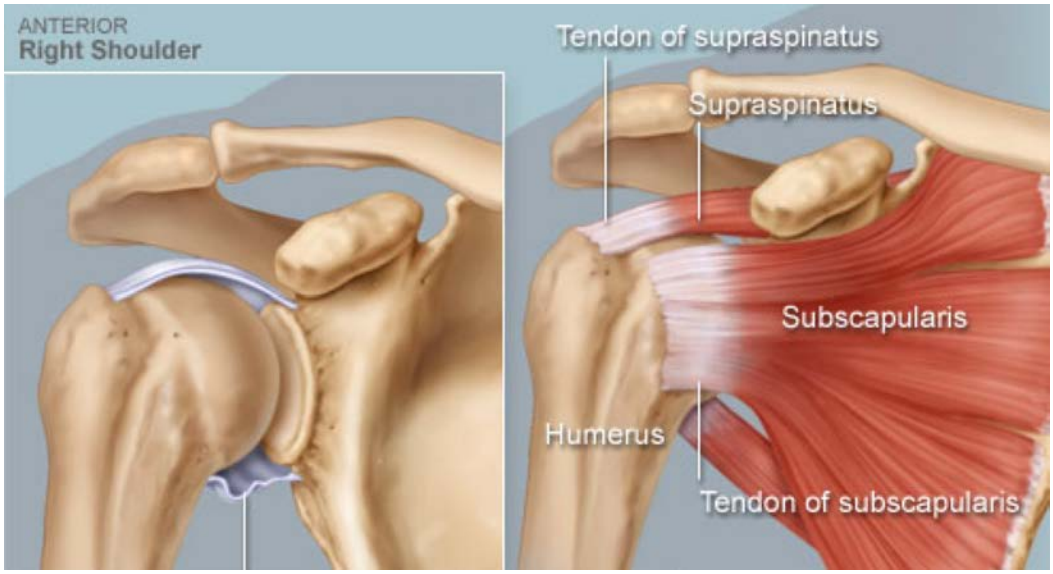
ROTATOR CUFF TEARS

The ball of the shoulder joint sits against its shallow socket (glenoid) like a golf ball on a golf tee. It is kept in place in large part by the actions of the rotator cuff muscles. The cuff is made up of four muscles: the supraspinatus, infraspinatus, subscapularis, and teres minor. These muscles come from the shoulder blade (scapula) and wrap around the humeral head to keep it in place during movements of the arm.

If the rotator cuff is not functioning properly as the result of torn rotator cuff muscles, then the complex coordination of muscle actions that enable the shoulder to move and function properly is disrupted. This causes pain and weakness, particularly with overhead activities.



Who gets rotator cuff tears?

Rotator cuff tears are most common in middle-aged and older people, often causing no overt problems, in fact up to 40% of people without shoulder pain may have a torn rotator cuff. However, for some people cuff tears are the source of considerable pain and disability. This can begin with a minor traumatic event or insidiously arise with no apparent cause. A fall or injury can also cause a sudden tearing of the rotator cuff.

How is a cuff tear diagnosed?

The symptoms and examination of the shoulder will suggest a diagnosis of rotator cuff tear, however other problems, such as a impingement or inflammation of the biceps tendon can mimic a rotator cuff tear.
Shoulder X-rays will be taken to generally assess the shoulder joint. An ultrasound scan can be very accurate to assess the condition of the rotator cuff muscles. In some cases, an MRI is used to further assess the rotator cuff.

How are rotator cuff tears treated?

Initial treatment is nonsurgical.

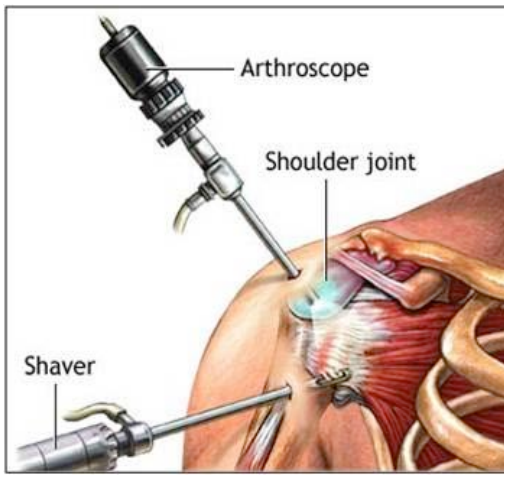
- Activity modification to avoid painful movements.
- Up to 50% of patients benefit from a steroid injection to settle pain and inflammation.
- Stretching exercises to improve range of motion.
- Strengthening exercises to maximise the actions of the surrounding muscles to compensate for the torn portion of the cuff.

Non-surgical management is the mainstay of treating uncomplicated impingement. About 2/3 of patients improve enough not to require surgery.

Surgical Treatment

If symptoms continue in spite of non-operative treatment, surgical treatment to repair the rotator cuff is recommended. Surgery is also recommended for large tears, those caused by acute trauma and those associated with significant weakness. The aim of surgery is to repair the torn tendons back down to the bone and allow them to heal, with the aim of restoring pain-free shoulder motion and function.

This is usually performed as an arthroscopic procedure. Two or three small puncture wounds are made. The joint is examined through a fiberoptic scope connected to a television camera. Small instruments are used to place anchors into the bone and these are used to secure the tendons back down to the bone.



Rehabilitation

The surgery is the easy part of rotator cuff repair. The rehabilitation of your shoulder after surgery is essential for the success of your treatment. Your surgeon and physiotherapist will advise you on the specifics of your rehabilitation, but the ultimate responsibility to exercise consistently is yours.

In general terms, you will in a sling for 6 weeks, followed by about 6 weeks of gentle movement

exercises, then 3-6 months of strengthening. It takes 18 months or more for the full benefits of the repair to be achieved. You should be able to get back to sedentary work within a week or two, but return to physical jobs can take 3-6 months

WHAT ARE THE RISKS OF SURGERY?

All surgical procedures have some element of risk attached. The likelihood of a life-threatening surgical complication, or damage to major blood vessels or nerves is very rare and unusual. The procedure does require a general anaesthetic, with the associated risks and concerns. Your anaesthetist will discuss this with you.

The most common and important risks of surgery that have been reported are:

Continued pain: 5%
Usually all the pain is removed. Some patients experience mild pain on overhead activities. Rarely is the pain not improved by surgery. Very occasionally (less than 0.5%) the surgery can provoke an excessive pain response called a regional pain syndrome. This is impossible to predict and often requires physical therapy and medication to overcome.

Infection: less than 0.1%
This is usually superficial in the wounds and is easily treated with antibiotics
Rarely the infection can be deep inside the joint and this requires surgery to wash the joint out.

Nerve damage: less than 0.1%
The axillary nerve runs close to the bottom of the joint and, if damaged causes weakness of the deltoid muscle and difficulty in raising the arm.

Stiffness: 1%
The shoulder will often become stiff after surgery and this usually settles with physiotherapy. Rarely the shoulder can become very stiff and require manipulation or arthroscopic release surgery. This risk is higher if you have diabetes or previous frozen shoulder problems.

Tendon re-tear : 6%
Tearing of the rotator cuff following repair does happen. The risks are increased with larger tears and older patients. Tendon re-tear does not guarantee a poor result, return of pain, or poor function but often does mean a loss of strength.