

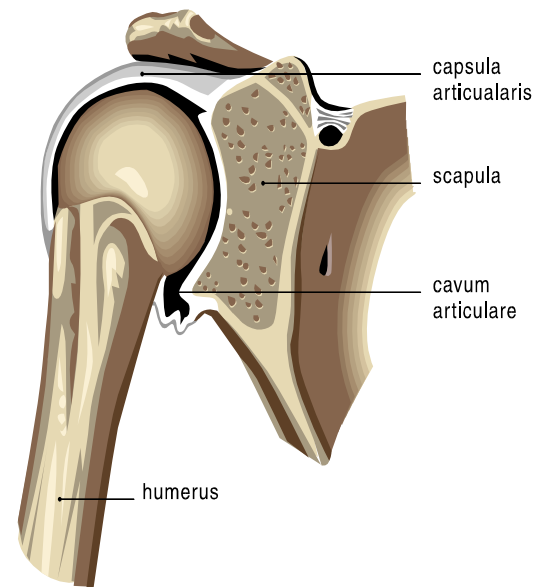
# ROTATOR CUFF TEAR

## ◆ What is it?

The rotator cuff tendons are key to the healthy functioning of the shoulder. They are subject to a lot of wear and tear, or degeneration, as we use our arms. Tearing of the rotator cuff tendons is an especially painful injury. A torn rotator cuff creates a very weak shoulder. Most of the time patients with torn rotator cuffs are in late middle age, although rotator cuff tears can happen at any age.

The rotator cuff connects the humerus to the scapula. The rotator cuff is formed by the tendons of four muscles: the supraspinatus, infraspinatus, teres minor, and subscapularis. The rotator cuff tendons help raise and rotate the arm. As the arm is raised, the rotator cuff also keeps the humerus tightly in the socket of the scapula.

Tearing of the rotator cuff tendons results in weakness in turning the arm outward (external rotation) and upward to the side (abduction). Often times, individuals with torn rotator cuff tendons have to “hike” or shrug the entire shoulder upwards to raise their arm overhead. This may or may not be painful depending upon how acute or chronic the condition is.



## ◆ Signs and Symptoms of this Condition

- Pain in the shoulder that often refers out into the deltoid muscle/upper arm.
- Pain that is worse with reaching overhead or lifting.
- Pain in the shoulder at night.
- Significant loss of strength, especially in turning the arm outward (external rotation) and raising the arm up to the side (abduction).

## ◆ Causes

- Most commonly occurs in late middle age associated with degeneration of the tendons. The rotator cuff tendons have areas of very low blood supply. The more blood supply a tissue has, the better and faster it can repair and maintain itself. The areas of poor blood supply in the rotator cuff make these tendons especially vulnerable to degeneration from aging. The degeneration of aging helps explain why the rotator cuff tear is such a common injury later in life. Rotator cuff tears usually occur in areas of the tendon that had low blood supply to begin with and then were further weakened by degeneration.
- This problem of degeneration may be accelerated by repeating the same types of shoulder motions (overhead work, overhead weightlifting, swimming, and it has even been known to

happen in elite fly fishermen due to the repetitive casting motion, etc). This can happen with overhand athletes, such as baseball pitchers. But even doing routine chores like cleaning windows, washing and waxing cars, or painting can cause the rotator cuff to fatigue from overuse.

- Strain from sudden force of trying to catch a heavy falling object or lifting an extremely heavy object with the arm extended.
- Direct injury to the shoulder from falling on an outstretched arm.
- Aging, degeneration of the tendon with normal use.

### ◆ **What Can I do to Prevent a Rotator Cuff Tear?**

- Appropriately warm up and stretch before practice or competition.
- Allow time for adequate rest and recovery between practices and competition.
- Avoid overhead weightlifting (military press, lat pulldowns, overhead tricep strengthening, etc.)
- Avoid repetitive overhead work/lifting.
- Maintain appropriate conditioning:
  - Cardiovascular fitness
  - Shoulder flexibility
  - Muscle strength and endurance (particularly rotator cuff strength)
- Use proper technique when lifting weights.

### ◆ **Prognosis**

- These do not heal on their own.
- Prognosis depends upon the treatment approach. Some may require surgery, while others may not or may be too large to repair.

### ◆ **Treatment**

- Rest – avoid overhead motions or any motion that is painful; avoid weightlifting, push-ups or pull-ups.
- Ice over the shoulder 15-20 minutes 1-2 times per day.
- Anti-inflammatory medication (aspirin, ibuprofen, etc) may be helpful in reducing both pain and inflammation.
- If surgery is required, you will undergo a supervised rehabilitation program you're your physical therapist.
- If surgery is not recommended by an orthopedic surgeon, you should undergo rehabilitation to maximize your shoulder function through maintaining your full range of motion, strengthening the available rotator cuff muscles, and strengthening the scapular (shoulder blade) muscles.