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SHOULDER SURGEON

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SHOULDER SURGERY
Information for Patients

IMPINGEMENT SYNDROME AND ROTATOR CUFF TEARS

This booklet has been prepared to help you better understand your shoulder problem and the surgery that may be required. It will also help explain what will happen after the surgery has been performed. Although this booklet aims to be relatively comprehensive, you will probably still have some questions and I would of course be happy to answer these at any time.

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The shoulder is a ball and socket joint and is illustrated in *Figure 1*. The ball consists of the head of the humerus which is the top of the upper arm bone. The socket consists of the glenoid which is attached to the scapula (shoulder blade). Surrounding the shoulder are a number of muscles which help you move your arm. The deepest layer consists of three main muscles known collectively as the rotator cuff. These are illustrated in *Figure 2*. The rotator cuff serves a number of purposes, but one of its main aims is to help you lift (elevate) your arm.

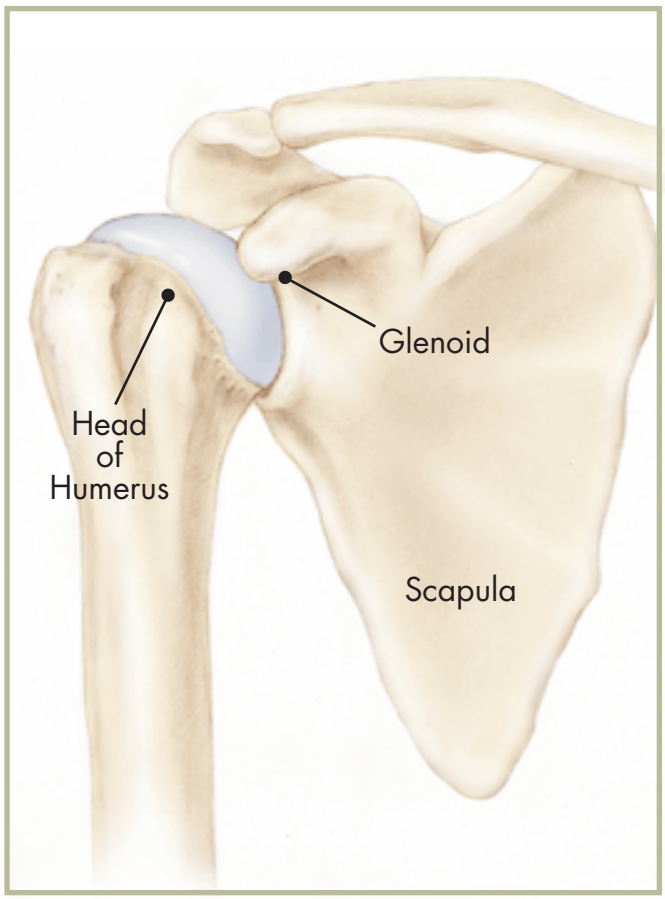

Figure 1. The bones of the shoulder

As you can see in *Figure 2*, the rotator cuff is situated underneath a bone of the shoulder known as the acromion. The space for the rotator cuff is very tight and in many patients the cuff may rub on the under surface of the acromion. This can lead to inflammation which is painful, particularly with use of the arm or at night in bed. This condition is known as impingement syndrome. Although this can sometimes settle with rest, physiotherapy or an injection, surgical treatment may be required particularly if your pain is severe or ongoing.

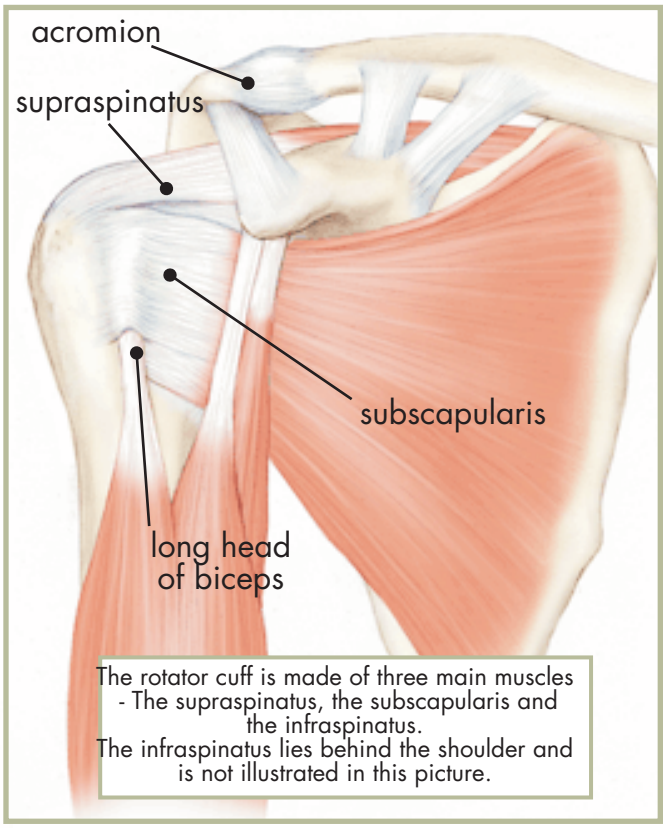

Figure 2. The muscles of the shoulder

If the rubbing of the rotator cuff underneath the acromion continues, a small hole may be torn in the rotator cuff. An example of such a tear is shown in *figure 3*. This very often leads to significant pain which does not resolve. If this tear is small then the arm may still have full function. If the tear becomes large then you may lose power in your arm, and eventually may not be able to lift the arm at all. In rare cases this may also eventually lead to arthritis within the shoulder joint. In the early stages a rotator cuff tear can be repaired with surgery. However, if it becomes too large, it may be impossible to repair. Surgery in these cases can be beneficial but you may still be left with some pain and loss of function in the shoulder.

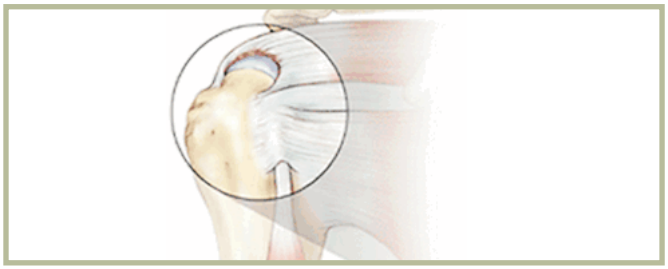

Figure 3. Rotator cuff tear. The tear shown involves the suprasinatus muscle. The tear can often extend to include the other muscles

SURGICAL TREATMENT

In the early stages of the disease, with impingement syndrome but no rotator cuff tear, the treatment is relatively straight forward. The operation performed is called a *subacromial decompression* (also known as an *acromioplasty*) and it involves the removal of a small piece of bone (known as a spur) from the under-surface of the acromion. This increases the space available for the rotator cuff and therefore the amount of rubbing on the under-surface of the acromion is reduced. This allows the inflammation and pain to settle. This procedure is done through keyhole (arthroscopic) surgery. A number of small holes (about 1 cm long) are made around the shoulder and a camera and surgical instruments are introduced into the joint. A shaver is used to remove the bone from the under-surface of the acromion. This operation is illustrated in *Figure 4, 5 & 6.*The scars usually heal to become nearly invisible.

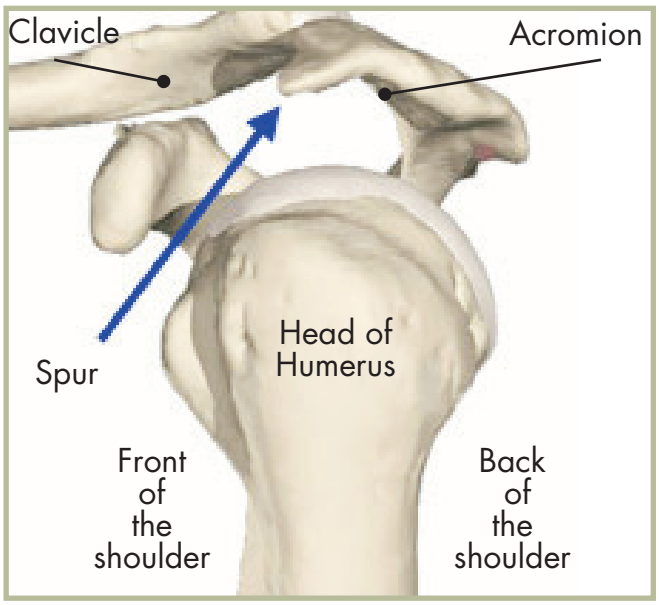

Figure 4. Side-on view of the shoulder. The spur at the front of the acromion is shown by the arrow.

If the rotator cuff is torn, then more extensive surgery is required. Stitches are used to repair tears in the tendon and to reattach the tendon to bone . An example of a rotator cuff repair is shown in *figure 7.* A number of small metal anchors may also be used to help with reattachment of the rotator cuff.

The type of surgery performed depends on the exact nature of the tear with the aim being to get as strong a repair as possible. In order to get a solid repair it is usually best to make a small incision – about 5cms long – over the outside of the shoulder. However certain types of tears are best repaired arthroscopically without the need for open surgery.

If the rotator cuff tear is massive, then it provides us with a great deal of surgical difficulty. Sometimes there is no chance of repairing the cuff by any means. In this case a subacromial decompression is performed and no other procedure attempted.

Figure 5. View of the shaver removing the spur from the under-surface of the acromion

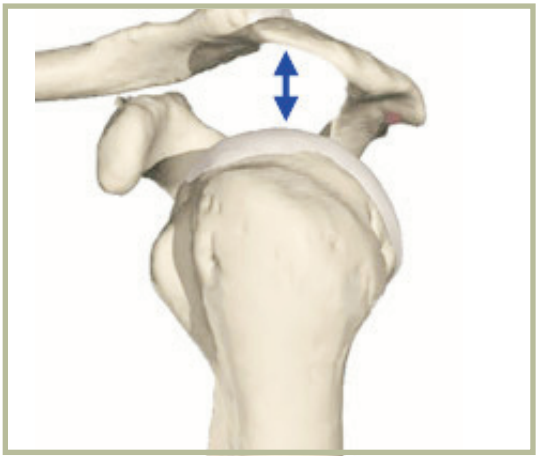

Figure 6. View after completion of the subacromial decompression. Note there is now greater space for the rotator cuff.

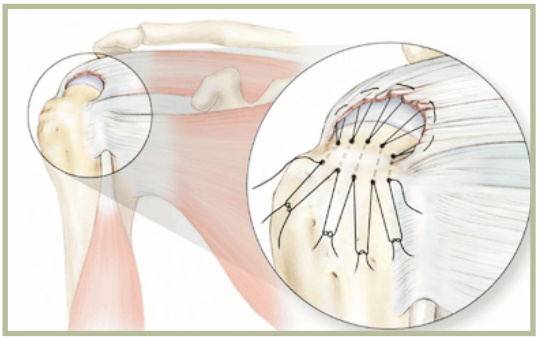

Figure 7. An example of a rotator cuff repair. Stiches are used to secure the cuff back down onto the bone.

ACROMIOCLAVICULAR JOINT

Another potential source of pain in the shoulder is the acromioclavicular joint (the 'ACJ'). This is the joint between the outer end of the clavicle and the acromion and is illustrated in *figure 8*. This joint is prone to arthritis not only in the elderly patients but also in the young. The best way to treat this condition is to remove the outer one centimetre (half an inch) of the clavicle. This prevents the two bones rubbing on each other and removes the source of pain. This operation is usually done arthroscopically and is shown in *figure 9*. After the surgery the coracoclavicular ligaments remain intact and hold the clavicle in its normal position. This means there is no loss of function or strength in the shoulder – in fact even professional athletes can return to their sport without any difficulty.

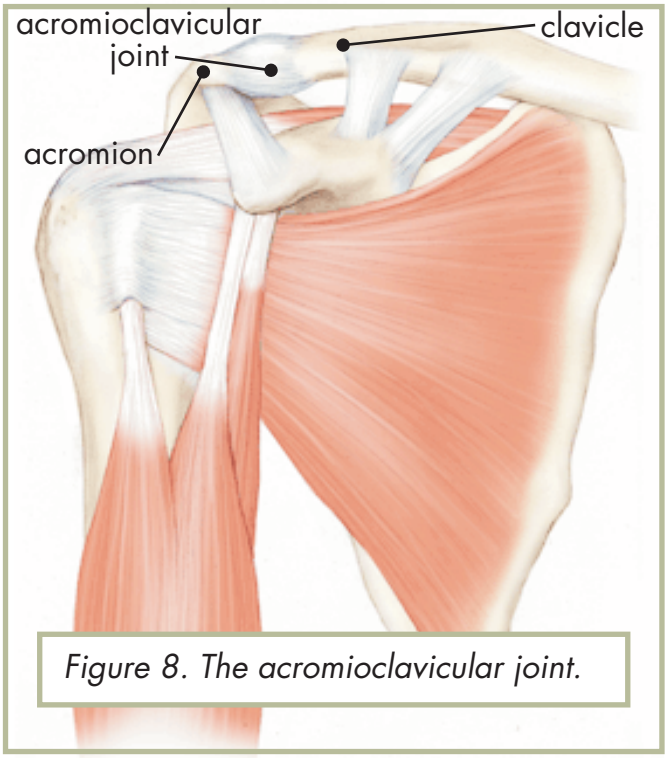

Figure 8. The acromioclavicular joint.

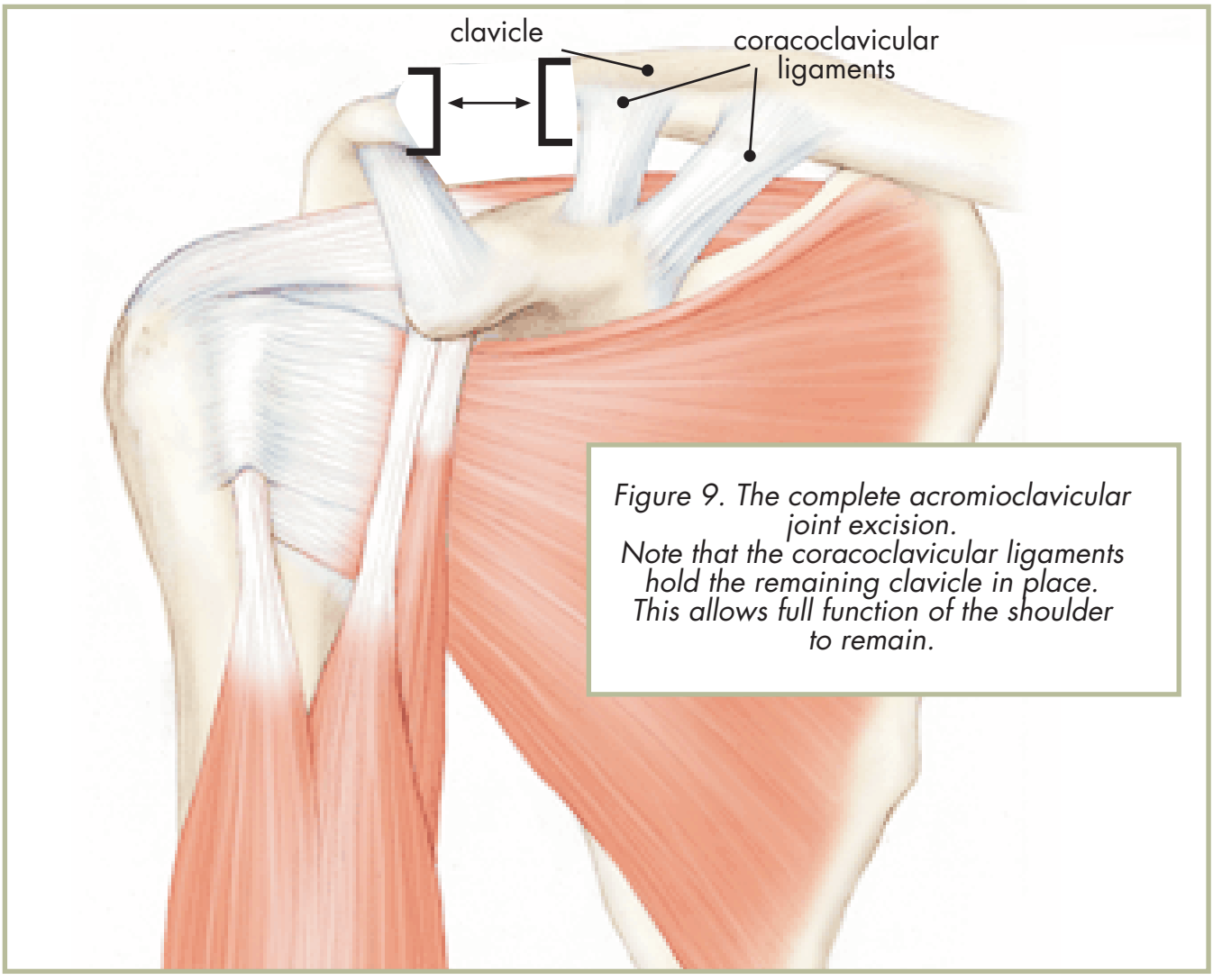

Figure 9. The complete acromioclavicular joint excision. Note that the coracoclavicular ligaments hold the remaining clavicle in place. This allows full function of the shoulder to remain.

RISKS OF SURGERY

ONGOING PAIN:

Although impingement and rotator cuff surgery is very successful, it may not be possible to eliminate all your pain. In the majority of cases any residual pain is mild and certainly less than before your surgery. However, in some cases, the amount of pain relief obtained may be less than expected. This is particularly true if you have arthritis within the shoulder joint, or a rotator cuff tear that is so large it is not repairable.

RE-TEAR OF THE ROTATOR CUFF:

Most tears of the rotator cuff occur because the tendon is at least partly worn out. This means that even after a successful repair, the rotator cuff may tear again. Even if this happens your shoulder is usually much better than before surgery. This is because the subacromial decompression which is performed with the repair usually gives significant pain relief even if the rotator cuff tears again.

STIFFNESS:

Your shoulder will be quite stiff following the surgery. This will gradually improve but may take a few months until it is completely better. Occasionally this stiffness can be quite severe and last for many months. This is called a "frozen shoulder" and can be associated with an increased level of pain. In almost all cases it resolves completely and does not affect the outcome, but it can certainly make your recovery longer than we would desire.

CHANGE IN APPEARANCE OF YOUR UPPER ARM:

Part of your biceps muscle runs through the shoulder joint. This part can be torn and damaged and must be released at the time of surgery in order to treat your pain. If this is required you may notice a slight change in the appearance of your upper arm along with some temporary aching. This does not generally affect the function of your arm.

INFECTION:

Infection in the shoulder joint is rare following surgery, but if it does occur you will usually require another stay in hospital and possibly further surgery.

There are a number of minor complications that can occur following surgery. These usually settle completely and do not affect the outcome. These complications can include bruising, swelling, tingling of your fingers, nausea, vomiting, sore throat and bruising around the intravenous drip site.

MAJOR COMPLICATIONS:

Thankfully, major complications following shoulder surgery are very rare. Some of these complications can include damage to major arteries and nerves, sudden death from anaesthesia, heart attack or stroke, deep vein thrombosis and pulmonary embolus.

Obviously, it is possible that these complications can lead to either loss of your limb or your life, but this is an extremely uncommon occurrence. If you have any particular concerns, myself or my anaesthetist would be happy to discuss this with you at length.

The list of complications is not fully comprehensive but it does outline what are considered to be the major risks of surgery and those which have the most serious outcome.

Further information regarding complications of shoulder surgery is found on my website www.terryhammond.com.au Click on "Shoulder Problems - Complications of surgery". I strongly suggest that all patients read this before having surgery.

Please feel free to discuss this with me at any time – you should not proceed with surgery until you are satisfied that any issues regarding the risks of surgery have been adequately discussed.

THE DAY OF YOUR SURGERY

You will usually be admitted on the morning of your surgery to either Pindara Main Hospital (Allchurch Ave) or the Day Procedure Centre (Pindara Place, ground floor). You will often be admitted some hours before your surgery. This time can be quite boring so it is a good idea to bring a book or magazine with you.

The nursing staff, my anaesthetist and I will see you before your surgery and go through a series of questions confirming your name, date of birth, what surgery you are having and what side we are operating on. In most cases you will have a general anaesthetic and be asleep during the whole procedure. You will then spend some time in the recovery unit before either being allowed home or staying overnight. You will have strong painkillers and therefore you will be reasonable comfortable immediately after your surgery.

You should tell your friends or relatives that this whole process is quite lengthy and will take some hours. I will see you immediately after your surgery but often it is difficult to remember what I say due to the anaesthetic drugs. I will therefore see you in the ward or contact you in the days following your surgery to give you information about your operation. Patients admitted to Pindara Main Hospital will often stay overnight but those in the Day Procedure Centre will be allowed home on the day of surgery.

AFTER YOUR SURGERY

DR. TERRY HAMMOND
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You should leave your dressing intact until I see you in my rooms. There may be some fluid or blood underneath them but this is quite normal. If there is any sign of infection i.e. redness or a pusy discharge you will need to contact myself, my rooms or the Emergency department of Pindara Hospital.

You should avoid getting your incisions wet for a total of two weeks after your surgery. You may shower but try to avoid wetting the dressings. When showering you can take your arm out of the sling and straighten your elbow out to allow your arm to hang straight down; you can then lean forward a little to wash your armpit.Your must not swim in the ocean, swimming pool or a spa for at least 2 weeks after your surgery.

When your arm is in the sling it is very common for the nerve behind the elbow to become squashed. This will lead to pins and needles in your hand. If this happens it is very important to let the nerve recover by spending some time out of the sling with your **elbow straight**.

The following sections offer specific advice depending on whether or not you required a repair of your rotator cuff.

ADVICE FOR PATIENTS WHO HAVE HAD A SUBACROMIAL DECOMPRESSION **WITHOUT** A ROTATOR CUFF REPAIR.

WHEN SHOULD I WEAR MY SLING?
You should wear your sling for comfort but you can remove it anytime you wish. You can use your arm and shoulder for anything you want. There are no restrictions on what you can do but of course you should let your pain level guide you on how much activity you can manage. Try to restrict your activities as much as possible - if you do too much the shoulder can become painful.

SHOULD I DO ANY EXERCISES OR PHYSIOTHERAPY?
You should take your arm out of the sling and exercise your hand, wrist and elbow. Bend and straighten your elbow and then turn your wrist around in a circle. Make a fist and then straighten your fingers. Do these exercises at least three times a day. A physiotherapist will advise you regarding these exercises whilst in hospital and I will usually refer you for physiotherapy when I see you after your surgery.

WHEN CAN I DRIVE?
You may drive when you feel safe and comfortable (usually after about two weeks). *Legally you cannot drive while wearing a sling.*

WHEN CAN I WORK?
You can go back to work at any time but you will usually need at least two weeks off due to discomfort from the surgery. Heavy manual labourers may need more time off.

WHEN CAN I PLAY SPORT?
You can play sport when your pain has settled.

ADVICE FOR PATIENTS WHO HAVE HAD A SUBACROMIAL DECOMPRESSION **WITH** A ROTATOR CUFF REPAIR.

WHEN SHOULD I WEAR MY SLING?
You should wear your sling while in bed or up walking around. If you are sitting down you may remove your sling but be careful not to lift your arm. You should discard your sling completely after six weeks.

WHEN CAN I USE MY HAND?
You may use your hand at the level of your waist for activities such as writing, typing, eating and going to the toilet. However, try to restrict these activities as much as possible – if you do too much the shoulder can become very painful.
You cannot lift your arm for six weeks – this is because doing so can tear out your stitches.

SHOULD I DO ANY EXERCISES OR HAVE ANY PHYSIOTHERAPY?
A physiotherapist will visit you in hospital to give you exercises. When I see you after your surgery I will refer you for formal physiotherapy. In some cases (for example if you had a large tear) then physiotherapy will be delayed for a number of weeks.

WHEN CAN I DRIVE?
Legally you cannot drive while wearing a sling therefore you cannot drive for at least 6 weeks.

WHEN CAN I WORK?
As your arm will be in a sling for six weeks, you will usually need at least two months off work. You cannot do heavy work for at least three months.

WHEN CAN I PLAY SPORT?
Your must not play sport for at least four months after your surgery.

WHAT SHOULD I DO AFTER SIX WEEKS?
After six weeks you should discard your sling. The rotator cuff repair will now be strong enough for you to lift up your arm as high as you want. You can then resume gentle day-to-day activities, such as driving, washing your hair and lifting up your arm.

PAIN RELIEF GUIDELINES

When you are discharged you will be given pain-killing tablets. Shoulder surgery can be very painful and it is therefore vital that you take enough medication to control your pain. The most common reasons for significant pain after surgery are using your arm too much and under-dosing your medication. I strongly recommend that you keep an accurate record of the exact time you take each medication. This allows you to know exactly when the next dose may be taken. Some patients should avoid certain medications - please read the information below to see if there are any you should not take.

Please note that the description of the medications below use the generic (official) name for the drug. The drug you get from the chemist often has the brand written in large letters on the box but the generic name is usually written as well - often in smaller writing. Please note carefully the dose of the drug; this may vary depending on your age.

Although you should take enough pain-killers to control your pain, you do not need to take all the medication. Start with the Paracetamol and add the Celebrex if needed. If your pain is still not controlled try some of the other medications. They may be particularly helpful at night to help you sleep.

As your pain settles, decrease the number of tablets you take. Stop the Oxycontin, Oxycodone and Tramadol first. When your pain is improved further, stop the Celebrex and finally cease the Paracetamol.

All strong pain-killing medications may have significant side effects - for example nausea, vomiting, dizziness, drowsiness, itchiness, rash etc. It is extremely important to stop any medication that gives you significant side effects. You can then try one of the other medications. Do not keep taking medication if side effects are unpleasant. Many patients prefer to put up with some pain than experience the side effects of medication.

Strong pain killing medication can make patients constipated and if you develop this or suffer from constipation then ask your chemist to prescribe a laxative medication such as Coloxyl.

The following guidelines provide further information regarding your medications.

PARACETAMOL

Take this regularly even if your pain is not severe. Take 1gm (usually two 500mgs tablets) four times a day if you are under 60 years old or take 1gm every six hours if you are over 60 years old.

CELEBREX

Take 100mgs twice daily. Take this regularly even if your pain is not severe but this can be stopped in 5 days if your pain settles. DO NOT TAKE if you have ischemic heart disease i.e. a history of a heart attack or angina or if you have had a cardiac stent.

TRAMADOL

Take 50-150mgs three times a day if you are less than 60 years old or 50-100mgs three times a day if you are over 60 years old. DO NOT TAKE if you have had seizures or epilepsy. Occasionally tramadol can make you feel `strange' or `jittery'. If so stop taking it.

OXYCODONE

This is NOT TO BE TAKEN REGULARLY. It is a strong pain killer for use if the other medications are not completely controlling your pain. Take it if and when you need it – often this may be at night.

Take up to 10-20mgs every four hours as needed if you are less than 60 years old and 5-10mgs every four hours as needed if you are over 60 years old. If the medication makes you nauseated, stop taking it or decrease the dose.

OXYCONTIN

Oxycontin is a strong pain killer for use if the other medications are not controlling your pain. You can take 10-40mgs twice a day. It is particularly useful at night. If the medication makes you nauseated, stop taking it or decrease the dose.

RECOVERY FROM SURGERY

I will generally see you in my rooms 1-2 weeks after your surgery. We will remove your dressings and check your wounds. I will ensure that your recovery is going as planned and I can answer any further questions that you may have at that stage.

It is important to realise that shoulder surgery has a very long recovery period. It often takes at least three months before you are really pleased you had the surgery. During that time, there may be periods when the shoulder is quite uncomfortable; you may think it is improving only to find it seems to get worse again. There may also be unusual sensations in the shoulder i.e. clicking, grinding or catching. All these findings are very common and generally do not indicate any problem. These symptoms will gradually improve with time.

However, the full recovery often takes *a year or more*. This long recovery period can be very frustrating but luckily shoulder surgery is associated with very good results. Well over 90% of patients will achieve an excellent result.

PHYSIOTHERAPY

All patients will see the physiotherapist in the hospital and will be given a series of exercises to do at home. In the initial stages these should be done very gently - if they produce any pain then they should be decreased or stopped. It is far better to do too few exercises than to do too many.

When I see you in my rooms after surgery I will generally refer you to your physiotherapist. Most commonly people wish to see a physiotherapist located near their home. I would appreciate if you could provide me with your chosen physiotherapist's contact details so I can communicate with them.

I will send them a copy of my operation notes and a copy of my protocols to be followed after surgery. Most physiotherapists are aware of my recommendations regarding therapy after surgery.

All my protocols are available on my website www.terryhammond.com.au and your physiotherapist can download these from that site. It is vital they know whether or not you have had a rotator cuff repair - the exercises are very different for different surgeries. If your physiotherapist has not received information, please ask them to contact my office and we can forward the necessary documents.

In some cases physiotherapy is delayed (usually because of an extremely large tear). In that case I will discuss your specific treatment with you when I see you following your surgery.

When you have recovered from your surgery and are using your arm relatively normally, it is often helpful to return to your physiotherapist. At that stage they can begin a long-term rehabilitation programme that can reduce the chances of developing further shoulder problems.

Please ask your physiotherapist to contact me at any time if they have any questions regarding your care.

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