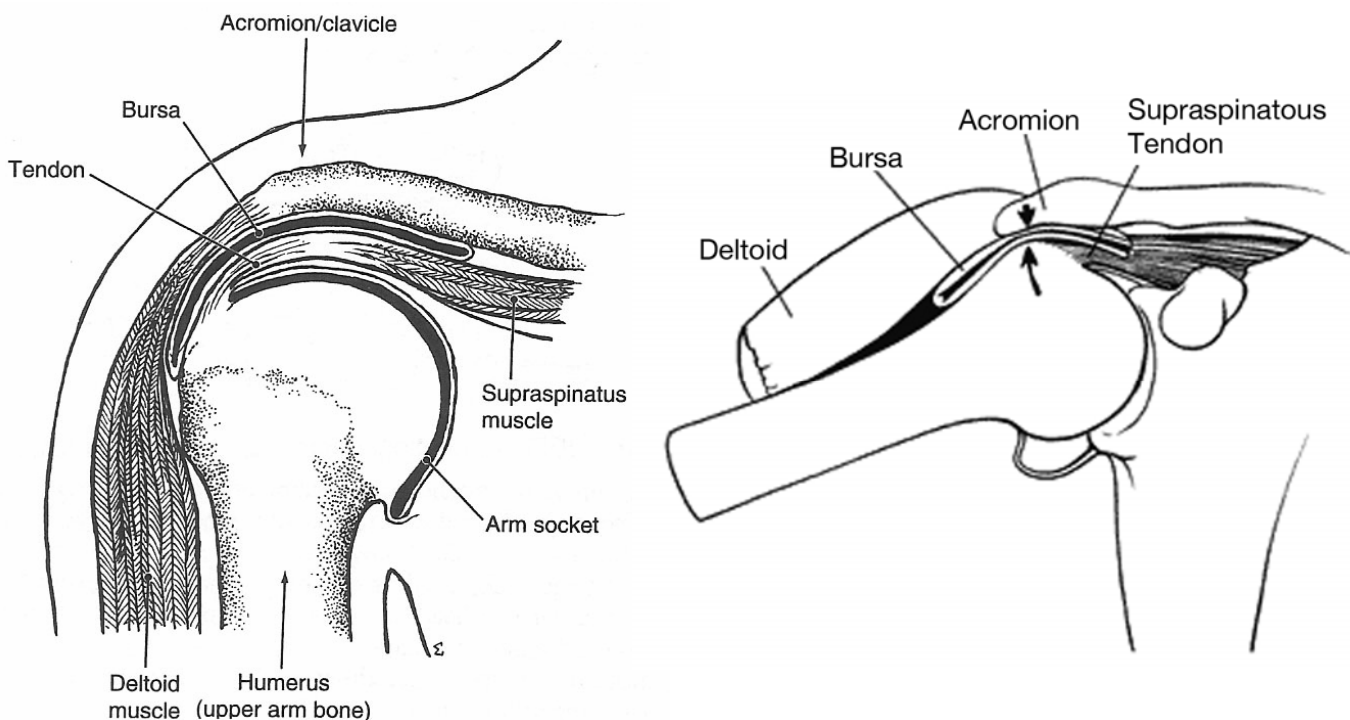


SHOULDER:

Impingement • Rotator Cuff Tendonitis • Subacromial Bursitis

The rotator cuff is composed of four muscles that work together to help stabilize and move the shoulder. The arrangement of the tendons and the other important structures around the shoulder can be seen in the drawing below on the left.

The primary function of the rotator cuff is to hold the glenohumeral joint in place while the larger muscles around the shoulder move and provide power to the arm. When the rotator cuff is injured or inflamed, the humerus (the ball part of the joint) tends to ride up in the socket to pinch and irritate the rotator cuff, acromion, and bursa. This causes pain and further injury (as is seen in the diagram below on the right).



When the humerus rides up, it can bump into the acromion and the AC joint (which make up the bony “roof” of the shoulder). This can eventually cause a spur to form on the undersurface of these bones, which can cause more irritation and even tears in the rotator cuff tendons.

TREATMENT

The goal of all treatments for impingement, tendonitis, or bursitis is to decrease pain and restore shoulder function. Generally this involves more conservative therapies initially, with progression to more invasive therapy if the pain continues.

Relative Rest • Physical Therapy • (6-10 weeks)

Relative rest followed by **supervised physical therapy** should be the first-line treatment of impingement. Relative rest means:

- Avoid repetitive lifting of your arm above shoulder level
- Avoid throwing or tennis serve (for athletes)
- No pushing or pulling heavy loads
- Keeping your hands at or below eye level when working out
- Avoid reading or watching TV while propped up on your elbow
- Daily stretching and gentle range of motion to prevent stiffness
- Icing your shoulder for 15-20 minutes once or twice daily
- Acetaminophen (Tylenol) or anti-inflammatory medications like ibuprofen or naprosyn as necessary to help with pain control

The goal of **supervised physical therapy** (with home exercises) is to regain range of motion and retrain the other muscles around the shoulder to keep the humerus from riding up in the socket. This, in turn, decreases pain and helps the shoulder to function more normally.

Injection

If the pain persists despite therapy and rest, a **cortisone injection** (“steroid shot”) into the bursa around the rotator cuff may be helpful. This is generally given in the office with some local anesthetic (“numbing medication”) to decrease the initial discomfort. The pain relief from the injection varies from patient to patient, but can last from weeks to years. One goal of the injection is to “break” the pain and inflammation to allow better participation with physical therapy.

MRI

A Magnetic Resonance Image (**MRI**) is different from an x-ray because it allows us to see the soft tissues (tendons, ligaments, and cartilage) around the shoulder. It also takes longer than an x-ray and can be troublesome for people who are claustrophobic. If the pain, weakness, and disability persist, however, an MRI of the shoulder allows us to look at the rotator cuff tendons. In some patients it is helpful to inject dye into the shoulder before the MRI (an arthrogram). This adds about an hour to the process and does involve placing a needle into the shoulder.

Surgery • (Usually after 3-6 months)

If you continue to have pain and disability despite non-operative care, then **arthroscopic surgery** is reasonable. This is outpatient surgery with an arthroscope (a camera used to look into the joint). Three small incisions are made around the shoulder to look inside the shoulder joint and in the sub-acromial bursa (the space above the rotator cuff). The structures in the shoulder are inspected and cleaned out as needed. The recovery and rehabilitation for this procedure is usually fairly swift, with early range of motion and then strengthening exercises. If things are going well, overhead activities can begin by 6 weeks.

Rarely, a significant partial tear of the rotator cuff is identified during arthroscopy that was not seen on the MRI beforehand. If this tear is large enough, then the rotator cuff is repaired. This lengthens the recovery time and changes the rehabilitation protocol after surgery.

Although most patients have significant relief after shoulder surgery, it is not uncommon to have occasional stiffness or soreness in the shoulder after the operation. The **risks** associated with shoulder surgery are generally low, but there are some **specific complications** that can occur:

- *Continued pain or stiffness due to scarring in the shoulder*
- *Progression of rotator cuff tearing*
- *Non-healing of the rotator cuff (if a repair was attempted)*
- *Development of acromio-clavicular (AC joint) arthritis*

A more **general complication** of surgery can also occur. These include:

- *Deep venous thrombosis (aka “blood clot” or DVT)*
- *Infection (all patients receive antibiotics at the time of surgery to decrease this risk)*
- *Nerve injury (associated with numbness, weakness, or paralysis)*
- *Vascular injury or compartment syndrome*
- *Complications associated with the anesthesia*



QUESTIONS?

If you have questions or concerns about any of these issues related to your shoulder, please discuss these with us at any time.

Internet Resources • Helpful Websites

American Academy of Orthopaedic Surgeons

Mayo Clinic

eOrthopod

<http://orthoinfo.org>

<http://www.mayoclinic.com>

<http://eorthopod.com>