

Shoulder Saver

Practice and Performance for Healthier Shoulders

One of the biggest issues facing trainees (recreational and athletes alike), is crappy shoulders. The reasons are numerous, as are the injuries, but the fixes can be narrowed down a bit. Obviously, if you have an acute injury, particularly one that required surgery, you're encouraged to listen to your doctor. But if you simply are having pain or a bothersome shoulder, read on and this 2-part article should help.

First and foremost is to see if you have excess internal rotation. For many people, following years of only pressing and/or very little pulling, plus hours and hours of sitting, they wind up with crazy internally rotated shoulders. When standing with your hands at your sides, do your palms face in, toward your sides? Or do they face more backward? If it is the latter, your shoulders are far more internally rotated than they should be. The quickest way to start to "fix" this is by adding in a lot of soft tissue work for your pecs (major and minor – a tennis or lacrosse ball works best - check the video below to see how to do it), and plenty of stretching.

[Pec Tissue Mobilization](#)

My favorite stretches include the doorway pec stretch, the corner pec stretch, and a "sink stretch" that I got from Kelly Starrett's MWOD. Other soft tissue work that is beneficial includes foam rolling and using the lacrosse ball on all the musculature surrounding the shoulders, including the lats, posterior delts, teres, etc., as well as the biceps. All of your stretching and soft tissue work can be done every day. Don't be afraid to enlist the help of a professional as well, such as sports massage, ART, etc.

Programming

Starting with the warm-up, add in 15-20 PVC or band dislocations to loosen up your shoulders. Be sure to use as wide a grip as necessary, bringing your hands closer together over time as you get more flexible. Also make sure to do some activation exercises for the middle and lower traps, as most people tend to be upper-trap dominant, and have no clue how their shoulder blades should actually be moving. My favorites for these are Y-T-I's, doing 8-10 reps of each. This video from Mike Robertson gives a great idea of some shoulder warm-up activities:

[Mike Robertson – Y-T-I's](#)

Another addition to your program should be pushups. While many people think pushups are a sissy exercise, the fact of the matter is many people can't do them (at least not correctly). In fact, the rule at my gym is that no one bench presses unless they can do 25 pushups correctly. Aside from all that, pushups allow the shoulder blades to move properly, since they aren't pinned down to the bench. This allows for proper movement at the glenohumeral joint, and again, reduces cumulative stress. Even if you can bang out pushups like crazy, try different variations. You can elevate the feet, place a band around your shoulders, add chains, etc. Martin Rooney also has a

number of pushup variations that his athletes use. Additionally, as I mentioned last week, adding in more pulling than pressing in your program is a stellar idea.

[Martin Rooney – Pushup Variations](#)

Putting It Into Practice

Here are a few tips on technique, as well as a few exercise additions that should keep (or start getting) your shoulders feeling like new.

Make sure you are performing your bench presses (if you must do them) correctly. While I don't recommend benching exactly like a powerlifter (big arch, wide grip), there are some aspects that I do use. Make sure your upper back stays very tight, and you put a slight arch in your low back, while keeping your glutes and abs very tight. Also, rather than a wider grip, take a closer grip, and touch the bar to the bottom of the chest. While it will put more stress on the triceps, it will also increase stress on the pecs, while reducing stress on the shoulders.

Pushups should be performed in much the same way – hands in line with the bottom of the chest, and closer to the body. At most, the elbows should be at about a 45° angle from the body. Be sure to use a full ROM (nose to the floor at the bottom, elbows locked out at the top). Another exercise you can add is the pushup plus, which is basically the very top part of a pushup, but with a bit of a twist. Watch the video from Nick Tumminello below, where he describes the best way to perform it. This helps activate the serratus anterior, an important muscle for shoulder stabilization.

[Nick Tumminello – Pushup Plus](#)

One final technique-based tweak I recommend is performing push presses, as opposed to strict military presses, if you have bad shoulders. The bottom 1/3 or so of the press is where most of the stress at the shoulder joint occurs and gives people the most pain (if they have any). Therefore, using a bit of hip drive to get through that portion can reduce stress and pain. Additionally, avoid behind-the-neck pressing, as it places the shoulder in an extremely disadvantageous position.

While it appears that this article was meant more for people with bad shoulders, it really should serve as a guide for anyone. Even if you aren't experiencing any shoulder problems at the moment, these are great ideas to begin implementing to avoid it down the road. So, start putting these tips into action TODAY, and soon your shoulders should start feeling great, in addition to performing better!

Introduction to Common Shoulder Injuries and Preventive Techniques

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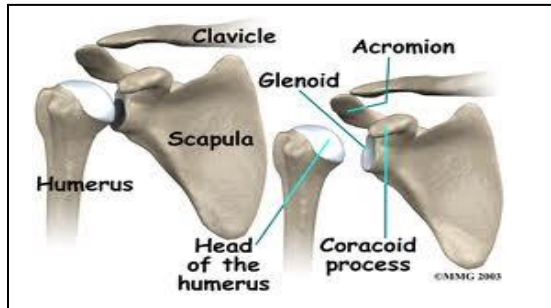
Shoulder Basics

The shoulder complex is the most complicated region of musculature of the body. Due to its unique anatomical structure, the shoulder complex has a great degree of mobility. The shoulder has very poor stability, and thus making the shoulder susceptible to injury. Many sport activities that involve repetitive overhead moments such as throwing, swimming, tennis and volleyball place a great amount of stress on the supporting structures.

The Shoulder Complex:

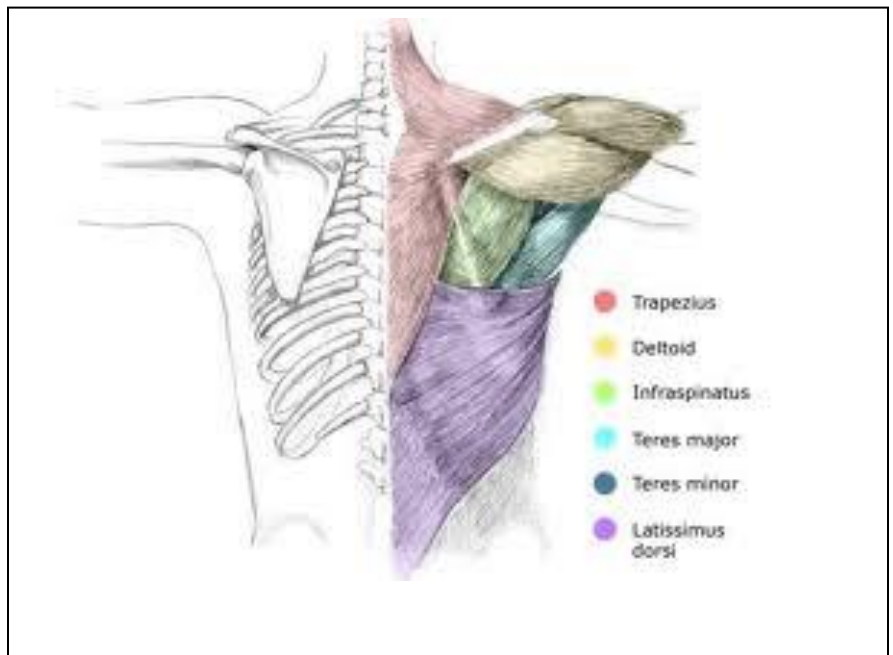
Bony Landmarks of the shoulder

- Clavicle
- Acromion
- Humerus
- Scapula
- Glenoid



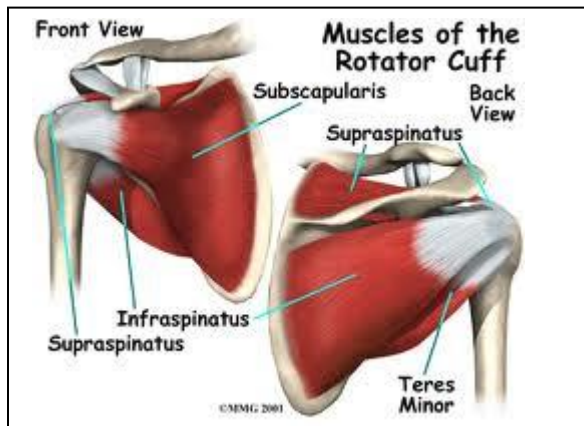
Muscles of the Shoulder

- Pectoralis major/minor
- Latissimus dorsi
- Deltoid
- Supraspinatus
- Infraspinatus
- Subscapularis
- Teres major/minor
- Trapezius
- Rhomboideus major/minor
- Levator scapulae
- Serratus Anterior



The Rotator Cuff Muscles

- Infraspinatus (ER)
- Supraspinatus (ER)
- Teres Minor (ER)
- Subscapularis (IR)



Throwing Mechanics

Wind Up Phase

- Also known as the preparation phase, lasts for the first movement until the ball leaves the gloved opposite hand. The lead leg strides forward, both shoulders abduct, externally rotate, and horizontally abduct.

Cocking Phase

- This phase begins when the hands separate and ends when maximum external rotation of the humerus has occurred. During this phase the lead foot comes into contact with the ground.

Acceleration Phase

- The acceleration phase lasts from maximum external rotation until ball release. The humerus abducts, horizontally abducts, and internally rotates at velocities that approach 7,000 degrees per second with forces approaching 800 N.

Deceleration Phase

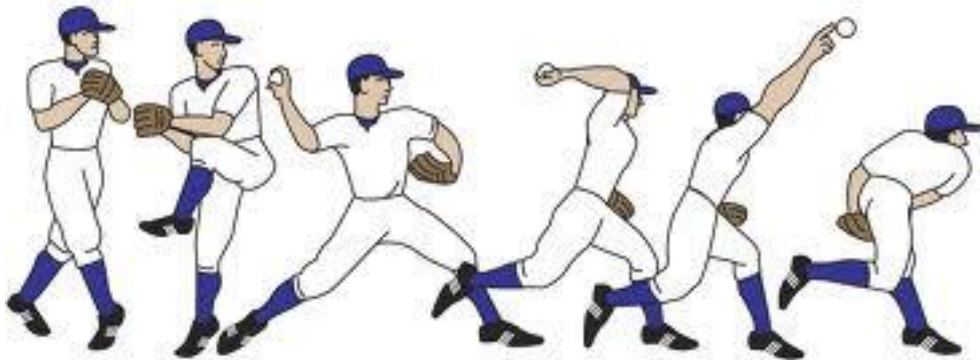
- The deceleration phase lasts from ball release until maximum shoulder internal rotation. During this phase, the external rotators of the rotator cuff contract eccentrically to decelerate the humerus. The rhomboids contract eccentrically to decelerate the scapula.

Follow-Through Phase

- The follow-through phase last form the maximum shoulder internal rotation until the end of the motion, when the athlete is in a balanced position.

Most throwing injuries that happen to athletes occur during the deceleration and follow-through phases of throwing. Emphasis on good throwing mechanics should be essential when teaching athletes.

On the deceleration and follow-through phases the athlete should be cued to take the hand down the opposite pocket. This allows the body to help decelerate the arm taking some of the stress of the external rotators, the primary decelerators.



Common Shoulder Injuries Among Athletes

Shoulder Dislocations

Shoulder Dislocations are the most common sport injury among high school athletes. In most cases, dislocation occurs from falling on an out stretched arm or having an anterior force placed on the humerus when the shoulder is abducted and external rotated. When the humerus is displaced from the capsule it causes an abnormal increase in shoulder laxity. This typically leads to other injuries or chronic instability of shoulder.

Types of Shoulder Dislocations

- Anterior Dislocation
- Posterior Dislocation
- Superior Dislocation
- Intra-Thoracic Dislocation

Signs and Symptoms

- Sudden onset of severe pain, and often the feeling of that the shoulder is “popped” out
- Athlete will usually hold arm close to the body and resist moving it.
- Visually noticeable deformity, deltoid will lose its smooth rounded contour.
- If there is any nerve or blood vessel damage there may also be pins and needles, numbness or discoloration through the arm to the hand.

Treatment

- Shoulder Reduction by a trained medical professional

Rehabilitation of the capsule and the muscles surrounding the joint will be necessary after a dislocation.

- Sling or immobilization of arm for 3-5 days
- Active range of motion exercise (shoulder ABC's, shoulder rolls, etc)
- Resistive range of motion exercise (rotator cuff work, band exercises)

Chronic Instability

Chronic or recurrent shoulder instabilities occur after acute subluxation, dislocations, and repetitive overhead motions.

Types of Instability

- Anterior
- Posterior
- Inferior
- Multidirectional

Signs and Symptoms

- Pain or clicking
- Dead arm syndrome in the cocking phase of throwing
- Decreased range of motion in external rotation
- Positive Sulcus sign
- Positive Apprehension test

Treatment

- Restore normal biomechanics to shoulder joint
- Strengthen the shoulder girdle
- Strengthen rotator cuff

Rotator Cuff Strains

Rotator Cuff Strain occurs usually from poor throwing in the deceleration and follow-through phase of throwing.

Types of Strains

- Grade 1: Some muscle fibers have stretched or torn. Some tenderness and pain with active range of motion, but full range of motion is usually possible
- Grade 2: A number of muscle fibers have been torn, and active contraction of the muscle is extremely painful. Usually a depression or divot can be felt in the muscle belly. Some swelling might occur
- Grade 3: Complete rupture of the muscle as occurred. Significant impairment of movement, if not total loss of movement

Sign and Symptoms

- Sudden, tearing feeling in the shoulder, followed by severe pain through arm
- Limited movement of the shoulder due to pain or muscle spasm
- Specific tenderness over point of strain or tear

Treatment

- Reduce initial pain and inflammation
- Regain full range of motion
- Strengthening of the rotator cuff muscles and other muscles surround the joint

Impingement

Impingement syndrome is caused by compression of the supraspinatus tendon, the subacromial bursa, and the long head of the biceps tendon. Impingement is most commonly seen in athletes who perform repetitive overhead motions.

Types of Impingement

- Primary impingement is caused by direct decrease in the subacromial space. Usually due to a hooked acromion process or weak infraspinatus and subscapularis that allows the humerus to compress the supraspinatus tendon.
- Secondary Impingement is caused by encroachment due to shoulder instability or muscle adhesions.

Sign and symptoms

- Increased pain with overhead activity
- Diffuse pain around the acromion
- Weak external rotators

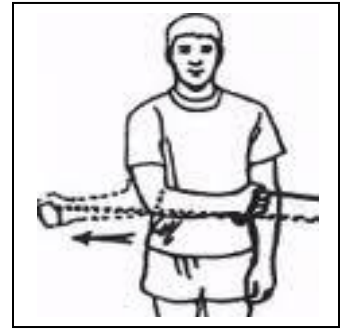
Treatment

- Restore normal biomechanics to the shoulder joint
- Decrease inflammation
- Strengthen external rotators

Shoulder Re/Pre-habilitation Exercises

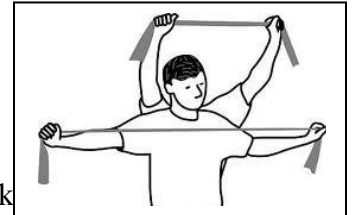
Band External Rotation

- Arm at 90 degrees of abduction, elbow bent to 90 degree
- Squeeze fist as tight on band
- Shoulder blade back and down
- Rotate ONLY at the shoulder, control arm back down to starting position



Band Pull Apart

- Standing tall, abs tight/back tight
- Arms at 90 degrees of flexion, performing horizontal adduction
- Scapulas are performing adduction, squeezing tight in the middle of the back



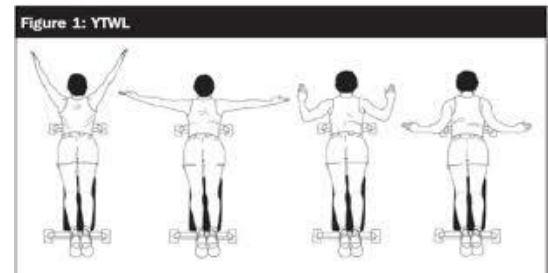
Full Can Raises

- Standing tall, abs tight/back tight
- Shoulder blade backs and down
- Hand by the pocket, thumb up, squeezing weight tight
- Perform shoulder flexion at 45 degree angle
- Stopping when shoulder reaches 90 degree of flexion



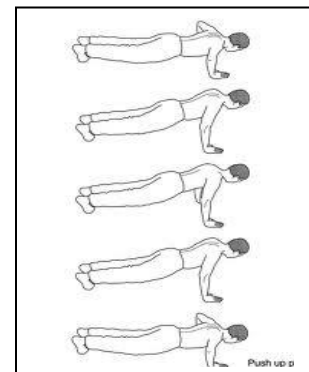
YTI Scapular Adduction/Stabilization

- Laying on a bench or on the floor
- Squeeze shoulder blades back and down
- While scapula is in adduction, the arms can be raised in flexion, extension, and horizontal adduction (arms straight or elbows at 90 degrees)



Push Up Plus

- Get into push up position, abs tight, butt tight
- Perform scapular adduction, then press into scapular abduction



Wall ABC's

- Standing tall, abs tight/back tight
- Shoulder blade backs and down
- Arm at 90 degree of flexion
- Press ball into wall and write the alphabet (upper/lower case)