

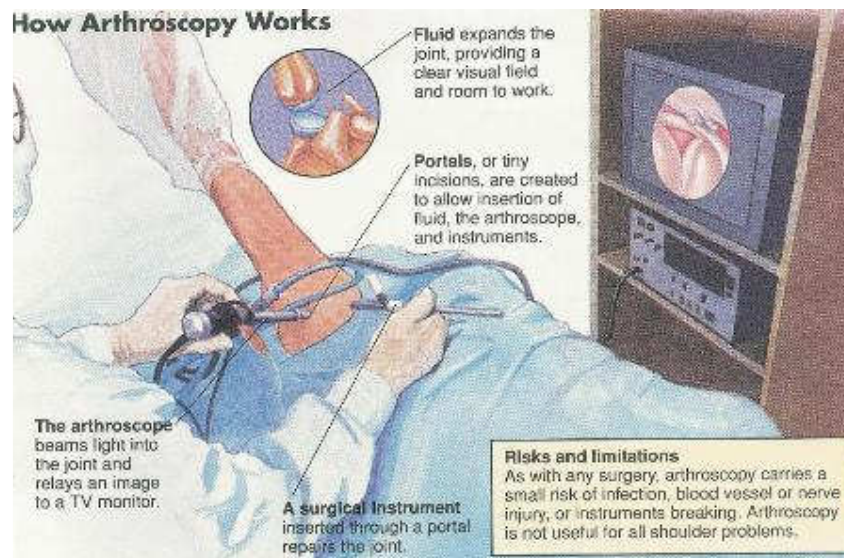


## **PATIENT NOTES | ARTHROSCOPIC SHOULDER SURGERY**

I have suggested that you consider an Arthroscopic procedure to assess and treat your shoulder condition.

Arthroscopy, or Minimally Invasive “keyhole” Surgery, allows the surgeon to look into the shoulder joint, make an exact diagnosis, and in most cases treat the condition with an operation that requires very small incisions.

We are able to use specially made instruments that fit through the small skin incisions and we are able to visualise the shoulder using a camera. Because this technique disturbs the shoulder joint less than open surgery, the hospital stay is shorter and the recovery smoother than with “open surgery”.



Prior to considering surgery you would have had an arthrogram or MR/arthrogram to endeavour to make a definitive diagnosis. On occasions, however, we find that when we look into the joint with the arthroscope that we discover something unexpected. The benefit of the arthroscopy is that we can fix up most of the problems using the arthroscope.

There are several conditions that can be treated arthroscopically:

1. Impingement or inflammation of the Rotator Cuff
2. Small Rotator Cuff tears
3. Some types of Instabilities or dislocations
4. Labral or cartilage tears
5. Chronic Frozen Shoulders
6. Early arthritis
7. Loose bodies
8. Calcific Tendonitis
9. Infections

If you have certain medical problems you may require some preoperative tests, to ensure you are fit for a general anaesthetic. These will be organised through my office and you may need to see a physician. One week prior to surgery, you will commence washing your shoulder girdle with PHISOHEX antiseptic solution (available from your chemist). Should you get an allergic reaction to the PhisoHex then cease to use this immediately and inform our office. You are to avoid getting sunburnt.

If you are on anti inflammatory tablets or Aspirin, please check with your G.P., and if he or she says it is safe, stop the tablets one week prior to surgery.

You will be admitted to the hospital on the morning of surgery and you will be visited by the anaesthetist who will examine you and make sure you are fully fit to undergo a general anaesthetic. In many cases the anaesthetist will explain to you the option of having a "block" which is an injection in and around the neck, which will reduce pain for 12 to 18 hours post operatively. The nursing staff will also explain the use of "patient controlled analgesia" (or P.C.A.) where you regulate the amount of pain relieving medication that you use. You must remove all rings from your hand prior to surgery.

The operation takes about 90 minutes, depending on exactly what procedure is done. There usually will be 2 or 3 very small incisions about the shoulder. Very occasionally there will be up to 6 small incisions if there are several facets to the surgery. The exact operation done will depend on what I find when we look in the joint.

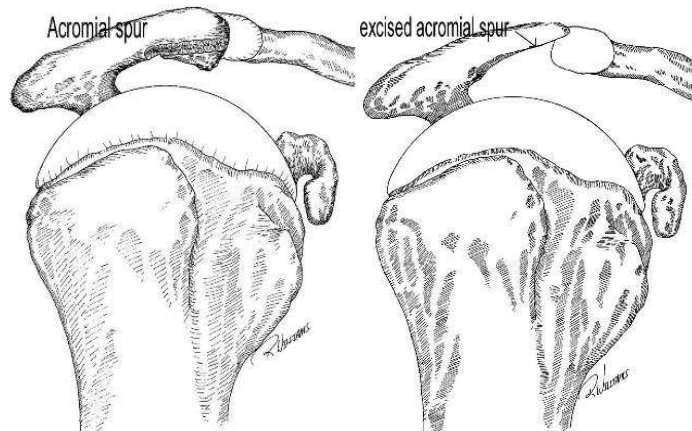
Sometimes people have 2 or even 3 pathological processes going on at once and all of these can usually be addressed at the same time. Rarely a different diagnosis is found to what was expected and you may need to return for an "open" operation a few weeks later once the swelling has settled.

Listed in the following pages are the most commonly performed procedures.

### **ARTHROSCOPIC ACROMIOPLASTY**

The acromion is the top part of the shoulder blade which can be felt at the point of the shoulder. Between this bone and the ball of the humeral head runs the rotator cuff tendons. If you have inflammation or a partial tear of the Rotator Cuff and you are getting "impingement" symptoms, as a result of the Rotator Cuff rubbing on the Acromion bone, we can shave the partially torn Rotator Cuff and trim the protruding acromion bone and related ligament, to give the Rotator Cuff more room to move and ultimately allow the Rotator Cuff to heal.

On occasions another tendon in the shoulder, called the biceps tendon, is severely damaged and it may be necessary to release or remove that tendon. On occasions the tendon is removed from the joint and reattached using a dissolving screw to the humerus bone or upper arm. This procedure does not lead to any functional deficit but may leave a small cosmetic lump in the lower arm.



After surgery you are in hospital overnight and commence physiotherapy the day after surgery. Sling immobilisation is required for about a week but sometimes longer if the surgery involves any labral repair or stabilisation procedure ( see other sections).

Maintaining motion prevents scarring in the shoulder which prevents stiffness. It is important to achieve a full range of motion as early as possible after the operation. If the shoulder does get stiff in the early post operative period it usually does recover but may take a period of months rather than weeks to do so.

The operation has a six month rehabilitation period and if the Rotator Cuff muscles are not too badly damaged the success rate of surgery is about 90%. The shoulder will continue to improve for up to 12 months. The surgery works by removing the bone that rubs on the Rotator Cuff muscle and relies on the ability of the muscle to heal. We cannot give you a new Rotator Cuff. Unfortunately in about 10% of patients, the muscle does not heal and the surgery does not work.

### **ARTHROSCOPIC EXCISION OF THE END OF THE COLLAR BONE**

People with arthritis of the Acromioclavicular joint can require the outer end (about 0.5 cm) of the collar bone removed. This procedure is often combined with an acromioplasty (see above) if the patient has impingement or inflammation of the Rotator Cuff as well as arthritis of the acromioclavicular joint.

After surgery you are in hospital overnight and commence physiotherapy the day after surgery. Sling immobilisation is required for about a week

Most people are back to normal within 3 months and the surgery has a 90% success rate.

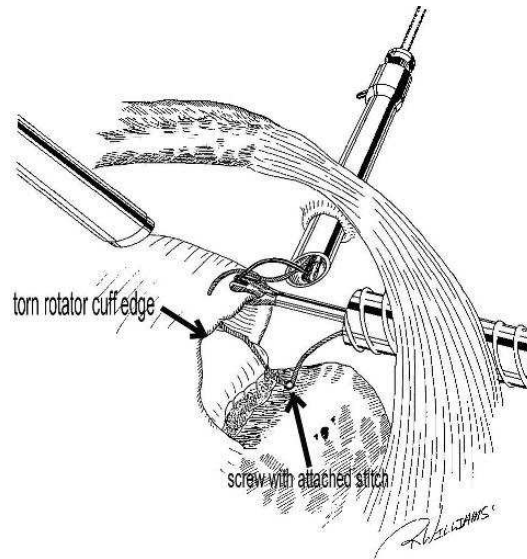
### **ARTHROSCOPIC ROTATOR CUFF REPAIR**

When the Rotator Cuff muscle has a complete or full thickness tear or a very large partial tear it is sometimes possible to repair the Rotator Cuff arthroscopically using dissolving screws or small metal screws with stitches attached to them.

This procedure is usually very successful in small or moderate sized tears. Sometimes, especially in the elderly, the quality of bone is very soft, and the small screws can in some cases pull out of the soft bone. In such cases we make a small incision over the shoulder, measuring about 2.5 cm. and reattach the rotator cuff to the bone using non dissolving stitches alone.

When the tears are large I recommend "open surgery" as the success rate is much higher in such cases.

In all cases the repair is combined with an Arthroscopic Acromioplasty (see above)



After surgery you are in hospital overnight and commence physiotherapy the day after surgery. Sling immobilisation is required for 4 to 6 weeks depending on the size and position of the tear.

Rehabilitation and physiotherapy are required for 12 months and lifting is limited to between 2 kg to 5 kg for 12 months. It often takes 9 to 12 months to be rid of all the pain.

The success rate for small or moderate tears is in the vicinity of 90%. Large tears have success rates of under 50% and for these tears I recommend an "open operation" which has a 90% success rate.

### **ARTHROSCOPIC STABILISATION AND LABRAL REPAIRS**

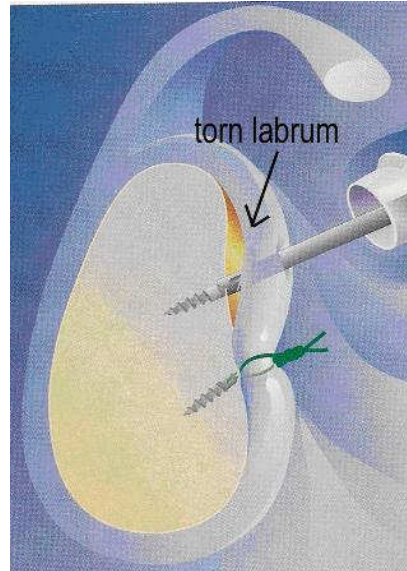
When patients have recurrent dislocations, subluxations (or half dislocations) or labral tears (also known as SLAP lesions ) there is an option of repairing these arthroscopically.

In these cases the labrum, or cartilage, tears off the bone and is repaired with either a dissolving screw or a metal screw with a stitch attached to the end. In cases where the capsule (or lining of the shoulder) has stretched there is the added option of tightening the capsule with arthroscopic stitches, which acts like tightening a double-breasted coat.

I occasionally use a technique known as a modified Thermal Capsular Shrinkage as an adjunct to tightening the capsule, where we run a hot current through the capsule and shrink the capsule. This however can also weaken the capsule if not used sparingly

In older patients with cartilage tears at the top of the shoulder that incorporate the biceps tendon, commonly known as a SLAP lesion, the bone is sometimes weak and cannot hold the screws. In such cases we may need to debride the labral tear and release or reposition the biceps tendon .

You are in hospital overnight and in a sling for 3 to 4 weeks. After that, an exercise program is commenced and physiotherapy may be required for 6 months. Sport and heavy lifting must be avoided for 4 to 6 months. You may be left with a slight but permanent restriction in range of motion.



The success rate of such surgery after one dislocation is about 95%, but if you have had 2 or more dislocations then the success rate drops to about 90%. In persons who have had several dislocations and are likely to resume contact sport an "open stabilization" may be more successful. When there is significant bony damage, an open procedure may be indicated.

People who have a hypermobile shoulder with significant generalised ligamentous laxity may be better suited to "open surgery" in selected cases. If you have had subluxations or "half dislocations", arthroscopic surgery is usually very successful. Where there is a SLAP lesion only, surgery is 90% successful.

### **CHRONIC ADHESIVE CAPSULITIS OR FROZEN SHOULDER**

In this condition when symptoms do not settle spontaneously within 18 months, surgery may be indicated to release the contracted and inflamed capsule (lining of the joint). With an arthroscopic cautery device we release the contracted capsule to return movement. If there is inflammation and impingement of the Rotator Cuff then an acromioplasty (see above) may be combined with the capsular release.

You are in hospital overnight and in a sling for about a week. Aggressive physiotherapy is commenced immediately after surgery and is required for at least 6 months. Surgery is successful in about 70% of patients but is less successful in diabetics. Even with successful surgery restoration of full movement is unlikely, but achievement of good movement is generally the rule.

### **CALCIFIC TENDONITIS**

In this condition abnormal amounts of calcium are found in the rotator cuff. If this calcification does not spontaneously disappear over an extended period, the surgery can help. In such cases the Calcium is excised arthroscopically and in most cases an acromioplasty (see above) is combined with the procedure. Occasionally a few stitches needs to be put into the rotator cuff.

You are in hospital overnight and in a sling for a week. Physiotherapy is required for 6 months and the shoulder can be a little stiff for up to 6 months. The Calcium can reform in about 10% of cases.

### **ARTHRITIS**

Arthroscopy can be helpful in this condition by removing loose fragments of bone, debriding the damaged articular cartilage and releasing part of the contracted capsule. The aim of such surgery is to give some pain relief and improve range of motion. It should however, be clearly understood that this surgery is of limited value in that it will not cure the problem and the relief will be temporary only. Ultimately you may need a Shoulder Replacement.

You will be in hospital overnight and in a sling for 1 week. Physiotherapy will be required for 3 to 6 months and an improvement may be seen for up to 6 months.

**Animations and videos of many of the above procedures  
can be viewed on our website at [www.orthosports.com.au](http://www.orthosports.com.au)**

### **AFTER SURGERY**

You will wake up in the ward in a sling. You will be given adequate analgesics to keep you comfortable.

The morning after surgery I will see you and discuss the surgery with you. A waterproof dressing will be placed on the shoulder and you will be allowed to shower. When showering take the blue sling off but leave your arm adjacent to your body. You will be given a gauze sling to wear in the shower – do not attempt to lift or rotate the arm – and then put the blue sling back on after you are dry.

Make sure the armpit is as dry as possible because of the risk of a sweat rash or an armpit infection. It is important to sit out of bed and walk around as soon as you are comfortable and able.

Depending on the exact procedure done you will commence physiotherapy the morning after surgery and you will be taught some exercises by the physiotherapist. You will need to do those exercises at home under your own supervision about 4 times a day. You will not be required to see a physiotherapist once you leave hospital, until after I see you in the office. If you have a labral repair or stabilisation do not have physio until I instruct you to do so, usually at about 4 to 6 weeks postoperatively.

You can be discharged from hospital the day after surgery if you are coping well with the pain level and are able to do your exercises yourself.

In the immediate post operative period you will experience pain about the shoulder. There will also be significant pain at night as a result of the surgery and this can last up to 8 weeks. On discharge from hospital you will be given analgesics as well as tablets to help you sleep at night, which I would encourage you to use. Should you require extra tablets, either let my office know or see your family doctor. If indicated you will be given antibiotics which you must take until you finish the packet.

You will have a “see through” dressing over the wound made out of a substance called “duoderm”. This is a waterproof dressing that allows you to shower without compromising the sterility of the wound. You will notice under the dressing there will be a white material that looks like pus. This is the perspiration of your skin reacting with the medication in the dressing and is nothing to worry about. The dressing should not be changed.

It is common to get swelling about the arm, forearm, hand and fingers. Please endeavour to keep the armpit as dry as possible – once the wound has healed at about 7 days you can use talcum powder which will help.

Moderate swelling about the shoulder, arm, forearm and hand can last for the period of time you are in the sling and occasionally longer.

### **When to contact me before I have removed your stitches:**

- Fever above 38° Celsius

- Increased pain unrelieved with pain medications
- Sudden, severe shoulder pain.
- Increased redness around the incision
- Increased swelling at the incision
- A bulge that can be felt at the shoulder
- Shoulder pain, tenderness or swelling
- Numbness or tingling in the arm
- Change in colour and temperature of the arm
- Change in motion ability
- Drainage or odour from the incision.
- Any significant concerns you have

The sling will need to remain on until I see you in the office at about 7 to 10 days postoperatively. The sling must remain on 24 hours a day, including at night. The sling only comes off to have a shower and get dressed and on those occasions the arm needs to be kept adjacent to the body. If you have been given an exercise program the sling is taken off to do the exercises. The Roads and Traffic Authority does not permit driving of a motor vehicle while you are in a sling. I therefore recommend you do not drive until you are out of the sling.

When I see you in the office, I will remove the stitches and fully explain the surgery to you with the aid of a model. In most cases I photograph the shoulder intraoperatively and these pictures aid in explaining the procedure to you.

In most, but not all cases, I remove the sling at that stage and commence physiotherapy. I will allow you to use the arm as much as you want but I would recommend no lifting greater than 2kg and no overhead work. You can gradually start to resume normal activity as pain permits.

If you have had a labral repair, arthroscopic stabilisation or arthroscopic rotator cuff repair I will be keeping you in a sling for about 4 to 6 weeks before starting exercises and physiotherapy.

I am comfortable with most persons returning to light clerical work within 3 to 4 days of surgery, however, if your job requires heavy lifting or repetitive overhead work then, it is unlikely you will be able to return to these duties for 6 months.

One should avoid contact and racquet sports and upper body weights for 6 months. Jogging, cycling and breaststroke swimming can be commenced within 6 to 12 weeks depending on the procedure that you have undergone.

I will be reviewing your progress every 4 to 6 weeks for about 6 months. During this time I will check your progress and upgrade your physiotherapy and exercise program.

Please note that many people have a misconception that arthroscopic shoulder surgery leads to a complete recovery within a few weeks. This is totally incorrect. Such surgery though minimally invasive, generally has a six month rehabilitation period and requires a patient committed to his or her post operative rehabilitation.

Smoking reduces the success rate of surgery as it inhibits tissue healing. I advise all smokers to avoid smoking prior to and after surgery.

## **COMPLICATIONS**

All surgery carries potential risks and complications. In most cases the decision to proceed with surgery is made because the advantages of surgery outweigh the potential disadvantages. It is very important, however, for you to understand the reason for choosing surgical management over other non-surgical forms of treatment and to make an

informed choice in consultation with the surgeon. This is particularly important in cases of elective surgery.

It should be noted that there is no operation that cannot make you permanently worse off than prior to surgery but I would like to emphasise that such complications are exceedingly rare.

The risks of surgery can be divided into general risks with any surgical procedure and specific risks of particular procedures.

**The general risks of surgical procedures include the following:**

**Respiratory tract infections:** This includes the development of pneumonia which can follow anaesthesia for surgical procedures. It is more common in the aged and very uncommon in the young and healthy. Treatment involves antibiotics, physiotherapy and respiratory support. Treatment is not always effective.

**Thromboembolic problems:** This term refers to the formation of blood clots within the blood vessels. If they form in the veins they are known as deep venous thromboses, which can cause swelling and pain in the legs and a restriction of blood flow. These clots can travel to the lungs and cause a pulmonary embolus (which is potentially fatal). This complication is more likely to happen in smokers, overweight people and women using contraceptive medications. For this reason patients are advised to stop smoking and stop taking oral contraception before surgery.

Long aeroplane flights also increase the chance of blood clots forming and therefore patients should not fly and have surgery in the same two (and preferably six) week period. Unlike lower limb surgery, blood clots are uncommon after shoulder surgery.

In emergencies, special precautions are taken. Treatment of this condition usually involves anti-coagulant (blood thinning) medication administered by injection into the skin or by intravenous drip and then followed up by a tablet form of anti-coagulant therapy. Therapy for this condition is not always successful. If clots form in the arterial system then a stroke may occur.

**Infection:** This can occur following any surgery. Operating theatres are designed to minimise the risk of bacterial infections. Surgical procedures are carried out in a sterile manner. In many operations, antibiotics are given to decrease the likelihood of infection. Smokers have an increased risk of infection.

Despite expert treatment and antibiotic protection, infections still occur. These can cause prolonged disability, require treatment with antibiotics and occasional require surgery. Infections can be found at the operative site, in the lungs, the urinary system and elsewhere.

**Anaesthetic Complications:** Anaesthesia itself entails a degree of risk, some of which is outlined above. For further information regarding anaesthetic risks please feel free to contact the treating anaesthetist for your operation. My office staff will be happy to provide you with a contact number. You will see the anaesthetist in hospital prior to your operation and will have the chance to discuss the effects and possible complications of anaesthesia at that stage.

The common complications specific to shoulder surgery include but are not limited to :

**Shoulder stiffness:** this is the most common complication following shoulder surgery and occurs in 10% of patients. Because it is far more common in post menopausal women and diabetics we believe that it may have a hormonal basis related to the stress of having an operation. The risk of stiffness can be reduced by strict adherence to the exercise protocol.

