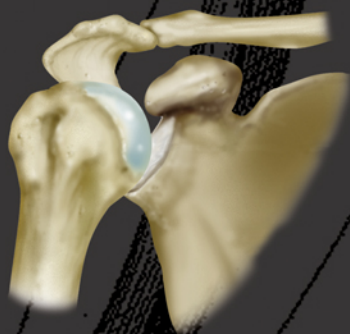


# What You Need to Know About Shoulder Replacement



VANDERBILT  UNIVERSITY  
MEDICAL CENTER

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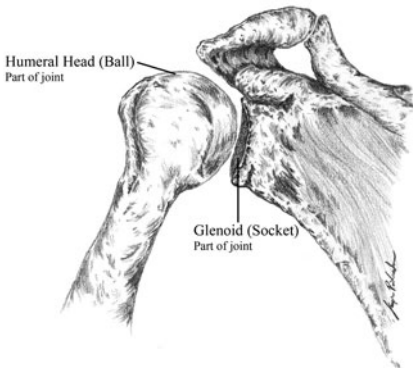
# Shoulder Replacement

- Shoulder replacement surgery started in the United States in the 1950s.
- Shoulder replacement, or shoulder “arthroplasty,” is the replacement of the ball of the upper arm, and often the socket of the shoulder blade.
- According to the American Association of Orthopaedic Surgeons, 23,000 patients have a shoulder replacement each year.
- Most studies show 85% of shoulder replacements are still doing well after 15 years.
- Osteoarthritis, also known as “wear-and-tear” arthritis, is the most common cause for a shoulder replacement.
- Other causes for a shoulder replacement include:
  - **Rheumatoid arthritis** - a disease where the body attacks its own cartilage and destroys it. This often affects more than one joint.
  - **Post-traumatic arthritis** - arthritis that usually occurs after an injury such as a fracture or dislocation (when the shoulder goes out of the socket)
  - **Rotator cuff tear arthropathy** - severe arthritis caused by a large rotator cuff tear.
  - **Avascular necrosis** - a disease where bone has died because of a lack of blood supply. It may be caused by certain medicines or an injury.
  - **A shoulder replacement surgery in the past that did not work.**

The purpose of this booklet is to help you understand what to expect before, during, and after shoulder replacement surgery. If you still have questions after reading this booklet, call your surgeon’s office.

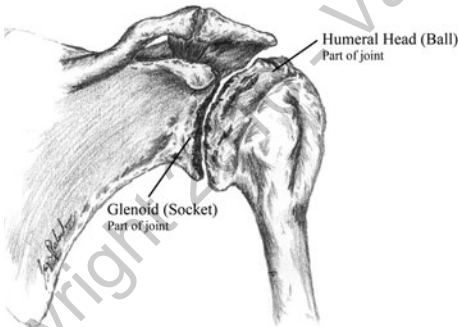
# The Shoulder

## The Normal Shoulder



The normal shoulder is a smooth round ball on the arm bone (humeral head), and a small shallow socket on the shoulder blade (glenoid). In a healthy shoulder, cartilage covers both ends of the joint (the dark space between the bones).

## The Shoulder with Arthritis



The shoulder with arthritis loses the cartilage. The joint becomes larger/flatter and the bone becomes denser. Osteophytes (bone spurs) form on the edge of the joint. The result is often painful and the shoulder has limited motion.

# Types of Shoulder Replacement

## Standard Total Shoulder Arthroplasty

The ball part of the joint is replaced with metal. The cup part of the joint is replaced by a plastic liner. This type of shoulder replacement is used for osteoarthritis and rheumatoid arthritis.



## Resurfacing Shoulder Hemiarthroplasty

A metal cap is placed on the surface of the ball. This implant is used when a cup cannot be used: when patients have large irreparable rotator cuff tears, or in young patients.



## Reverse Ball and Socket Arthroplasty

In this replacement, the joint is actually flipped upside-down. A ball is placed on the cup part of the shoulder blade, and a cup is placed on the ball part of the arm bone. This implant is used when the rotator cuff is severely damaged and function is very limited. It is also used in salvage or revision surgery.



## Important Points

This is an elective operation. Patients should tell the doctor when they feel the time is right for shoulder replacement surgery. Most replacement surgeries will last 15 years or more. Relief of pain and improved function occur in more than 90% of patients.

### **This surgery carries risks similar to other joint replacement surgeries. These include:**

- Infection (generally 1% chance)
- The implant is metal and plastic. Like any machine, it can wear out, particularly if it is used for heavy activities or impact loading.
- The cup or the ball part can become loose with time and cause pain.
- Fractures can occur around the implant.

If these problems develop, it is possible that additional surgery may be needed.

### **What happens if I decide to have shoulder replacement surgery?**

Once you decide to have a shoulder replacement, you will:

- Talk with a scheduler to pick a date for surgery
- Be given an appointment for the Vanderbilt Pre-op Clinic which is usually scheduled for a few days before your surgery
- Get fitted for your shoulder brace or sling
- Be asked to get a letter of medical clearance from your medical/family doctor (see next section for more details).

## Important Points - continued

### Medical Clearance

Your surgeon may want you to have a complete physical exam by your medical or family doctor. This is to make sure that you are in the best possible health to have the surgery. Your surgeon and your medical/family doctor will work together to see if you need any special care before, during, or after your surgery.

- If you have recently seen your medical doctor, you should have him/her send a letter of medical clearance to your surgeon.
- If you have not had a complete physical exam recently, you will need to do so before surgery. If you do not have a medical/family doctor, let your surgeon know and he can help you find one.
- Call your surgeon's office if there is a question whether your last doctor's appointment is enough or if you need to schedule a new exam before surgery.
- If you see other doctors for certain medical problems (such as a doctor for your heart or lungs), you should also have them send a letter of medical clearance to your surgeon.
- You will also need a letter from your dentist stating you are clear from any dental infection.

### Important - Blood Thinners

Please refer to the enclosed list of drugs, which are all types of blood thinners. If you are taking any of them, please talk with your medical/family doctor about when you should stop them before surgery.

After stopping Coumadin, your medical/family doctor may want you to use Lovenox for a few days before surgery.

If your medical doctor has any concerns about stopping your blood thinners before surgery, please have him or her call your surgeon's office.

# Vanderbilt Pre-Op Clinic

## Important – List of Medications

Please have a list of all the medications you are taking and have taken in the past two weeks.

You will have an appointment in the Vanderbilt Pre-op Clinic (VPEC) several days before your planned surgery. The purpose of this visit is to prepare you for your surgery.

### ***This visit includes:***

- A complete medical history, including a review of your medical problems and the medicine you are taking for those problems.
- A meeting with someone from the department of anesthesia. This person may ask some of the same questions that other people have already asked. This person will also explain the type of anesthesia you will have. Lastly, he/she will review any special instructions, such as medications you should or should not take before surgery.
- An assessment will also be made of any needs you may have once you are released from the hospital.

## Important – Infection

Please tell your surgeon right away if you have an infection of any kind, especially in the skin around your shoulder. This means a rash, a cut, a pimple, a scratch, or any other kind of mark. It may not seem important, but if you have a cut or a rash where the surgeon needs to make an incision, your surgery may have to be delayed until the problem is resolved.

### **Please also tell your surgeon if in the week before your shoulder surgery you:**

- *are not feeling well*
- *have a toothache*
- *have a sore throat*
- *have a cold*
- *have a fever*
- *are taking antibiotics*



# Night Before Surgery

## **What should I expect the night before my surgery?**

The night before surgery may be a restless night for you. This is to be expected so don't be alarmed.

You can eat anything you wish the evening before surgery. After midnight, you should not eat or drink anything unless your doctor has told you otherwise.

The anesthesia team will instruct you on which of your medicines you will take the morning of surgery with a sip of water.

## **Important - Medicine**

If you start any type of new medicine (either prescribed or over the counter) after your pre-op visit, please call your surgeon's office as soon as you start it to let them know.

## **Getting Ready**

To ensure you are properly prepared, make sure you have everything you will need for your overnight stay, such as a toothbrush, hairbrush and clothes to wear home.

Please remember to bring with you any special brace and/or sling you were fitted with before surgery.

Finally, make sure you have someone to drive you to and from the hospital. Also, make sure you have directions to the surgery center.

# Day of Surgery

## Getting to the Hospital

On the day of your surgery, you will be asked to report to the hospital or surgery center at least two hours before the surgery.

*Please note that at least one family member or other responsible adult must come with you to the surgery center and must stay in the surgery waiting area during your surgery and recovery.*

## Before Your Surgery

- The nursing staff will take your temperature, pulse, respiration, and blood pressure.
- You will be asked to go to the bathroom.
- To administer medications, an intravenous (IV) line will be started by the nurse or a member of the anesthesiology staff.

*Medications may be given about one hour before surgery to help you relax and dry your mouth and sinuses. You will also be given pre-operative antibiotics and post-operative antibiotics through this line.*

- Your skin will be prepped with special antibacterial cleansers/antiseptics and the hair surrounding the surgical site will be shaved to lessen the risk of skin infection.

*Please inform the surgical staff of any allergies to topical skin cleansers or antiseptics prior to surgery. Also inform of any latex or adhesive allergies.*

- A special block to numb your shoulder may be performed by a member of the anesthesiology staff. Sometimes this involves inserting a catheter in your neck near your collarbone.
- This device may be removed by your doctor on your first post-operative visit or by your physical therapist on the day of your physical therapy appointment. You may also remove this device by gently tugging on the tubing near the insertion site.

## Day of Surgery - continued

- The device should remove very easily and there should be little to no drainage from the insertion site. If you do have some residual drainage, it should be a small amount and can be absorbed by a band-aid dressing.
- A member of the surgical team will ask you questions about your medical history and your doctor will visit with you to answer any of your last minute questions.
- Your family may visit you in the holding room before your surgery if you would like.
- You will be moved to a special operating room bed. The operating room is equipped with special overhead surgical lights and anesthesia equipment.

### **Keeping Your Family Informed**

During surgery, your family will be continuously informed of your progress by a special monitor located in the surgery waiting area.

Your doctor will also speak personally with your family following your surgery to inform them of the procedure details and any special post-operative instructions.

# After Surgery

**Following surgery, you will be moved to the recovery room where medical staff will watch your condition closely.**

- You will remain in the recovery room for at least an hour, or until the anesthesia has worn off and your blood pressure and pulse are stable.
- If you have pain, the nurses will give you medication.

**Once you are awake and alert, you will be:**

- Allowed to drink some fluids
- Accompanied to the bathroom
- Moved to your room at the hospital. Generally, you can expect to be released from the hospital the day following surgery. Occasionally an additional night may be necessary for pain control.

**You will have a bulky dressing covering your incision.**

- Under the bulky dressing, you will have thin strips of tape or “steri-strips” over your incisions.
- The bulky dressing may be removed the day following your surgery leaving the incision open to air. If your incision is draining (leaking fluid), a new dressing may be applied.
- The steri-strips will stay on until they peel off on their own.
- You will be given special wound and bathing instructions by your doctor.
- You will be placed in a special shoulder brace or sling.  
*Please keep the shoulder brace or sling on until instructed otherwise.*

## **The Sling**

The sling should be worn for the first 48-72 hours unless otherwise directed. After three days, the sling can be removed for light activity such as desk work.

- It is important to keep your hand in front of your body when the sling has been removed.
- The sling should be worn as needed during the day whenever you are active or in an uncontrolled environment.
- The sling should always be worn at night for the first six weeks.

# First Day Home

## What should I expect on my first day home?

### Discomfort

You may need help with your daily activities. It is a good idea to have family and friends prepared to help you.

You can expect to have some mild to moderate shoulder discomfort.

- Please take your medication regularly as prescribed.
- If your pain medication is not relieving your pain, please contact our office so that we may change this for you.

### Nausea and Vomiting

It is not uncommon to have nausea and/or vomiting for the first 24 hours following surgery (as the anesthesia wears off).

- Please notify our office for any persistent nausea/vomiting so that we may prescribe an anti-nausea medication for you.
- You may eat whatever you wish, however, it is recommended that you tolerate fluids/bland food well prior to progressing your diet.

# First Week After Surgery

## Eating and Sleeping

You are encouraged to return to your normal eating and sleeping patterns as soon as possible. It is not uncommon, in the early recovery period, to have some trouble sleeping until you find comfortable positions that will also protect your shoulder.

- This should be temporary and can be relieved by taking over-the-counter sleep aids
- If over-the-counter sleep aids do not help, please contact our office or your medical doctor's office for insomnia (having a hard time sleeping).
- Also, use pillows to support yourself.
- Please remember to always wear your sling at night for the first six weeks.

It is important for you to get plenty of rest and to eat a well-balanced diet to speed up your recovery process. You are also advised to remain in a stress-free environment as much as possible.

## Constipation

It is not uncommon to experience post-operative constipation from the anesthesia and post-operative pain medications; however, this should be temporary.

- An over-the-counter stool softener may be all that is necessary.
- Please notify your medical doctor about problems with persistent constipation.
- Increasing fiber in your diet such as prune juice and/or dried prunes and increasing fluid intake will also help.

# First Week After Surgery - continued

## Swelling and Bruising

- It is not uncommon to develop post-operative swelling and/or bruising following shoulder replacement surgery.
- This is caused by bleeding into the small tissues from surgery and is nothing to be alarmed about.
- You may notice the bruising to initially be black to red to purple which will change to a yellowish-green hue as it begins to fade.
- This may be a process of several weeks, and can involve the shoulder joint as well as the entire upper extremity.
- You may notice bruising extending down your arm as gravity allows the drainage to travel downward.
- You may also notice some hand swelling. This should be temporary and can be relieved by using a squeeze ball or doing some hand pumps. Your body will eventually reabsorb this fluid.

## Temperature

It is not uncommon to run a low grade fever within the first week of surgery. This is part of the normal healing response.

- You are encouraged to increase fluids during this time and to take over the counter Tylenol.
- Please contact our office immediately if your temperature persistently stays elevated or goes above 101 degrees as this could indicate an infection.

# Incision Care

## How do I care for my incision?

- Make certain your incision stays dry and the steri-strips remain intact.
- You may shower 48-72 hours following your surgery.
  - To wash underarm area, lean forward and let your arm dangle in front of you.
  - It is okay to allow water to run across your incisions which are protected by the steri-strips.
- Do not get into a bathtub, pool, or spa until your sutures are removed and your incisions are completely healed. This lessens the chance of skin infection.
- Always wash your hands before touching your incision.
- Do not use anti-bacterial creams or ointments on your incision.
- Please contact our office immediately if you notice any of the following as these could indicate an infection:
  - Drainage from your incision
  - A foul odor from your incision
  - Redness or warmth of/or surrounding your incision
  - Increased pain at the incision site

In addition, please check your temperature if you begin to feel ill, warm, or if you have chills. Contact our office immediately if your temperature is above 101 degrees or you develop an infection anywhere in your body.



# Risk of Blood Clots

Surgery may cause the blood flow in your legs to slow down. Although rare, this could cause a blood clot that could stay in your leg or move to your lungs.

*Blood clots can be serious. If you have one, you will need to go back to the hospital for treatment.*

## Prevention

- Blood clots can be prevented by walking regularly in the early post-op period.
- Doing ankle pumps and calf raises can lessen the risk of this complication.
- There are special anti-embolism stockings that you may purchase and wear during the post-operative period.
- Sometimes it may be necessary for your medical doctor to place you on special blood thinner medication to reduce this risk.

## Danger of clots

Clots rarely cause long-term problems with the return of blood from your leg to your body. The main danger with blood clots is that they may dislodge from your leg veins and travel to your lungs. In the lungs, they can be silent, cause severe pain, or even cause death.

## Please contact our office immediately if:

You develop swelling in your thigh, calf or ankle that does not go down when you elevate your leg, or tenderness, pain, warmth or redness of your thigh, calf or ankle.

*This could indicate a blood clot in your leg. You will need an ultrasound exam of the leg veins to further evaluate.*

## Call 911 if you have these symptoms which suggest a blood clot in your lungs:

- Your chest suddenly begins to hurt
- You have trouble breathing or your breathing becomes rapid
- You begin to sweat a lot
- You are confused

# Weeks Following Surgery

## What should I expect 2-6 weeks following my shoulder replacement surgery?

Your sutures may dissolve. If not, they will be removed 10-14 days after surgery. Steri-strips may or may not be re-applied depending upon your healing process.

### Discomfort

It is quite common to still be experiencing post-operative discomfort during this time and your pain medication may be refilled according to individual needs.

- A tapering process will be used to aid in gradually weaning you from the post-operative narcotic.
- Any prolonged post-operative pain is best managed by a pain clinic which will be recommended if needed.
- You may begin driving again when you are no longer taking the narcotic pain medication and can perform the necessary functions safely.

### Physical Therapy

You will begin a formal physical therapy program following the Shoulder Arthroplasty Protocol and given a pulley system for home use.

Physical therapy is a deliberate process of gradually increasing ROM (range of motion) and strength of your shoulder joint with the goal of returning you to as much of a functional process as possible. Your physical therapist is encouraged to contact your doctor with any questions.

Your shoulder will generally continue to improve steadily in the months following your surgery with your activities increasing as muscle strength improves.

### Exercises should never be “overdone”

- If you find your shoulder is swelling late in the day, it may be a sign you are doing too much, too quickly.
- A small amount of muscle discomfort with increasing exercise may occur, but it should be “reasonable” discomfort - not pain.
- You will discontinue the use of the sling six weeks after surgery.

*It may be several months before your desired results are achieved, so do not get discouraged.*

## Weeks Following Surgery - continued

### **What should I expect 7-10 weeks following my shoulder replacement surgery?**

- You will continue to progress in therapy following the Shoulder Arthroplasty Protocol.
- It is anticipated that you will have full PROM (passive range of motion) at 10 weeks post-op.
- The physical therapist will periodically measure the ROM (range of motion) in your new shoulder. These measurements will indicate how far you can move your shoulder in different directions.
  - Measurements may include forward movement (flexion) and rotating (external and internal rotation) of the shoulder.
  - Movements will be limited in accordance with the Shoulder Arthroplasty Protocol.
- Your pain should be much less, no longer requiring the narcotic pain medication.

### **What should I expect 10-16 weeks following my shoulder replacement surgery?**

- You should have full AROM (active range of motion) at 12 weeks post-op.
- You will continue with the exercise program, progressing with weight and endurance as tolerated.
- You will be released to perform activities as tolerated at this time.

### **What should I expect 24 weeks and beyond following my shoulder replacement surgery?**

- Progression to full activity.
- You will continue to follow-up with your doctor as directed until full recovery is reached and you have achieved as much function as possible.
- You will be discharged from formal physical therapy when you have achieved all physical therapy goals.
- You will be given a home exercise program to maintain full function.

# Return to Activity

Determining the date you return to work will depend upon the type of work you do. Some individuals may require modifications of their job. Others may easily return to their previous activities.

- Lifting and pulling/pushing job-related activities might be delayed or discouraged.
- Those engaged in heavy manual labor may have to discuss the possibility of vocational retraining.
- Your functional status will be monitored closely.
- It is our goal to return you to your normal work routine as quickly as possible.

## **What leisure and sport activities can I do after my shoulder replacement surgery?**

### **Risks**

There are different risks associated with certain types of leisure and sports activities. Some activities may lead to damage of your artificial joint over time due to wear and tear of the joint.

*In general, the more vigorous the activity the higher the risk of damaging the implant, increasing the wear and tear on the implant, or increasing the risk of loosening.*

### **Three major categories of activities should be avoided. These include:**

- Activities causing high impact stresses on the implant
- Activities with potentially high risk of injury
- Activities that may result in falling or getting tangled with opponents, risking dislocation of the joint or a fracture of the bone around the implant

# Return to Activity - continued

## Activities that should be avoided include:

- Sport activities requiring a vigorous throwing motion of the arm
- Chopping wood
- Hammering
- Heavy lifting
- Pushing activities
- Martial arts
- Rough contact sports (such as: football, soccer, lacrosse, basketball, baseball, handball, and volleyball).

## Things you can do

Lower stress activities are excellent forms of exercise for individuals with a shoulder replacement including:

- Walking
- Biking
- Golfing
- Swimming
- Some patients also return to playing tennis with a shoulder replacement.

## When can I?

Returning to full leisure and sport activities will vary with each individual. Your doctor will give you guidelines as to what activities are safe for you.

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