Rotator Cuff Injury.

What are the rotator cuff muscles?

The rotator cuff muscles are a group of muscles that control the rotation of the shoulder. The rotator cuff consists of the infraspinatus, teres minor and supraspinatus muscles, which rotate and move the shoulder outwards and also the sucscapularis muscle, which rotates the shoulder inward (See Figure 1).

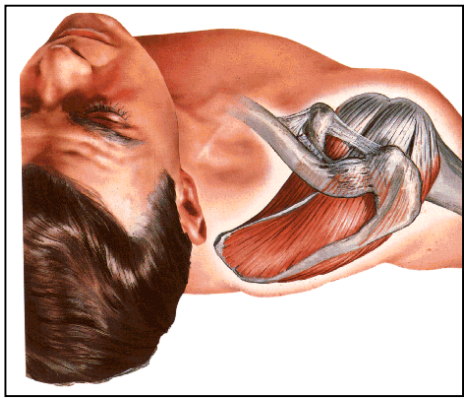

Figure 1: Rotator Cuff Muscles .

Figure 2: Bony Anatomy.

These muscles are put under a great deal of strain, specifically because they provide the only support for the shoulder joint. The shoulder joint is made up of three different bones, which come together to form the shoulder joint. These bones are; the arm bone (humerus), the shoulder blade (scapula) and the collarbone (clavicle) (See Figure 2).

The joint between the humerus and the scapula (the glenohumeral joint) is a ball-and-socket joint. The ball is on the top of the humerus and this fits into a socket of the shoulder blade called the glenoid. The shoulder joint allows players to move their shoulder through a significant range of motion. There is no other joint in the body that allows more motion that the shoulder joint. However, by allowing this wide range of motion, the shoulder is not as stable as other joints. Together the rotator cuff muscles help guide the shoulder through this range of motion, and also lend some stability to the joint. The ends of the rotator cuff muscles form tendons that attach to the humerus (See Figure 3).

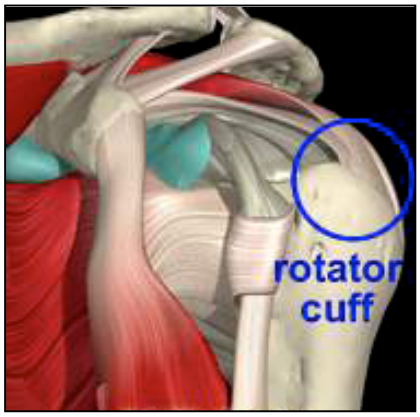

Figure 3: Rotator Cuff Tendons.

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What is a rotator cuff injury?

Rotator cuff injuries tend to be caused by either a "repetitive use injury" or a specific accident or injury. Repetitive use injuries might result from a player performing an action, such as an overhand throwing motion that leads to an injury to the tendons of the rotator cuff. This is often called a gradual process injury or an 'over-use' injury. These types of injuries are uncommon in football. A more common way a player can injure their rotator cuff in football, are in traumatic events, such as falling onto an outstretched hand, while playing football.

Rotator cuff injuries are seen both in young and old players. Usually, in younger players, there is a specific injury. As people age, the muscle and tendon tissue of the rotator cuff loses some elasticity, becomes more susceptible to injuries and may be damaged while performing everyday activities. Some researchers and doctors suggest that although the rotator cuff can be injured by a single traumatic incident, this is not common. Injury to the rotator cuff will usually begin as inflammation caused by some form of micro trauma (a small but continuous source of irritation, such as repeated activity). If the cause of the inflammation is not addressed and continues over a long period of time, partial tears may develop in the cuff that could eventually become a complete tear.

What are the signs and symptoms?

A player will have pain on overhead activity, such as throwing the ball in, or if they are a goalkeeper on throwing, catching crosses or making saves. The player will also have pain when they bend their arm and rotate it outwards against resistance. The pain will frequently be located on the outside of the shoulder - possibly radiating down into the arm. The player will often also have pain and stiffness in the shoulder, which is worse at night. Other symptoms of rotator cuff injury include weakness and loss of full movement. The amount of pain will depend on the extent of the injury. Players with early-stage inflammation may only have pain with overhead activities, while those with a complete cuff tear may not be able to move their arm or sleep because of the pain.

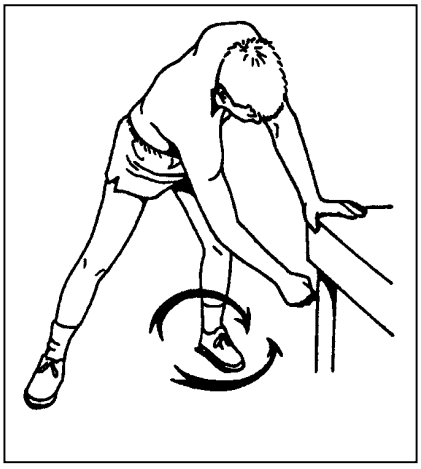


Figure 4: Range of Movement Exercises.

What can the player do?

After sustaining a rotator cuff injury, the player should rest and ice the shoulder. Some players may be able to carry on playing, depending on the severity on the injury. The player should try to keep the shoulder moving by carrying out some simple range of movement exercises and stretches (See Figures 4 & 4A).

All players should see a sports injury professional who can advise on treatment and rehabilitation.

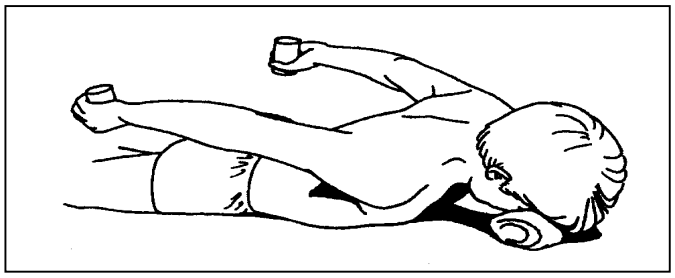
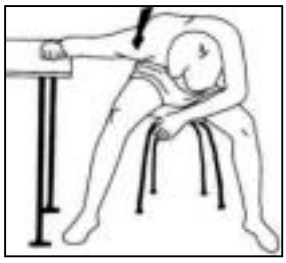


Figure 4A: Strengthening Exercises.

What can a sports injury professional do?

A sports injury professional (sports doctor or physiotherapist) will examine the player's shoulder and diagnose the injury. Sometimes an ultrasound scan or MRI Scan is required to determine the extent of the injury.

The severity of the injury will determine the treatment required. Physiotherapy is often effective in treating the short term and long-term pain of the rotator cuff, when a complete tear is not present. The aim of treatment is to reduce the amount of inflammation and pain with ice, ultrasound, and acupuncture. A sports doctor will often prescribe anti-inflammatory medication in the initial stages of a rotator cuff injury.



A physiotherapist will design a rehabilitation programme, including stretching and strengthening exercises. This may include exercise band strengthening exercise and shoulder stability exercises (See Figure 5). The use of sports massage techniques can help reduce any associated muscle spasm and tightness (See Figure 6).

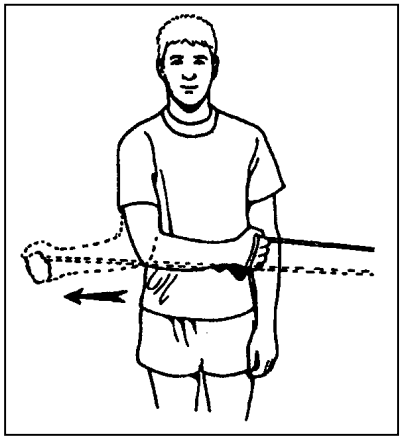


Figure 5: Exercise Band Strengthening.

Figure 6: Sports Massage.

A corticosteroid injection may be given if the player's symptoms do not improve with physiotherapy. However most rotator cuff injuries respond well to rest, physiotherapy and medications. A complete tear of the rotator cuff is treated by surgical repair. A sports doctor will be able to discuss with the player the best options if a complete tear of the rotator cuff is suspected. They will also be able to advise the player on when to return to training and playing – regardless of the severity of the rotator cuff injury.

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