

The Total Shoulder Replacement Patient Manual



Table of Contents

1. Introduction	1
2. Preparing for Surgery	6
3. Your Hospital Stay	14
4. After Your Hospital Stay	21
5. Problems to Watch for After Surgery	25
6. Other Considerations	26
7. Shared Decision Making	27
8. Frequently Asked Questions	28



Each year, over 1 million Americans decide to end their chronic joint pain by having joint replacement surgery.

Your decision to have joint replacement surgery at Salem Regional Medical Center means that you have taken the first step toward a healthier lifestyle.

You have been diagnosed with end stage arthritis. While this problem has seriously affected the quality of your life, there is a treatment. We offer a unique program for shoulder replacement, which is designed to return you to an active lifestyle as quickly as possible. Since you and your orthopaedic surgeon have decided that you are a good candidate for a shoulder replacement, this guide will help answer questions you may have.

You will need time to prepare for joint replacement surgery, both physically and psychologically. Planning ahead for the challenges of surgery and recovery will help ensure a more successful outcome. It is the philosophy of our team to focus on all aspects of care so as to improve your outcomes and overall satisfaction; not only with the surgery itself, but also with the process you go through before and after surgery.

Communication is a very important part of this process. This guide is designed to educate and inform you about:

- What to expect at each step in your care from pre-admission, admission, surgery, rehabilitation, through follow-up care
- What your role is
- How to care for your new joint

We ask that you take the time to read this manual in its entirety, and then sign a form indicating that you have done so and that you understand all of the information presented. If you have any questions regarding this guide, please let us know. We also want to know if something could be done better throughout this process, so please share your comments or concerns with any member of our team at any time.

Why Have a Joint Replacement?

A painful joint can impact your quality of life and limit your daily activities. The goal of a total shoulder replacement is to reduce your pain and improve the motion in your shoulder.

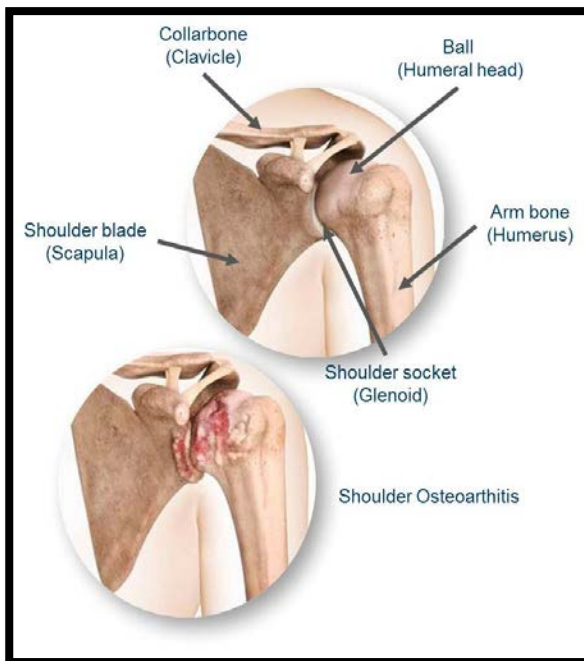
For most people, the main indication for total joint replacement is pain. This surgery will likely stop or reduce your shoulder pain and improve your quality of life. Pain relief is achievable in more than 95% of patients.

The other primary indication for total joint replacement is poor function. A successful replacement will provide a stable limb that, although not like a normal joint, will provide good to excellent function in more than 95% of patients. You will be able to use your arms more and build arm strength.

Understanding Shoulder Replacement

Damage to the shoulder joint is often caused by arthritis, which is when wear and tear, disease or injury breaks down parts of the joint. Arthritis simply means loss of cartilage within a joint, which is the soft covering over the bone ends that form the joint. When this covering is lost, the joint becomes painful, stiff, and function is lost. There are three major types of arthritis that are treated with total replacement:

- **Osteoarthritis**, or degenerative arthritis is the most common type of arthritis and is caused by a wearing away of cartilage. Osteoarthritis can run in families (hereditary). It also occurs in people that have abnormal joints either from development or previous surgery, and those that have overused their joints throughout their lives.

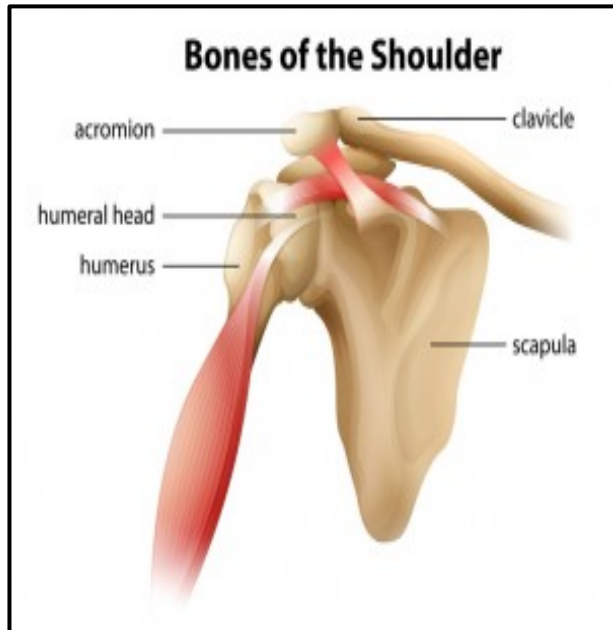


- **Rheumatoid arthritis** is also known as “crippling arthritis,” and can also be hereditary. This disease process is thought to be a rejection of the body’s own tissues, called autoimmune disease. Medication can help control this disease but when the cartilage within the joint is destroyed, a total joint replacement may be the only treatment option.

- **Post-traumatic arthritis** is the third major type of arthritis often treated with total joint replacement. This problem is caused by an injury to the joint (such as with a fall or car accident), which destroys cartilage, bone or both.

During the early stages of arthritis, many patients are able to control their symptoms and slow the progression of the disease with pain medications, rest, and physical

therapy. However, as the arthritis progresses, it will often result in extensive bone damage and typically will require surgery to correct. Total shoulder replacement surgery is often recommended to patients suffering from severe arthritis, who are unable to relieve pain symptoms with more conservative treatments, or who have a poor range of motion, which interferes with use of the arm for everyday activities.



Anatomy of the Shoulder

The shoulder joint is very complex and involves more than one joint and three bones, the clavicle (collar bone), the scapula (shoulder blade), and the humerus (upper arm bone).

There are many muscles, ligaments, and tendons surrounding the joint. The upper end of the arm bone (humerus) and the outside edge of the scapula bone (glenoid) form a “ball-and-socket joint.” This joint is remarkable because it allows greater range of motion than any other joint in your body.

When is a Shoulder Replacement Needed?

Shoulder replacement surgery is most commonly used for severe degenerative joint disease (osteoarthritis) of the ball-and-socket joint. When the smooth surfaces (cartilage) of the ball and socket become rough, they rub against each other rather than glide. This rubbing causes pain, stiffness, and swelling. Most patients who decide to have shoulder surgery have experienced shoulder pain for a long time. Many patients have developed pain that limits their daily activities, as well as interferes with their sleep. Shoulder stiffness also interferes with the use of the arm for everyday activities. A shoulder replacement is performed to decrease shoulder pain. It also helps to improve the range of motion of your shoulder joint, which also improves your function and the quality of your life.

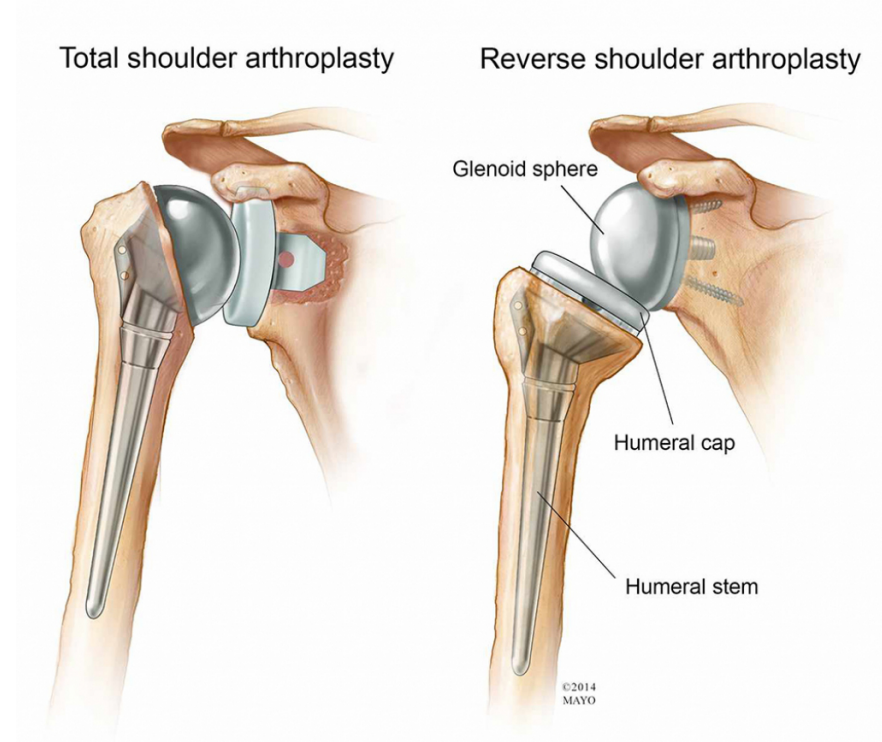
What are the Types of Replacement?

The two most common types of shoulder replacement are the anatomic shoulder replacement and a reverse total shoulder replacement.

- **Anatomic Shoulder Replacement:** The worn out cartilage is removed and the ball (humeral head) of the shoulder joint is replaced with an implant that includes a stem with a smooth, rounded metal head. The socket (glenoid) is

replaced with a smooth, specialized plastic that is cemented into place. In a few cases, just the ball is replaced, which is called a partial shoulder replacement or hemiarthroplasty.

- **Reverse Total Shoulder Replacement:** The normal structure of the shoulder is “reversed,” which means that the ball portion of the implant is attached to the scapula (where the socket normally is) and the artificial socket is attached to the humeral head (where the ball normally is). (See Below). This allows the stronger deltoid muscles of the shoulder to take over much of the work of moving the shoulder, making the joint more stable. A reversed procedure is used for patients with a severely damaged rotator cuff. It is also commonly used in revision surgery cases.



What is Involved in the Surgery?

Shoulder replacement is performed in the hospital with the help of an experienced, specialized surgical team. The procedure generally takes 1 hour. About 90% of patients are able to go home the day after surgery. However, some patients may stay in the hospital overnight. In these cases, particularly for people who do not have assistance at home, a longer hospital stay is required. Occasionally, a brief stay in a skilled nursing facility may be necessary for additional assistance. Patients who are in good health, under age 70, and have support at home may go home the same day of surgery.

What Does the Procedure Involve?

To get to the shoulder joint, an incision is made on the front of your shoulder. After exposing the shoulder joint, the damaged ends of the bone (humerus and glenoid) are removed. The bone is prepared for the replacement with the artificial joint. The artificial joint is made of metal, which is usually a titanium or a cobalt-chrome alloy.

For a standard shoulder replacement, the stem is placed inside the humerus bone, usually without cement. The glenoid component is made of a special plastic (polyethylene). The glenoid is cemented into place. Not all patients require a glenoid component, and the final decision to use a glenoid component is made during the surgery.

For reverse shoulder replacements, the ball is secured to the socket with a press-fit and supplemented with screws. The humeral stem is then press-fit or cemented into place. A high-strength plastic is then placed to act as a spacer between the stem and the ball.

How Successful is Shoulder Replacement?

In most cases, shoulder replacement is very successful. Typically patients gain 50 degrees in forward elevation (raising the arm straight ahead). In other words, most patients go from raising their arm at or below shoulder level to being able to raise the arm above the shoulder. Similarly, rotation out to the side improves on average by 30 degrees. Rotation behind the back also improves. The survival of the implant is usually 90 - 95% at 10 years after surgery and approximately 80% 20 years after surgery.¹⁻⁴

How do the Results of a Complete Replacement Compare to Partial Replacement?

In partial replacements, only the ball or just a portion of the ball is replaced, which is sometimes called a resurfacing. A partial replacement can be successful in select cases depending on the patient ages and the condition of the glenoid bone. However, the vast majority of patients will have a better outcome with a total shoulder replacement. Study after study has demonstrated that in most cases a total shoulder replacement leads to improved motion, less pain, and less need for repeat surgery compared to partial replacement; since arthritis affects both sides of the joint (the ball and socket). Additionally, the approach to the shoulder joint requires the same incision whether a partial or complete replacement is used.

PREPARING FOR SURGERY

Prior to Your Admission

You are a very important person to us, with very important, individualized needs. You are the center of our care and attention, and together we will share in your total joint experience.

After you have made the decision to have a total shoulder replacement, your surgery can be scheduled during an office visit or it can be done over the phone with our surgery scheduling staff. You will need to schedule an appointment with your primary care physician to obtain medical clearance for surgery.



Pre-Surgery Visit at SRMC: The staff from Salem Regional Medical Center (SRMC) will contact you approximately 4-6 weeks before surgery and arrange for you to come to the hospital for a pre-surgical visit, which is usually scheduled early in the morning since you will also have some testing performed at that time.

What to bring during your Pre-surgery visit:

- ✓ **Current list of medications and their dosages**
 - ✓ **Current insurance card**
 - ✓ **Joint replacement manual**
-

When you arrive at SRMC for your pre-surgical visit, you may park in the parking deck or outpatient lot located on the east side of the hospital's campus. Handicapped parking is also available near the Main Entrance. Stop at the Main Lobby Desk, where you will be directed to the **outpatient registration department**, which is on the hospital's ground floor. You are also encouraged to bring a friend or relative with you to that visit.

During your pre-surgical visit, you will meet with a nurse, dietitian, physical or occupational therapist, case manager and anesthesiologist. A nurse will gather medical information and answer any questions you may have. Any required Lab work, X-rays and an EKG will be completed. In addition, a nasal swab will be taken to test for resistant Staph bacteria (MRSA); so if necessary, treatment can be completed before surgery to help reduce your risk of post-operative infection.

The case manager will meet with you to discuss any special equipment needs you will have in preparation for your return home.

Anesthesia: An anesthesiologist may meet with you during your pre-surgical visit to ask you about your health, medications you take, other surgeries you have had and also discuss the type of anesthesia you will receive.

A general anesthetic will be used for your surgery.

- **General anesthetic:** Anesthetic medication is given through injection in your IV or through inhalation. This anesthetic affects your entire body by working on your brain and nervous system to render you temporarily unconscious. After you are asleep, a breathing tube will be placed down your throat and oxygen will be administered through this. The anesthesiologist will also use a special device called a BIS monitor, which measures the depth of anesthesia and allows the anesthesiologist to ensure you are getting the right amount of medication for your surgery.

Other Ways to Prepare for Your Surgery

In most cases, surgery is arranged several weeks in advance, and most people will have separate preoperative visits 1 to 2 weeks prior to surgery. This is to review the surgery process, be fitted for a sling (which you must bring to surgery), and provide prescriptions for medications after surgery.

- **Medications:** If you take Aspirin or Aspirin products, Ginkgo Biloba, and/or Fish Oil, please stop these medications 1 week prior to surgery unless pre-arranged. Do not take arthritis medications which include but are not limited to: Advil, Ibuprofen, Motrin, Aleve, Naprosyn, Voltaren, Diclofenac, Feldene, Mobic and Relafen for 7 days before surgery. Stop taking Celebrex 3-4 days before surgery. These medications can cause bleeding during surgery.

- Stop taking Aspirin or Aspirin products 7 days before surgery.
- Tylenol or Acetaminophen products can be taken up to the night before surgery.
- Please let your surgeon know if you are on a steroid, such as Prednisone. You should continue to take this until the day of your surgery.
- You should stop taking Coumadin, Plavix, Pradaxa, Xarelto, Eliquis or other blood thinning medication as directed by your prescribing physician, cardiologist or specialist.
- If you are on blood pressure or heart medications and usually take them in the morning, take them the morning of surgery with a small sip of water.



- **Eating/Drinking:** Please do not eat or drink anything after midnight the evening prior to surgery – if you do, your surgery may be cancelled. The exception is essential medications which can be taken with a sip of water the morning of surgery. If you take any blood pressure medications,

these should be taken on the day of surgery. Diabetes medications should not be taken since you won't be eating. You will be instructed on insulin dosage prior to surgery. All nonessential medications (allergy medications, cholesterol medications, antidepressants, vitamins, etc.) do not need to be taken on the day of your surgery.

- **Smoking:** If you smoke, you need to stop smoking. Your primary care physician can help you with this. If you cannot stop smoking permanently, you must abstain for at least 2 weeks before your surgery. If this is not done, your surgery may be cancelled. It is also essential not to smoke for at least 2 weeks after surgery. Smoking causes problems with wound healing and greatly increases infection and blood clotting risks.

- **Bathing:** To help prevent infection, special SAGE wash will be provided by the hospital during your pre-surgery visit to use the day before your surgery and the morning of your surgery. Please shower the day before your surgery, at least 3 or more hours before the first time you prepare your skin with the special, SAGE wash. You will be given a detailed instruction sheet on how to use the SAGE wash at your preoperative appointment.

What to Bring to the Hospital for Surgery: Please bring your insurance ID card(s) to the hospital. Wear loose, casual clothing. Do NOT wear makeup, acrylic nails, nail polish or jewelry to the hospital. If you wear dentures, hearing aids, contact lenses or eye glasses, you will be asked to remove them prior to your surgery.

Other: Notify your orthopaedic surgeon and Pre-surgical Testing at 330-332-7188, if there is a change in your medical condition (such as a cold, infection, fever, etc.), or if you have skin lesions or open sores prior to surgery. If so, it may be necessary to postpone or reschedule your surgery.

Risks of Surgery



A total joint replacement is considered to be a major surgery. Complications are rare, but we feel you should be aware of them in order to make an informed decision about your surgery. Some of the more common possible complications are presented below.

As with any surgery, there is always a risk of complications. Infection and glenoid (socket) component failure are the most common complications in shoulder replacement. This risk of complications affecting the outcome is roughly 5% for an anatomic shoulder replacement. The infection risk is about 1-2%. For reverse shoulder replacements, the complication rate is higher at 10-20% and may include infection, component failure, acromion stress fracture, and dislocation. The

need for a blood transfusion after shoulder replacement surgery is very low at less than 5%.⁸⁻¹⁰

You will be given antibiotics before, during, and after your surgery to minimize the risk of infection. A wound infection after shoulder surgery is extremely uncommon at approximately 1 in 5,000. An infection can take the form of a superficial wound infection requiring antibiotics and/or surgical cleansing; or a deep infection down to the implants which might require implant removal, placement of an antibiotic cement spacer, prolonged intravenous (IV) antibiotics, and a period of months until another implant can be placed. On very rare occasions, the joint cannot be redone.

Infection is also possible in the implanted joint throughout your life, many years after total joint replacement. This is thought to occur by bacteria from a distant site traveling to the implant. Bladder or kidney infections are the most common source of delayed infections, but dental abscesses, infected ingrown toenails, foot surgery, or bacterial sinus infections can all pose a threat. If these infections occur, they should be treated immediately and our office notified.

It is important that you notify all of your healthcare providers, including any surgical specialists and your dentist, that you have had a total joint replacement. If dental surgery, bladder surgery, bowel surgery, rectal surgery, or hemorrhoid surgery is planned after your total joint replacement, the operating physician or dentist will determine if you need antibiotics prior to the procedure.

Bruising & Swelling

Bruising after shoulder surgery is normal. Don't be alarmed if your arm turns black and blue. It is normal for bruising to go into your mid-arm and chest area. The bruising usually occurs 3-7 days after surgery. Some degree of swelling is also normal. Often the swelling occurs around your sling. We encourage hand and elbow exercises to help reduce swelling.

Dislocation: It is important to understand that in most cases, the ball and socket are not locked together in shoulder replacement surgery. The ball and socket are held together by muscle tension. Dislocation can occur with an injury, such as a fall or accident. It can also occur because of inappropriate body positioning. Correct positioning will be shown to you by therapists and nurses after your surgery. If a dislocation occurs, you will be placed under anesthesia and the shoulder relocated. You may then need to wear a brace for 6-8 weeks. Occasionally, the shoulder cannot be relocated without repeat surgery.

Blood Clots: Shoulder surgery coupled with advanced age and/or other chronic illnesses or blood clotting abnormalities exposes the patient to the risk of blood clots forming in their legs, which can break loose and travel to the lungs. A blood clot that

develops in the veins of the leg is called deep vein thrombosis (DVT). A blood clot that travels to the lungs is known as a pulmonary embolus (PE), and this can be life-threatening. The risk of leg clots or DVT is low after shoulder surgery, but we make every effort to prevent it. Preventive measures will be taken during your hospital stay to reduce your risk of developing a blood clot.

All patients having shoulder surgery will have leg pumps during surgery that are meant to lower the risk of blood clots. In addition, it is advised that you take frequent walks after surgery since walking will decrease your risk for leg clots.

Wear and Implant Failure: The implanted components of a total joint replacement are mechanical pieces and can wear out or break. Only proven technology and materials are used in these implants. More intense activity is associated with a greater chance of failure with the implant; however, with usual daily and recreational activity, your total joint replacement should function well for many years.

Allergic Reaction to Materials: Total joint replacements are made of materials foreign to your body. These materials have been thoroughly tested, but a small risk of allergic reaction exists. If you are allergic to metals, let a member of the team know.

Bone Fracture: During surgery, your bone can crack with the insertion of the implant. This would be addressed at the time of surgery with screws or wires and should not affect your recovery.

Blood Loss: Since total joint replacement is a major operation, excessive blood loss can occur which would require blood bank transfusion. Blood transfusion is a possibility, although very unlikely. All appropriate blood loss sparing techniques will be used during your surgery.

Nerve Damage: There are major nerves that cross all major joints. The possibility of major nerve injury following total shoulder replacement is less than 1%, but can lead to weakness or numbness of the lower leg and foot, possibly requiring a permanent brace. All patients routinely notice numbness in the skin surrounding the incision as the result of clipped nerve endings in the skin. This area of numbness usually decreases in size but will take time, even up to one year after surgery to resolve.

Lack of Pain Relief: The total joint replacement is often done for pain relief. However, the procedure may not relieve all of your pain.

Importance of Nutrition



Good nutrition helps healing.

It is important to get enough protein and calories in your diet to promote healing. This process starts before your surgery. Visit www.choosemyplate.gov to find healthy nutrition guidelines more specific to your needs.

Your nutritional status will be assessed with pre-operative bloodwork, and you may require a dietary supplement. Diabetics need to have their HbA1C level at or below 7 for the best outcome. Patients who are malnourished or overweight may be referred to a dietitian or nutritionist for additional dietary counseling.

Tips for Maintaining Good Nutrition At Home:

- Eat Regularly!
- Eat five or six small meals during the day
- Eat a bigger meal earlier in the day
- Have easy, convenient meals and nutritious snacks available
- Eat nutrient-rich foods, such as low-fat yogurt, cheese and nuts
- Prepare and freeze extra servings of foods
- Stock up on single-serving packages of healthy snacks, such as dried fruits, nuts, peanut butter and crackers, or granola bars

Eat Right!

- Try to eat at least 5 ounces of lean meat, poultry or fish each day
- Include 1 ½ cups of colorful fruits + 2 cups of vegetables daily (fresh, frozen, canned)
- Choose low-fat milk, yogurt and cheese- 3 servings of dairy daily
- Select whole grain bread, cereal, pasta and rice

Other Tips

- Try to maintain your weight and avoid weight loss close to your surgery date.
- Keep your body well-nourished before surgery as preparation to help with healing.
- High protein foods are important and help with healing. Examples include lean meats, dairy products (milk, cheese, yogurt, cottage cheese), eggs, beans, nuts or peanut butter and soy products.
- Vitamin C can also help optimize healing. Food sources include citrus fruits or fruit juices as well as strawberries, cantaloupe, peaches, currants, green peppers, tomatoes and cauliflower.
- Dietary supplements may help meet nutritional needs as you prepare for surgery:
 - Vitamin D: Vitamin D is important to bone health, and studies also suggest that Vitamin D deficiency can be associated with poor healing after rotator cuff repair. In this region of the country, most patients are Vitamin D deficient. Therefore, it is recommended that you take Vitamin D (800 IU) daily for a

month prior and for at least 12 weeks following shoulder surgery. Daily Vitamin D also lowers the risk of hip fracture so there are other good reasons to take it.

- Vitamin C: At least one study has shown that Vitamin C can lower pain after surgery. Therefore, I recommend 500 mg of Vitamin C twice daily for 2 weeks after surgery.

- High protein nutritional supplements may also be helpful in meeting nutritional needs prior to your surgery.

Talk to your doctor or registered dietitian if you have questions about your specific nutritional needs.

Preparing Your Home for Your Return



It is recommended that you plan for your return home prior to your admission to the hospital so that you are as comfortable as possible. We recommend that a family member or friend be with you 24- hours a day for the first week following your surgery. In addition, make sure that you have rides planned from the hospital and to your first follow-up visit, which will be one week after surgery. If your family or friends are unable to help you, the Case Management Department can provide a list of agencies for referrals.

Because your arm will be in a sling for the first four to six weeks following surgery, you should place everything in your house that you use on a regular basis at elbow level. This way you will not have to raise your arm. Also, you will not be able to drive for four to six weeks while you are recovering.

It is important that your house be free from hazards that could cause you to fall or lose your balance, since a fall can greatly set back your recovery. Use the following checklist to ensure that your home is safe for your return from the hospital.

- | | |
|--|---|
| <input type="checkbox"/> Be aware of uneven surfaces inside and outside of your home. | <input type="checkbox"/> Tubs and showers should have non-skid surfaces or mats. |
| <input type="checkbox"/> Remove throw rugs and secure extension cords out of the way. | <input type="checkbox"/> Select footwear that stays securely on your feet and has non-skid soles. |
| <input type="checkbox"/> Have a cordless phone or cell phone that can be kept on your person. | <input type="checkbox"/> Move frequently used items to shelves and counters within reach. |
| <input type="checkbox"/> Provide a place for your pets to be kept while you walk around the house. | <input type="checkbox"/> Consider water bottles to avoid spills that could be a slip hazard. |
| <input type="checkbox"/> Maintain adequate lighting in all areas. Use night-lights in bathroom and hallways. | <input type="checkbox"/> Prepare simple meals ahead and store for re-heating later. |

If you need assistance in preparing for your return home, please contact SRMC's Case Management department at 330-332-7267. Note that you will meet with a case manager during your pre-surgery visit, and may discuss any concerns that you have at that time regarding your care after you are discharged from the hospital.

YOUR HOSPITAL STAY

Day of Surgery

Before You Come to the Hospital

- ☐ Do not take any medications the morning of your surgery, except as directed by your physician.
- ☐ Do not eat or drink anything.
- ☐ Please refrain from using any tobacco products the morning of your surgery.
- ☐ Leave all valuables at home. Do not wear any makeup, hair gel/hair spray, perfume or jewelry.
- ☐ Remove all piercings, fingernail and/or toenail polish, and contact lenses.
- ☐ Wear loose fitting, comfortable clothing.
- ☐ **Bring your Joint Replacement Manual with you** to the hospital.
- ☐ Use the Sage wipe as directed during your pre-surgery visit.

Arriving at the Hospital

Please arrive on time for your surgery, which is usually 90 minutes to 2 hours before your scheduled surgery time. Patients arriving for surgery are encouraged to enter the



Salem Regional Medical Center campus from Pershing Street and be dropped off at the Surgery Center entrance, with parking available in the lower level of the parking deck or the outdoor outpatient lot. Report to the Surgery Center on the ground floor of the hospital. After checking in at the reception desk, you will be shown to the Surgery Waiting Room and then will be taken to your room in the pre-op unit. Here, the nurses will make you comfortable, perform a brief history and physical examination, start an IV and answer any questions.

For your safety:

- A nurse will provide surgical consent forms for you to sign.
- You will be asked to verify your name, birth date, procedure and surgeon's name. This is a normal routine that helps enhance patient safety. Don't be alarmed if you are asked to provide this information more than once.
- A name bracelet will be placed on your wrist. If you have any allergies, you may be given a special bracelet to wear.
- An anesthesiologist or CRNA (Certified Registered Nurse Anesthetist) will meet with you at this time to discuss any changes in your medical condition.
- You will meet a surgery nurse in the Pre-op Unit and you will be transported to the operating room at the appropriate time.
- Do not be alarmed if different staff members ask you the same questions. This is intentionally done to ensure your safety.

Family and Friends: Family members are welcome to accompany you on the day of your surgery. However, for the comfort and privacy of our other patients, we ask that when you are in your room preparing for surgery, no more than two guests remain with you.

While you are in surgery and the Post Anesthesia Care Unit (PACU), your loved ones are welcome to relax in the Surgical Waiting Room. Please have them notify the waiting room's receptionist for whom they are waiting. The Surgery Waiting Room includes a computerized patient tracking board so that they can receive general updates regarding your status. Patient privacy is protected by using special codes, rather than patient names. Upon entering the Surgery Waiting Room, your loved ones can get their code from the volunteer on duty. General updates will be given, such as "In Recovery."

If your family leaves the Surgery Waiting Room for any reason, they should keep the receptionist informed of their whereabouts. They may also request a beeper to take with them, so they can be notified when to return to the area.

Surgery

Once you are in the surgery area, you will be asked to move from the gurney to the operating table. This table works extremely well during your surgery, but it is not the most comfortable piece of furniture you have ever been on!

You will notice a flurry of activity around you. While the anesthesiologist hangs IVs, places monitors on you, and prepares for the type of anesthetic you will receive, the nurses will be preparing the room for surgery. A great deal of equipment needs to be prepared for each procedure. When the surgery is completed, you will be transported to the Post Anesthesia Care Unit (PACU) or Recovery Room.

Recovery Room

In the Recovery Room, also known as the Post Anesthetic Care Unit (PACU), you will be closely monitored by highly trained nurses. Your surgeon will notify your family of your condition and how your surgery went. Your pain should be under control; if it is not, bring this to the attention of your nurse. X-rays will be taken as necessary. Most likely, you will be breathing additional oxygen through a mask or nasal tube. You will be in the PACU for approximately 2 hours. Many patients require a longer stay. No visitors are allowed so that the nurse may provide the best environment for all patients. However, your nurse will keep them informed of your status. When you are medically stable, you will be transported to your patient room on the nursing floor.

Nursing Floor and Post-Surgery Schedule



Once on the nursing floor, you will be cared for by an experienced staff of registered nurses, physical therapists, and other clinical staff. A team approach to total joint patients has been established and is headed by your surgeon. Your care will follow a protocol designed to maximize your recovery.

Patients generally stay 1 night in the hospital. This is a very busy time for you and your family. There are a lot of physical therapy and nursing instructions that have to be given in a very short amount of time. Written instructions will be provided to you prior to your discharge home.

As a general rule, the following will be your post-surgical schedule:

- **Day of Surgery:** Depending on your pain levels, you will rest, receive pain pills or IV medications as needed, do bed exercises, drink fluids, and advance to a regular diet as tolerated. Physical therapy will get you up and out of bed to walk depending on how you feel.
- **Day #1 After Surgery:** You will continue to progress to a regular diet and work with physical therapy. About 90% of patients will be discharged to their homes.
- **Day #2 -3 After Surgery:** Patients who require more physical therapy will continue to increase their activity level. Those who need to be transferred to a skilled nursing facility will have discharge arrangement made by case management.

Physical & Occupational Therapy



Physical Therapy: The physical therapist (PT) works with you primarily on exercises and walking. He or she will begin to work with you on the day of your surgery. Your PT will teach you necessary precautions to allow proper healing and functioning of your new joint. Your PT will assist in bed mobility, walking, hand/elbow and wrist exercises and how to put on and remove your sling.

These exercises are necessary to prevent your elbow from getting stiff. They will be difficult to perform in the beginning, but will get easier every day. During your hospital stay, you will attend physical therapy one to two times a day. An occupational therapist and nurse discharge planner also will help you prepare for your homecoming.

Occupational Therapy: The occupational therapist works on activities of daily living assistance (i.e.: dressing, bathing, etc.) This will be done on an individual basis depending on your needs and safety.

How long do I need to go to therapy?

Physical therapy is an integral part in your recovery following a joint replacement surgery. Your progress will determine the duration of that therapy. The therapist will additionally instruct you in exercises that you can perform on your own without supervision. When you reach the goals that your therapist outlines with you and your therapist feels that you have reached independence, your therapy will be discontinued.

Medications and Pain Management



Our goal is to control and ease your pain, but surgery is simply not a pain-free process.

Upon arrival for surgery, you will receive medications by mouth that have been shown to reduce after-surgery pain.

Patients undergoing joint replacement surgery are generally ordered certain classes of medications during their hospital stay. These frequently include antibiotics, pain medications,

and medicine to prevent or control nausea or an upset stomach. The nursing staff will discuss with you what medications have been ordered, what they are used for, and the common side effects that you may experience when taking these medications.

In addition, your healthcare team is aware of your concern about pain and is committed to answering your questions and managing surgical pain. Please know that it is the primary goal of the team to keep your pain as well-controlled as possible in a safe manner. This may mean that you have some pain, but not severe pain. Please feel free to discuss your pain with any member of our team.

Pain is different for everyone. Some patients have minimal pain after surgery whereas others have more severe pain. It is important to understand that surgery will not relieve your joint pain immediately. Pain after surgery occurs in a cycle. It begins and increases until medication interrupts it. The aim of good pain control is to treat the pain before it becomes intolerable. If at any time you experience severe pain, let your nurse know immediately.

ICE after surgery is important! This is one of the cheapest and most effective ways to limit pain. In fact, studies show regular icing leads to decreased pain weeks after surgery. While you are awake, ice your shoulder for about 20 minutes every 1 to 2 hours. Even if you aren't having a lot of pain, this is a good idea for the first few days after the surgery. Options for icing the shoulder include a bag of ice, a bag of frozen peas or a dedicated ice machine. Many people find that the machine is most convenient. However, you will probably have to pay for the dedicated machine, since it is not covered by insurance. If you are interested in this type of device, you can discuss with our bracing/orthotics specialist.

There are several different types of pain control methods available that will keep you comfortable and allow you to be up and walking shortly after surgery.

Surgical Site Infection: The surgical site may be injected with local anesthetic at the end of surgery. The nerve block can last for as long as 2- hours, depending on the location and type of block used.

Pain Medication: The nurses will start you on oral pain medications right away. A balanced mix of narcotic pain killers, anti-inflammatory drugs, and anti-nausea medications may be used.

In general, you will be given a prescription for:

- 1) Percocet 5/325 mg or Norco 5/325 mg. 1 or 2 tabs every 4-6 hours as needed for pain. Both of these contain Tylenol (acetaminophen), so please don't take extra Tylenol during this time.

- 2) If you are having issues with nausea, a prescription for Zofran 4mg will be provided for you.

If you aren't on any narcotic medications prior to surgery, in general you will need these for pain control for about the first few days to 2 weeks. When you no longer need narcotics, you can use Tylenol alone. NO REFILLS WILL BE PROVIDED ON THE WEEKENDS. If you need a refill, please anticipate this and let us know early in the week.

How long will my pain last? How long a person experiences pain after total joint replacement is variable, but your pain should gradually diminish over time. You will initially require strong narcotic pain medicine for the first 4-6 weeks after surgery. In general, you should then be able to switch to over-the-counter pain medicines such as an anti-inflammatory or Tylenol. Most people are able to decrease the use of pain medication over the first few weeks and rarely require prescription narcotic medication longer than 3 months after surgery. If you still require narcotic pain medication beyond 3 months after surgery, or your surgeon may re-evaluate your shoulder or refer you to a pain management specialist.

Some therapy and exercises will also cause mild to moderate pain for some period of time. Minor discomfort related to a replaced joint may on occasion linger for 6-12 months. If the pain persists, let your doctor know.

Medications

In general, resume all your regular medications immediately after surgery. Three other medications should be considered:

- 1) Vitamin D: Vitamin D is important to bone health, and studies also suggest that Vitamin D deficiency can be associated with poor healing after rotator cuff repair. In this region of the country, most patients are Vitamin D deficient. Therefore, I do recommend that you take Vitamin D (800 IU) daily for a month prior and for at least 12 weeks following shoulder surgery. (See page 11)
- 2) Vitamin C: At least one study has shown that Vitamin C can lower pain after surgery. Therefore, I recommend taking 500 mg of Vitamin C twice daily for 2 weeks after surgery. (See page 12)
- 3) NSAIDS: Non-steroid anti-inflammatories (Ibuprofen, Motrin, Naproxen, Mobic, Celebrex, Aleve, etc.) can impact rotator cuff healing. The timing is important. It appears that if given early, they can decrease tendon healing. Therefore, avoid NSAIDS for 6 weeks following surgery. However, after the early phase, these medications may actually help healing. I advise taking them from 6 weeks until 12 weeks after surgery if you tolerate them (no problems

with upset stomach). Options are ibuprofen 600 mg three times daily or Aleve 2 tabs (440 mg) twice daily can be taken from 6 to 12 weeks after surgery.

Blood Loss and Transfusions

Blood Donation and Transfusion Options

You may need blood after surgery, although this is becoming less frequent. Changes in surgical techniques with smaller incisions and exposures have decreased the need for self-donated blood (autologous) and donor blood (allogenic) transfusions.

Patients are transfused only if they have a significant decrease in their blood count (anemia) post-operatively and/or have symptoms related to anemia. Your surgeon will let you know if donating your own blood prior to surgery is recommended for you. Patients undergoing shoulder replacement typically do not need to donate blood prior to surgery.

A **Blood Transfusion Consent** form will be given to you during your pre-surgery appointment at the hospital.

Getting Ready for Discharge



If you are discharged home, you should be able to:

- Get in and out of bed independently.
 - Identify medications, name the side effects, and know when to take them.
 - Take care of your incision and dressing after surgery.
 - Follow post-surgery care precautions from your surgeon.
 - Correctly use sling.
 - Participate in a home exercise program.
- Get in and out of a car correctly and safely.
 - Be able to use home equipment effectively.
 - Have a follow up appointment with your surgeon.
 - Have contact information for the home health agency and physical therapists.

If you have a long car ride home, stop every 45-60 minutes and get out to walk so as to prevent blood clots from forming. Do ankle pumps in the car while riding home.

If you live alone, it is highly recommended to have a family member or a friend stay with you for a few days after discharge from the hospital.

AFTER YOUR HOSPITAL STAY

Care of Your Incision

You can shower 48 hours after your surgery without your sling. Dressings can be removed two days after surgery. **DO NOT REMOVE THE STRIPS!** Water can pass over the wound, and you can pat the wound dry. To wash under your armpit, lean over and dangle the arm at the side. After you shower, Band-Aids may be applied to each incision. Once the incision is completely dry (a few days after surgery at most), no Band-Aids are needed. Sutures, if present, will be removed 10-14 days after surgery. Please do not soak in a pool or hot tub until 4 weeks after surgery.

Rehabilitation Needs

Transfer to an Inpatient Rehabilitation or Skilled Nursing Unit after your hospital stay, will be done ONLY for those patients needing additional closely monitored therapy.



Therapy is a continuation of what you have read in this manual and learned in the hospital. Living alone is not considered to be a reason for going to rehabilitation.

Your transfer for rehabilitation or skilled nursing depends on:

- Questions asked before surgery about your health, help at home and activity level
- How you progress in the hospital after surgery

Insurance companies have very specific criteria for patients needing rehabilitation or skilled nursing care, and your case manager will address these requirements if it is determined that you have a medical necessity for a transfer to this type of facility.

The rehabilitation or skilled care unit is a place where people go for additional therapies for several days up to 3 weeks. Patients with many different types of medical conditions are on this type of unit, including: strokes, fractures, injuries and total joint replacements. Because the rehabilitation of, or recovery from an injury or surgery takes longer the older you are, most of the patients in these types of units are older. **A rehabilitation unit or a skilled nursing facility is not a nursing home!**

These facilities are also not a hospital, but a care facility where the focus is on gaining independence. This means that although clinical care is provided by nurses, the nurse to patient ratio is different than in the hospital. To be admitted to a rehabilitation unit, you must be able to participate in 3 hours of therapy per day, 5 days per week. The three hours are split between Physical Therapy and Occupational Therapy. You will receive less therapy on the weekends.

Therapies are done on an individual and group basis. The average length of stay is one week. This stay is covered by Medicare and most major insurance groups. Prior to a transfer to a rehabilitation or skilled nursing facility, your insurance coverage will be verified by a case manager.

You will be getting dressed daily, so please bring several changes of loose-fitting clothes that you normally wear at home. Some exercises are done in a therapy gym, so slacks or sweat pants are helpful. Meals are served in a central dining room or in your room. You will be encouraged to bathe, dress, and perform daily hygiene independently with the assistance of your therapists.

While on the rehabilitation or skilled nursing unit, you will be followed by a health care team: a medical physician (who may or may not be your family doctor), nurses, therapists, a dietician and a case manager. Your mobility skills are practiced and increased daily so that when you go home, you will be able to take care of yourself.

~ Note that Salem Regional Medical Center has a skilled nursing facility for patients meeting medical necessity for this type of care after hospital discharge.

Shoulder Precautions

Rehabilitation & Physical Activity

Rehabilitation following shoulder surgery is very important. Your rehabilitation plan will be tailored to meet your particular shoulder problem, and after surgery you will be provided with a rehabilitation plan with important timelines/dates such as sling removal. Make sure you keep this form. You will need to exercises on a daily basis, and you may also need to work with a physical therapist. You can also have a copy of my rehabilitation programs. These programs are based on evidence-based studies and are designed to maximize your long-term outcome. Please DO NOT let anyone make changes to your rehab without you and I discussing first. In most cases, formal physical therapy can begin 6 weeks after surgery when the sling is removed. In some cases it can begin sooner.

Return to full activity varies based on the type of shoulder surgery. Being physically active is an essential part of recovery. Continue to perform the exercises you learned in the hospital. Before leaving the hospital, you will be given a physical therapy exercise plan to follow. For the next three to six weeks, you need to protect the shoulder so that the muscles can heal. You should have an appointment to see a therapist within the first or second week after you are discharged from the hospital. During the first few

weeks of recovery, the physical therapist may teach or help you perform specific exercises to strengthen your arm and shoulder.

You may experience swelling and bruising of the hand and arm. This is normal and results from the swelling and bruising from your shoulder, which travels down the arm. Unfortunately, there is no treatment for this, but it is recommended that you bend and straighten your elbow frequently and make a fist to help keep your circulation flowing.

Your arm will still be in a sling and it is recommended that you wear it when you are in public or moving around. If you are reading, watching television or working at a desk, you may loosen it. When you are getting dressed, it is easiest to put your operated arm through the shirt-sleeve first, then put your sling on. You may use your arm to perform normal daily activities, such as eating, writing or shaving, but you may not lift any items or reach out suddenly until you are instructed that it is OK to do so.

Sling Care

The sling is important for your recovery. In most cases, the sling is simply to prevent shoulder movement. Therefore, it is okay to take it off when you are sitting with your arm at your side. You can take your arm out of the sling and place it on a pillow, similar to the position that it would be in with the sling. When you are up moving around and when you are sleeping, the sling **MUST** be on.

Sleep

Sleep is one of the most difficult issues after shoulder surgery, for the first few weeks, especially while wearing a sling. Some people find it easiest to sleep in a reclining chair while others sleep in a normal bed. A pillow wedge can be useful for sleeping in bed, and these can easily be found on the internet for less than \$50. It is important to sleep with the sling on until the removal date specified on your rehab plan. If you are still having difficulty sleeping at the first postoperative visit, please discuss this with me, and we can provide you with a sleeping medication to help. Do not drink alcohol with this medication or with your narcotic pain medication.

Driving

You cannot drive while taking narcotic pain medication. Delay driving until you are out of your sling. This is for 4 to 6 weeks, depending on your surgery and rehab protocol.

Work

Return to work will be dictated by your type of work and your desire to return. All FMLA and short-term disability paperwork can be turned into our office.

Follow-up Care



After you have returned home, you will need follow-up care at routine times, assuming all is going well.

After Surgery Office Visits

Here are the typical return visits to the office:

- 1) **2 weeks after surgery:** This is a brief office visit. We will go over the findings of the surgery, rehabilitation plan, provide a therapy prescription if needed, handle return-to-work notes, and provide any refills of pain medication if needed.
- 2) **3 months after surgery:** Rehabilitation will be progressed.
- 3) **6 months after surgery:** Release to normal recreational activities is the normal and physical therapy is no longer required.
- 4) **12 months after surgery:** Final check if needed.

Further Follow-up: Follow-up visits are important in order to continue to define the best treatment for total joint patients. Please note that the post-surgery follow up schedule as outlined is for patients progressing without problems. Should you have the need for more frequent visits, you may be asked to return at shorter intervals. If you have concerns or problems, call your physician so you can be seen sooner than your scheduled visit. You should also see your regular primary care physician within 2 months from the date of your discharge from the hospital. This visit will ensure that you are as physically fit as possible and allow you to maximize your recovery.

Return to Daily Activities

Travel: You can travel when you feel comfortable. This is generally about 6 weeks after surgery. However, when travelling, it is important to take some measures to prevent blood clots. It is recommended that you get up to walk and stretch at least once every one to two hours during extended travel.



Will I be able to return to my normal activities: Continue to do the exercises prescribed by your physical therapist for at least 2 months after surgery. Most people return to all of their normal activities after shoulder replacement. In fact, many patients are able to do more because their motion is improved and their pain is decreased. Activities that involve a significant lifting or accelerate the arm (golf, tennis) are allowed 6 months after surgery. While there is no consensus among shoulder experts, in general it is recommended that you do not frequently lift over 25 pounds after a shoulder replacement. This is not to say that it cannot be done occasionally (like for lifting a suitcase). But, if someone does frequent lifting, particularly at or above shoulder level, the prosthesis is more likely to wear out.

The way a shoulder replacement will perform depends on your age, weight, activity level and other factors. There are potential risks and recovery takes time. If you have conditions that limit rehabilitation, you should not have this surgery. Only an orthopaedic surgeon can advise you if a shoulder replacement is right for you.

Some Problems to Watch for After Surgery



Signs and Symptoms of Infection: Infection is a very serious complication after total joint replacement so it is important to be aware of the signs of an infection. Patients may experience persistent fever ($>101^{\circ}$), chills or night sweats. In addition, it is important to closely monitor your incision and be aware of any redness and/or drainage.

Please call your orthopaedic surgeon's office if:

- The incision becomes red or "angry looking."
- You notice an increase in any type of drainage through the incision or drain site.
- The area around the incision becomes more swollen and doesn't respond to rest and elevation (elevation defined as your foot above the level of your heart).
- You have a fever that is not getting better.

A good rule of thumb is, **when in doubt, call.**

Blood Clots: If the swelling of the entire leg occurs that does not go down with elevation (foot above the level of your heart) or after resting overnight, this may be a sign of a blood clot. Should you notice leg, ankle, or foot swelling that does not respond to rest and elevation, please call us. Blood clots can form in your calf or thigh, and there is usually tenderness of the calf or inner thigh along with swelling. Redness in these areas is also sometimes seen. Many people develop blood clots without any sign of a problem so, **when in doubt, call.**

Chest Pain: If you are having chest pain and/or shortness of breath, it is best to call 911 and go to the nearest hospital.

Other Considerations

Cost and Insurance

It is very important for patients to know their insurance policy information and the coverage that they have. Our surgery scheduling staff will obtain the proper authorizations for surgery and the hospital stay. They can also refer you to the proper resources at the hospital to answer your questions regarding coverage.

Words of Encouragement

The entire Team is committed to the successful outcome of your surgery. We have prepared this manual and organized our team so that you, the patient, are an active participant. We ask that you maintain a positive mental outlook throughout this entire process. Please be assured that our team will help guide you along this journey.

You will also have an opportunity to provide feedback about this process, and will receive a follow-up survey that will come through the mail about 6 weeks after your surgery.

Thank you for reading this manual.

Shared Decision Making: Acknowledgement of Understanding

Shared decision making occurs when a health care provider and a patient work together to make a health care decision that is best for the patient. This process takes into account evidence-based information about available options, the health care provider's knowledge and experience, and the patient's values and preferences.

Our Team feels it is of utmost importance that YOU, the patient, be well informed before the surgery. This has been shown to improve your results after the surgery.

I have read the joint replacement manual, understand its contents, and feel prepared for surgery. My surgeon has discussed all applicable treatment alternatives with me, and we have agreed that a total joint replacement is an appropriate course of treatment. I understand if I have a further question or concern, I may contact the SRMC orthopaedic team at 330-332-7244, my family doctor or my orthopaedic surgeon

Patient Signature: _____ Date: _____

Print Patient Name: _____

Surgeon Signature: _____ Date: _____

Print Surgeon Name: _____

Frequently Asked Questions

How common is shoulder replacement compared to hip and knee replacement?

Most people know someone who has had a hip or knee replacement. Knee replacement is the most common replacement performed in the U.S. each year. Hip replacement is the next most common, and shoulder replacement is the third most common. The results of shoulder replacement are similar to hip and knee replacement. Studies have also shown that the complication rate is lower with a shoulder replacement compared to hip and knee replacement.⁷

Who should perform a shoulder replacement?

Many shoulder replacements are performed by surgeons who perform less than 10 replacements a year. Multiple studies, however, have shown that complication rates are lower in the hands of an experienced surgeon, performing the surgery in a high-volume hospital.¹²⁻¹⁴ I primarily perform 50-75 per year shoulder replacements a year, which is one of the highest in the state of Ohio.

Will I be able to care for myself after surgery?

Most people are able to return to normal every 4 day activities such as dressing themselves and grooming within the first two weeks after successful shoulder replacement surgery. It is good to have someone who can help with daily activities for the first couple of weeks after surgery.

When can I shower?

In most cases, your surgical incision will be closed with absorbable sutures and covered with surgical glue. In that case, you may shower 2 days after surgery. Water can pass over the wound, but please do not soak in a pool or hot tube until 2 weeks after surgery. To wash under your armpit, lean over and dangle the arm at the side. After a couple of days, a bandage is not needed. If the incision is closed with staples, showering may occur 3 days after surgery and a bandage should cover the incision until the 2-week follow-up.

When can I drive?

You cannot drive while taking narcotic pain medication. Legally, I must recommend that you delay driving until you are out of your sling. This is for 4 to 6 weeks depending on the type of shoulder replacement surgery. Standard total shoulder replacement and partial replacements require a sling for 4 weeks after surgery. Reverse total shoulder replacements require a sling for 6 weeks.

When can I return to work?

Return to work will be dictated by your type of work and your desire to return. In general, I advise taking 2 weeks off of work. Some patients wish to return earlier, but it is better to plan for more time off and return early than vice versa. Immediately after surgery you can move your elbow and wrist up and down. This allows you to eat, drink, write, use a keyboard and other minimal activities that do not require the use of your shoulder.

Will I be able to return to my normal activities?

Most people return to all of their normal activities within 4-6 months after shoulder replacement. In fact, many patients are able to do more because their motion is improved and their pain is decreased. Activities that involve significant lifting or accelerate the arm (golf, tennis) are allowed 6 months after surgery. While there is no consensus among shoulder experts, in general it is recommended that you do not frequently lift over 25 pounds after a shoulder replacement. This is not to say that it cannot be done occasionally (like for lifting a suitcase). But, if someone does frequent lifting, particularly at or above shoulder level, the prosthesis is more likely to wear out.

Will I set off a metal detector?

Shoulder replacements do contain metal, so this is a possibility, but it depends on the sensitivity of the detector and the amount of other metal in your body/on your clothes. If you do set off the detector, you simply will need a manual scan. We do not provide cards stating that you have a joint replacement since these are not accepted by the TSA.

Do I need antibiotics if I have dental work?

The American Academy of Orthopaedic Surgeons and the American Dental Association do not recommend antibiotics before dental work, as they are not helpful. In general, I recommend waiting at least 3 months after shoulder replacement to have dental work.