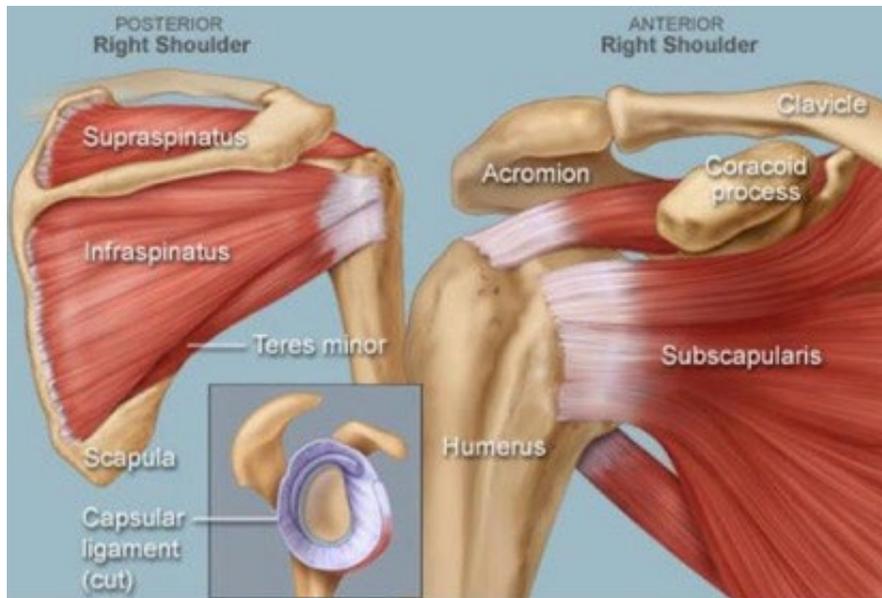


ROTATOR CUFF REPAIR - PATIENT INFORMATION

✚ OVERVIEW

The rotator cuff is a group of 4 muscles that help control the position of the arm in space. The muscles pass from the front and back surfaces of the scapula (wingbone) to the upper end of the humerus (arm bone). Each muscle has a specific role and tears of the different muscles will cause pain in different locations around the shoulder, and cause weakness with certain movements.



Supraspinatus helps lift the arm up and is important in holding loads above shoulder height. *Subscapularis helps turn the arm in* and *infraspinatus and teres minor help turn the arm out*.

When the rotator cuff is not functioning properly the head of the humerus may not sit normally in the glenoid (cup) and this may lead to other issues including bursitis and impingement. Impingement occurs when the rotator cuff tendon gets compressed between the head of the arm bone and the acromion (see above).

✚ WHAT ARE THE DIFFERENT TYPES OF TEARS?

Reading scan reports can be confusing unless you understand the ways in which tears are described. Very broadly speaking the tear can be broken down into:

1. the tendon or tendons that are involved
2. whether the tear is part way through (partial thickness) the tendon or all the way through (full thickness)
3. the amount of the tendon that has either a partial or full tear in it
4. if the tear is full thickness, the amount the tendon has retracted

So for example, a 5mm partial thickness tear of the supraspinatus and a 1.5cm full thickness tear with retraction, while both representing rotator cuff tears, will be treated very differently.

⚡ IS IT NORMAL TO HAVE A ROTATOR CUFF TEAR?

The same collagen that is present in our skin is also present in our tendons and ligaments. Just as we look older as the years go by, our tendons also age. As a result the presence of tears of the rotator cuff tendons increases with age.

There are multiple studies that have looked at the presence of tears of these tendons in people of different ages with no shoulder pain or limitations at all. Very broadly speaking, the presence of tears (even people with no shoulder pain or limitations) increases with age. If you are under 40 it is very uncommon to have any sort of tear. Between the ages of 40 and 60 partial thickness tears become more common (about 30% of people in this age bracket) but full thickness tears are still relatively uncommon (4%). After the age of 60, about 30% of people have full thickness tears and 30% have partial thickness tears. Remember these are people with no shoulder pain or limitations at all. So after the age of 60 it is more common to have a tear of some kind, than to not have one. This does not mean a tear is not a cause of pain and limitation in YOU. It just means that if the tear is not excessively large and we can control your symptoms by other means (physiotherapy ± injections) you do not have to have an operation simply because one is seen on a scan.

⚡ SYMPTOMS

Rotator cuff tears typically cause both pain and functional limitation.

The most common of the rotator cuff tendons to tear is the **supraspinatus**. Typically the pain from this type of tear will be felt on the outer part of the upper arm or behind the shoulder. The supraspinatus is important in helping lift the arm up and so tears of this muscle may cause weakness or early fatiguing in activities that involve holding loads at or above shoulder height. The torn tendon may also impinge (between the arm bone and part of the wing bone) and cause pain with activities in this range.

The **subscapularis** is a muscle at the front of the shoulder that helps rotate the arm in. Tears of this muscle will typically cause pain at the front of the shoulder and will result in weakness in internal rotation. This type of action includes things like lifting your hand away from your lower back and getting objects out of your back pocket.

Infraspinatus is a muscle at the back of the shoulder and helps rotate the arm out. Pain from tears of this muscle is usually felt at the back of the shoulder or on the outer part of the upper arm. Weakness may be noticed with activities like reaching and holding onto objects that are above and behind you, and brushing your hair.

Rotator cuff tears may also be associated with degenerative changes in the *long head of biceps*. This is the part of the biceps muscle that attaches inside the shoulder. Tears or fraying of this tendon may need to be addressed in the treatment of your shoulder condition in order to get resolution of all of your pain.

⚡ MY ASSESSMENT AND THE TREATMENT OPTIONS

During your assessment I will take a history and examine your shoulder. The examination revolves around:

1. confirming that the shoulder is the source of your pain (and not referred pain from the neck muscles or spine)
2. determining that the cause of your shoulder pain is a rotator cuff tear and not other shoulder conditions such as frozen shoulder or arthritis)
3. assessing the strength of the rotator cuff muscles and looking for associated pathology including impingement and biceps issues

I will generally arrange some plain X-rays of your shoulder if these have not already been done. The X-rays are aimed at excluding arthritis and calcification in the shoulder.

I will also arrange an MRI of the shoulder or in some situations an ultrasound scan. This is aimed at confirming the presence of a rotator cuff tear and also to determine how big the tear is and exactly what muscles are involved. There are also features on the MRI that can help me determine how long the tear has been there for and whether a repair is possible.

Once a ligament injury is confirmed we will discuss your management options.

Non surgical management with physiotherapy and possibly an injection will generally be recommended for:

1. smokers (until they cease smoking)
2. patients of any age with a partial thickness tear
3. patients with very small full thickness tears
4. patients older than 80 with a tear of any size
5. patients between 60-80 with tears in the range of 5mm to 1.5cm

Surgery will be recommend for:

1. those under 40 with a full thickness tear
2. patients between 40-60 with a full thickness tear that is symptomatic and greater than approximately 5mm
3. those between 60-80 with tears >2cm
4. those with a full thickness tear of any size that have failed a period of non-operative management

✚ SURGICAL MANAGEMENT

The aims of rotator cuff surgery is to reattach the torn tendon to bone and to deal with secondary issues inside the shoulder such as impingement and biceps pathology if they are contributing to the problem.

The surgery involves a keyhole inspection of the joint. If the long head of biceps is thought to be frayed, partially torn or not sitting normally in its groove, then it can be released at this point in the operation. The underside of the acromion is usually burred to remove any undersurface spurs and create more space for the rotator cuff tendons. Small tears may be repaired through keyhole incisions. Larger tears are repaired through a mini open incision (about 3-5cm long). Tendon repair is achieved with bioabsorbable anchors that are inserted into the bone. The number and type of anchors that is required is determined by the size, location and degree of retraction of the torn tendon.

✚ THE SURGERY

You will be admitted to the hospital on the morning of your operation. A cannula or drip will be placed in your arm or hand. You will then be taken around to the theatre where I will see you before your surgery and put a mark on the shoulder that is to be operated on. If you could please give me the blue form with your chosen contact person's details it would be appreciated.

This operation is usually done under a general anaesthetic with a nerve block that is done by the anaesthetist who will discuss the risks and benefits with you. The nerve block involves an injection into the side of the neck that is done under ultrasound guidance. The block will make the entire arm go numb (in most circumstances) for 12-24 hours and provides very good immediate post-op pain control. You will then be taken into the operating room and after the general anaesthetic is administered the surgery will begin.

The morning after your operation, provided your pain is well controlled with tablets (see POST-OP PAIN CONTROL document) you can go home. I will see you to check the wounds about 10 days after the surgery.

✚ REHABILITATION

Rehabilitation with a physiotherapist is essential for recovery from rotator cuff repair. You should book in to see your physio about 14 days after the operation and see them once or twice a week for a minimum of 3 months. For my physio protocol please see the document under the rehabilitation tab on this website.

It is important for you to understand that the surgery involves reattaching what is often a somewhat degenerate tendon. I cannot alter the degenerate nature of your tendon and I also do not make the tendon heal. That is up to your body and is the reason the rehabilitation from rotator cuff surgery is prolonged.

Very broadly speaking the rehabilitation protocol is as follows:

DAY 1 – WEEK 2: sling full time

WEEK 2-6: sling full time coming out three times a day for pendulum exercises and **passive range of motion** exercises (someone or something else lifting your arm for you)

WEEK 6-12: full **active** (you moving the arm yourself) and passive range of motion but no resistance activities

WEEK 12-24: continue to regain full range and gradually introduce **resistance**

As you can see the therapy protocol lasts for 6 months. You will make improvements from a pain, range and power point of view out to 12 months from the operation.

I will generally see you 2 weeks, 6 weeks, 12 weeks and 24 weeks after the surgery.

This information is not exhaustive and if you have further questions I would be happy to answer them.

Regards,



Luke McDermott.