Medicine for Managers

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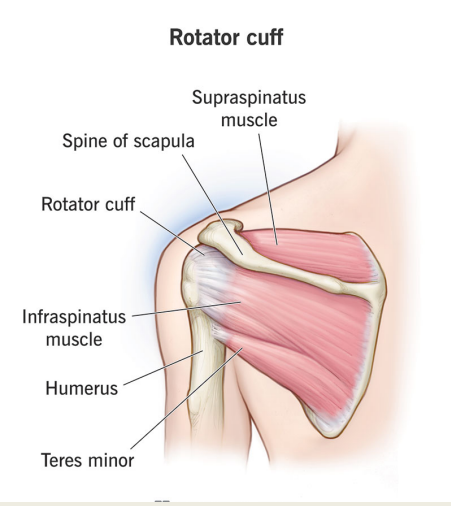
Rotator Cuff

Your shoulder joint is amazing. In order to allow it to make its comprehensive range of movements, it is surrounded by a 'cuff' of muscles and tendons. It connects the shoulder blade (scapula) to the humerus bone in the upper arm. Called the *rotator cuff* it stabilises the joint and enables you to raise your arm above your head and move it in a range of different directions. Injuries of the rotator cuff are common, especially in athletes.



The rotator cuff is made up of four muscles, all with complex names:

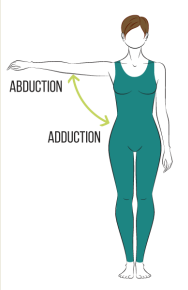
Supraspinatus muscle
Infraspinatus muscle
Subscapularis muscle
Teres minor muscle

(*Teres* is from the Latin meaning 'rounded')

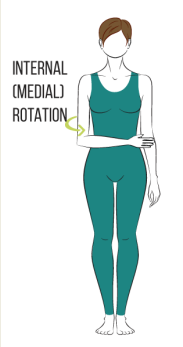
The rotator cuff muscles maintain the shoulder joint (***glenohumeral joint***) ***stable***, as well as turning and rotating the shoulder and they arise from the ***scapula*** (shoulder blade) and attach to the humerus. The range of movements is extensive. The muscles work together to achieve the movements smoothly.

Flexion moves the arm forwards and upwards

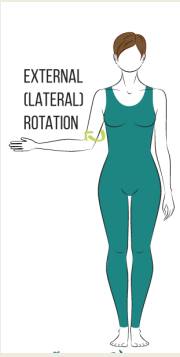
Extension moves the arm downwards and backwards



Abduction moves the arm outwards and upwards.
Adduction moves the arm downwards to the side

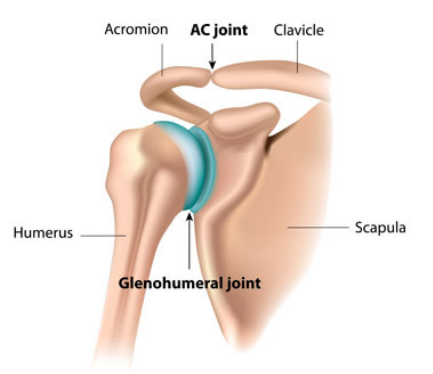


Internal rotation moves the arm inwards



External rotation moves the arm outwards

The joint itself is a shallow ball and socket and



The joint capsule is lax.

Tendons connect the muscles of the rotator cuff to the bones. When muscles contract, the tendons pull the bones to move the shoulder and upper arm.

Disorders of the rotator cuff. Because of the frequent use injuries to the rotator cuff are common and may be sudden or build-up gradually. They have a variety of descriptions.

- Overuse syndrome
- Swimmer's shoulder
- Shoulder impingement syndrome
- Shoulder sprain
- Rotator Cuff Tear

Acute injuries may be felt as sharp, stabbing pain and sudden tears from acute trauma may lead to intense shoulder pain and arm weakness. Less severe or repetitive injuries may present as a dull ache deep within the shoulder.

Diagnosis of such injuries is with a detailed history, physical examination and imaging using X-ray, ultrasound and MRI scan.

Treatment is directed to resting the damaged area to allow healing to occur. This includes:

- ***Rest***. Avoiding aggravating activity
- ***Ice***. Ice packs wrapped in towels will help
- ***Anti-inflammatory drugs***, such as ibuprofen or naproxen. For longer term use, dose should be discussed with the GP
- ***Physiotherapy*** after the initial rest phase to strengthen the shoulder again
- ***Corticosteroid drug*** may be injected into the rotator cuff as an anti-inflammatory measure

The more serious rotator cuff injuries may need surgical repair or long term physical therapy to achieve a resolution.

Avoiding Rotator Cuff Injuries

It may be quite difficult to avoid such injuries depending on the nature of sporting or work activities which can induce the symptoms. Things to consider include:

- ***Stopping exercise*** as soon as any symptoms develop
- ***'Warm up'*** before training
- ***Wear any appropriate support equipment***
- ***Seek medical advice*** if symptoms develop

Rest and other therapies outlined above will allow a rotator cuff injury to heal, but recovery is protracted if symptoms are ignored and continued shoulder use will make such injuries worse.

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