain with weight-bearing activities
- Pain standing from low chair or after prolonged sitting
- May lead to low back problems in dancers by pulling spine into excessive lordosis
- Painful arabesque and decreased turnout

❖ **Causes:**

- Walking long distances
- Sacroiliac malalignment,
- Prolonged sitting
- Leg length difference

❖ **Management:**

- Correct imbalance of weak and tight low back and hip muscles
- Trigger point pressure
- Stretching, making sure to stabilize spine



Piriformis

Function: rotates hip outward

❖ **Symptoms:**

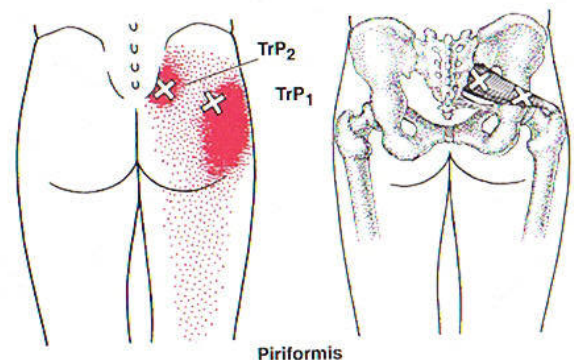
- Pain worse with sitting, standing, or standing from sitting
- Possible numbness, weakness, or swelling in the involved leg
- Mimics 'sciatica'
- SI dysfunction
- Chronic pelvic infections

❖ **Causes:**

- Catching oneself while falling, or twisting while lifting or rotating while weight on one leg
- SI malalignment
- Prolonged driving or sitting
- Leg length difference

❖ **Management:**

- Correct leg length difference or flat foot;
- Avoid strong twisting motions;
- Limit driving with involved foot on accelerator
- Avoid sitting on involved leg
 - Trigger point pressure and stretching



Tensor Fascia Lata (TFL)

Function: helps stabilize the pelvis, rotate, abduct, and flex the hip

❖ **Symptoms:**

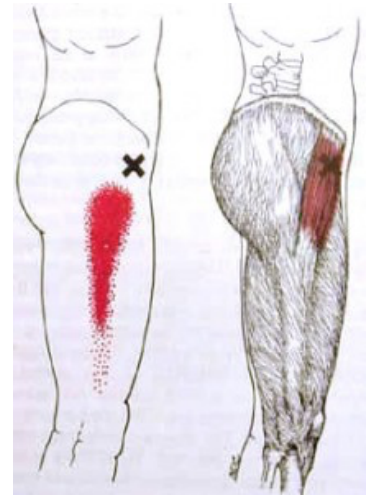
- Pain down the front and outside of the thigh
- Difficulty walking at a fast pace
- Pain and difficulty standing on one leg and keeping the pelvis level
- Deep pain felt towards the front of the hip
- Pain/difficulty sitting in a low chair

❖ **Causes:**

- Running uphill/downhill or on uneven surfaces
- Excessive foot pronation
- Landing on the feet from a high jump
- Sitting for a prolonged period of time
- Weak hip abductors (gluteus medius and minimus)

❖ **Management:**

- Stretches for the TFL and iliotibial band
- Strengthening the hip abductor muscles (gluteus medius and minimus)
- Foam rolling & trigger point release



Rectus Femoris

Function: hip flexion and knee extension

❖ **Symptoms:**

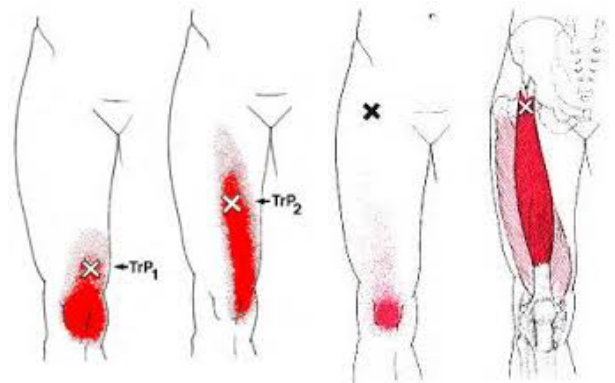
- Deep/aching pain to the knee
- Pain worse at night when trying to sleep
- Weakness at the hip and knee
- Can contribute to patellofemoral pain

❖ **Causes:**

- Jumping and landing
- Catching oneself after stumbling/falling
- Improper form while performing deep squats
- Tightness of the muscle

❖ **Management:**

- Trigger point pressure
- Stretching
- Foam rolling or massage stick massage



Hamstrings

Function: hip extension and rotation, knee flexion.

❖ Symptoms:

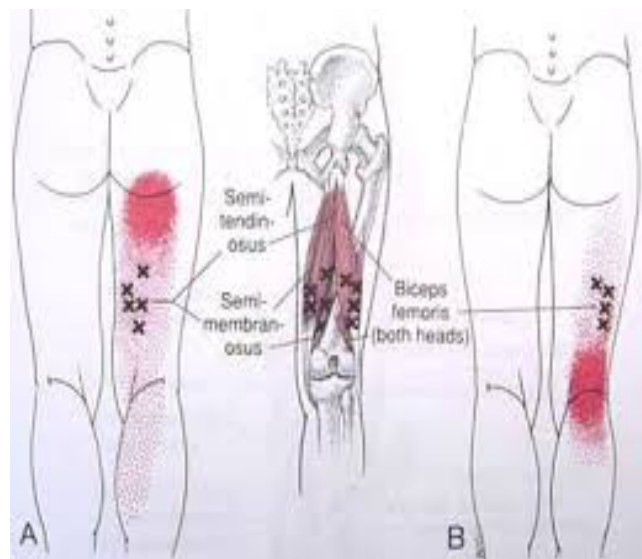
- Pain felt at the back of the knee, back of the thigh, and towards the buttocks
- Difficulty bending the knee
- Pain increases with walking

❖ Causes:

- Sitting cross-legged for a long period of time
- Prolonged sitting while leaning forward
- Bending at the waist for an extended period of time

❖ Management:

- Stretching
- Trigger point pressure
- Foam rolling
- Sit in chair that allows feet to touch the ground

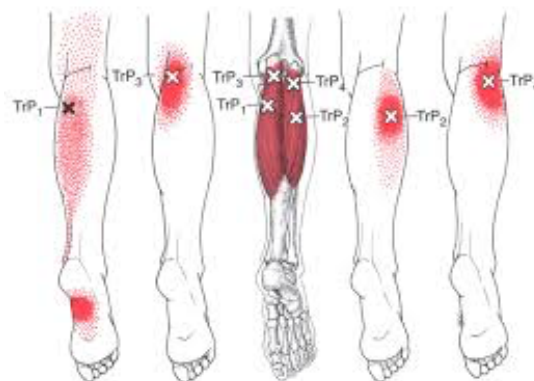


Gastrocnemius/Soleus

Function: flexes the knee and plantarflexes (points) the foot.

❖ Symptoms:

- Calf cramps, typically at night
- Pain on at the back of the knee or inner region of the foot
- Pain with walking flat footed

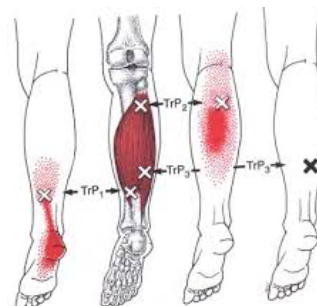


❖ Causes:

- Walking, jogging, climbing up a steep slope or uneven surfaces
- Immobilization of the muscle (eg walking cast)
- Prolonged pointe dancing

❖ Management:

- Trigger point pressure and stretching
- Foam rolling
- Avoid prolonged sitting/wearing high heels



Foot Intrinsic Muscles

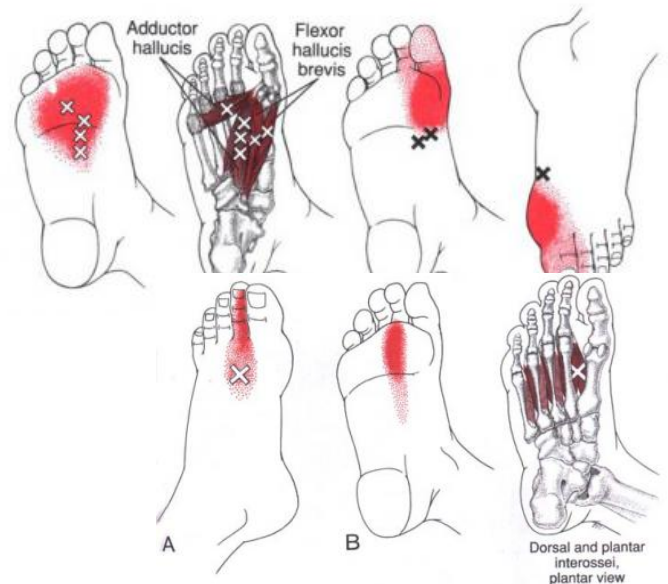
Function: these are the muscles inside the foot, in contrast to 'extrinsic' foot muscles that move the foot and toes, but whose muscle bellies are external to the foot (i.e., in the calf or shin). Foot intrinsic muscles curl, extend or flare the toes, and are used extensively for balance, especially when barefoot, and are active when on the ball of your foot or toes. Note that only a few of the intrinsic muscles and their referral pattern are shown here.

❖ Symptoms:

- Foot pain and cramps
- Feels like plantar fasciitis or metatarsal stress fracture
- Pain with walking, especially barefoot or on soft surfaces

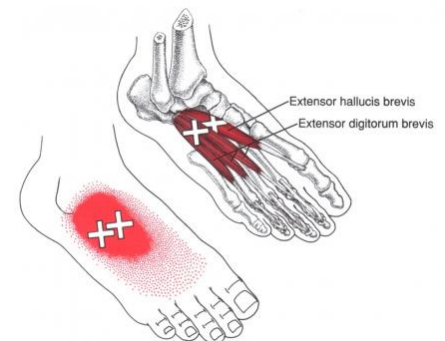
❖ Causes:

- Standing, walking, etc., especially if on soft or uneven ground or when your balance is challenged
- Jumps
- Prolonged pointe dancing
- Flat feet, especially if often barefoot
- Tight shoes or shoes with stiff soles



❖ Management:

- Trigger point pressure using pencil eraser
- Rolling your foot over a tennis ball or frozen water bottle or foot massage
- Stretching intrinsic muscles (careful not to overstretch a flat foot)



All trigger point information is adopted from the following sources:

Delaune, V. *Pain Relief with Trigger Point Self-Help*. California: Lotus Publishing; 2011.

Perry, D. Tensor Fascia Lata Trigger Point in IT Band and Hip Pain Complaints | TriggerPointTherapist.com. *Triggerpointtherapist.com*. 2017. Available at: <http://www.triggerpointtherapist.com/blog/hip-pain-trigger-points/tensor-fascia-lata-trigger-point-it-band-syndrome-hip-pain/>. Accessed February 2, 2017.

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Perry D. Gastrocnemius Trigger Points: The Calf Cramp Trigger Points | TriggerPointTherapist.com. *Triggerpointtherapist.com*. 2017. Available at: <http://www.triggerpointtherapist.com/blog/gastrocnemius-pain/gastrocnemius-trigger-points-calf-cramp/>. Accessed February 2, 2017.