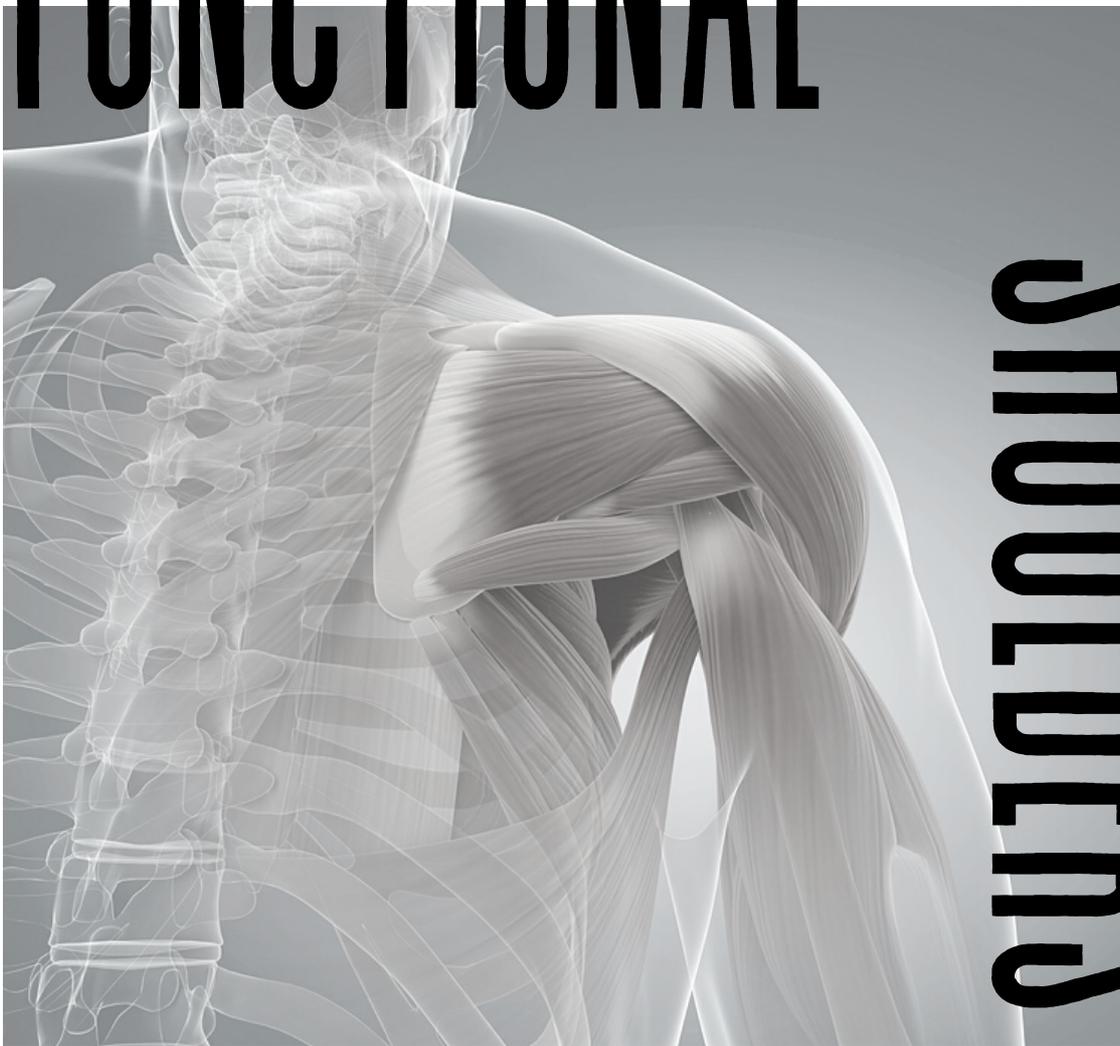


STRONG &

FUNCTIONAL



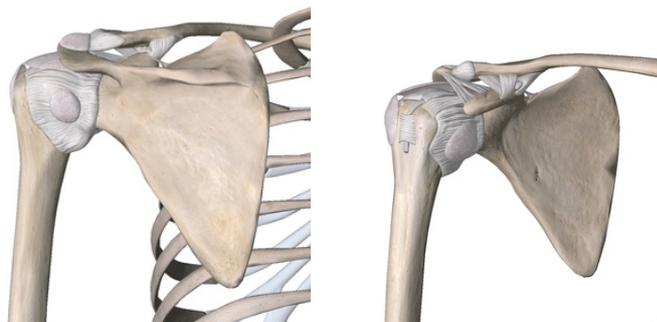
SHOULDERS

Onyx Physical Therapy and Wellness

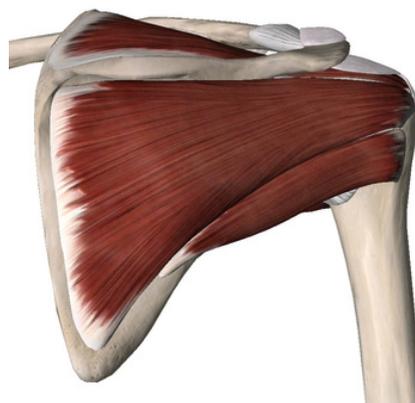
SHOULDER ANATOMY



The shoulder is one of the most dynamic joints in our body. Because of the mobility at this joint, muscles, ligaments, and bones must move and work in sync with one another for healthy joint mechanics. The shoulder joint, a.k.a., the glenohumeral joint, is made up of three bones: the scapula, the humerus, and the clavicle.



The glenohumeral joint is often described as a golf ball on a Tee. The ball of the humerus sits on a shallow concave surface, much smaller than the ball of the humerus. This allows for mobility, but can also lead to instability. And the ligaments around the shoulder to form a tight fitting, hold to provide support. The rotator cuff muscles lay close to the joint and add compression to the humerus in the socket and are considered the primary stabilizers. Generally, the rotator cuff muscles are smaller. The rotator cuff is made up of the subscapularis, supraspinatus, infraspinatus, and teres minor.



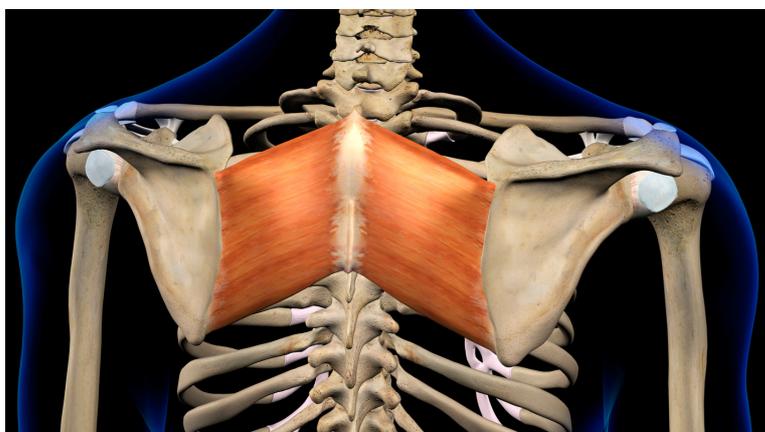
Larger muscles, such as the latissimus, pecs, and deltoid attach to the shoulder blade and humerus and act as the prime mover of the arm. The rotator cuff muscles work to stabilize the joint while the larger muscles do the majority of the motion. Together the larger muscles and smaller muscles work to produce safe and powerful movements.



SHOULDER ANATOMY



The next set of muscles that are important are the muscles that connect to the scapula, aka shoulder blade: rhomboids, trapezius, teres, major, and serratus anterior. These allow stability at the scapular allows for the shoulder to move and change positions while still maintaining a good base of support to the body.



This brings us to the thoracic spine or mid back. The scapula sits along the upper and mid ribs, connecting to the thoracic spine. The shape of the mid back can dictate the efficiency of the shoulder movement. For the shoulder to move, efficiently one must have an adequate amount of thoracic spine mobility.

In conclusion, the shoulder blade should be able to move effectively on the thoracic spine to allow for the rotator cuff muscles to do their job and maintain stability at the joint while the large primary movers of the arm provide the strength and power.



HEALTHY SHOULDERS



What causes shoulder pain?

The simplest and most common answer is excessive strain to smaller structures due to inefficient movements at the glenohumeral joint, scapula, or thoracic spine. Four primary issues can be:

- Poor posture leading to kyphotic thoracic spine.
- Muscle Imbalances between the prime movers and the stabilizers (rotator cuff)
- Instability
- Poor movement and lifting techniques

Posture

Posture is not only at the shoulders and upper back, but also at the pelvis. The scapula transfer power from the hips to the shoulder joint and this is not done. If, there's excessive tilt at the pelvis. The most common postural issue is rounded shoulders with forward head, creating an increase kyphosis in the thoracic spine, which prevent the shoulder from fully extending, and creates impingement of the shoulder.

Muscle imbalance

Muscle imbalances are the next cause of injury and this is when the rotator cuff or small primary stabilizers are imbalanced with the large primary movers. The most common injury with imbalances is instability, are impingement at the subacromial joint.

5 Tips to maintaining healthy shoulders:

1. Maintain good thoracic spine (upper back) mobility to reduce the stress on the shoulder with overhead movements.
2. Incorporate stabilizing exercises, such as planks and free weights into your normal workout routine.
3. Work on your posture, both in standing and sitting. It is impossible to reach overhead in a slouched position.
4. Strengthen and stretch in all three planes of motion. Your shoulder moves in all different directions and training should support that.
5. Effective stress management can reduce muscle tension in the neck and shoulders, therefore reducing pain and tightness.



PAIN AND/OR PINCHING AT THE SHOULDER



Instability

The shoulder has a great deal of mobility, making the joint inherently unstable. The shoulder relies heavily on ligaments and muscles to maintain proper stability and function. If an injury occurs to the soft tissue structures surrounding the shoulder, movement patterns and overall function can be affected.

How does instability cause pain?

When the ligaments and muscles are weak, they are unable to tolerate the demand on them. As a result, the ligaments get stretched and cause pain. The surrounding muscles try to help, and they soon fatigue and can add to the pain by cramping.

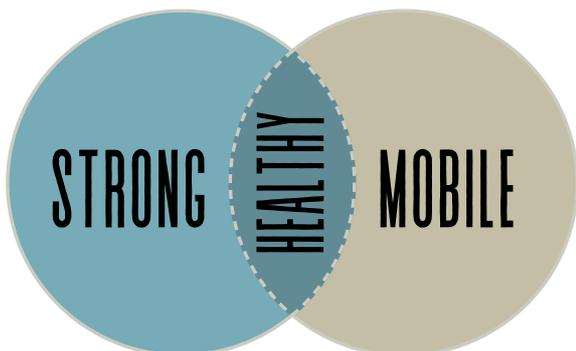
What is Impingement

Two types of impingement exist. External impingement is a pinching of the bursa rotator cuff tendon against the acromion bone. Internal impingement occurs when tendons of the rotator cuff are pinched between the ball of the humerus and the edge of the socket tee.

Injury management will include muscle, strengthening, mobility, movement coordination, and joint stabilization. Mobility restrictions, are often caused by stiff lats, tight pecs, and excessively stiff thoracic spine.

Poor stability at the shoulder joint is commonly caused by weak rotator cuff, or a weak and poorly functioning serratus anterior muscle.

The final cause is poor movement and technique, which should come to no surprise. When heavy weights are pushed overhead, the shoulder muscles need to work together to stabilize, but more importantly, the wrists elbows shoulders, and the back should be kept in vertical stacked alignment.



01 Wall Angels

- Entire back flat on wall
- Head on wall
- Feet ~5 inches from wall
- Arms in 90/90 Position

Can you touch your entire arm to the wall?



02 Supine Lat Screen

- Supine on the floor
- Knees to chest
- Move arms overhead, as far as possible while maintaining full back contact.

Can you touch your arm to the floor?

- Now straighten your legs while keeping arms overhead

Did your arms move closer to the floor?



03 External Rotation with Press

- Half kneeling or standing position
- Row until elbow is inline with shoulder
- Externally rotate until wrist is perpendicular to ground
- Press-up keeping the arm perpendicular to floor

Can you maintain this position without the arm falling forward?



01 Thoracic Spine

- Extension on Foam Roller
- Thread the needle
- Cat/Cow
- Open Books
- Low Cobra



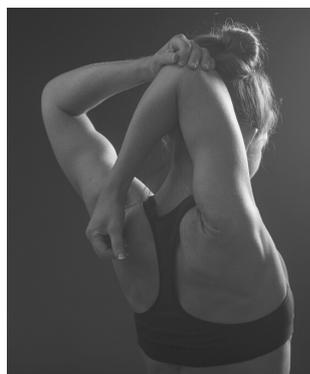
02 Lats and Pec Flexibility

- Foam Roll Lats
- Lacrosse Ball Pec Rollout
- Foam Roller Angels
- Lat Stretch with Band
- Box Lat Stretch
- Doorway Pec Stretch
- Eccentric Curl-ups



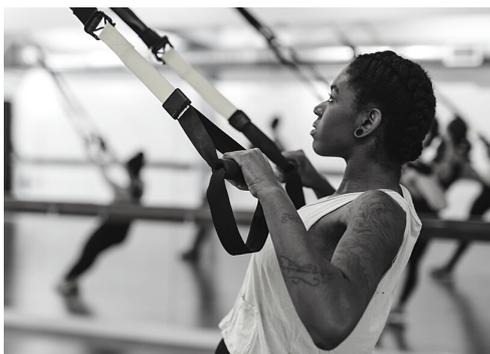
03 Addressing Internal and External Rotation

- Lacrosse Ball to Teres Minor
- Sleeper Stretch
- Towel Stretch
- Tricep stretch
- Eccentric Internal Rotation with Band



01 Stabilize

- Plank
- Side plank
- TRX Rows
- Kettlebell press
- Turkish Get-Up
- Farmer Carry's
- 90/90 Bottoms up Kettle bell carry



02 Rotator cuff strength

- Isometric ER walk-out
- ER with overhead press
- D2 Flexion, aka Pull the Sword
- Scaption or "Full can"
- Shoulder Extension



03 Scapular Strengthening

- Swimmers
- Y's and T's
- Swiss Ball Circles
- Lat Pull downs
- Push-up+
- Bent Over Rows



About Us

We help active individuals get out of pain, and move well so that they can return to the activities they love. We empower you with better movement mechanics and the knowledge you need to live the life you want.

DO you have health goals that you want to achieve?

What could your life be without pain or fear of movement?

What would your life be like if you reached those goals?

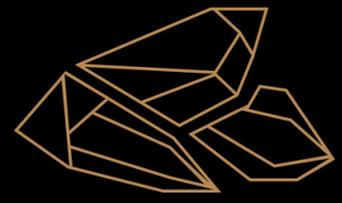
Is investing in your health, worth it?

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