

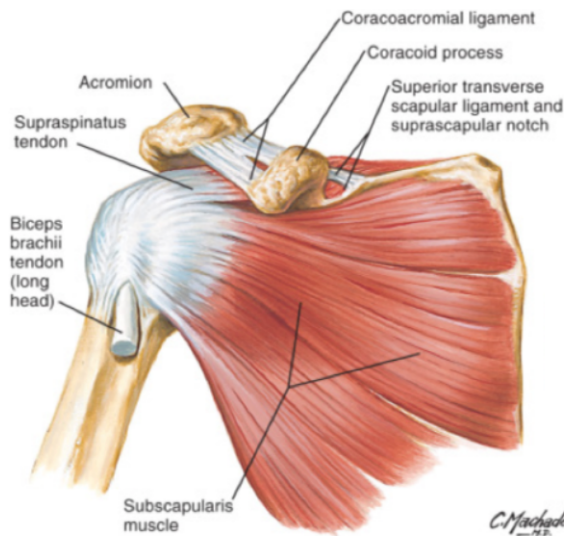
# ROTATOR CUFF TEARS: REVERSE TOTAL SHOULDER ARTHROPLASTY

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 reverse total shoulder arthroplasty is a consideration. Other treatment options exist for some rotator cuff tears (including repair/augmentation/reconstruction, tendon transfers and 'limited goals' surgery which are discussed in separate information sheets.

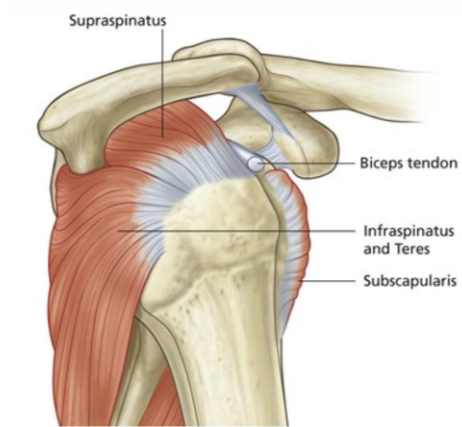
## ROTATOR CUFF TEARS

Tendons connect your muscles to bone.

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

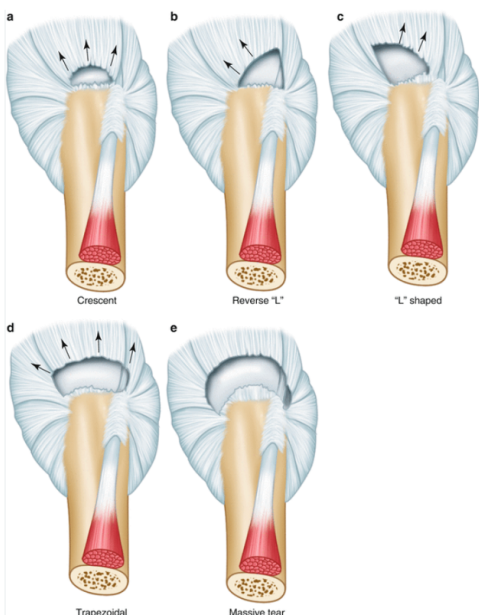


Anterior view



Lateral view

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



## ROTATOR CUFF TEAR SURGERY

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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.

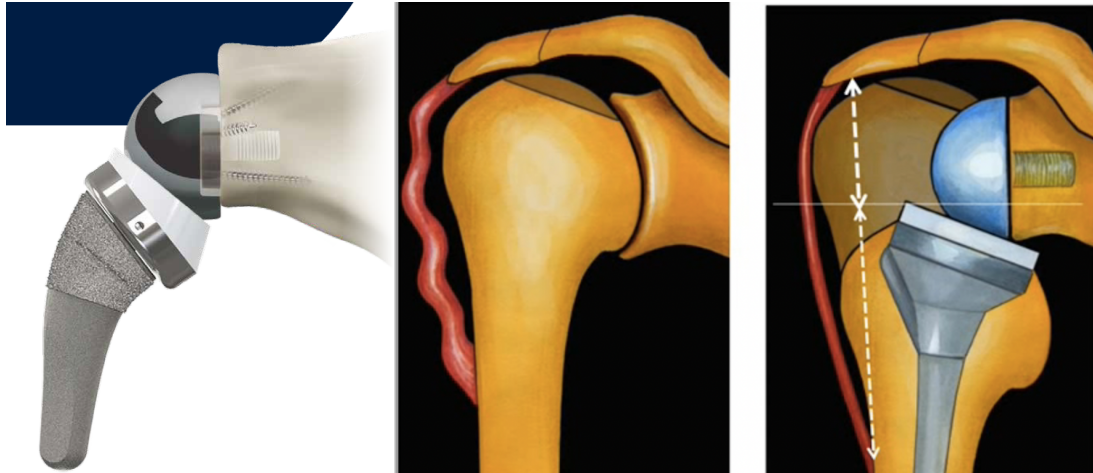
In Hamada 3 or 4 either reverse shoulder arthroplasty or 'non-cuff' surgery are options. In Hamada 5 only reverse shoulder arthroplasty is possible.

Reverse shoulder arthroplasty is an 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 patients who no longer have the ability to elevate the arm and/or rotate the arm (noted as isolated loss of anterior elevation [ILEA]; isolated loss of external rotation [ILER]; combined loss of elevation and external rotation [CLEAR] in your clinic letter).

## REVERSE SHOULDER ARTHROPLASTY.

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This design of shoulder replacement allows good shoulder function even in the absence of a functional rotator cuff. It is very successful and reliable because it uses the deltoid muscle to partially take over the function of the absent rotator cuff. But because it is a replacement operation it is only recommended for older patients. It is the only reconstructive treatment option in Hamada types 3, 4 and Hamada type 5.



An alternative non-reconstructive surgical option in Hamada type 3 and 4 is a more 'limited goals' strategy (this is covered in the information sheet entitled 'cuff tear limited goals surgery').

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 main advantage of reverse total shoulder arthroplasty is that it is a very reliable treatment option in terms of improving pain and usually range of motion. However, range of motion is usually not 100% after a reverse shoulder replacement. In particular it is unlikely that full internal rotation (hand to bra strap region) and full external rotation (hand to back of head) will be achieved, though some patients do. This is due to the altered biomechanics that occur in a reverse shoulder replacement.

## THE OPERATION

You will have a general anaesthetic. A nerve block may also be used. The surgery usually takes 1-3 hrs. An incision is made on the front of the shoulder around 10cm long. The subscapularis tendon is usually detached from the front of the humerus to allow access to the joint

## AFTER SURGERY

You will stay in hospital 1 night. Sometimes a 2<sup>nd</sup> night stay in hospital is needed.

You will see a physiotherapist before you leave hospital. You will use a sling for 6 weeks.

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, 2 years, 5 years, 10 years, 15 years, 20 years.

### 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.

### MILESTONES

0-2 weeks

Sling full time including waist band

2-6 weeks

Sling full time. Waistband can be removed.

6-12 weeks:

Sling is removed. Normal day to day use of the arm is allowed.

Aim to regain 50-75% range of motion during this phase.

Active use is allowed but do not lift anything heavier than 1-2kg

3-6 months:

Aim to regain 75-100% range of motion during this phase

Formal strengthening starts

6 months +:

Full activity

### RETURN TO WORK/SPORTS

Work (light duties / office)

1-2 weeks

Swimming (breaststroke)

6-8 weeks

Driving

6-8 weeks

Work (manual)

3-6 mnts

Light lifting:

3-4 mnts,

Heavy lifting

not done

Swimming (freestyle)

3-4 mnts

Golf

3-4 mnts

### 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.

### LIFTING

In the long-term regular lifting of >10kg and any repetitive lifting over shoulder height is not recommended

### LIKELY OUTCOMES

The main aim of surgery is to improve pain and function. Range of motion and strength may also improve although this is more difficult to predict. Patient satisfaction rates after surgery are around 95%. No surgery will result in a joint that feels and functions completely normally.

Improvement in prosthetic design and materials mean that we expect that the prosthesis will last for a long time. However eventually all non biological materials will wear out. For this reason joint replacements need to be carefully looked after and are generally recommended only for older patients and heavy lifting is not permitted

