Impingement and rotator cuff disease: Shoulder Arthroscopy

Trauma and Orthopaedics

This leaflet is for patients considering Arthroscopic shoulder surgery.

The purpose of this leaflet

Before you agree to any treatment it is advisable to obtain information about your condition. This means knowing what the problem is, the treatments that are available, the risks, and any alternatives. This leaflet should help you to make a decision alongside discussion with your doctor. Do mention any particular worries that you have and ask for more information at any time.

What is the problem?

You have a painful shoulder. This may be due to wear and tear of the tendons surrounding the shoulder joint. This group of tendons is called the rotator cuff.

What is the rotator cuff?

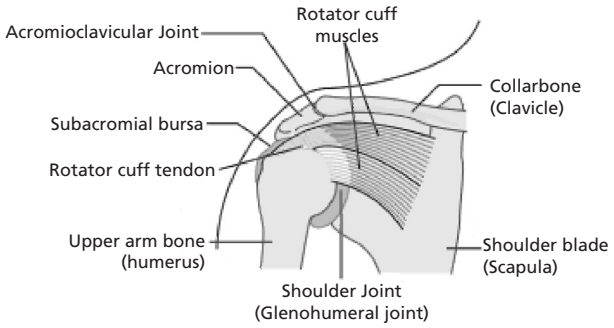
Your shoulder is a ball and socket joint. The rotator cuff is a group of muscles and tendons running over the top of the shoulder.

These muscles run over your shoulder blade, over the joint, and attach onto and around the ball of the shoulder.

A tendon is a strong and flexible cord that joins muscle to bone. These tendons are joined together to make a continuous sheet called a 'cuff' that helps with movement of the shoulder.

The rotator cuff tendons run under an arch of bone, called the acromion, which is part of the shoulder blade.

Front view of the shoulder:



The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- **Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available**
- **If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111**
- **Keep the environment clean and tidy**
- **Let's work together to keep infections out of our hospitals and care homes.**

What has gone wrong?

As you age or use your shoulder, the tendons of the rotator cuff sometimes wear down. This can cause the tendons not to function properly and as a result inflammation can occur in the space above the tendons causing 'impingement' under the arch of bone called the acromion. Occasionally these tendons can fray or tear away from the bone resulting in further dysfunction of the tendon and inflammation. This is called a rotator cuff tear.

What is a Shoulder Arthroscopy?

This is a keyhole operation during which the rotator cuff muscles are able to be examined. An arthroscopic subacromial decompression is a part of this surgery involving shaving away part of the acromion and clearing out the inflamed tissue overlying the tendon in order to allow the tendon to settle down. Also, if there is a tear to the rotator cuff, this may need to be repaired (rotator cuff repair). This operation is usually successful since the need for further surgery is rare – in less than 5% of cases further surgery is needed within 10 years[1].

What are the benefits of having this surgery?

The main benefit of this operation is to reduce the pain that you get from your shoulder. In general, between 80-90% of patients experience full or significant pain relief following surgery. The majority of patients experience this pain relief within 12 weeks of surgery[2].

What are the risks of surgery?

Extended rehabilitation

Whether you undergo a subacromial decompression or a rotator cuff repair it can take some time for all of your symptoms to settle. Most patients are really starting to feel the benefits of surgery at around 3 months, but further improvement can be expected up to 9-12 months following such surgery.

Stiffness

Post operative stiffness is encountered by approximately 5% of patients. Usually this is addressed by physiotherapy as part of the rehabilitation period. Rarely patients can develop a 'frozen shoulder' which is a condition which can cause pain and stiffness and may require further surgery.

Re-tear of the rotator cuff

If you required a repair of your rotator cuff tendon there is a risk of the tendon re-tearing. This is because of the wear and tear of the tendon (which was part of why the tendon tore). Repairing the tendon does not alter this and as such the tendon is still prone to tearing again. Despite a re-tear rate which is well recognised, the need for second surgery to repair the tendon again is rare.

Persistent symptoms

Occasionally some patients may have such severe wearing down or tearing of the tendons of the rotator cuff that a complete repair is not possible and some symptoms may persist following surgery. In these cases further treatment may be discussed.

Infection

Redness of the wound can occur. The chances of a minor wound infection are around 1 in 100[3]. This may be treated with antibiotics. Infection prevention is taken very seriously in hospital. All staff, patients and visitors are encouraged to wash or clean their hands frequently. Hand wash gels are available on the wards for this purpose – please encourage anyone visiting you or staff making direct contact with you to use the hand gel.

Nerve damage and bleeding

Nerves and blood vessels close to the operation site could be damaged during surgery. The chances of this happening are however rare – less than 1%[1]. Occasionally the nerves may be bruised during the operation which causes temporary weakness in the shoulder or elbow muscle. It is however rare for a nerve to be permanently damaged[3].

Anaesthetic problems
Any operation puts a strain on the heart, brain, lungs and immune system. A small number of patients can have a serious problem such as a heart attack, stroke or chest infection soon afterwards. This is more likely to happen if you already have heart or lung problems. The complications relating to the anaesthetic such as sickness, nausea or rarely cardiac, respiratory or neurological problems are less than 1% each[1].

A blood clot or thrombosis
There is a chance that you could develop a blood clot in one of the veins in your legs following surgery. This is called a deep vein thrombosis. The clots in the legs or arms cause pain and swelling. Rarely part of this clot may break off and travel to the lungs which can be fatal(4). In order to try and prevent these clots from developing you will be encouraged to exercise your arms and legs and to start walking as soon as possible after your operation to help your circulation. When you go home it is advisable to take regular, short walks. You should avoid long car journeys in the first 6 weeks unless you can stop and take a short walk every half an hour. If you have any risk factors for blood clots that you know: such as a previous blood clot or family history, you should let your surgeon know.

What are the alternatives?

The majority of patients benefit from initial non-operative management and most do not require surgery. Non-operative management consists largely of a combination of physiotherapy and Steroid injection.

Physiotherapy:
Aims to recondition your rotator cuff muscles in order to help to try to improve their function. This has a well proven efficacy in treating such problems.

Injection:
You may be offered a Steroid injection into your shoulder. This injection usually contains a mixture of steroids (a powerful anti-inflammatory) and local anaesthetic that can help to relieve the inflammation surrounding the tendon. It is useful to improve pain to allow you to get the most from your physiotherapy.

Like any procedure, injections carry small risks. There is a very rare risk of infection or allergic reaction. Following the injection some patients may experience an ache in the shoulder for a few days.

What would happen if I decided not to have any treatment?

Your shoulder may continue to hurt. If you have a tear in the rotator cuff this is likely to become larger as you age. Some patients' symptoms may settle down as previously stated, in these cases treatment is not necessary. Patients who are very active or of younger age are less likely to manage with conservative means of treatment and are probably more likely to go on to require surgery.

How do I decide which treatment is best for me?

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

What happens if I decide to have the operation?

You will be asked to attend the pre-assessment clinic to check your general health prior to your operation. You will be given information about coming into hospital.

Consent

We must seek your consent for any procedure or treatment beforehand. Your doctor will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

What anaesthetic will I be given?

This operation is usually done under a general anaesthetic. This means that you will be kept asleep during the operation. The anaesthetist may discuss a nerve block with you. This is an injection of local anaesthetic around the nerves at the top of the shoulder. It is usually given after the general anaesthetic. A nerve block provides excellent pain relief following surgery for the first few hours. Some patients are suitable for surgery awake under nerve block alone. The benefits and risks of a nerve block will be discussed with you by the anaesthetist.

What happens during the operation?

Several small incisions are made around the shoulder. Each incision is about 1cm long. This is called an arthroscopic procedure or 'key hole surgery', and the surgery is done using a camera inserted through these small incisions. Fluid is pumped into the shoulder to allow us to work. The operation can also be done (though uncommonly) through one larger incision which is around 5 to 7 cm known as an 'open' procedure.

If required, some of the bone is removed from the undersurface of the acromion bone (subacromial decompression) this allows inflammation over the tendon to settle down. If the rotator cuff is torn this will be repaired with stitches (rotator cuff repair). In total, the operation may take around 1 to 2 hours.

Occasionally your surgeon may discuss the need for other areas within your shoulder to be addressed at the time of surgery. These include:

- The long head of Biceps tendon: this is a thin tendon that runs along the front of your shoulder and enters the joint close by to the rotator cuff. It may be damaged in some patients who have these problems. A 'Biceps tenotomy' involves cutting this tendon. This has the effect of improving pain relating to this damaged tendon. Your Bicep muscle will still work well because it has a second tendon attached elsewhere. You may notice a slight difference in the shape of your Bicep muscle afterwards though
- The AC Joint: The acomio-clavicular joint is a small joint between the end of your collar bone and your shoulder blade It is situated on top of your shoulder. This joint can become worn down and cause pain. You may benefit from having the end of the collar bone shaved during your surgery (ACJ excision). This takes the pressure off the joint and improves pain

What happens after surgery?

The wound is usually closed with stitches and covered with a dressing. Your arm will be supported in a sling. The surgeon will discuss with you how long you will need to wear your sling for. Depending on what you have had done you may need to wear a sling for up to 6 weeks following surgery.

Whilst the arm is in a sling no weight can be placed in the hand; including phones, cups and cutlery. The sling has to be worn at night for sleeping and should only be removed for washing, dressing and physiotherapy exercise. Patients may find it easier to sleep in a semi-sitting position with a 'v' pillow behind them. Alternatively lying on your back with pillows under the operated shoulder or lying sideways on the non-operated side are sleeping positions patients tolerate better.

Will it be painful?

Some post operative pain is expected but can be managed with pain killers. You should be provided with some pain killing tablets to go home with following surgery. This 'take home' prescription will provide around 10 days of medication. After this you may need to ask your GP for further prescription.

The nerve block given before surgery, will stop working after a few hours. It is important that patients start to take pain relieving tablets straight away to prevent unnecessary pain when the block wears off. Appropriate pain relief if taken regularly can reduce muscle spasm, improve comfort and sleep. Patients whose pain is well controlled cope better with post operative exercise and this aids recovery. The use of cold packs can also be helpful. Ask your physiotherapist for further advice.

What exercises should I do and how will they help my recovery?

Before leaving hospital a member of the physiotherapy team will explain what exercises you should do and how often you should do them. Your exercises will then be reviewed by a physiotherapist in an outpatient physiotherapy clinic.

If you have not been contacted with a follow up Physiotherapy appointment within 1 week of your procedure, please contact your discharging hospital so that on-going Physiotherapy can be arranged.

Early exercise can have a positive influence on tissue healing and may reduce joint and soft tissue stiffness. Too much movement or the wrong type of exercise however may be harmful to tissue healing and it may cause inflammation which can increase your pain. If you are not sure if it is safe to do something, please talk to your physiotherapist first.

Whilst you are wearing a sling it is important to loosen or release the to move your elbow, wrist and hand. This will prevent stiffness at these joints. This should be done 3 times a day.

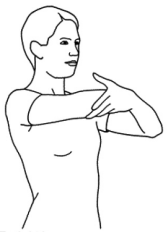
Below, are examples of physiotherapy exercises usually given to patients after surgery. You will be advised when they are safe to start and the range of movement that they should be carried out in.

Early Shoulder Surgery Exercises

Number 1:

Stand or sit. Lift your operated arm forward assisting the movement with your other hand, until you feel a gentle stretch in your shoulder.

Repeat 5 – 10 times. Safe Zone (if specified by your consultant): .....



Number 2:

Stand or sit. Lift your operated arm to the side, assisting movement with your other hand, until you feel a gentle stretch in your shoulder.

Repeat 5 – 10 times. Safe Zone (if specified by your consultant): .....

Number 3:

Sitting with your arm supported (either in sling or on pillows) – squeeze your shoulder blades together by gently pulling your shoulders back and down. Hold for 3 – 5 seconds.

Repeat 5 – 10 times.

Number 4:

Hold and support the wrist of the operated arm. Gently straighten and bend your elbow with your supporting hand.

Repeat 5 – 10 times.

Number 5:

Support the forearm of your operated arm with the palm turned down. Repeat each movement 5 – 10 times:

a. Alternately turn your palm up and down keeping your elbow still
b. Practice making a fist and opening and straightening your fingers
c. Bend your wrist up and down

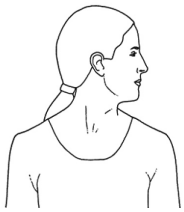
Number 6:

Tilt your head toward one shoulder until you feel a stretch on the opposite side. Hold for approximately 5 seconds.

Repeat for the other side.

Repeat each side 5 – 10 times.

Number 7:



Sitting. Turn your head to one side until you feel a stretch. Hold for about 5 seconds.

Repeat for the other side.

Repeat each side 5 times.

Number 8:

Sitting up straight. Pull your chin in whilst keeping your neck and back straight. Do not tip your head forwards. Hold for 5 seconds, then relax.

Repeat 5 times.

When can I go home?

You can usually go home on the same day as your operation. However, you must have had something to eat and drink, passed urine and feel well enough to go home before you are discharged.

Please make sure that a responsible adult collects you from hospital and stays with you for at least the first 24 hours.

How should I care for the dressing?

You may have a bulky outer dressing over the wounds which needs to be removed after 1 to 2 days. If you do have this type of dressing a member of the nursing staff will explain when and how to remove it. It is normal for some fluid to leak out of the small incisions into the bulky dressing over the first 24 hours. This should be watery fluid and is the fluid we have used to see inside the joint.

Any other type of dressing should not be removed until you return to your outpatient's appointment. Keep the dressing clean and dry.

When can I use the bath or shower?

Surgical wounds should be kept dry and covered whilst washing for the first two weeks. Waterproof dressings may be provided by the hospital to wear when you are washing, alternatively these can be bought from a chemist.

You may need assistance to wash and dress as you will be unable to use your operated arm. During these activities the operated arm should be supported at all times and kept in front of the body (ask your physiotherapist for further advice if required).

After two weeks the wounds should be healed and you can shower and bathe as normal.

When do I return to the hospital?

You will be reviewed by a member of the Orthopaedic Surgery team at around two to three weeks after your operation. At this appointment the wound will be checked. Any stitches will be removed. You will be asked to attend regular physiotherapy appointments for the first few months at one of the following locations; New Cross Hospital, West Park Hospital or Cannock Chase Hospital. Attending physiotherapy is essential.

When can I return to work / sport?

This very much depends on the type of work that you do. For example, if you do any heavy lifting as part of your job it may be around 3 months before you can return to work. In general you will need between 6 to 12 weeks off work. Please check at your appointment about when it is advisable for you to start work again. Most patients should not return to full sporting activity for approximately 3 months following surgery. Check with your physiotherapist and surgeon before returning to any sporting activity.

When can I drive?

Depending on the type of surgery that you have had it will be between 2 – 8 weeks on average before you can drive. Please check that it is safe for you to drive at your outpatients appointment. You should certainly not drive during the time period when you have been specified to be in the sling.

When should I contact the hospital?

You should contact the hospital for advice if you experience any of the following:

- Bleeding or discharge which soaks through the dressing
- Severe pain that is not relieved by painkillers
- Pain, tenderness and swelling in the calf of either leg – this could indicate a blood clot or thrombosis
- If you have any other problems that you feel may be related to your operation

Contact Details

New Cross Hospital

Main Hospital Switchboard
01902 307999

Waiting List Co-ordinator
01902 694092
Mon – Fri, 9:00am – 4:30pm

Orthopaedic / Fracture Clinic
01902 695380
Mon – Fri, 8:30am – 4:30pm

Pre-Admission Clinic
Mon – Fri, 8:30am – 4:00pm
01902 695587

Ward A5
01902 695005

Ward A6
01902 695006

Beynon Short Stay Unit
01902 694049

Appleby Suite
01902 695588

Cannock Chase Hospital

Main Hospital Switchboard
01902 307999

Orthopaedic Pre-admission Clinic
01543 576589

Holly Bank Ward
01543 576742

Hilton Main Ward
01543 576580

References

1. Royal Berkshire NHS Foundation Trust, 2005. Arthroscopic Subacromial Decompression [ASD] with or without Arthroscopic Excision of Acromio-Clavicular Joint.
   [ACJ] [online]. Royal Berkshire NHS Foundation Trust. Available from http://www.royalberkshire.nhs.uk/download/orthopaedics/Arthroscopic_subacromial_decompression.pdf. Accessed August 2007
2. West Suffolk Hospitals NHS Trust, 2005. Subacromial Decompression [online]. West Suffolk Hospitals NHS Trust. Available from http://www.wsh.nhs.uk/pals/PatInfo/redirect. aspx?ID=277. Accessed August 2007
3. Dumas, 2003. Rotator cuff repair of the shoulder – open operation. Dumas Ltd
4. Queensland Health, 2004. Rotator Cuff Repair/Subacromial Decompression [online]. Queensland Government. Available from http://www.health.qld.gov.av/informedconsent/Consent Forms/Ortho_38.pdf. Accessed August 2007

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。

Designed & Produced by the Department of Clinical Illustration,
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