

“INJURIES TO THE ROTATOR CUFF”

Shoulder injuries are hugely common, both in the sporting arena and in everyday life. There are many causes of shoulder pain due to the complex anatomy of the area and the dynamic nature of shoulder movement.

The ‘shoulder joint’ refers to the ball and socket joint which is the main moving part of the shoulder, however in reality the shoulder is a complex of joints which together create a very mobile and functionally important joint.

Some basic anatomy

The ball and socket is formed by the upper end of the humerus (ball) and a shallow socket found on the outer edge of the scapula (shoulder blade). Above this there is a bony outcrop called the acromion. This is the bony edge you can feel on the top of your shoulder. Between these two bones (the ball and the acromion) there is a space 5-10mm in height through which passes part of the rotator cuff tendon. The other muscles of the rotator cuff (there are 4 in total) originate from the front and back of the scapula and attach onto the ball of the humerus, forming a cuff of blended tendons which envelop the ball of the humerus.

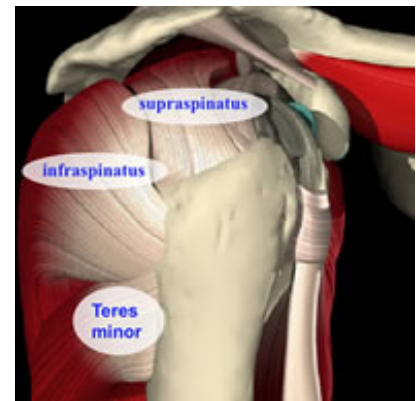


Figure 1: Side view of the rotator cuff. Also see the bony acromion at the top of the image, the tendon of supraspinatus passes through the space below this and onto the ball.

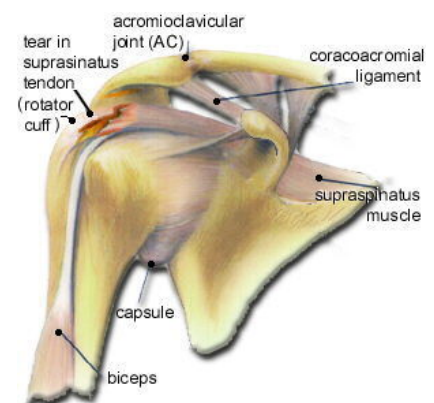
The rotator cuff muscles, by virtue of this blended attachment, play a crucial role in stability of the shoulder. These deep muscles work together to keep the ball of the shoulder centred in the socket during all movements, whilst the bigger power muscles around the shoulder produce the movement and the power (eg; deltoid, pectoralis major).

How does the rotator cuff get injured?

Rotator cuff tear

A tear can occur with a traumatic injury where force on the shoulder joint causes a tear of the tendon. This can happen when you dislocate your shoulder for example, or when it's forced into an unusual position.

Figure 2: tear of the supraspinatus tendon – part of the cuff.



A tear can also develop due to degeneration of the tendon tissue with age. This can be a gradual process which goes unnoticed for a long time before starting to become painful.

Impingement of the rotator cuff

This refers to painful pinching of the tendon and will often occur in the space between the ball of the humerus and the bony acromion above. The tendon is vulnerable here due to the narrow space. It can be pinched by a number of means; thickening of the bone above due to wear and tear, thickening/degeneration of the tendon and swelling of the bursa (fluid filled sac under the tendon).

Poor posture with rounded shoulders is very often a contributory factor in developing impingement pain. It causes stiffness in the upper back and weakness in the shoulder muscles that can directly lead to shoulder pain

Weakness of the rotator cuff

If the rotator cuff muscles are weak, this won't in itself cause pain but it could lead to problems. Remember the main function of the cuff is to keep the ball centred in the socket, if it can't do this effectively then the stability of the joint suffers and could lead to impingement pains developing as the muscle tendon is squeezed between the two bones.

Shoulder injuries are often complex

The difficulty with shoulder injuries is that they are rarely straight forward. It is common for a few problems to co-exist, for example an unstable shoulder can lead to impingement, or a tear of the cuff tendons can lead to an unstable shoulder. This is why accurate assessment is very important.

What should I do if I have a painful shoulder?

Any problem that leads to pain, limitation of movement or weakness should be assessed by a medical professional, either a Physiotherapist specialising in musculoskeletal or sports injuries, Sports Physician or Orthopaedic Specialist.

Physiotherapy is often the first line of treatment. Physiotherapy is aimed at restoring movement and function through the use of manual therapy, exercise and guidance. Initial assessment will highlight the areas that need to be addressed. Treatment will typically involve a lot of strengthening exercise which will focus on the rotator cuff muscles and the muscles that stabilise the shoulder blade to improve overall movement control. This will be progressed into sports specific rehabilitation or job related activity if appropriate.

Physiotherapy will also address bad posture, helping to mobilise stiffness in your back and educating about good posture is very important for shoulder problems.

Shoulder specialists/Sports Physicians may wish to send you for investigations such as x-ray, MRI scans or ultrasound scans. These will help in the accurate diagnosis of a problem but are not always necessary. This is more likely to be needed if physiotherapy has not achieved the expected level of improvement.

Do I need surgery?

Surgery is sometimes required for shoulder injuries, this will depend on the nature of the injury, how serious it is and what demands you will be putting on that joint in the future.

There are many different surgical procedures. For example, a tear to the tendon may be surgically repaired if it's large. Impingement of the rotator cuff from abnormal bone growth above, may require removal of the offending bony edge.

After surgery it is highly likely that you will be referred for further physiotherapy to rehabilitate your shoulder and guide you back to sport or work.

In summary

The shoulder is a complex part of the body which is involved in most daily activities and many sports. Injury to the shoulder area is very common and many people suffer with shoulder pain for which they can offer no explanation as to how it started. The rotator cuff is a group of muscles which help stabilise the joint and ensure optimal movement control, they are often involved in shoulder injury.

Advice should be sought if you have a shoulder that is painful, weak or difficult to move. There are ways to identify the problem and then treat it effectively, sometimes investigations are needed to help this process and in some instances surgery is required.

Sam Wilde

MCSP SRP

Specialist Musculoskeletal Physiotherapist

If you have any specific questions about the Rotator cuff or any other medical treatment please contact us on **0870 2000 878** or reception@puresportsmed.com

Clinics at:

Point West, 116 Cromwell Road
Kensington, London.

The Lodge, Parkside Hospital
53 Parkside, Wimbledon, London.