



Massage Ball 101

How to stop pain fast with nothing but a tennis ball

Welcome

This is a basic guide to treating the most common muscle knots with equipment you probably already have at home. In my experience as a yoga teacher, massage therapist and personal trainer, you can treat the vast majority of the various muscle aches and twinges on your own with things you have lying around the house. You don't need to know anything about anatomy or have any special knowledge. All you need is a willingness to explore your body and try new solutions.

You Will Need

- 2x Tennis balls or other similar sized balls (Lacrosse balls or massage balls)
- A sock or small bag
- Chair or stool with a firm, flat seat.

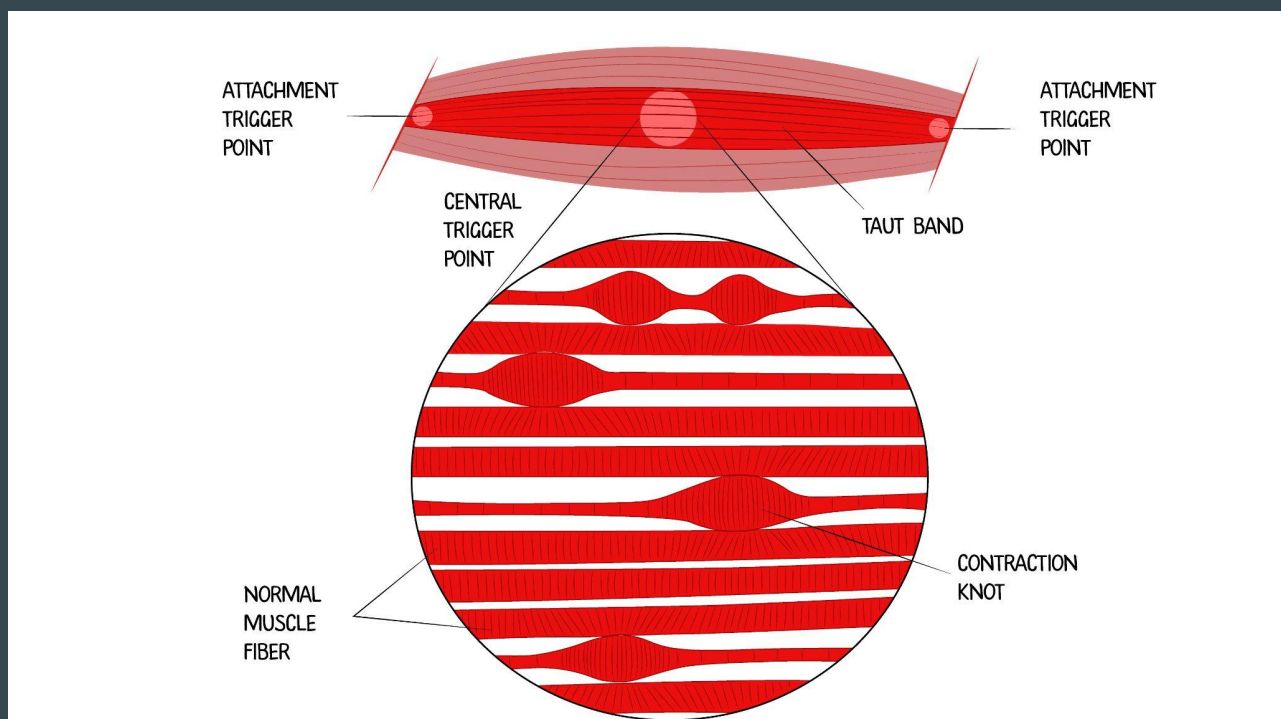


What are trigger points?

A trigger point is a sensitive spot in muscle tissue that can cause aching and stiffness. Almost everyone experiences these spots to some degree, but some people may have more, and more painful ones. The exact nature of trigger points remains a mystery, although they are commonly referred to as myofascial trigger points (TrPs) and informally known as muscle "knots."

The current leading explanation for trigger points is that muscular stresses can lead to areas of poor circulation, causing the accumulation of metabolic wastes and increased acidity in specific regions of the muscle. This condition can be uncomfortable and trigger contractions in individual muscle fibers. A single trigger point is often not serious, but left untreated they can 'snowball' pulling nearby muscle fibers into dysfunction and wreaking havoc on your posture and mobility.

Treating muscle knots is a matter of applying pressure to manually relieve areas of poor circulation and 'reset' the nerves responsible for the knots contraction. Sensitivity to pressure is one of the characteristics of trigger points, so releasing them using self-massage techniques can have a 'hurt so good' kind of feeling. Working closely with your breath you will be able to relax into the sometimes uncomfortable sensation and produce a greater benefit.



What Causes Trigger Points?

The exact cause of trigger points and the underlying mechanisms of their formation are not fully understood. However, several factors and circumstances have been associated with trigger point formation and aggravation. Here is a summary of the potential causes and risk factors:

1. **Overexertion:** Intense muscular contraction or general fatigue, combined with potential vulnerabilities, may contribute to trigger point formation.
2. **Stagnation and Lack of Stimulation:** Insufficient movement and lack of regular muscle stimulation can increase the risk of trigger point development. Both prolonged inactivity and sporadic intense activity (such as weekend warriorism) may be problematic.
3. **Pain and Chronic Health Problems:** Other sources of pain and chronic health conditions can potentially exacerbate trigger point pain and contribute to their formation. (ie If it hurts to move, you tend to move less and thus develop trigger points)
4. **Injuries:** Muscles and joints that are injured or functionally impaired can develop trigger points as a response to the abnormal and dysfunctional situation.
5. **Sustained Elongation or Shortening:** Awkward working postures and prolonged positioning of muscles in stretched or shortened states can increase the likelihood of trigger point development. Poor ergonomics and awkward sleeping positions are common scenarios.
6. **Exhaustion and Sleep Deprivation:** Lack of sufficient sleep and extreme fatigue can increase the risk of trigger point formation and pain.
7. **Chilling:** Exposure to cold temperatures, especially when specific body parts are affected, can lead to increased muscle tension and potentially trigger point formation.
8. **Stress and Anxiety:** Psychological stress, particularly anxiety related to pain itself, can have complex effects that may contribute to trigger point aggravation.
9. **Excessive Caffeine Consumption:** High consumption of caffeine has been suggested as a potential contributor to muscle pain, including trigger points.

It is important to note that this is not an exhaustive list, and there may be other factors and vulnerabilities involved in the formation and persistence of trigger points. Exploring these triggers, vulnerabilities, and perpetuating factors further can provide a broader understanding of the complexities associated with trigger points and their management.



Trigger Point Symptoms

Confirming a trigger point diagnosis is often straightforward if you experience the following symptoms:

- Sore spots in muscles that are sensitive to pressure
- Dull, aching, and nagging pain primarily felt in muscles, not joints
- Deep-seated pain with a clear epicenter in a specific area
- Weakness, heaviness, and stiffness in affected limbs
- Flare-ups triggered by extreme positions, exercise, or temperature changes
- Episodic pain that can persist for weeks or months
- Possible movement of pain to the other side of the body (although uncommon)
- Temporary relief from massage, but the pain returns
- Craving for hot showers or baths, which provide brief relief
- Feeling better with activity and exercise
- Pain not strongly linked to movement, unlike acute injuries like an ankle sprain

If you identify with several of these symptoms and there is no apparent explanation for your pain, it is likely that you have one or more trigger points contributing to your discomfort.



General Protocol for Treating Trigger Points

1. **Test Range of Motion:** Begin by assessing the range of motion and functionality of the affected muscle or joint. Observe any limitations, pain, or discomfort experienced during movement.
2. **Palpate the Tissues:** Use your hands to feel the tissues around the area if you can. As a general rule, the less you push, the more you feel. Move your fingers over the area where the trigger point is suspected and feel for differences in muscle tone and sensitivity.
3. **Apply Pressure with the Ball:** Place the tennis ball on the trigger point and apply gentle pressure using your body weight. Roll the ball or perform small movements to target the area effectively. Adjust the pressure based on your comfort level, aiming for a 4-7 intensity range on a scale of 10.
4. **Focus on Breath:** Incorporate conscious breathing into the treatment. Breathe deeply and synchronously with the movement of the ball. Inhale as you explore the muscle tissue, and exhale as you apply pressure or perform kneading strokes. Allow your breath to support relaxation and release of tension.
5. **Fine Tune:** Pay attention to the feedback from your body. If you encounter areas of increased sensitivity or resistance, make slight adjustments in the position of the tennis ball or the applied pressure. Listen to your body's signals and explore different angles or movements to target the trigger point more precisely. (ie Move towards the discomfort)
6. **Retest and Repeat:** After a period of sustained pressure (around 30 seconds to a minute), gradually release the pressure and observe any changes in the muscle tension or discomfort. Retest the range of motion to assess any improvements and repeat the pressure as needed.



How to Breathe

The breath is such an integral part to releasing trigger points that it deserves its own section. Trigger points are as much neurological as they are muscular and the breath is your key to activating the parasympathetic nervous system to relax and release contracted muscle fibers.

Here are instructions for incorporating mindful breathing during self-trigger point release:

Deep Belly Breathing: Start by taking a slow, deep breath in through your nose. As you inhale, allow your belly to expand fully, feeling it rise and expand with the breath. Fill your lungs with air, but avoid any forced or strained breathing.

Exhale Slowly: Exhale slowly through your mouth, letting go of any tension or stress with each breath. Focus on the release and relaxation of the muscles around the trigger point as you exhale.

Coordinate Breathing with Pressure: As you apply pressure to the trigger point, synchronize your breath with the movement. Inhale deeply before applying pressure and exhale as you gradually increase the pressure or hold it steady. Breathe naturally and comfortably without forcing or holding your breath.

Relaxation on Exhalation: During each exhalation, consciously release any tension or discomfort you may feel around the trigger point. Imagine the breath carrying away the tension, allowing the muscles to soften and relax.

Maintain a Rhythmic Breathing Pattern: Establish a gentle, rhythmic breathing pattern that feels natural to you. Aim for slow and controlled breaths, focusing on smooth inhalations and exhalations throughout the process.

Stay Present and Mindful: Throughout the self-trigger point release, remain present and aware of the sensations in your body. Notice any changes or shifts in discomfort or tension as you continue to breathe and release.

Remember that breathing should be comfortable and relaxed during self-trigger point release. If you experience any pain or discomfort, adjust the pressure or technique accordingly. You should never feel pain inside your joint, sudden sharp pain or pain so intense you can't move or breathe. If you find it challenging to maintain a relaxed breathing pattern, take a moment to pause and focus on your breath before continuing.



Fine Tuning

Finding the exact right place to apply pressure takes some practice and finesse. Follow these general tips for finding the right spot.

Explore changes in body position: Closing a joint and bringing the ends of a muscle together softens the muscle and may allow for deeper pressure whereas opening a joint brings muscle attachments farther away from each other and increases pressure on the ball. Slowly exploring a range of motion will allow you do work a muscle at the proper depth.

Change the tools you are using: Using two balls together is more stable, but less focused and intense than one ball alone. Smaller and firmer balls are more intense. Softer and larger balls will be less intense. If tennis balls don't feel right, try changing the tools you are using.

Explore changes in placement: The instructions here will give you an approximate idea of where to work. You will need to spend time trying slight variations in placement before you arrive at the right spot. As a general rule, follow tension and sensation to the tensest, most sensitive part of the muscle.

Remember to listen to your body and adjust the pressure and technique based on your comfort level. If the sensation becomes too intense or causes pain, decrease the pressure or change the technique. It's important to find a balance between effectively engaging the trigger point and respecting your body's limits.



Sole of the feet (Plantar fascia)



1. Stand next to a chair or wall for balance
2. Step your foot onto the ball so that the top of the arch rests on the ball.
3. Increase the weight pressing into the ball.
4. Slowly roll along the length of the foot, from the heel to the balls of the toes.
5. Return to the arch and slowly roll along the width of the foot, from the inside to the outside.

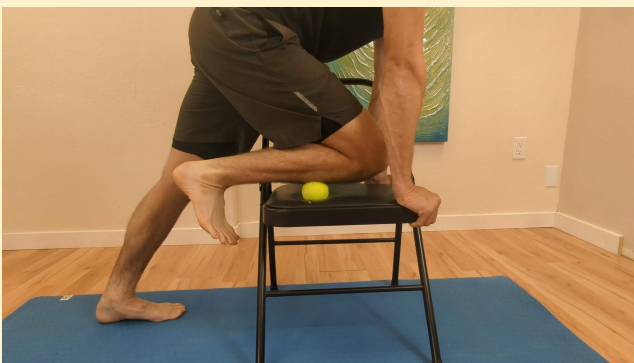
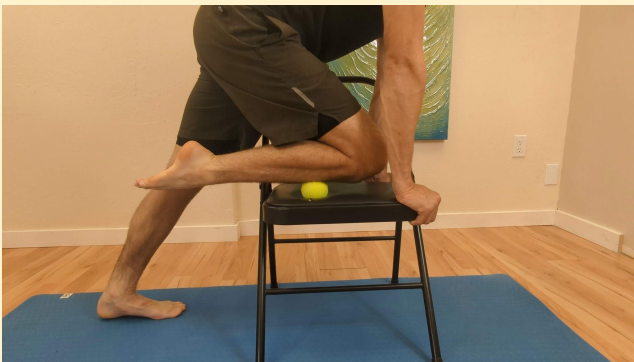
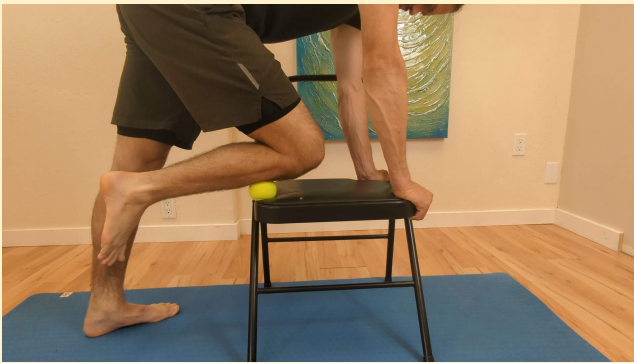
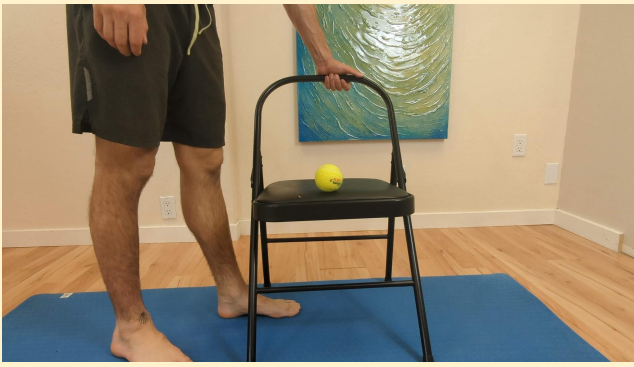
Shins (Tibialis Anterior)



1. Place the ball on a block, chair or other flat surface.
2. Find the groove between the shin bone (tibialis) and the muscle at the front of the shin (tibialis anterior)
3. Set the ball on the groove between muscle and bone near the top of your knee
4. Increase pressure into the ball by shifting your weight into your shin.
5. Roll the ball down the length of the shin to the top of the ankle.

Tip

- Flex and extend your ankle to work the ball deeper.



Calves (Gastrocnemius & Soleus)



1. Begin on your hands and knees
2. Use two balls in a sock
3. Set the balls at the back of the knee.
4. Sink your heels towards your hips to increase pressure on the balls.
5. Reset and place the balls midway down the back of the calf.
6. Repeat bringing your hips towards your heels to increase pressure on the ball.

Tip

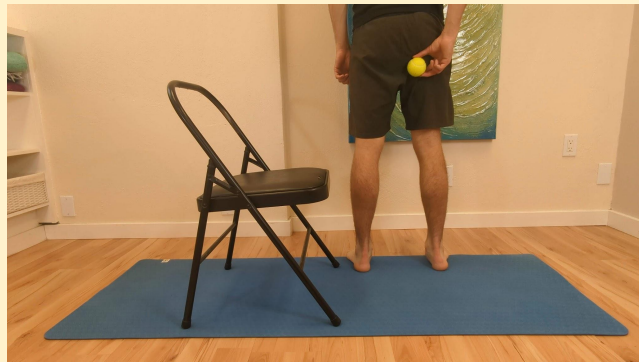
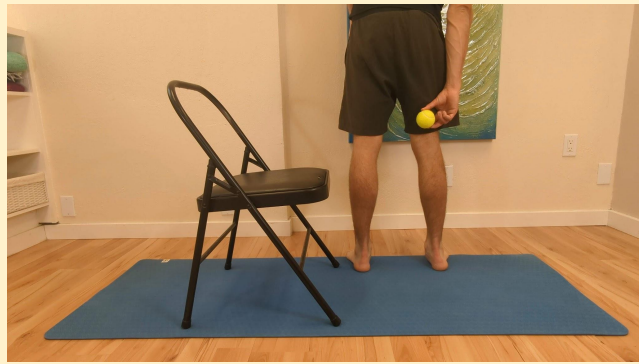
- Align the shoulders over the hips to maximize pressure on the ball, bring your hips away from your heels to minimize pressure.



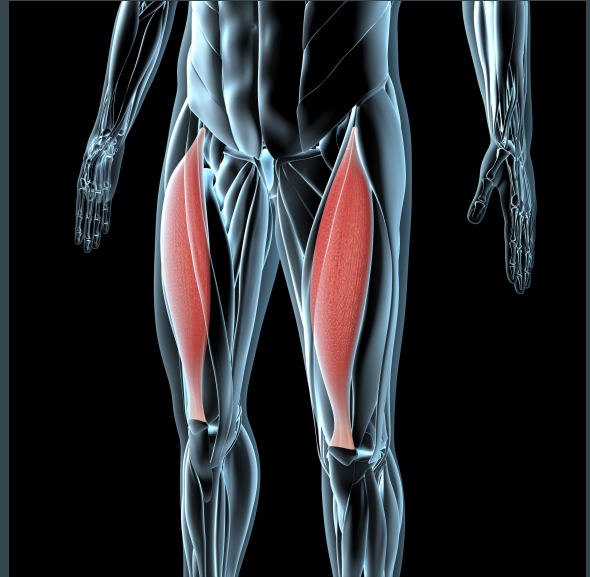
Hamstrings (Bicep Femoris)



1. Begin sitting on a flat chair or stool with your back straight and pelvis neutral (So your weight is ON your sitting bones not behind them)
2. Slightly extend your knee so your heel can rest on the ground.
3. Set the ball between the back of the leg and the seat of the chair.
4. Brace the palms of your hands or your forearm on the top of the leg above the ball to hold it in place.
5. Lean your chest and shoulders forward to pressure weight in the ball
6. Extend your knee and flex your ankle upward to increase pressure in the ball.



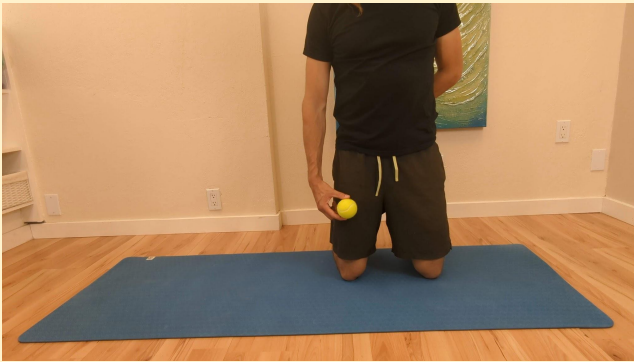
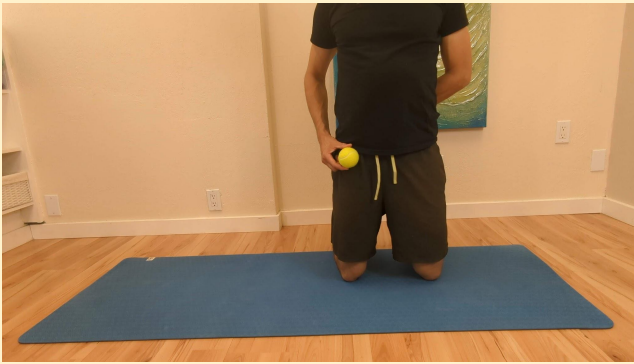
Quadriceps (Rectus Femoris)



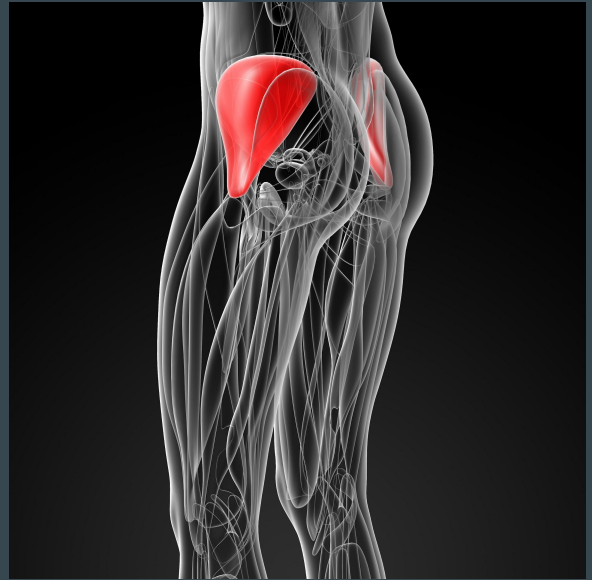
1. Lie face down on the ground with your elbows under your shoulders and one leg bent to the side for support.
2. Set the ball at the top of the thigh of the straight leg near the front of the pelvis.
3. Roll the ball laterally across the muscle by twisting the hips to the left and the right.
4. Roll the ball longitudinally along the leg by pulling the hips forward and backward.
5. Place the ball midway down the thigh and repeat steps 3-4

Tips:

- Increase pressure in the ball by bending the knee.



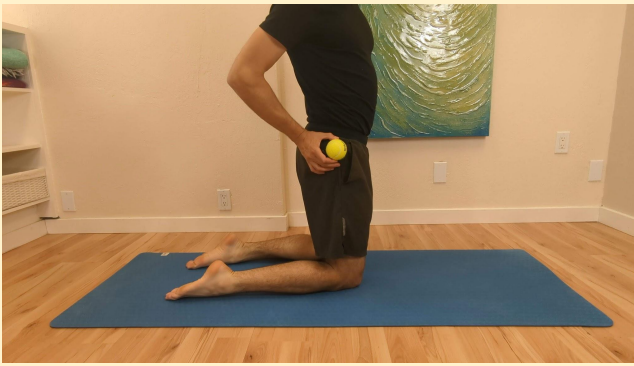
Pelvis 1 (Gluteus Medius)



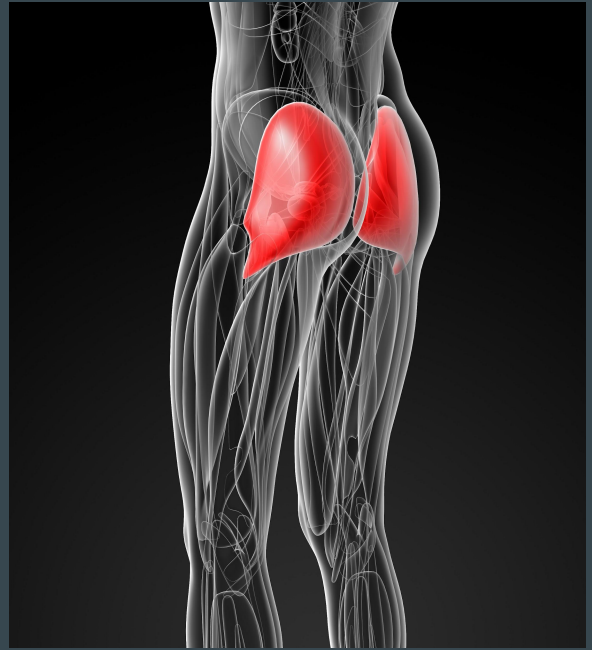
1. Begin lying on your side with the foot of the top leg on the ground in FRONT of you for support
2. Roll slightly forward, exposing the side of the pelvis.
3. Reach behind your hips and set the ball between the side of the pelvis and the floor.
4. Roll backward until you feel pressure on muscle on the outside of the hips.

Tip

- Move the bottom leg backward (extending the hip) to increase pressure and fine tune the placement



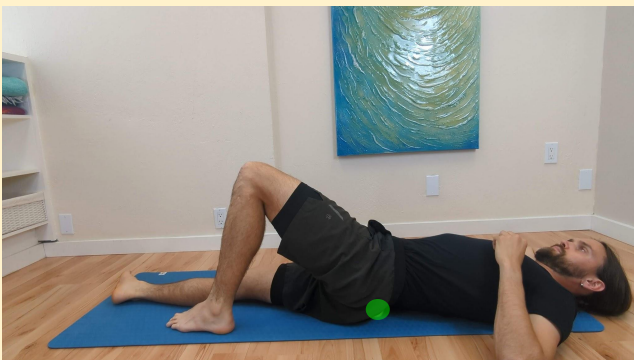
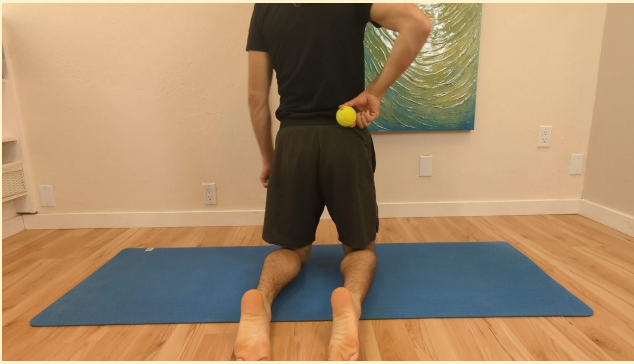
Pelvis 2 (Gluteus Maximus)



1. Begin lying on your side with the foot of the top leg on the ground BEHIND you for support.
2. Set the ball in between the back of the pelvis and the floor.
3. Twist the chest and shoulders towards the floor to increase pressure on the ball.

Tip

- Roll the ball along the rim of the pelvis to explore the full muscle



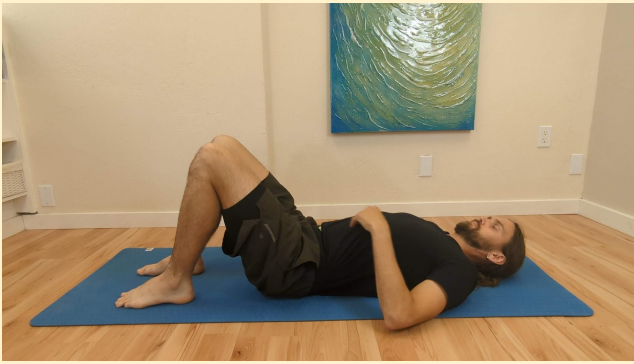
Pelvis 3 (Piriformis)



1. Begin lying on your back with your knees bent and feet on the floor.
2. Cross your ankle over opposite the knee for make a figure four shape.
3. Twist slightly to the side, exposing the hip of the lifted leg
4. Set the ball between the hip and the tailbone.
5. Release the hip back down towards the ground to increase pressure on the ball.

Tip

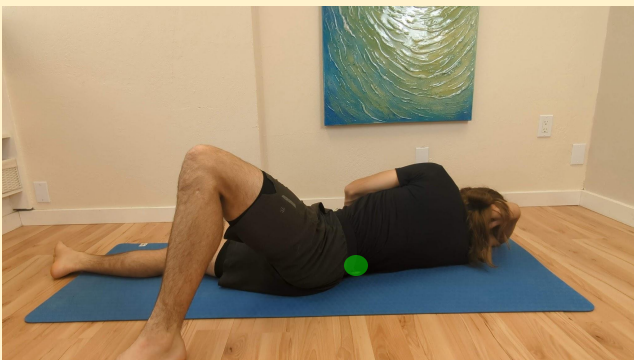
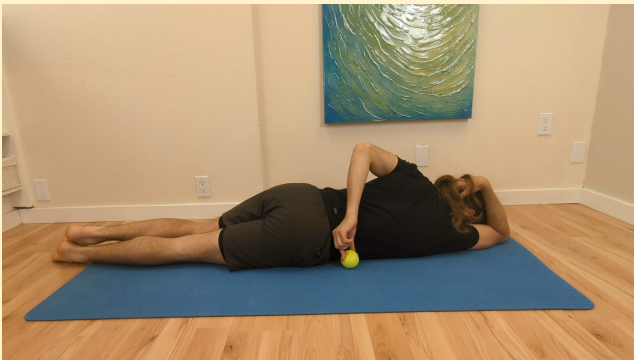
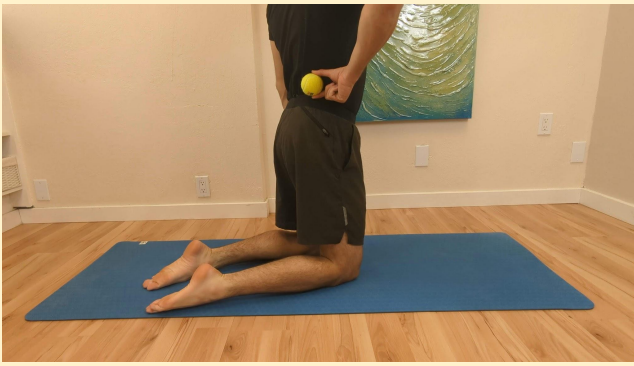
- Explore the region by dropping the knee of the lifted leg towards the floor.



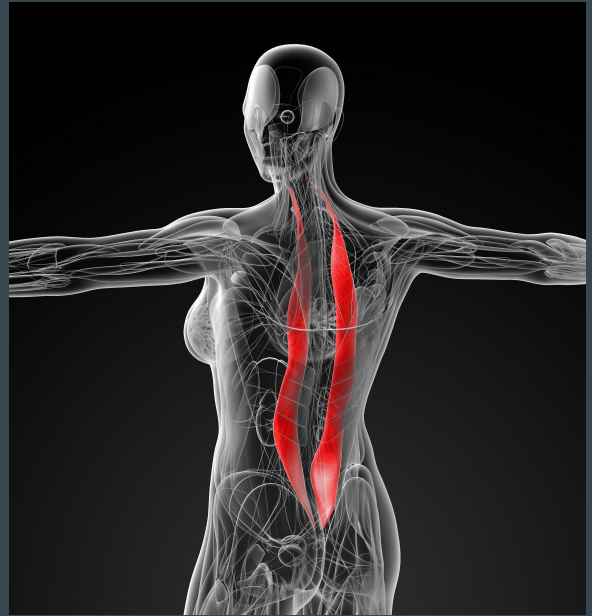
Low Back 1 (Quadratus Lumborum)



1. Begin lying on your side with your legs straight
2. Set the ball between the floor and the LATERAL side of the muscles on the low back. (NOT between the muscles and the spine)
3. Bend the top knee and lift the top knee away from the bottom knee to initiate a twist.
4. Feel the the pressure of the ball push from the side body INWARD towards the spine as you twist



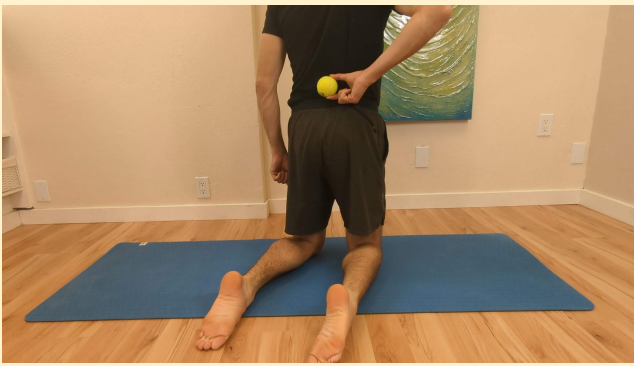
Low Back 2 (Erectors)



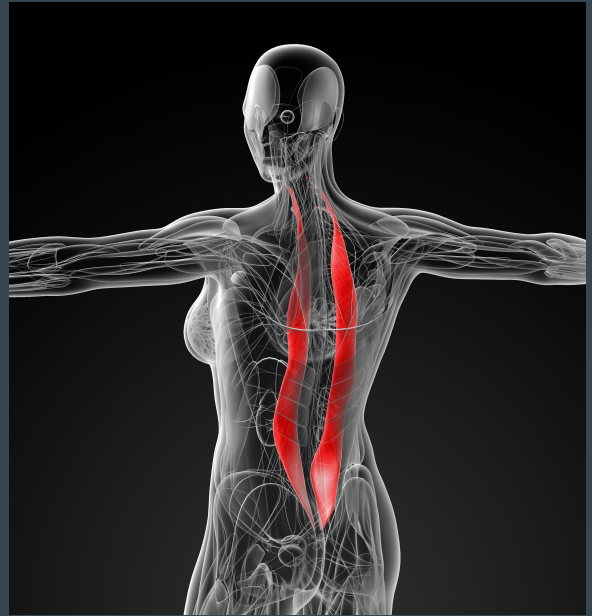
1. Begin by lying on your back with one knee bent, foot resting on the floor, and the other leg straight (the side that gets the ball)
2. Twist towards the side with the bent knee, exposing the low back of the side with the straight leg.
3. Set the ball on the floor and in the groove between the bone of the vertebrae and the muscles of the erectors.
4. Drop the bent knee of the other leg towards the midline of the body to initiate a twist.
5. Feel the pressure of the ball increase, pushing OUTWARD away from the spine as you twist.

Tip

- Increase pressure in the ball by posteriorly rotating the pelvis. Slightly lift the hips, scoop the tailbone towards the heels and resettle your weight on the ball.



Mid Back (Extensors)



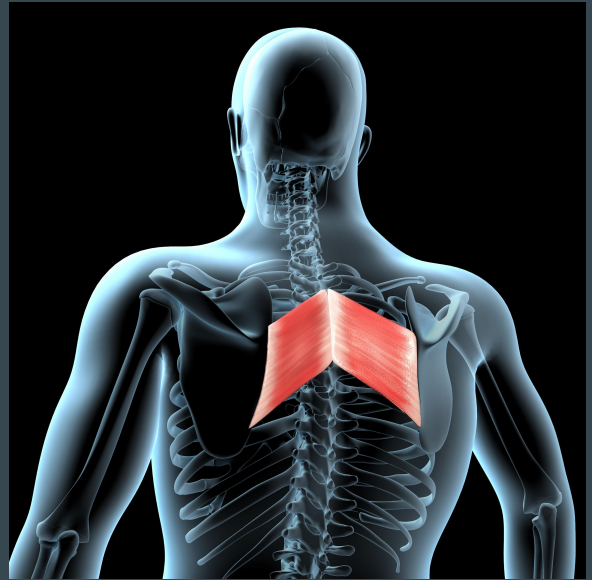
1. Begin lying on your back with your knees bent
2. Use two balls in a sock.
3. Lift your hips and set balls at the mid back beneath the shoulder blades. You should have one ball on either side of the spine
4. Cup your hands around the back of your head and lift your chest and shoulders off the ground to increase the pressure on the balls
5. Roll the balls up the spine by dragging your hips towards your feet

Tip

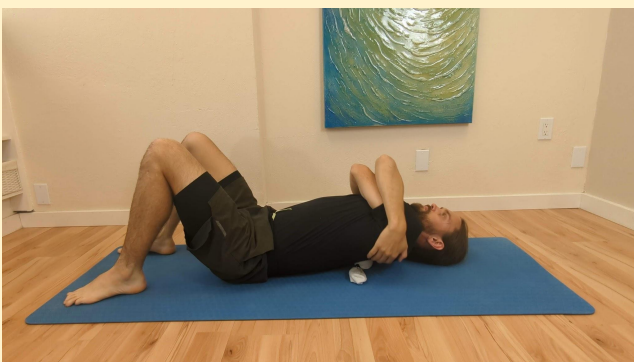
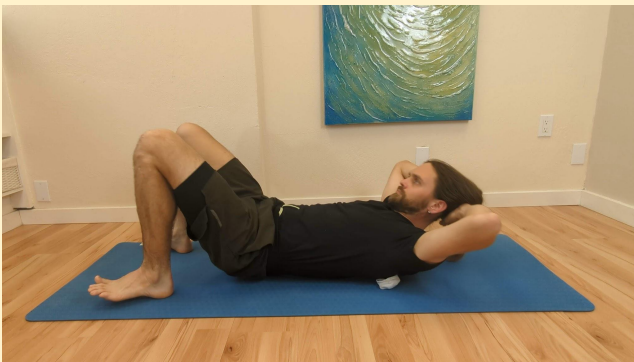
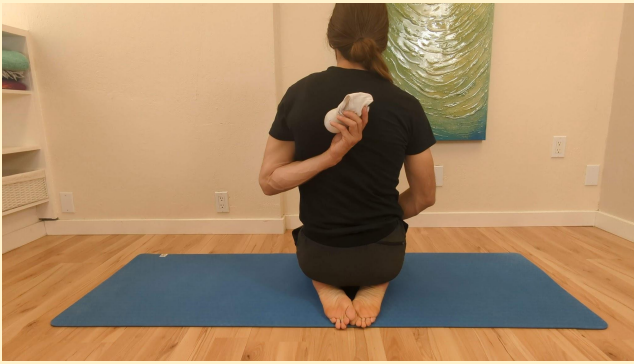
- If setting the balls at your back while lying down is difficult, set the balls on the ground first and lower yourself down so your mid back is on the balls



Mid Back (Rhomboids)



1. Begin lying on your back with your knees bent
2. Use two balls in a sock.
3. Lift hips and set balls at the mid back (between) the shoulder blades. You should have one ball on either side of the spine
4. Cross your arms in front of your chest, giving yourself a hug
5. Gently rock left and right massaging the balls in between the shoulder blades.

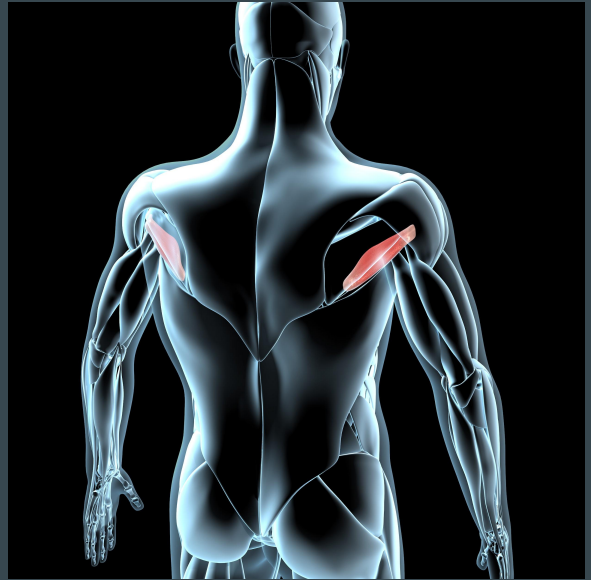


Shoulder 1 (Serratus Anterior)



1. Begin lying on your side with your bottom arm flexed overhead holding the base of your skull.
2. Find the groove on the side body between the front of the shoulder blade and the back of the rib cage.
3. Set the ball on the floor and rest the groove between shoulder and ribs on top.
4. Sink into the pressure as comfortable.

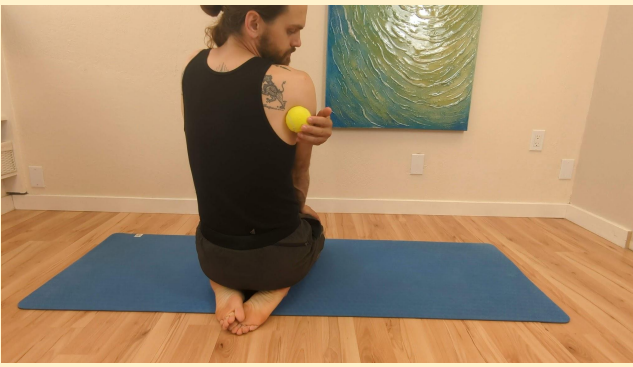
Shoulder 2 (Teres Minor)



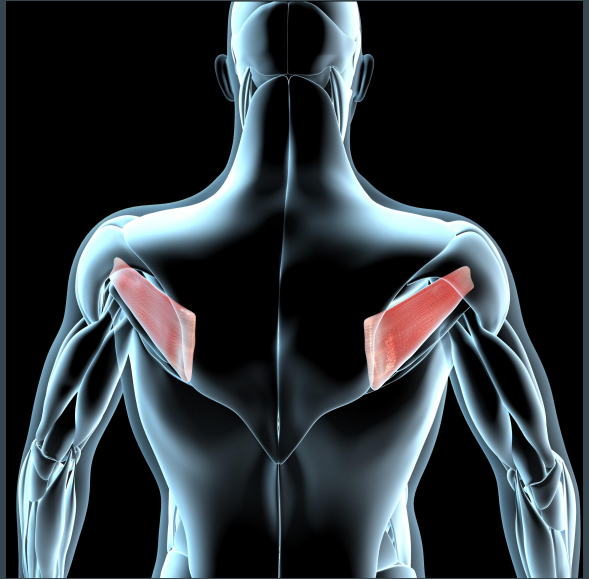
1. Begin lying on your back with your knees bent and feet on the floor.
2. Place the ball at the back of the shoulder where the arm meets the shoulder blade.
3. Drop your knees towards the side with the ball and lean your weight towards the shoulder to increase pressure.
4. Roll the ball across the muscle by pushing gently into your legs.

Tip

- Explore your range of motion at the shoulder socket by reaching your arm in front of your chest and overhead.



Shoulder 3 (Infraspinatus)



1. Lie on your back with your knees bent and feet on the floor
2. Roll your shoulder back and down by resting the elbows on the ground and reaching the thumbs towards the floor. Feel the back of the shoulder blade rests flat on the ground
3. Set the ball between the back of the shoulder blade and the floor.
4. Slowly abduct your arm to the side to apply pressure to the ball

Tip

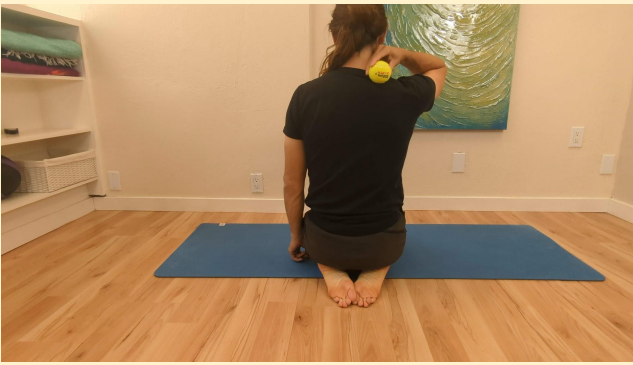
- Increase pressure by leaning your weight towards the side with the ball.



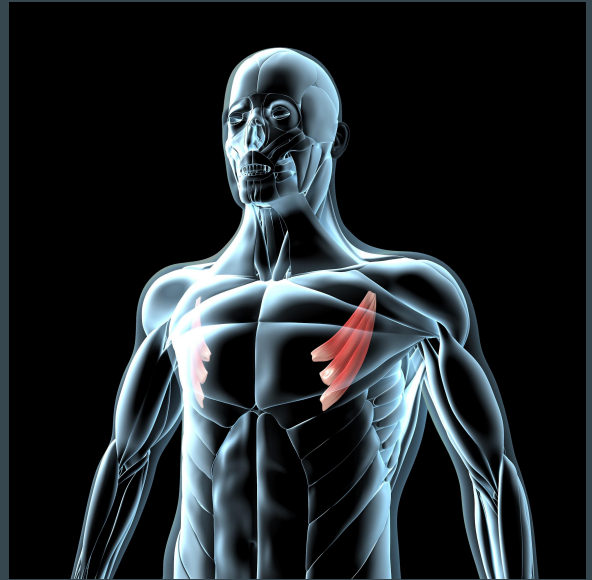
Shoulders 4 (Supraspinatus)



1. Begin lying on your back with your knees bent and feet on the floor.
2. Set the ball between the floor and the shoulder, above the shoulder blade
3. Reach your arm overhead so your arm rests alongside your ear
4. Increase pressure in the ball by lifting your hips up.



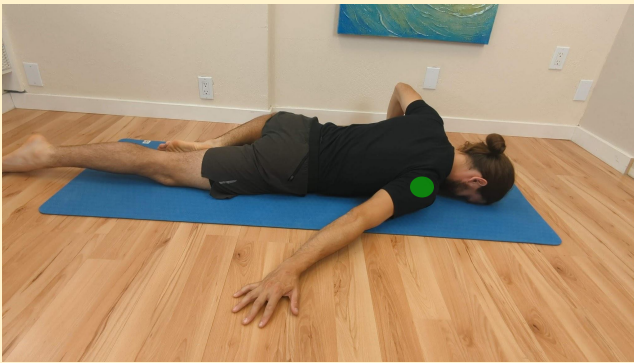
Chest (Pectoralis minor)



1. Lie face down with the arm abducted out to the side. (Keep the arm at shoulder height or lower)
2. Set the ball between the front of the chest and the floor
3. Increase pressure on the ball by rotating the hips towards the abducted arm

Tip

- Bend the knee of the opposite leg to the side for stability. To increase the pressure, twist further and step the foot behind the opposite leg.
- As you twist continue stretching open the chest by reaching the fingers of the abducted arm away from the torso. The idea is the focus on the movement of the shoulder blade, not the movement of the arm in the shoulder socket.

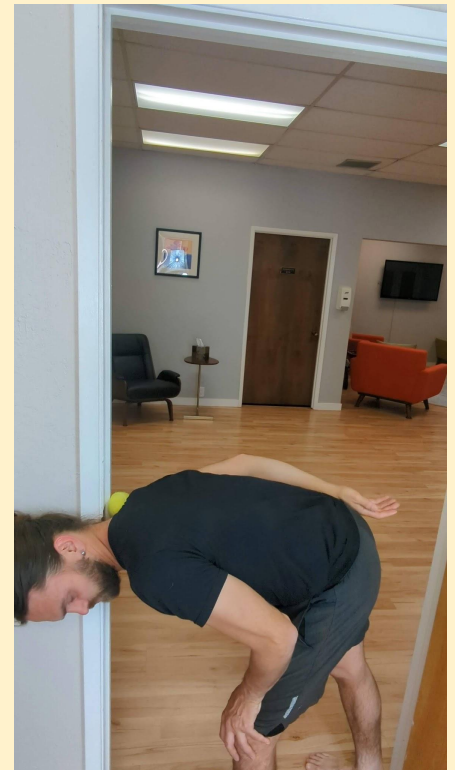
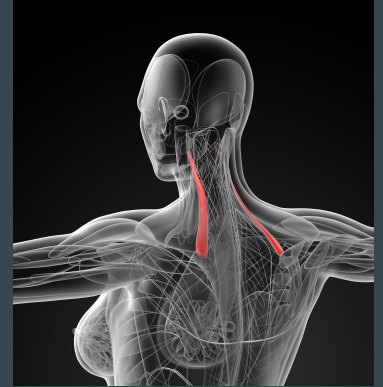


Neck 1: Upper Trapezius & Levator Scapula

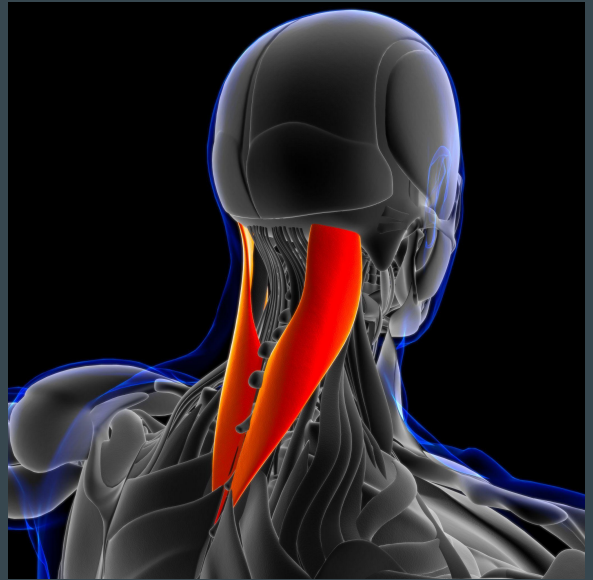
1. Stand near a door frame that is strong enough to support your weight
2. Hold the ball in place above your collarbone, on top of the muscles between the neck and the shoulder blade.
3. Hinge forward to pin the ball in place at corner the door frame so that your head can clear the wall.
4. Let the arm with the ball relax towards the ground.
5. Increase pressure on the ball by leaning more weight into the door frame.

Tip

- Brace the opposite arm on a chair or your thigh for stability
- Explore range of motion in the shoulder by reaching the arm with the ball behind your back and turning your neck away from the side with the ball.



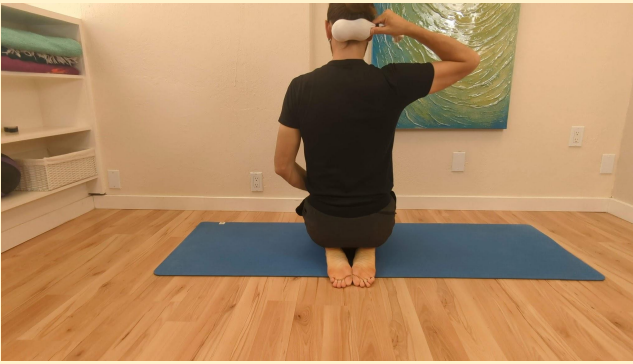
Neck 2 (Splenius Capitis)



1. Begin lying on your back with your knees bent.
2. Use two balls in a sock.
3. Tuck your chin.
4. Hold the balls at the base of your skull.
5. Apply pressure to the ball by slowly lifting your chin.

Tip

- Explore range of motion of the ball by turning the head slightly side to side.



Common Mistakes in Self-Treating Trigger Points

By being aware of these common mistakes, you can enhance your self-treatment results and prevent trigger points from persisting or worsening. Taking a cautious and informed approach will contribute to a more effective and successful treatment experience.

Right Amount of Pressure: The right amount of pressure is not too much nor too little. Finding the goldilocks zone takes time but, while starting out, err on the side of caution. Start light and gradually increase pressure as your body become accustomed to the treatment.

Uncontrolled Movement: Moving the tennis ball too quickly or haphazardly over the muscle can be counterproductive. It's crucial to maintain controlled and deliberate movements, focusing on specific areas and allowing enough time for the pressure to have an effect.

Inadequate Breathing: Neglecting proper breathing techniques during trigger point treatment can hinder the effectiveness of the therapy. It's essential to breathe deeply and consciously, using diaphragmatic breathing to promote relaxation and enhance the release of tension in the muscle.

Ignoring Pain Signals: Pain during trigger point treatment can vary, but it should never exceed a tolerable level. Pushing through excessive pain or ignoring discomfort can potentially cause further damage or exacerbate the trigger point. It's crucial to listen to your body and adjust the pressure accordingly.

Overlooking Adjacent Muscles: Trigger points can refer pain to other areas, so it's important to explore surrounding muscles and not solely focus on the location of the discomfort. Neglecting adjacent muscles that may be contributing to the trigger point can result in incomplete treatment.

Neglecting Rest and Recovery: Rest and recovery are crucial aspects of trigger point treatment. Overworking the muscles or failing to allow enough time for rest can impede progress and lead to increased muscle tension and soreness. It's important to incorporate periods of rest and self-care into the treatment routine.

By being aware of these common mistakes and implementing appropriate techniques, individuals can maximize the benefits of using a tennis ball for trigger point treatment and achieve more effective and lasting results.



Nick Williams



I have been working as a manual therapist and movement coach for over 10 years and specialize in helping everyday people overcome injuries, recovery from surgery and eliminate chronic pain. I know how difficult it is to begin a recovery program, especially when chronic muscle pain prevents you from moving like you used to and getting proper rest.

I've been an athlete for my entire life and have been through the recovery cycle numerous times. Whether it's rock-climbing, mountaineering, weightlifting or running marathons, I've seen that injury is somewhat unavoidable and the best strategy is to have an effective recovery plan. Having the tools and knowledge to give your body the care it needs, when you need it is essential to keeping your mobility.

I've witnessed firsthand how powerful these techniques can be when applied correctly, I've used them for myself and I've used them to get results for my clients.

