



Table of Contents

Introduction	4
The Shoulder Joint	4
How Arthritis Affects Your Shoulder	5
Indications for Surgery	6
Total Shoulder Replacement Surgery	6
Reverse Total Shoulder Surgery.....	7
Preparing Yourself and Your Home Before Surgery	8
Your Hospital Stay.....	9
What to Expect after Surgery	11
Sling questions	13
Activity While You Are in the Hospital	15
Physical/Occupational Therapy	16
Discharge Instructions Following Replacement	17
When to Contact your Surgeon	20
About your Surgeon	22
Word List	24



Introduction

Many people know someone with an artificial knee or hip joint. Less common, but just as successful in relieving joint pain, is a shoulder replacement (arthroplasty). This procedure may be recommended if arthritis or degenerative joint disease makes your shoulder stiff and painful or if the upper arm bone is fractured so badly that tissue death may result.

This booklet will help provide answers to the questions you may have about a shoulder replacement (arthroplasty). It contains information about what to expect before, during and after your hospitalization. You will learn about the hospital routines, the people who will assist in your recovery and changes in your lifestyle.

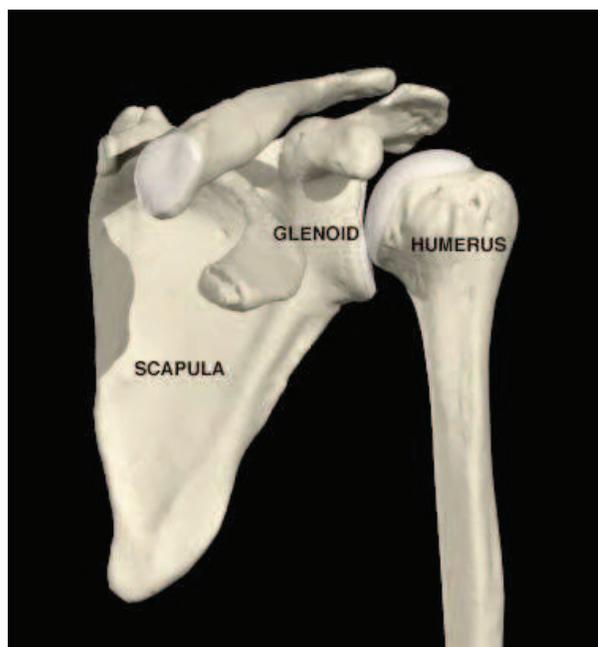
The nursing staff, physicians and other healthcare team members are available to answer your questions or concerns.

There is a Word List on page 24 that explains terms that may be new to you.

The Shoulder Joint

Joints are areas where bones connect and motion occurs. The shoulder joint is one of the most complex joints in the body. It is a ball and socket joint with greater range of motion than any other joint. Most shoulder movement occurs where the head or top of the humerus (ball) fits into the glenoid cavity of the scapula (socket).

Three joints form your shoulder. Working in unison, they allow you to move your arm. The largest joint — and the one most often affected by arthritis — is the glenohumeral joint. Most of your shoulder movement occurs here. When you have arthritis a significant amount of stiffness leads to a restricted motion and much pain with attempted motion.



How Arthritis Affects Your Shoulder

Various types of arthritis can affect your shoulder. The most common types include:

- **Osteoarthritis:** Osteoarthritis usually affects the shoulder of the arm you use the most. It causes severe pain and sometimes causes extreme loss of motion in your shoulder.
- **Rheumatoid arthritis:** Rheumatoid arthritis isn't as common in the shoulder as it is in other large joints, such as your knees and hips. But when it does occur, rheumatoid arthritis often causes pain and weakness in both shoulders.
- **Rotator cuff tears and arthritis:** Sometimes arthritis damages your shoulder joint enough to cause tears in your rotator cuff — the muscles that surround your shoulder joint and help you move your arm. This is most common with rheumatoid arthritis, but occurs in other types of arthritis as well. Rotator cuff tears that go unrepaired can also lead to arthritis.
- **Other types of arthritis:** If you have other types of arthritis in your shoulder, such as post-traumatic arthritis and avascular necrosis, surgery may help improve pain and loss of motion.

Below, you can see how the arthritic shoulder differs from the normal. The head is not round and there is no space between the glenoid (cup) and the ball (humeral head).



ARTHRITIC

In the arthritic shoulder there is very little, if any, space between the glenoid and humerus and in most cases very large bone spurs develop leading to a decreased motion.



NORMAL

Indications for Surgery

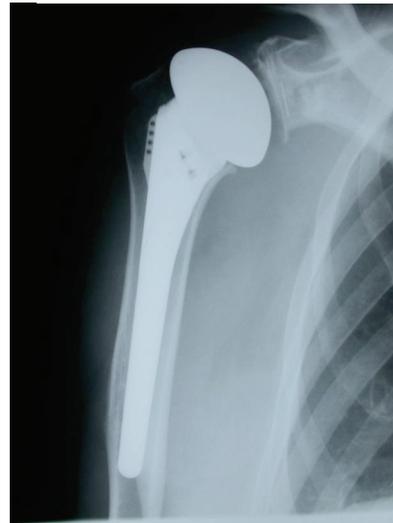
Chronic (ongoing) shoulder pain or loss of movement is the most common reasons for shoulder replacement surgery (arthroplasty). If you've tried medications and exercises for your shoulder and haven't had much luck, you're probably thinking about surgery. Although joint replacement isn't the only surgical procedure available, it is the most common one for shoulder arthritis.

Total joint replacement can increase the range of motion in your shoulder, making it easier to move your arm. It also improves strength and reduces pain in your shoulder. In most situations, the range of motion can be returned to approximately 75% of normal. Most importantly (and this is the main reason to have the surgery) a significant amount of your pain will be eliminated by the surgery.

Total Shoulder Replacement Surgery

You have decided to proceed with a total shoulder replacement. During surgery, the surgeon and assistants will remove the damaged parts of your shoulder and replace them with artificial parts or components call prostheses (pros-the-sez). Your surgeon will choose the prosthetic parts that are best for you. All of the devices that are used in the shoulder are made of stainless steel with a plastic material for the glenoid portion. The diagrams and x-rays below show what the two devices look like and where each will be located in your shoulder.

Total shoulder replacement



The biggest question most people have is “how long does it last?” This is a great question, but unfortunately it varies from person to person. In most of the studies that are available that have followed patients over a number of years, 85% of the shoulders are functioning well at an average of 12-15 years. However, this is just an average and individual results vary depending on your age and activity level. In general, that younger and more active you are, the more likely the device will potentially have problems as a result of the “mileage” that it experiences.

Reverse Total Shoulder

In some cases, there is significant arthritis in the joint, but there is also a tear of the rotator cuff that is too large to repair. In those cases, a different type of replacement is necessary. This is called a Reverse Replacement. The reason it is called “reverse” is because the ball and socket are inverted from the normal. (See Figures below) The reason this device is necessary is because the muscles that rotate the shoulder bone (the rotator cuff) are no longer connected. By changing the orientation of the ball and socket, the deltoid muscle is now able to move the shoulder and improve your function.

While there is great potential for improvement with this device, there are also more potential problems. The device is more constraining to the joint so that there are more stresses experienced by your remaining normal bone. What that means is that the device can fail at a higher rate than a regular total shoulder. In general, these devices are reserved for older patients (older than 70 years of age), although occasionally a younger patient is a candidate as a result of a severe combination of arthritis and a rotator cuff tear that is unrepairable.

REVERSE SHOULDER



STANDARD TOTAL SHOULDER



Preparing Yourself and Your Home Before Surgery

Recovery is a gradual process and will take time after surgery. Plan for your return home before you enter the hospital. Most patients return home either the day after surgery or one day later.

- Ask your spouse, children or friends if they can assist you with shoulder exercises for after leaving the hospital.
- Before surgery, it may be helpful to practice daily activities not using your arm that will be affected by surgery.

If you are interested in assistance from a home healthcare agency or public health nurse, select the agency before hospitalization. Your doctor's office can help you with these arrangements. Most of the time, your insurance will cover the cost of home health care for a few days (7-10) after surgery. It can be arranged that you have a nursing assistant come to your house and help with day to day things you may need as well as help with physical therapy exercises.

- Anticipate temporary changes to your activity level.
- Plan to leave your home clean and in order.
- To prevent falling, remove throw rugs and excess clutter from traffic paths.
- Place a sturdy armchair in your living room near a table so that magazines, hobby supplies, TV remote, telephone (a cordless is a

good idea) or other items you want can be within reach.

- Rearrange your kitchen so that often-used utensils are easily accessed. Place them at a height so that you do not need to bend or reach to get them. It also would be helpful to have a sturdy chair available in the kitchen.
- Prepare some meals in advance and freeze them.
- If possible, ask your mail and newspaper carrier to deliver to the door.
- Ask your church or synagogue to arrange visits while you recover, if desired.

What to bring to the hospital

- Remember to bring your sling!
- Leave your valuables at home. Any rings should be removed, especially from the side where the surgery will take place.
- Do not bring your medicines that you usually take. It is important to have a list with the appropriate dosages. This will be requested from you at the time of registration at the hospital.
- Comfortable, non-skid walking or athletic shoes. Elastic laces are available, eliminating the need to tie your shoes. Athletic shoes are available with hook and loop fasteners. Another option are slip-on shoes or slippers.
- A warm, knee-length bathrobe that opens in front.
- Clothes that are soft and loose fitting. Women can bring pants with elastic waistbands and sleeveless tops to make things easier. For men, gym pants and loose shirts without buttons are easiest.

Your Hospital Stay

You and your surgeon will decide when you should be admitted to the hospital. It is important to follow these instructions:

- You should stop all medicines that have a potential to cause bleeding about 7 days before.

The most common medicines that fall into this category include aspirin, antiinflammatories (such as Advil, Motrin, Naprosyn) and blood thinners such as Plavix and Coumadin.

- Supplements: In general, you should discontinue all herbal and over-the-counter supplements one week before surgery. You may continue multivitamins, but nothing else. Some supplements affect bleeding tendencies and may cause problems with wound healing.
- Before surgery, do not eat or drink anything after midnight. Your stomach must be empty before you receive the anesthetic. This helps prevent nausea, vomiting and other complications during and after anesthesia.
- Take a shower or bath the evening before surgery. This will help decrease the amount of bacteria on your skin.
- A good night's rest is important before surgery.
- Do not wear makeup the morning of surgery.
- Take only the medication your physician or nurse tells you to take on the morning of your surgery. (with a small sip of water)

Morning of Surgery

- After admission, the nursing staff will take your temperature, pulse, respiration rate and blood pressure.
- Anti-embolism or support stockings may be provided to promote circulation to the legs.
- An intravenous (IV) line will be started before surgery.
- You should receive a dose of antibiotics before surgery.



Going to Surgery

- You will be asked to empty your bladder.
- Remove all jewelry (including rings), dentures, contact lenses and nail polish.
- You may wear your glasses/hearing aid if necessary.
- Relatives and friends will be given instructions on where to wait.
- A surgical orderly will take you on a cart to the preoperative waiting area.
- The affected arm and shoulder may be scrubbed and shaved to prepare for surgery.
- The anesthesiologist will discuss the type of anesthesia to be used.



What to expect After Surgery

After surgery, you will be moved to the Post-Anesthesia Care Unit (PACU). Your relative will be told when you are in the PACU. One of the most important functions of the PACU is to manage pain and nausea as you awaken from anesthesia. Nurses will monitor your vital signs, alertness, pain or comfort level and need for medications.

In the PACU, you may notice a variety of equipment. The room is brightly lit, and as you awaken the noises may seem louder than usual. If you feel cold, blankets are available. It is normal to receive oxygen through a facemask.

The average length of stay in the PACU is one to two hours. If there is an extended delay, your relative may check with the nursing staff. When the anesthesiologist decides you are ready to leave the PACU, a surgical nurse or a surgical orderly will take you back to your room.



The first 24 Hours

After you return to your room, your blood pressure, pulse, color, warmth, movement and sensation of your arm and fingers will be checked frequently. The nurse also will check the bandage on your shoulder. Report any soreness, numbness or tingling in your arm or fingers to the nurse.

You may be given fluids intravenously (IV) for one to two days after surgery. Tell your nurse if you have any pain or notice redness around the IV site.

Once you can tolerate liquids and your nurse can hear bowel sounds, you will be able to eat solid foods.

You will be given an antibiotic through your IV for about 24 hours. Antibiotics are given to prevent infection.

One small plastic suction drainage tube may be used to draw excess blood and fluid from the area around your incision. The drainage tube usually is removed 24 to 48 hours after surgery.

Oxygen may be given through a face mask or nasal prongs to soothe your throat, to help you breathe easier and to loosen secretions in your lungs. The oxygen equipment can be removed for short periods of time.

Coughing and Deep Breathing

You should be encouraged to cough and deep breathe frequently for the first few days after surgery. To help you cough, take a slow, deep breath. Breathe in through your nose and concentrate on fully expanding your chest. Breathe out through your mouth and concentrate on feeling your chest sink downward and inward. Then, take a second breath in the same manner. Now, take a third breath. This time, hold your breath for a moment. Then cough vigorously. As you cough, concentrate on forcing all the air out of your chest. Repeat this exercise two more times.

- Relax.
- Repeat 10 times every hour are awake.

To exercise your legs:

- Lie on your back.
- Tighten the muscle on top of your thigh by pressing your knee down toward the bed.
- Hold for five seconds.
- Relax.
- Repeat 10 times on each leg every hour you are awake.

Circulation Aids

Circulation aids promote the return of blood to the heart and decrease your chance of developing a blood clot while you are less active after surgery.

Support stockings (TEDs) are one type of circulation aid. If prescribed, wear them to surgery and throughout your hospital stay. Your stockings will be removed on a regular basis to air your skin.

Exercise

Exercising your legs after surgery is one way to promote blood flow and decrease your chance of developing a blood clot. To exercise your feet:

- Push your toes toward the end of the bed.
- Pull your toes up toward the head to the bed

Sling Questions

Your arm will be placed in a sling following the surgery. (Figure) You will be given the sling at your preoperative visit and you will be fitted for it prior to leaving the office.

Following surgery, you can take the sling off while you are in bed and sitting in your room. When sitting or lying down, it is important to keep a small pillow or folded blanket under your elbow and behind your arm to prevent the arm from falling back and straining the area of your operation. It is encouraged that you wear your sling while you are walking around or in an environment where your arm may be placed at risk, such as in crowded places for the first two weeks.

In most cases, you should wear the sling to bed for the first week or so, until you have good arm control and it seems comfortable to go without it. The sling can be discontinued altogether after two weeks. However, some patients find that their arm becomes slightly more painful and/or tired towards the end of the day for a couple of weeks after that. In these situations, the sling should still be used during those times.



Pain

It is normal to feel pain or discomfort after surgery. Tell the nurse if you are having pain or discomfort. When you have pain, your nurse will ask you to rate your pain on a scale of zero to 10 (0= no pain, 10= worst pain imaginable). Your pain may not be totally relieved. However, pain medication can be given to make you more comfortable. Tell your nurse if you experience any other discomfort. If you suspect the pain medication is causing any nausea or other symptoms, let your nurse know. There are many different medicines that are used for pain control and these are all available to you while you are in the hospital.



Ice will also be applied to help reduce swelling and discomfort around your incision. Tell your nurse if your arm gets too cold or if there are any changes in the sensation of your extremity.

Ice Therapy

In many cases, your doctor will prescribe a machine that circulates ice water through a mechanical device that is attached to a shoulder-specific wrap. This will depend on whether or not your insurance will cover the cost of the device. A representative from the company will contact you and discuss this with you. In addition, you will be given an option to pay for the device out of your own pocket if you choose to do so. The specific devices vary and you will receive a different instruction manual that is specific to your device directly from the company that provides the machine.

If you use the device, you can certainly keep on shoulder as much as is comfortable, especially for the first week following surgery. Good times to apply the device include any time the pain begins to increase, following your daily ice routine and before bedtime to limit some of the pain that often occurs while in bed.

Activity While You Are in the Hospital

While you are in the hospital, healthcare providers will help you perform self-care activities.

Self-care allows you to remain as responsible and as independent as possible. While in the hospital, you will learn how to care for yourself before you return home. Your participation is vital to increase your independence.



Your healthcare team members will:

- Answer your questions
- Follow your special healthcare plan
- Encourage your participation in your hospital care
- Show your family and friends ways to take part in your care.
- This may include learning dressing changes, incision care, applying stockings and using assistive devices correctly.
- Teach you ways to provide self-care
- Teach your family and friends ways to care for you after you leave the hospital
- Help you plan for the day you leave the hospital
- Assist with care when you are unable to do it yourself

You should be able to get out of bed and into a chair the day after surgery. It is encouraged that you get out of bed at least for all of your meals. The nurse or caregiver will help you out of bed. Initially, a trapeze may be used as an assistive device to help you move in and out of bed. Eventually you will be taught how to get in and out of bed by yourself. You will be able to walk to the bathroom with assistance the day after surgery.



Physical Therapy

After surgery, you will begin your shoulder exercise program that was shown to you in the hospital. A formal physical therapy program should start within the first week of the surgical procedure. You will be given a prescription for therapy at your preoperative appointment so that you can set up your rehabilitation program prior to your surgery. It is ideal to have visits set up with your therapist so that you begin within the first week.

At your first appointment a physical therapist will examine you. Physical therapists are trained professionals in rehabilitation. With direction from your surgeon, they will determine an exercise program for you.



To increase your comfort during exercise, you may want to talk with your nurse or therapist about taking pain medication 30 to 45 minutes prior to your physical therapy sessions.

Your physical therapy program will include “passive” and “active” exercises for your affected arm. Your therapist will gently perform “passive” exercises with your shoulder. In these exercises, you relax and the therapist carries the weight of the arm through various movements. He or she also will teach you “active” exercises (those you can do

by yourself) for your elbow, wrist and hand. Your therapist will check your daily progress and will keep your surgeon informed.

If possible, a member of your family or a friend should accompany you to some physical therapy sessions to learn the exercises you should do at home. Your friend or family member will practice these exercises at your sessions, under the supervision of the physical therapist. The therapist will give you and your relative or friend verbal and written instructions on how to assist you with these exercises.



Discharge Instructions

What if I need help at home?

Your healthcare team will help you and your family plan your home care. If needed, the nurse may suggest resources to help you and your family after leaving the hospital. In many cases, the doctor's office has already discussed this with you and has arranged for home health care.

Wound Care

Your wound will have a sterile dressing placed at the time of surgery. Most of the time the dressing is left in place for three days. Since most patients go home before then, you can take the dressing off on day three. There will be small paper strips that are adherent to your skin once the dressing is removed. These should stay in place until they fall off on their own. Most of the time this occurs within ten days to two weeks from surgery. The wound is typically dry and you are now able to shower and wet the wound without problems. You should not submerge the wound either in bath or pool until the strips fall off.

It is not unusual to experience a fair amount of bruising and discoloration that can extend down the arm and hand and occasionally into the chest and breast area. This is normal and will go away over a period of ten days to two weeks.

Activity at Home

Everyone's progress is different after this surgery. Listed are guidelines to follow. Follow all specific instructions from your surgeon, nurse and physical therapists. The following guidelines may be of benefit:

The following are the basic guidelines and restrictions:

- Use your sling as directed. It will provide stability for the shoulder and allow the soft tissues to heal and regain normal strength.
- Use your hand for gentle activities directly in front of you. You may bend the elbow, wrist and hand but be careful with shoulder motion. In general, tabletop activities such as eating, writing and computer work are alright to do.
- No lifting or holding weight until given permission by the surgeon. No heavy housework such as vacuuming. Some housework can be done with the unaffected arm. At the six-week follow-up appointment, your surgeon may permit you to start lifting up to five pounds.
- No heavy lifting (as defined by your surgeon) for the rest of your life.
- Increase your activity only as your surgeon has directed. It may take three months to one year before you regain optimum function and strength of your arm.
- Do not put weight on your hand, arm or shoulder by pushing, pulling or leaning.

Exercises

In most cases, shoulder exercises will be taught to you by your surgeon and/or your physical therapist while you are in the hospital. These should become a regular routine in your day, once you are at home. In general, performing these simple exercises should be done three times per day for five minutes. They should start the day after surgery. These help you maintain the function of the affected joint as well as in unaffected joints.

The exercises should not be painful in any way. If you begin to develop increasing pain following this simple routine, rest for the rest of the day and restart the exercises the next day. You will not lose any ground by resting and resuming exercises when you are pain-free.

Driving

You should not drive until you have completely stopped using the postoperative narcotic medications. If there is any question, you should wait until you see the surgeon at your post-operative visit. Part of this restriction relates to your insurance company's restrictions following surgery of a limb.

Sexual Activity

You may resume sexual activity after your follow-up appointments, depending on the extent of your surgery. During sexual activity, it is important that your shoulder does not rotate or twist. Keep your arm at your side. It is suggested that you lie on your back. Feel free to discuss sexual activity with your surgeon, nurse or physical therapist.

Diet

Follow an eating plan to achieve and maintain a healthy body weight for the rest of your life. Maintaining a healthy weight will help avoid staining your new joint.

Eat a variety of foods to maintain a nutritionally balanced diet. This means including foods from all food groups on a daily basis. Wound healing depends on a well-balanced diet.

Constipation can occur as a side effect of pain medication and as a result of decreased activity after surgery. Eat high fiber foods such as fresh fruits/vegetables and whole grains to help prevent constipation. Drink six to eight glasses of water daily unless instructed otherwise.

Ask a dietitian your general nutrition questions. They may provide instructions for a special diet if recommended by your surgeon.

Pain Control

You may experience shoulder discomfort for several weeks following surgery. Medication will be prescribed for the short term that will include a narcotic medication such as codeine or hydrocodone. Use this medication as instructed to help you complete your exercises effectively and increase your activity. As soon as you can, decrease your prescribed pain medication use. Do not take aspirin or ibuprofen if you take an anti-coagulant. If you choose to use acetaminophen (Tylenol), take no more than 12 regular or eight extra-strength pills in a 24-hour period.

Ice, no heat!

According to your physician's instructions, for six weeks after surgery:

Apply ice to your shoulder before and after exercise to reduce pain and swelling.

Do not put a heating pad on the joint as heat will increase swelling in the joint.



Wound Care

Your wound has stitches that are deep under your skin and will not need to be removed. The paper strips that are solidly attached to your skin should stay in place for about ten days.

No dressing is required unless your wound shows signs of drainage. If you are more comfortable with a dressing it is fine to cover it with a sterile dressing.

After the incision appears completely healed, you can begin immersing your wound in water. Prior to that you may shower, but not take a bath unless your shoulder stays out of the water.

Avoid prolonged sun exposure. Too much sun may cause permanent irregular pigmentation changes to the incision.

Bathing

Forty-eight (48) hours after surgery, you may shower and wet the wound.

Pat the incision dry after sponging it with water or after you shower.

Make sure to wash under your armpit and dry it thoroughly. Place dry padding or a washcloth in your armpit to help absorb moisture.

Use only roll-on or stick deodorants. Avoid sprays, powders and perfumes that might hinder the healing of your incision.

Alert Future Physicians and Dentists

You must always protect this new part of your body from infection. Expect to take an antibiotic before and after any invasive procedure to help protect the new joint from the possibility of infection.

Always notify your physician and dentist that you have a shoulder replacement joint.

If you are going to have any of the following procedures, you may need to take an antibiotic:

- Dental work
- Urinary catheterization
- Surgery of any kind
- Proctoscopy
- Colonoscopy
- Any procedure where an instrument or tube is inserted into your body

Recommended antibiotics

Dental procedures: Amoxicillin 2.0 g orally 1 hour before the procedure

Genitourinary and Gastrointestinal procedures: Amoxicillin 2.0 g orally 1 hour prior to procedure

Allergic to penicillin: You can take Clindamycin 600 mg orally 1 hour before the procedure.

When to contact the Surgeon

- Drainage or odor from the incision
- Fever (temperature above 100.4 degrees F or 38 degrees C for two days)
- 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
- Arm or shoulder pain, tenderness or swelling
- Numbness or tingling of the arm
- Change in arm length
- Changes in color and temperature of the arm
- Change in motion ability
- A urinary tract infection, bronchitis or any other type of infection



The phone number for the Southern California Orthopedic Institute is (818) 901-6600.

Follow-up Appointments

Your surgeon will have you return for a follow-up examination to be sure your shoulder has healed properly. This is usually within two weeks of your surgery. An appointment can be set for you at the time of your preoperative visit.

At the time of the appointment, x-rays will be obtained to show you your new joint!

Following the initial appointment you will need to be seen approximately 6 weeks postoperatively, then at 12 weeks postoperatively. If everything is going well at that point, then you will be asked to follow-up on a yearly basis to obtain an xray and make sure all of the components are working properly.

Return to Work

The decision to return to work is made depending on your job requirements. In most occupations that involve office and/or computer work, you may be able to return within about seven days. The return at this point will not be normal and you may not be able to work all day, but you will certainly be able to be productive. Complete, unrestricted abilities with regards to office work will occur by about one month.

If your job requires significant manual labor and lifting, the return will not occur completely until approximately three months following surgery. Even after the three months, there may be significant restrictions applied. Including a permanent restriction of 50 pound maximum lifting.

Return to Sports

The first six weeks following surgery should be reserved for returning your range of motion under the guidance of a physical therapist. You may resume running as soon as you are comfortable, but in some cases it will be uncomfortable to run for several weeks. The use of a stationary bicycle is appropriate in the first few days. Return to light weightlifting and swimming should be delayed until six weeks postoperatively, at which time your range of motion will allow these activities.



Complete unrestricted activities are delayed until three months postoperatively. This includes sports such as golf, tennis, bowling, waterskiing, etc. Essentially any sport requiring higher impact to the shoulder should be delayed until this time.

