

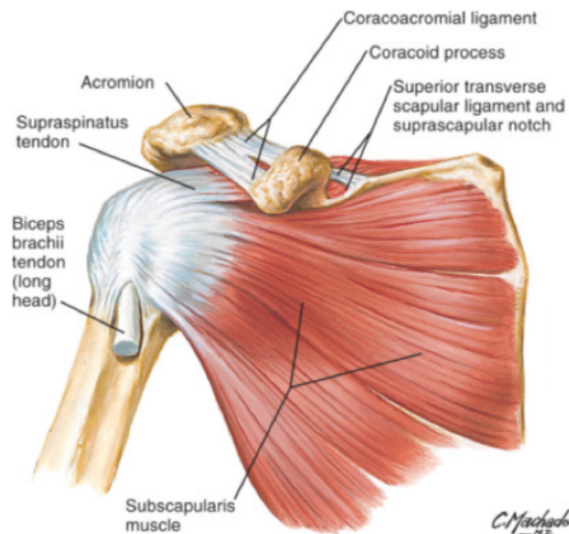
ROTATOR CUFF TEARS: NON-CUFF SURGERY

This information aims to help you understand your condition and gain maximum benefit from your treatment. It covers the most commonly asked questions. However, every individual is different, and you should ask as many questions as you like. This information is specifically for those patients with rotator cuff tears in whom a surgical option that only targets 'symptoms generators' other than the cuff is a consideration. Other treatment options exist for some rotator cuff tears (including repair/augmentation/reconstruction, tendon transfers and reverse total shoulder arthroplasty which are discussed in separate information sheets.

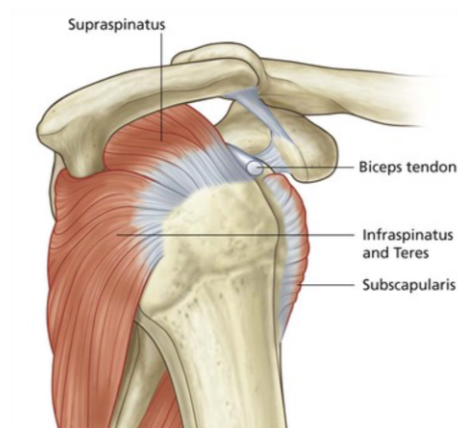
ROTATOR CUFF TEARS

Tendons connect your muscles to bone.

The 4 tendons of the rotator cuff surround the shoulder and help move and stabilize the joint.

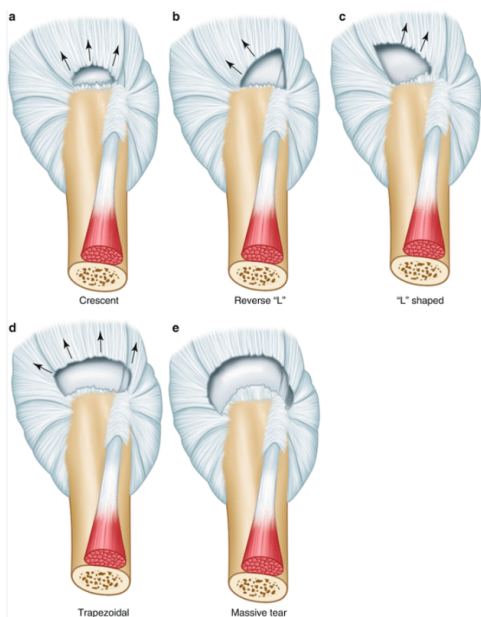


Anterior view



Lateral view

In a rotator cuff tear the tendon pulls away from the arm bone.



ROTATOR CUFF TEAR SURGERY

Tears are common. Around 10% of 65-year-olds are affected. But not all tears cause symptoms. Tears do not heal spontaneously. The shoulder can become weak and painful. Over time 40% of tears get bigger and become more symptomatic. This is more common in larger or more symptomatic tears.

Secondary changes can develop in long standing large tears. These are **muscle atrophy** (the muscle becomes smaller), **fatty infiltration** (muscle gets replaced by fat tissue) and **'cuff tear arthropathy'** (where the humerus rides upwards and progressively results in arthritis). These features are considered irreversible even after a rotator cuff repair, and also increase the chances of non-healing after repair and therefore make any attempt at repair/augmentation/reconstruction inadvisable.

You will see the size of each tendon tear noted in your clinic letter, written as 'Cuff:' followed by PT or FT (short for partial thickness or full thickness) and a numeral 1,2,3 for each of the tendons.

The degree of muscle fatty infiltration is noted in your clinic letter, written as 'Goutallier:' followed by a series of numbers. Each number reflects the amount of fatty infiltration in each of the cuff muscles. Repair is generally not advisable if there is Stage 3 and 4 changes of fatty infiltration in subscapularis (the first number listed) or infraspinatus (the third number listed).

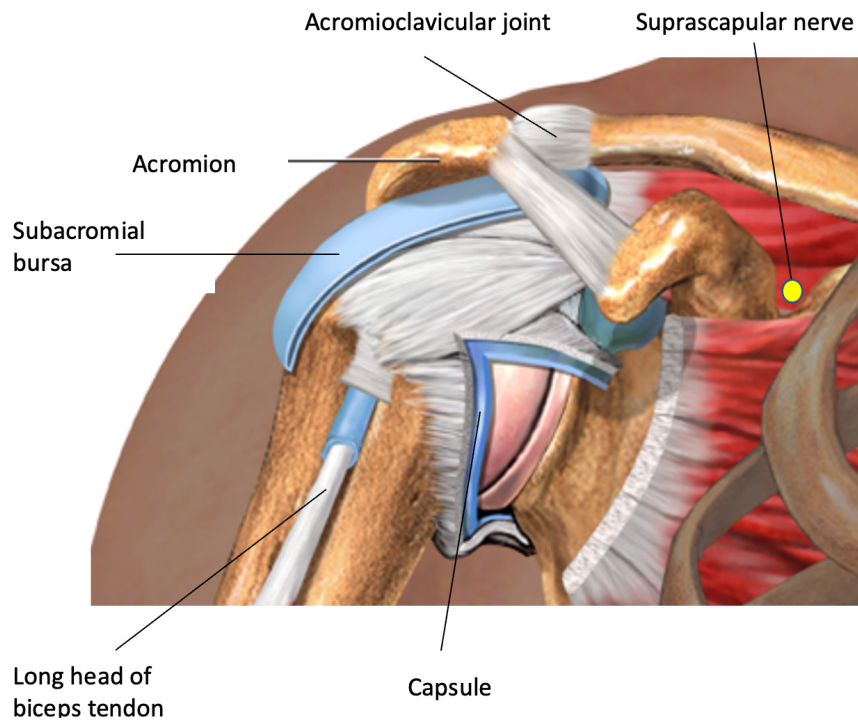
The degree of cuff tear arthropathy this noted in your clinic letter written as: Hamada: 1, 2, 3, 4 or 5. In Hamada 1 and 2 cases either cuff repair/augmentation/reconstruction or tendon transfer are options. This is the most common situation.

But in stages 3, 4 or 5 an attempt at repair/augmentation/reconstruction or tendon transfer is not advisable. In Hamada 3 or 4 either reverse shoulder arthroplasty or 'non-cuff' surgery are options. In Hamada 5 only reverse shoulder arthroplasty is possible.

'Non-cuff' surgery is a particularly good option in patients who maintain the ability to elevate the arm, but who find it painful to do so (noted as 'painful loss of forward elevation' in your clinic letter), or in whom other 'non-cuff' structures seem to be the major source of symptoms.

'NON-CUFF' SURGERY

A 'non cuff' strategy is an option in some patients with Hamada 3 or 4 cuff tear arthropathy. Here the treatment targets other associated issues (or 'symptom generators') which are present as well as the cuff tendon tears.



SUBACROMIAL BURSITIS & SUBACROMIAL BURSECTOMY

The subacromial bursa is a bag of fluid that sits above the rotator cuff. The bursa is commonly inflamed in rotator cuff tears. The inflamed subacromial bursa is removed at the time of surgery

ACROMIAL SPUR AND / OR INCREASED 'CRITICAL SHOULDER ANGLE, SUBACROMIAL DECOMPRESSION AND/OR LATERAL ACROMIOPLASTY'

The shape of the acromion bone may have a role in the development of rotator cuff tears. Any excess bone is shaved away from the acromion at the time of surgery.

LONG HEAD OF BICEPS INFLAMMATION AND WEAR & BICEPS PROCEDURES

The LHB lies in a groove between supraspinatus and subscapularis. It is commonly inflamed or worn. The LHB may also be 'unstable' because of tears in the adjacent tendons.

LHB TENOTOMY

In older people the best treatment is usually a 'tenotomy' (the worn tendon is removed from the shoulder). This can sometimes mean that the biceps muscle looks different after surgery (called a 'popeye' sign) but otherwise functions well though there may be some cramping pain in the biceps muscle that lasts for a few months.

LHB TENODESIS

In younger people a 'tenodesis' is performed because people who use the arm more for heavier tasks can get more pain after a tenotomy. In a tenodesis the LHB is removed from the shoulder and then reattached to the arm bone a few centimetres below the shoulder. If a tenodesis is performed the shape change of the muscle is less. This may be done arthroscopically (suprapectoral) or through a small incision (subpectoral). This choice between the two depends on where the worn part of the tendon is.

ARTHRITIS OF THE ACROMIOCLAVICULAR JOINT, ACJ COPLANING AND ACJ EXCISION

The ACJ is a small joint at the top of your shoulder at the outer end of your collarbone.

It is very commonly arthritic, but this is not always a source of pain.

Sometimes bone spurs from the undersurface of the ACJ can press down on the rotator cuff tendons.

ACJ EXCISION

The outer 5-10mm of the clavicle is shaved away so the arthritic bone surfaces no longer rub together.

AC JOINT COPLANING

Bone spurs from the undersurface of the ACJ are removed but the AC joint itself is left intact

CAPSULAR CONTRACTURE & CAPSULAR RELEASE

The capsule is the lining of the shoulder. It may be inflamed and thickened, causing pain & stiffness

In a capsular release, the capsule is cut from the inside to improve range of motion and pain

SUPRASCAPULAR NERVE TETHERING & SUPRASCAPULAR NERVE DECOMPRESSION

The suprascapular nerve sits just next to the supraspinatus and can be trapped in very large tears.

The nerve can be released by cutting a small ligament to give it more room. I perform this if a lot of pain is felt at the top and back of the shoulder.

The main advantage of this 'limited goals' approach is a short period of rehabilitation and minimal risk.

An alternative reconstructive surgical option is reverse total shoulder arthroplasty. This is a more reliable treatment option but does have a longer rehabilitation period and a greater risk of complications.

In general, because reverse total shoulder arthroplasty is very reliable, the 'limited goals' approach is only an option in a few different circumstances:

Older patients who wish to avoid the longer period of rehabilitation involved with rotator cuff repair.

Older patients who have pain but reasonably well-maintained function.

Any patient in whom an attempt to delay the need for a reverse total shoulder arthroplasty would be beneficial.

The choice of which option is recommended overall depends on a multitude of factors including: age, occupational and recreational activity levels, tendon tear characteristics, muscle quality, previous surgeries, bone quality, general health and rehabilitation requirements. Each option has its own advantages and disadvantages.

THE OPERATION

You will come to hospital on the day of surgery. You will have a general anaesthetic. A nerve block may also be used. The surgery usually takes 1 hr.

AFTER SURGERY

You may go home either on the same day or the day after surgery

You will see a physiotherapist before you leave hospital.

You will be given a sling. The time required in a sling is dictated by whether a biceps tenodesis (3-4 weeks) or tenotomy (you are not required to wear it unless it is providing pain relief - most patients use a sling for 1-2 weeks) is performed.

The speed of recovery is variable. It can be rapid or seem slow. Most improvement occurs in the first 6 months. The end of recovery is around 12-24 months after surgery.

Further general information is available in the 'Information for patients undergoing surgery' leaflet.

APPOINTMENTS AFTER SURGERY

10-14 days; 6 weeks, 3 months, 6 months, 12 months.

REHABILITATION EXERCISES

Specific rehabilitation exercise sheets will be given to you in hospital and during your follow-up visits.

Only do the exercises shown to you in hospital and demonstrated to you in clinic. Do not remove the sling until you are told to do so. Your therapist will suggest whether you can do the exercises yourself at home or would be better with regular supervised physiotherapy sessions. You will need to get into the habit of doing the exercises several times a day for around 6 months.

The following applies to limited goals surgery with biceps TENOTOMY

MILESTONES

0-2 weeks

Sling full time

2-6 weeks

Wean out of sling.

Use the sling between exercises if needed for comfort

Use the arm for light activities with no load

6-12 weeks:

Normal day to day use of the arm is allowed.

Strengthening starts

3-6 months:

Progress strengthening

6 months +:

Full activity

RETURN TO WORK/SPORTS

Work (light duties / office)	1-2 weeks
Swimming (breaststroke)	3-4 weeks
Driving	3-4 weeks
Work (manual)	3-6 months
Light lifting	3-4 months
Heavy lifting	4-6 months
Swimming (freestyle)	3-4 months
Golf	3-4 months
Contact sports	6 months

DRIVING

You cannot drive while you are using a sling.

Once you have been told that you can remove the sling you can drive when you feel that you have full control of the vehicle. It is your responsibility to make this decision.

LIKELY OUTCOMES

The main aim of surgery is to improve pain and function. This is almost always achieved to some degree. But because the cuff tear is not addressed there will be some ongoing symptoms.

