

NAON Patient Education Series

# Postoperative Shoulder

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of Orthopaedic Nurses

*Advancing the Art and Science of Orthopaedic Care*

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## Multimodal Analgesia

Pain is generated from multiple nerve pathways in your body. To ensure the best possible pain relief after shoulder surgery, your doctors may use a pain control approach called multimodal analgesia. Multimodal analgesia means that you will receive two or more medications that provide pain relief and, when used together, more effectively block pain signals. These medications can be given by the same or different routes (such as intravenous [through a tube inserted into a vein], injections, or pills). Multimodal analgesia is geared toward reducing your pain after surgery in order to help you recover more quickly and easily.

One of the main goals of multimodal analgesia is to decrease your need for opioid medications. Opioid medications include drugs derived from the opium plant (such as morphine) and also man-made drugs designed to have similar pain-reducing effects (oxycodone and hydrocodone). Opioid medications provide effective pain relief, but taking them regularly can lead to physical dependence and, sometimes, addiction. They also may have serious side effects, such as a dangerous decrease in the ability to breathe. Using less opioid medication can help decrease dangerous side effects and also other side effects (such as sleepiness, nausea, vomiting, and constipation) that may be unpleasant for you and may interfere with your ability to participate in physical therapy.

Multimodal analgesia includes medications that you receive before, during, and after surgery. Some of these medications may be familiar to you; for example, acetaminophen (Tylenol) and nonsteroidal anti-inflammatory drugs (Celebrex, Toradol, and others) are commonly given before and after surgery. Opioid medications are also used, especially when other medications do not give you enough pain relief. Another option for reducing pain after shoulder surgery is local anesthetic injection during surgery (see below for more information). When using multimodal analgesia, your doctors will choose pain medications, doses, methods of administration, and length of treatment based on your medical history, symptoms, and response to treatment.

## Local Anesthetic Injection

One important part of multimodal analgesia (see above for an explanation of this term) for pain following surgery is local anesthetic injection. Your surgeon may use this procedure during your shoulder surgery. The surgeon injects a local anesthetic (similar to novocaine given at the dentist) alone or in combination with other medications into the part of the body where the surgery is taking place.

Local anesthetics block pain signals sent by the nerves to the brain. Injection of local anesthetics into the part of the body where the surgery is taking place is a simple and effective practice for controlling pain from surgical procedures. Local anesthetic injection can help reduce the pain you experience after surgery, including pain that may occur when you walk or move around. Research studies have shown that injection of local anesthetics during surgery, when used as part of multimodal analgesia; provide effective relief of pain after surgery. They may also reduce your need for opioid medications and help you to walk sooner after your surgery.

Of the medications used for local anesthetic injection, ropivacaine and bupivacaine are among the most common. A concern with these medications is that they are short acting, so their pain-relieving effects may not last long enough after surgery. One alternative is a long-acting form of bupivacaine that slowly releases medication at the injection site and may provide pain relief for a longer period of time. Your surgeon will decide the best combination of medications for local anesthetic injection during your surgery, if this technique is used.

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## General Information

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### Welcome and Purpose

Welcome to your shoulder surgery patient education. This information will help you learn what to expect from your experience with shoulder surgery

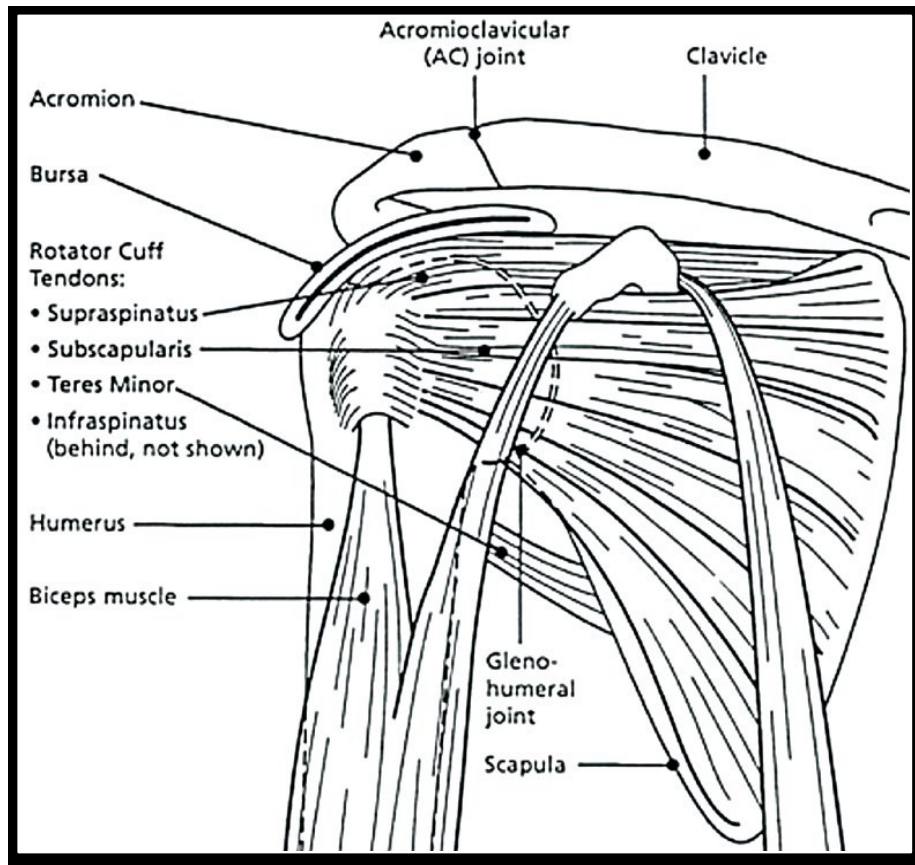
Shoulder problems are a common reason for people to seek medical attention. As many as 7.5 million people per year visit their doctor's office in order to be evaluated for shoulder issues. Symptoms may include stiffness and inability to move the shoulder joint normally. There may be arm weakness or pain that prevents you from performing your work or daily activities. You may feel a popping, grinding or

sliding of the shoulder joint. Injury to the shoulder can occur during activities involving repetitive overhead motion in sports, or from everyday activities that include reaching. Shoulder pain, stiffness and weakness can also be the result of wear and tear on the shoulder joint, which progresses over time.

Some shoulder problems may be managed with non-surgical treatments. However, if you and your orthopaedic surgeon have determined that shoulder surgery is necessary; your surgeon will discuss which type of procedure will be used to treat your particular shoulder problem.

## Introduction to Shoulder Surgery

How your shoulder works:



*National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)*

The shoulder joint is the most flexible of all of the body's joints. When it is functioning normally, this flexibility allows movement of the arm in almost every direction through a full range of motion. When there is damage to any of the structures in the shoulder, this makes movement difficult and painful.

The shoulder is a ball-and-socket joint. The ball portion is found at the top of the arm bone, which is called the head of the humerus. This fits into the socket, which is called the glenoid. This ball and socket makes up the glenohumeral joint. The glenoid composes part of the shoulder blade, which is called the scapula. This area is a common site for arthritis to form. Arthritis results in narrowing of the joint space and causes stiffness and pain. Shoulder replacement may be an option for pain management and improving movement.

The bone known as the acromion sits above the ball and socket and protrudes over the shoulder joint. This area is prone to the development of bone spurs. If non-surgical treatment is unsuccessful, surgery may be necessary to remove bone spurs and repair the rotator cuff muscles that surround the shoulder joint.

A structure known as the acromioclavicular (AC) joint, next to the acromion, connects the collarbone, also called the clavicle, to the scapula. This area is a common place for shoulder instability and separations to occur. Surgery is usually advised for repeat shoulder dislocations.

The labrum is a strong rim of fibrous tissue that lines the shoulder socket. It functions to help maintain a stable fit for the head of the humerus in the shoulder socket. Shoulder ligaments also attach to the labrum. A tear in the labrum can occur from trauma to the shoulder from a fall on an outstretched arm or actions of sudden pulling, tugging, or forced reaching.

A fluid filled sac, called the bursa acts as a cushion. An impingement, or pinching, syndrome can happen if the bursa and tendons become swollen or inflamed (bursitis). The impingement can also occur when the shape of the acromion causes it to press against nearby structures. This results in irritation and torn tissue. If conservative measures with medication and therapy are unsuccessful, your surgeon may need to surgically correct these problems as they interfere with normal shoulder function.

The shoulder joint is surrounded by four muscles, known as the rotator cuff. This group of muscles allows the arm to rotate in and out, as well as up and overhead. Strong fibrous bands of connective tissue, known as tendons, attach the rotator cuff muscles to the top of the arm bone (humerus).

The rotator cuff muscles also work to maintain the position of the shoulder in its socket. Repetitive overuse activities, such as reaching and throwing with sports can cause irritation, swelling, and tearing of tissue. Fraying of the tendon may occur as we age. The tendons may be weaker from prior injury and in danger of being torn again. Although a rotator cuff tear can happen at any age, the average age reported is 65 years old.

Injury to the rotator cuff causes weakness and stiffness, impairing the ability to raise the arm over the head, depending on whether there is a partial tear or a complete tear.

Another important shoulder muscle is the Deltoid. The deltoid muscle serves as the largest and strongest muscle of the shoulder. It is responsible for lifting the arm out to the side. It also helps to stabilize the shoulder to prevent dislocation. If conservative measures with therapy are unsuccessful, your surgeon may need to surgically correct these problems as they interfere with normal shoulder function.

### **Surgical Options**

Shoulder surgery can be done either through an incision (open surgery) or through a tube with special instruments inserted into the shoulder joint (arthroscopy). Open surgeries may allow better visualization. Arthroscopic surgery allows the surgeon to work around structures rather than cutting through tissue and suturing it back to get to the damaged area. Open surgeries tend to be more painful, often requiring overnight hospitalization for pain control. People who have arthroscopic surgery can often have the procedure performed as an outpatient and go home the same day.

### **Arthroscopic or Open Repair of Rotator Cuff Tear**

Surgery to repair a torn rotator cuff may involve re-attaching the tendon to the upper arm bone. A partial tear may only need a procedure called a debridement, where structures are smoothed out. A complete tear often is repaired by stitching the two sides back together.

This surgery may be recommended by your surgeon when your pain does not improve with non-surgical treatments. If you are involved in sports or are very active your physician may recommend surgery as well. Based upon your discussion with your surgeon one of three options may be recommended. In an open repair, the surgeon makes an incision over the outside of the shoulder, and exposes the rotator cuff so that it can be repaired. The incision is usually a few inches long.

Commonly, arthroscopic repair is done. With this surgery, the surgeon makes numerous small incisions around the shoulder and uses a scope tube with a camera (arthroscope) to visualize the area. Specially designed instruments are inserted in order to make repairs. You will see several small incisions, rather than a large incision.

A mini-open repair may also be used. The surgeon performs an arthroscopy to visualize the structures inside the shoulder, and correct damage in the joint using special instruments. Then a small incision, typically about 1-2 inches long, is made, and open repair of the rotator cuff is performed.

All three surgical options are reported with a high level of patient satisfaction, pain relief, and return to mobility. Completing your exercises and following your rehab program is essential to getting the best results. You can improve your chances of complete healing by stopping smoking or other tobacco use and eating a nutritious diet.



### **Arthroscopic Acromioplasty (Subacromial Decompression or bursoscopy)**

The top front part of the rotator cuff may impinge on a ligament, causing fraying and painful degeneration. This surgery is used to relieve the pressure due to severe impingement syndrome. With impingement syndrome the tendons become irritated and inflamed. This can result in weakness, pain, and loss of function.

The surgeon makes numerous small incisions around the shoulder and uses an arthroscope and camera to visualize the area. This surgery releases the area of impingement and improves patients' mobility. Normally most patients have a dramatic relief in symptoms after the surgery is completed. Postoperative rehabilitation is very important and most patients have a resolution in symptoms after a few months.

### **Bone Spurs**

Most bone spurs cause no signs and symptom and may not be detected until seen on an X-ray is performed Bone spurs can cause pain and loss of motion in your joints as well as swelling and tears in your rotator cuff (tendinitis). This can be repaired by using an arthroscopic procedure.

### **Modified Bankart Reconstruction (reconstruction of the capsule and labrum)**

This procedure is to correct an unstable shoulder. Two things are accomplished with this procedure; it re-attaches the ring of cartilage in the shoulder (labrum) and tightens loose ligaments. Typically, this is an open procedure. However, there are new techniques that allow surgeons to perform this repair using an arthroscopic procedure (called arthroscopic Bankart reconstruction or arthroscopic suture capsulorrhaphy).

Data shows that there is less pain and complications after surgery and that success rates are similar to open procedures. There are several procedures used to help stabilize the shoulder, including the DuToit stapling of the torn capsule back to the glenoid bone. Other repairs may be with pins, screws, or cutting bone and changing the route of the tendons.

### **Correction of Anterior Shoulder Dislocation**

Ninety-five percent of shoulder dislocations occur when the head of the arm bone (ball) comes out of the socket toward the front (anterior), often after a fall backwards on outstretched hand. Posterior and Inferior (downward) dislocations rarely occur. Although many dislocated shoulders can be put back in place initially, recurrent dislocations may require surgery to help stabilize the shoulder.

A dislocated shoulder usually results in severe pain and loss of function. Tendon, ligament or nerve injury may occur with the dislocation or while putting the ball and socket back in place. Watch for numbness, weakness and any change in the ability to feel or move your lower arm or hand. Notify your nurse or physician immediately if this occurs. Severe pain stops almost immediately once the shoulder joint is back in place.

### **Total Shoulder Joint Replacement Surgery (Total Shoulder Arthroplasty)**

Shoulder joint replacement surgery, or shoulder arthroplasty, may be performed to relieve pain, stiffness and the decreased ability to function normally. Severe shoulder dysfunction results from loss of cartilage that normally lines the joint and allows for smooth movement of the head of the humerus inside the glenoid. Cartilage may progressively wear away over time or can be damaged due to injury. This results in diminished joint function. Shoulder replacements are done for the following problems:

- Various types of arthritis: degenerative joint disease (osteoarthritis), rheumatoid, or post-traumatic
- Disruption of the blood supply to the head of the humerus (avascular necrosis)
- Severe arthritis in combination with large rotator cuff tears that cannot be repaired (rotator cuff arthropathy)
- Severe fractures

## Conventional Total Shoulder Replacement



*Normal Shoulder*



*Arthritic Shoulder*



*Total Shoulder Replacement*

The type of shoulder replacement your surgeon performs depends upon the extent of the abnormality affecting the shoulder. Conventional total shoulder replacement is generally performed when cartilage is totally worn away, yet the rotator cuff tendons are in good condition. This type of shoulder replacement also relies on the rotator cuff muscles to move the arm. The system is modular, which allows the best fit possible. The arthritic head of the arm bone is replaced using a metal stem and highly polished metal ball. The socket is replaced with a plastic durable material.

There are various types of implants available. Your surgeon will determine the appropriate type for you with the goal of eliminating shoulder pain, improving movement, and allowing a return to normal activities.

### Reverse Total Shoulder Replacement



A prosthesis specifically designed for fractures is utilized. In this procedure, the damaged head of the humerus is removed and replaced with a new metal ball that is fixated on a stem. The stem extends into the canal of the arm bone.

Reverse Total Shoulder Replacement is performed when there is damage to the rotator cuff, resulting in inability of these muscles to help move the arm properly. The positions of the components of the reverse total shoulder prosthesis are switched, in relation to how they are implanted in the conventional total shoulder procedure. The pieces include a durable plastic socket that is connected to the upper part of the arm bone and a metal ball that is attached to the shoulder bone. The goal of this surgery is to alleviate pain and to improve the ability to lift the arm up. The reverse total shoulder replacement relies on the deltoid muscle to provide movement to the arm, rather than the torn rotator cuff muscles.

### Partial Shoulder Replacement (Hemiarthroplasty)



A partial shoulder replacement or hemiarthroplasty may be performed in the case of a severe fracture.

## Partial Shoulder Replacement Resurfacing



A partial shoulder replacement with resurfacing may be performed in cases where there is severe arthritis, yet a total shoulder replacement is not needed. There are various types of prosthesis for partial shoulder replacement with resurfacing.

Your surgeon will determine the best type of surgery for you, depending on the condition of your shoulder joint and your particular activity abilities and needs. These are two types of shoulder resurfacing procedures. Your surgeon will discuss with you whether these options or others best fit your situation:

- The damaged humeral head may be replaced with a smooth metal cap implant placed over it. In this procedure, the socket is smoothed out and resurfaced into a shape that matches the surface of the implant, so that movement is easy.
- The glenoid socket may be replaced and the head of the humerus is smoothed and resurfaced.

### Frequently Asked Questions about Shoulder Surgery

A well-informed patient is one who will be able to take an active part in their care and rehabilitation. Knowing what to expect before, during, and after surgery can help you to recover more quickly. It can also assist you and your caregiver to avoid and recognize potential problems. There are common questions patients have about shoulder surgery. Answers to some questions are listed below. However, it is best to discuss specific questions with your surgeon. Note that some questions have a reminder to do just that.

#### *Why do most people have shoulder surgeries?*

One reason is to have less pain, depending on the exact surgical procedure that is needed. Other reasons may include range of motion and ability to complete your normal daily activities. Activities such as dressing, grocery shopping, and others are pleasant when they become easier and less painful. Many people feel improved quality of life overall.

#### *What are the major risks related to shoulder surgery?*

The same risks for any surgery apply to shoulder surgery. That's why it is important to be in good general health before you have an elective surgery. Rare nerve injury or fracture of the bone, while inserting hardware or implants, can occur. Prophylactic antibiotics decrease the chance of infection. Medication or mechanical devices that help circulate blood in your legs may be used if you are at risk for blood clots. Discuss any history of blood clots or other concerns you might have with your surgeon.

#### *What do I need to do to prepare for my surgery?*

You may be asked to come to the hospital before your surgery to register and have tests. You will be told not to eat or drink anything after midnight the night before your surgery. On the day of the surgery you need to arrive at the hospital about 1-2 hours before the scheduled surgery time. You will be taken to a pre-surgery area. You may be given medicine to help you relax. When your surgery team is ready, you'll be taken to the operating room and your anesthesia is started.

#### *Am I too old for this surgery?*

Age is not an issue if you are in good health and want to continue living an active life. You may be asked to see your primary care doctor about your overall health and readiness for surgery.

#### *Will I need a blood transfusion?*

You may need blood during or after surgery. Discuss with your surgeon if there is a need or plan to donate or use banked blood. In many hospitals, you or a family member can donate blood that will be used during your shoulder surgery. Banked blood is considered safe, but you may want to use your own. Other options and medications are available to patients prior to surgery that may help decrease the need for a blood transfusion.

*\*Discuss need for blood with your surgeon.*

### ***Will I be put to sleep for surgery?***

General anesthesia is given to you for your surgery. General anesthesia allows you to sleep. A nerve block may be administered before the surgery as well. A local anesthetic is injected near the nerve as they exit from the neck region. Many times patients find that this helps better control their pain after surgery. Several factors are included to decide which type of anesthesia is best for you:

- Past experience with surgery
- General health and physical condition
- Reactions or allergies you have had to medications or latex
- Risks of each type of anesthesia
- Input from your surgical team and you

*\*Discuss this with your anesthesiologist/nurse anesthetist.*

### ***How long will my surgery last?***

Time often depends on the equipment and anesthesia as well as the specific shoulder surgery that you will have. Some time is also spent preparing you for surgery and anesthesia.

### ***Will I have pain after surgery?***

Pain is an individual response, it varies greatly. You have a right to have your pain addressed. Most facilities use a 0-10 pain scale, 0= no pain to 10 is the worst pain ever Pain medication in your vein (IV) is very potent but it doesn't last as long a medication by mouth. If you require IV medication, you will need close monitoring in the hospital. Pain medication works best when you take it before your pain is too severe. If your medication by mouth contains acetaminophen (tylenol/apap), do not take any additional medication with acetaminophen in it. Too much acetaminophen can damage your liver.

Do not "tough it out". If your pain is too great, you may not be able to do the exercise or activity required to recover quickly from surgery.

### ***What happens after the surgery is completed?***

After surgery, you'll go to the post anesthesia care unit (PACU) or recovery area. Once the anesthesia has worn off and you are stable you will either be transferred to the nursing floor or you will be prepared for home (depending on the surgical procedure).

### ***When can I get up?***

When you awake and clear headed after surgery you may get up with assistance. It's common to get dizzy when up so call for assistance until you know if you will stay clear headed and steady.

### ***When can I shower?***

You can shower with assistance when approved by your surgeon. Protection of your incision during showers will be discussed with you.

Do not get in a pool or tub where water will soak into or around your incision, infection could occur.

### ***How long will I stay in the hospital?***

Most patients go directly home after they recover from the surgery. The amount of time you are in the hospital will depend upon the type of shoulder surgery needed. For example- for an arthroscopy, you are generally allowed to go home on the day of the procedure, after your surgeon determines that you have recovered from the surgery. For a total shoulder replacement, you may need to be in the hospital 1-2 days, depending on your progress and your surgeon's assessment. After discharge from the hospital, some patients may need to spend a few extra days in a hospital-like setting, or rehabilitation center. There are reasons that patients may not go directly home. These may include: pre-existing medical conditions that limit progress or if there is not enough help at home, which creates concerns for safety and risk for falling. Those types of situations may confirm the need for a temporary stay elsewhere. The hospital Case Manager/Discharge Planner will work with you and your surgeon to assure that appropriate discharge plans are in place. It is important that you and any significant others take an active role in this planning process.

### ***Will I need physical therapy at home or will I need to do anything special for my shoulder?***

The initiation, duration and type of therapy depend upon the type of shoulder surgery performed and your surgeon's specific recommendations.

Most patients continue therapy independently at home after surgery. Physical Therapy may be started immediately after the operation, or may take up to 4 weeks to start. This depends upon the type of surgery involved. It is a good idea to check with your insurance company, before surgery, to find about your benefit for therapy coverage.

### ***Should I exercise before my shoulder surgery?***

Your doctor may want you to perform exercises or therapy to boost your overall strength and conditioning before your surgery. This will depend upon the type of shoulder issue being treated. If surgery is being done on your dominant arm, it is helpful to practice doing basic hygiene activities with the non-surgical "good" hand.

*\*Please discuss physical therapy with your surgeon*

### ***Will I need special equipment after a shoulder replacement?***

You may be given a shoulder sling or immobilizer with specific instructions from your physician regarding use. Your doctor may also suggest an ice bag. A bag of frozen peas is a handy way of having an effective ice bag on hand.

### ***How long will I need to wear my sling or immobilizer?***

You may have to wear the sling for 4 – 6 weeks. Your surgeon will better inform you on your first post-op visit.

### ***Can I drive after surgery?***

No, you cannot drive immediately after surgery. You cannot drive while taking pain medication, and you are unable to react rapidly when needed. Generally, driving resumes 2-4 weeks after surgery. You can ride in a car after surgery while following any special instructions given by your therapist or physician.

*\*Please discuss driving with your surgeon.*

### ***When can I return to work and usual activities?***

You can return to work when your doctor says it's ok to do so. Unless otherwise instructed, avoid using your arm to work until you have gone through physical therapy. Check with your doctor to see whether or not you can use your arm for light activities. Following shoulder replacement, if you have a sedentary job, you may be allowed to return to work 2-3 weeks after surgery. However, if your job requires overhead or lifting activities the return to work time may be several months. Lifting, pushing, pulling, and activities of daily living may place excessive tension on the area that has been surgically repaired. Your surgeon will determine the limitations that you will need to follow, depending on the type of shoulder problem being treated. For example, after a rotator cuff repair, you will be restricted from activities that require moving your elbow out to the side. These restrictions may last for 3 months, or as advised by your surgeon. You will need to consider that driving, shopping, and usual daily activities will be difficult to manage during this time. Plans for needed assistance with driving, dressing, and other tasks should be made before surgery.

*\*Discuss your specific work activities with your surgeon.*

### ***When can I play sports again?***

You are encouraged to participate in low-impact activities after your full rehabilitation. These activities include walking, dancing, golfing, hiking, swimming, bowling, and gardening. Your surgeon will need to determine when you can return to previous sports activities. Sports that require lifting heavy weights, intense resistance exercises, or activities where there is a major risk of falls are not encouraged. High-impact activities such as running, tennis, and basketball are not recommended.

*\*Discuss specific activities with your surgeon.*

### ***How often will I need to see my surgeon?***

Most patients are seen one to two weeks after surgery for suture removal and further instructions.

*\*Discuss frequency of follow-up visits with your surgeon.*

## **Your Health Care Team**

Your health care team members have special training and interest in the area of orthopaedics. They use extensive knowledge to guide you to discharge from the hospital and through rehabilitation. It is important for you to be an active partner with your health care team in order to have the best possible outcome. This team includes many, but the main members are listed below.

### **Anesthesiologist/Certified Registered Nurse Anesthetist**

A physician or advance practice nurse responsible for your anesthesia (putting you to sleep or numbing your shoulder) for your surgery. The anesthesiologist or nurse anesthetist may also be involved in pain management issues before and after surgery.

### **Case Manager/Discharge Planner**

A registered nurse or social worker that works closely with your surgeon and the other team members to help you make decisions about your discharge plan. This may include outpatient therapy, home equipment, and/or any skilled nursing care if needed. The case manager/discharge planner can also answer your questions about insurance coverage for services and equipment.

### **Nurse Practitioner (NP)**

A registered nurse with advanced skills and education that works with your surgeon to manage your care. An NP can diagnose and treat health care problems. An NP can prescribe medications, order, and interpret needed tests. Nurse practitioners often see you before, during, or after surgery.

### **Occupational Therapist (OT)**

A healthcare professional responsible for planning safe ways for you to complete your daily activities, such as bathing. The OT may partner with the physical therapist (PT) to complete your exercise routine. The OT offers ideas to assist you to create a safe home environment. Adaptive equipment is used to simplify self-care tasks while conserving energy.

### **Orthopaedic Surgeon**

A physician/surgeon that performs your shoulder surgery and directs your care. This doctor guides your rehabilitation and follows you through office visits.

### **Physical Therapist (PT)**

The physical therapist plans your physical rehabilitation after your shoulder surgery. This therapist will help you regain range of motion, muscle strength, and balance to walk safely, as having your arm in a sling may affect your balance.

### **Physician Assistant**

A health care professional that works with your physician to prescribe, diagnose, and treat health care problems. Physician assistants often see you before, during, or after surgery.

### **Registered Nurses (RNs)**

Professional nurses that are responsible for managing your bedside nursing care following your surgery. Nurses use the surgeon's instructions to guide your care. RNs provide education to you and your family about your health and safety needs. This includes information before and after surgery and helps you plan for your discharge from the hospital. RNs also provide care and education in your surgeon's office.

# Before Surgery Checklist

## 6-8 Weeks before Surgery

### Advanced Health Care Directive (Advance Directive, Living Will)

- If you do not have an Advanced Health Care Directive, this is a good time to complete one before your surgery. This form will help explain your health care wishes to the health care team and hospital staff. Hospitals have the forms for you to complete if needed.
- If you already have an Advanced Health Care Directive, please bring a copy along to the hospital.

### Assistance

Ask your spouse, children, neighbors, or friends if they can help you for a few weeks after returning home. The first few nights after your surgery, you should have someone in your home to assist you. Due to the effect of pain medication, having someone with you to help get to the bathroom at night is important for your safety.

### Blood Donation

If your surgeon asks that you donate blood prior to surgery, you may do so 3-6 weeks beforehand.

*\*Discuss the need for blood donation with your surgeon*

### Dental Exam

See your dentist before surgery. You can make that appointment now in case more than routine dental cleaning is needed. That way you'll have a clean bill of dental health prior to your surgery. Studies have shown that plaque on teeth is responsible for other infections such as pneumonia. Check with your surgeon to about the amount of time before or after surgery that dental work should be avoided.

### Diet

Eat as healthy as possible with the appropriate servings of fruits, vegetables, protein, whole grains, and low fat dairy. An adequate iron supply is important before surgery. Good sources of iron include lean red meats, fortified cereals, and leafy green vegetables such as spinach or kale.

- Discuss starting a multivitamin and iron supplement with your primary care doctor. These supplements may need to be stopped 1-2 weeks before surgery, so now is the time to get some benefit from the added nutrients.
- Fluids are important for helping you to have regular bowel movements. Most of that fluid should be water and juicy fruits and vegetables.

### Equipment

There is standard equipment needed for everyone after surgery. A sling or immobilizer will be used after surgery. It will be provided either by your doctor's office, or in the hospital. Your nurses and therapists will teach you the appropriate method of applying and removing the sling. You may require a cane or other assistive device for balance. Your therapist will work with you and your doctor to determine if this is needed.

There is some equipment that often is not covered by insurance. Very handy for use after surgery are the items listed below. Most of the items can be found at a medical supply store. Some can be found at pharmacies, home improvement stores, or thrift stores.

- The **sock aid** is helpful to put on a pair of socks by yourself.
- The **reacher/grabber/dressing stick** can help to pull up your pants, reach for dropped items, and obtain items that are out of reach.
- The **long-handled sponge** can help clean hard to reach places during bathing.
- **Safety bars** can be installed by a handyman in the shower area and wherever else needed.
- A **tub bench/shower chair** allows safe transfer and sitting on it in the shower or tub.
- A **hand-held shower** is handy for bathing from the tub bench/shower chair.
- A **travel mug or thermos** with a secure lid allows safe transport of a liquid such as water.
- **Elastic shoe laces** are helpful to secure shoes instead of trying to tie laces after surgery.
- **Long-handled shoe horn** assists to put on shoes without bending.

## Home Preparation Checklist

- Purchase nightlights and place them in your bathroom, bedroom, and hallways.
- Keep interior and exterior stairways clear and well lit.
- Handrails are recommended on all steps and stairways. Make sure all handrails are sturdy, secure, and positioned so that you can use them with your "good" arm.
- Repair any loose carpeting on steps.
- Tack down loose carpet. Remove all scatter rugs.
- Make sure all rooms are well lit and light switches are easily accessible.
- Clear all hallways and walkways of clutter and wires.
- Make sure all pathways are wide enough to accommodate you.
- Have a portable telephone with emergency numbers available to use.
- If you have pets, arrange for someone to assist with their feeding and care.
- Identify chairs with arms in the living and kitchen areas that are not too short or soft, as these may be difficult to rise from with using only one arm.
- Some people find sleeping in a recliner for the first few days after surgery is most comfortable. You may want to consider this, if you have access to one.
- Move the most often used kitchen items to an area that is readily reachable with your "good" arm.
- Make some meals that can be frozen and easily reheated.
- Arrange for someone to assist you with laundry, vacuuming, and other household chores.
- Place a rubber mat or non-skid adhesive on the floor of the tub or shower

## Pre-Surgical Medical Appointments

You may be asked to see your primary care doctor prior to surgery. Ask your surgeon which tests are preferred prior to surgery so you can tell your primary care doctor.

- EKG (electrocardiogram)
- Lab work
- Chest x-ray
- Urinalysis

*\*Discuss needed tests with your surgeon*

## Smoking

Smoking is known to cause breathing problems. It can also decrease the rate of healing. Try to decrease smoking or seek methods to stop. Your primary care doctor can offer ideas to do so.

## Weight Loss

Seek the assistance of a dietitian or exercise specialist if weight loss is a goal. Your primary care doctor can make a referral for you.

## Work

Ask your surgeon to sign a work release form\*. Notify your employer of the time needed per your surgeon's recommendation, as this will vary with the type of surgery being performed and the type of job you do.

*\*Discuss the need for a work release with your surgeon*

## 10-14 Days Before Surgery

### Church or Synagogue

Notify your church or synagogue as desired for requested prayers or visitors while you are in the hospital.

### Mail

Arrange for someone to collect your mail or place it on hold at the post office.

### Medications

Discuss with your physician when or if you need to stop certain herbs or medications. Many of these medications prolong bleeding time.

Medications that are often stopped prior to surgery include:

- Aspirin
- Some anti-inflammatory medicines (like Motrin<sup>®</sup>, Aleve<sup>®</sup>, etc.)
- Some vitamins
- Fish oils
- Herbal supplements (such as ginseng, ginkgo biloba, garlic pills)
- Herbal teas
- Fortified cereals that contain vitamin E
- Pain medications that contain aspirin

Some over the counter and prescription pain medications can continue until the time of surgery.

Please be honest about your drug and alcohol use. It is important to know as it can relate to your anesthesia and pain management.

*\*Discuss which medications should be stopped and when with your surgeon; this includes Xarelto<sup>®</sup>, Pradaxa<sup>®</sup>, Plavix<sup>®</sup>, Coumadin<sup>®</sup>, and pain medications*



## Several Days before Surgery

### Bills

Pay bills so they are up to date through a few weeks after your return home.

### Clean

Clean up the house, including vacuuming the carpets. Do laundry.

### Groceries and Supplies

Purchase food items and needed supplies that can be used after your return home. It's handy to have bags of frozen peas or corn on hand as they can be used for ice packs.

### Infection

Notify your surgeon's office right away if you think you may have an infection of any kind: bladder, skin, tooth, etc. If you wear artificial nails, have them removed.

### Transportation

Confirm how you will get to and from the hospital. You are not allowed to drive yourself home from the hospital. Your arm will be in a sling or immobilizer, therefore it will be difficult to safely climb into a truck or SUV that requires you to step up. Take this into consideration when arranging your ride home from the hospital.

## 1 Day/Night Before Surgery

### Pack

Items to include are:

- Your most current list of medications and supplements, noting which ones have been stopped and when. Include a list of allergies.
- Loose button front pajamas or short nightgown and short robe if desired
- Underwear
- Loose fitting button front shirt, top, or dress. Elastic waist bottom which does not require you to tie or zip with both hands.
- Slippers with backs and rubberized sole or walking sneakers/shoes with Velcro<sup>®</sup> closures or elastic shoe laces
- Socks
- If your surgery requires an overnight stay: Personal toiletries (toothbrush, toothpaste, denture cleanser/cup, deodorant, air freshener, electric or other razor, shaving cream, comb, no powders), make-up, and mirror if desired
- Eyeglasses
- Hearing aid and batteries
- CPAP machine settings, tubing, and machine
- Long-distance calling card or cell phone and charger, important telephone numbers (include person bringing you home)
- Driver's license or photo ID, insurance card, Medicare/caid card
- Copy of your Advanced Health Care Directive
- Hard candy or gum
- Small amount of cash
- Pack this education information so you can review items with your health care team

### Do Not

- Do NOT eat or drink anything after the time you were instructed. Ice chips, gum, or mints are not allowed.
- Do NOT bring valuables – no jewelry, credit cards, checkbooks, cash >\$20
- Do NOT bring your own medications, unless told that you should bring them.

### Do Shower

The night before or morning of surgery, wash your hair and rinse it well. Shower using any special soap that is given to you by the hospital or surgeon office.

- Do not shave at or near your affected arm. Shaving may increase your risk of infection.
- Pat dry with a clean towel
- Do NOT use lotions or powder
- Apply newly washed pajama/nightgown or clothes
- Sleep on freshly laundered linens

### Day of Surgery

Do not wear makeup and jewelry; remove fingernail and toenail polish. If you take a beta blocker medication, take it and any other medications that you have been directed to take before surgery. Take these only with a small sip of water. Take insulin or anti-diabetic medication as instructed by your internal medicine doctor. Do not eat or drink anything. You may brush your teeth. It's important to arrive at the hospital on time or even earlier than your appointment time.

# Hospital Care

## Day of Surgery

The morning of surgery there may be additional forms that you will need to complete. You will be taken to the pre-op area where nurses will prepare you for surgery. You will be given a hospital gown and asked to change. You may have an IV started in your vein. You will discuss your anesthesia with an anesthesiologist or nurse anesthetist. You may be given medication to relax. You will be taken to the operating room for your surgery. After your surgery is completed, you will be taken to the PACU/recovery room for up to several hours. Nurses will watch you closely until you are stable and then transport you to the hospital unit or the area where you will be until you are safe to go home. Your surgeon will talk with your family after surgery has ended.

## Activity

Once your surgery is over your surgeon will decide whether your arm should be in a shoulder splint, sling, or immobilizer. This will help with protection as well as positioning of your shoulder. This will not prevent you from beginning and participating in physical therapy. Exercises typically begin on the day after surgery with an emphasis on moving the shoulder, wrist, and hand. For the first 8 -12 weeks the focus on physical therapy will be on achieving full motion, but not strength. With surgeon approval, strengthening exercises will begin at about twelve weeks from the time of surgery. This time is necessary to allow the tissues to heal.

## Breathing

There may be an oxygen tube in your nose immediately after your surgery. You will do deep breathing and coughing exercises. You may be asked to use a breathing device as well. This is done to expand your lungs and help get oxygen to your tissues.

## Circulation

It is important to move around to help your blood circulate. You therapists will work with you to teach you exercises and evaluate your balance with one arm being immobilized.

There may be snug stockings and/or sleeves wrapped around your legs or feet. If present, the sleeves fill with air and then relax. These are used to decrease your risk of blood clots.

Smoking is not allowed in the hospital. Ask for stopping assistance as needed.

## Pain Control

You will have some pain. The goal is to get the pain low enough so that you can rest and take part in physical therapy. You may receive pain medication through your IV. You may have a nerve block. You may have pain pills. It is important that you take your pain pills with food to avoid GI upset Or you may have a combination of any of these. An ice pack may be used on your shoulder to lessen pain and swelling. Your pain should lessen every day.

## Food/Fluids

You will have fluids going through your IV at first. The IV will be stopped when you are eating and drinking well.

You may start with a liquid diet when you first wake up. Your nurse will help you decide when you can eat solid food. Increasing food slowly can help to avoid nausea that sometimes happens after anesthesia or use of pain medication. You may not be very hungry for a while. It is important that you eat as best you can in order to heal well.

## Going to the Bathroom

When you get up for the first time, make sure that your nurse or significant other is available to assist you. Do not get up by yourself while you are taking any pain medications.

It may take a day or more to have a bowel movement. Anesthesia and pain medication can cause constipation. Drink plenty of fluids and eat whole grains, fruits, and vegetables. A stool softener or laxative can help normal bowel function to return.

## Wound Care

You may have a dressing on your shoulder. You will be given instructions about the dressing when you go home. Your incision may have sutures, staples, or steri-strips.

### Day after Surgery to Discharge (if you are staying overnight in the hospital)

- Your surgeon will visit you while you are in the hospital. Your shoulder dressing will be changed.
- Continue to cough and deep breath.
- You will walk to the bathroom with assistance.
- Solid food will be offered. Drink fluids to keep hydrated.
- You will switch to pain pills if pain medication had been given through your IV.
- Wear loose clothes. You will work with therapists to practice exercises. Repeating exercises throughout the day will help you gain strength. Your therapist will show you how to remove your sling or immobilizer for bathing and dressing.
- Discuss discharge options and needed equipment with the case manager/discharge planner. You will be discharged to home if you have met therapy goals. You will be discharged to a skilled nursing or rehabilitation facility if you do not meet therapy goals

### When You Are Discharged from the Hospital

Depending on the type of surgery you are having, you may go home on the day of surgery.

- Shoulder arthroscopy is considered an outpatient procedure, therefore you will not need to stay overnight in the hospital.
- For open shoulder surgery, you may be released from the hospital one to two days after surgery.
- For shoulder replacement surgery, you may be in the hospital for 2 days.
- If you are going to be discharged to a short term rehab facility (Skilled Nursing facility) you will be in the hospital 3 days or per insurance requirements.
- Your surgeon and physical therapist will talk with you about the importance of limiting any sudden or stressful movements to the arm for several weeks or longer.
- Even though your incision may look small, the work done to correct problems inside your shoulder joint may be quite extensive. Therefore, you should not participate in any activities that involve pushing, pulling, and lifting until you are given permission from your surgeon.

### Special Considerations for Shoulder Replacements:

- Therapy will be prescribed per your surgeon's recommendation. This may include pendulum exercises (refer to exercise section) and gentle elbow range of motion several times daily.
- Avoid reaching out to the side
- Avoid turning the arm in or putting your hand across the body.
- Do not use the arm to push yourself up in bed or from a chair because this requires forceful contraction of muscles.
- Do not lift anything heavier than a glass of water, until allowed by your surgeon.
- Avoid placing your arm in any extreme position, such as straight out to the side, or behind your body.

### Your First Day at Home

- It is a good idea to have a family member or significant other with you in case you need any help during this first day. If your surgeon or physical therapists have given you specific exercises to complete at home, they should assist you with them.
- If your surgeon ordered a sling or immobilizer for you for home use, wear as directed.
- Never use your arm to push yourself up in bed or from a chair. The added weight on your shoulder may cause you to re-injure the joint.

### How to Cope in the First Week

- You are encouraged to return to your normal eating and sleeping patterns as soon as possible.
- It is important for you to be active, but it is very important to increase your activity level or exercises only as your surgeon has directed.
- Consult with your doctor about returning to work, as this differs from patient to patient. If your job requires heavy lifting or climbing, there may be a delay for several months.
- Until you see your surgeon for your first follow-up visit, make certain that your wound stays dry and is not draining. If you notice any drainage or a foul odor from your incision, please contact your surgeon.
- If you develop a temperature greater than 100.5 call your surgeon.
- Your stitches or staples may be removed at 7-14 days after surgery. You may still experience pain surrounding the surgical site.

# Caring for Yourself at Home

## Anticoagulant Medication

- You might be given a prescription for an anticoagulant medication. This medication prevents clots from forming. The medication may be in pill or shot form (a tiny needle that goes into the abdomen).
- You may also need lab work done to make sure your medication is working properly.
- Take this medication for as long as directed by your doctor.
- Contact your doctor right away if you notice easy bruising, nosebleeds, or blood in your urine or stools.

## Body Changes

- You may have less of an appetite for a while. Be sure to drink plenty of fluids.
- Your energy level may be less than usual for a few weeks after surgery.
- Constipation may result from pain medication. Use a stool softener or laxative if needed.
- You are at risk to fall. When using a sling/ immobilizer your center of balance is altered. Therefore, take precautions not to fall.
- Coping with Stress
- Undergoing surgery can be a very stressful event for anyone. It can also be stressful to rely on others to help while you are healing. However, having support from friends and family is needed for full rehabilitation.
- Having realistic goals and keeping a positive outlook can help. Make note of small achievements.
- Some people find that deep breathing and relaxation techniques help.
- Many hospitals have resources available (social workers, counselors, spiritual care, etc.) if you need additional support. Remember to ask for help when you need it.

## Discomfort

It is important to take pain medication with food and as prescribed by your surgeon.

- It may be helpful to take your pain medication about 30 minutes before your planned therapy/exercise session.
- Don't wait until discomfort has the best of you to take medication.
- Do not drink alcohol or drive while taking pain medication.
- As you have less discomfort, start to decrease how many pain pills you are taking and how often you are taking them. Eventually, you will no longer need pain medication.
- Applying an ice pack to your shoulder for 20 minutes several times per day can help the discomfort too. Using a frozen pea or corn bag may be helpful.

- Change your position at least every 45 minutes during the day to avoid stiffness.
- Numbness around the incision may be temporary or permanent.
- Contact your surgeon if your discomfort does not respond to the above methods.

## Equipment

- You cannot get down into the bathtub until approved by your surgeon. Your therapist may recommend a shower bench or chair.
- Adaptive equipment such as a reacher, sock-aid, long-handled shoehorn, long-handled sponge, handheld shower, grab bars, and elastic shoe laces may prove useful to you as well.

## Incision Care/Dressing Changes

- Keep the incision clean and dry. You and your caregiver should wash your hands before and after changing your dressing.
- Your dressing should be changed every day. Condition of the incision should also be noted. There will be some swelling initially, especially after exercise.
- There should be no redness, hotness, odor, increased drainage, or opening of the incision. Call your surgeon's office if you notice those changes.
- Usually, sutures or staples are removed 10-14 days after surgery by a health care professional.
- If you do not know, call to find out whether or not to get your incision wet while showering.
- No Tub baths, No hot tubs, No swimming.
- After showering, pat the incision dry with a clean fresh towel. Do not rub the incision when drying.

## Intimacy

Generally, most people wait to resume sexual activity for a few weeks after surgery. Your incision, muscles, and ligaments need time to heal.

- You can usually resume sexual activity when you feel ready.
- The bottom or missionary position is usually the most safe and comfortable.
- It is important to only maintain positions that do not stress your shoulder.

*\*Discuss return to sexual activity with your surgeon.*

# Preventing/Recognizing Potential Complications

## Infection

- Hand washing (or an alcohol-based hand cleanser) is the most important step for preventing infection. You and your caregiver need to wash your hands prior to changing the dressing over your incision.
- Keep your incision dry, unless your surgeon has approved getting it wet.
- Eating a healthy diet and drinking plenty of fluids can help prevent infection too.
- After shoulder replacement surgery, your surgeon may recommend that you take antibiotics to prevent infection before you undergo future dental procedures or other invasive medical procedures. Be sure to discuss this during your first postoperative visit unless already done.

Contact your surgeon right away if you note any of the following:

- Increased redness, heat, or swelling around incision
- More or foul smelling drainage from incision
- Bleeding through the dressing
- Increased pain in the shoulder
- Persistent fever greater than 100° F or chills

Contact your primary care doctor if you think you may have an infection elsewhere. This includes bladder, sinus, tooth, etc.

## Blood Clots

You may be asked to wear snug stockings at home. If you are given anticoagulant medication, take as directed. Perform your exercises and walk. These are all ways to prevent blood clots. Contact your surgeon right away if any of the following occur:

- Pain or excessive tenderness in your leg or calf
- Redness of your calf
- Swelling in your foot, ankle, calf, or thigh
- A blood clot in the leg can move to the lung. This can lead to shortness of breath, chest pain, coughing up blood, or unexplained anxiety, especially with breathing. Call 911 for this medical emergency.

## Weight Loss

Following an exercise and walking program will promote wanted weight loss. A dietitian can make suggestions for a healthy weight loss meal plan. Talk to your surgeon about visiting a dietitian if desired.

# Postop Exercises, Goals, and Activity Guidelines

Exercise after shoulder surgery is related to the type of repair involved. Progression of exercises is based upon the extent of shoulder surgery. Timeframes for the start and progression of exercises are determined by your surgeon. Your surgeon and physical therapist will inform you of your specific exercise/therapy plan.

Do not compare your progress with that of someone you know who has had the same type of surgery. Everyone is an individual. You will be instructed regarding the frequency of your home exercises, based on your overall shoulder soreness and level of morning discomfort. Copies of the exercises with pictures and instructions should be provided to you.

You will be told to use ice after your exercises. You may also be instructed to use ice 3-4 times per day for 20 minutes at each session. A family member may be taught to assist you with your exercises and daily activities.

## A note about Range of Motion (ROM) Exercises

You will be instructed to do ROM exercises. In the early recovery and therapy phases after your surgery, you will do Passive ROM exercises. Eventually you will progress to Active ROM exercises. When you are doing Passive ROM, it is important to relax your muscles and allow your helper to do the movement for your arm without you doing any of the work.

## A note about Arthroscopic Surgery

Although your incision site looks small, the repair done to the underlying structures may be extensive. It may be tempting to try to overdo it. Follow the precautions and exercise plan given by your surgeon and therapist. This plan takes into account tissue healing time for the muscles and tendons involved in your operation.

Once you have progressed to performing shoulder home exercises 3 times per day, the therapist may instruct you to start all of your initial exercises while you are lying on your back. In this position, the shoulder blade is supported, the muscles are more relaxed, and the effect of gravity is lessened. This allows you to progress through range of motion without increased stress on the rotator cuff muscles.

## Arthroscopic Acromioplasty (Subacromial Decompression)

### Goals:

- Regain range of motion (ROM) and shoulder strength
- Decrease pain and inflammation
- Minimize stress on healing areas, maintain posture
- Increase independence with activities of daily living (ADLs)

### Precautions/Activity Guidelines

- You will need to wear a sling for a short period of time during the early healing phase. As soon as you are more comfortable, your doctor will remove the sling to begin exercise and use of the arm.
- Avoid motions that compress the subacromial structures. Care must be taken with moving the arm out away from the body.
- Overhead and lifting activities will progress slowly with therapy

## Arthroscopic Rotator Cuff Repair

### Goals:

- During early healing phase (Post-op weeks 1-6) - protect tendon repair while restoring motion and preventing adhesions
- During Active ROM phase (Post-op week 6-12) normalize motion, regain ability to use arm for ADLs, improve inflammation and pain, begin strengthening work with surrounding muscles
- During Strengthening phase (Post-op week 12-16) restore strength, power, and endurance, return to normal functional work and recreational activities

#### Precautions/Activity Guidelines:

- Your surgeon may instruct you to wear a sling or immobilizer for as long as 4 to 6 weeks, depending on the size of your tear and the extent of repair needed. Immobilization of the shoulder joint is generally for up to 4 weeks. Your therapist will work with you to accomplish controlled weaning from the sling. The sling is worn at all times and is removed for bathing and exercises. There may be a small foam cushion between the arm and the body. This should remain in place, while wearing the sling.
- Do not actively move the arm away from the body. Follow your surgeon's instruction on rotating the forearm away from the body to protect repaired tendons and muscles. Do not reach behind your back with your operated arm.
- You may use your wrist, hand, and elbow for daily activities including eating, shaving, dressing as long as you take care not to move the operated arm away from the body, and it does not increase your pain.
- Do not use your arm to push up off the bed or out of a chair for six weeks following surgery.
- When using your keyboard and mouse, do not move your arm away from the body.
- Do not lift any object, even if you are bending the elbow.
- When showering, you may wash under the involved armpit by bending forward to let the arm hang freely, while reaching under with the opposite arm.
- When lying on your back, place a rolled towel under the elbow to support the arm. Many people find that lying on a 30 degree incline wedge in bed is more comfortable than lying flat. Sleeping in a recliner during the first few weeks after surgery may be recommended.

#### Arthroscopic Debridement of Labral Tears

##### Goals:

- During motion phase (Post-op day 1-14) - reestablish range of motion without pain, minimize loss of muscle tone and strength, decrease pain and inflammation
- During intermediate phase (Post-op week 2-4) increase muscle strength and stretching, improve ability to control shoulder movements
- During dynamic strengthening phase (Post- op weeks 5-7) increase strength, power, and endurance, improve ability to control shoulder movements, beginning sport-specific preparation activities
- During return to activity phase (Post-op week 8 and beyond) focus on exercises to prepare to return to full activity

#### Precautions/Activity Guidelines:

- After surgery, you will need to keep your shoulder in a sling for the amount of time determined by your surgeon.
- A gentle stretch and strengthening therapy program with passive ROM exercises will be initiated early on. You will be able to perform daily activities with caution according to therapists' directions and as directed by your surgeon.
- A more intense focus on bicep strengthening will occur when your sling is discontinued.
- It may be 3-4 months before the shoulder is fully healed.

#### Arthroscopic Labral Repair

##### Goals:

- During immediate post-surgical phase (Post- op day 1-week 6) - prevent problems with immobilizing the shoulder, protect the surgical repair, decrease pain and inflammation
- During the intermediate phase- (Post-op week 7-14) - gradually restore full passive and active ROM to the shoulder, restore muscular strength
- During the minimal protection phase (Post- op week 14-20) regain full ROM, continue to improve strength, power and endurance
- During the advanced strengthening phase (Post-op weeks 20-26) - continue to increase muscular strength, power and endurance and progress to more usual function with the shoulder in daily activities
- During the return to activity phase (months 6-9) - increase sport-related activities, advance strengthening and stretching

#### Precautions/Activity Guidelines:

- You will need to use a sling for several weeks, per your surgeon's instructions.
- This includes sleeping in the sling. When lying on your back, place a rolled towel under the elbow to support the arm. Many people find that lying on a 30 degree incline wedge in bed is more comfortable than lying flat. Sleeping in a recliner during the first few weeks after surgery may be recommended.
- Follow your therapist's instructions regarding restrictions on flexion, elevation and movement of your arm. These are related to the amount of the repair involved.
- Do not actively bend your elbow.
- You may be told to do hand gripping exercises.
- Rate of progression depends upon your individual tolerance and level of comfort.



## Open Shoulder Stabilization Surgery, (including Bankhart repair)

### Goals:

- During the immediate post-surgical phase (Post-op day 1-21) - decrease pain and inflammation, passive ROM, prevent oversteering healing tissues
- During the intermediate phase (Post-op week 4-5) continue to advance ability to move arm away from body and degree of passive ROM
- During strengthening phase (Post-op weeks 6-10) - increase movement to reach full ROM with comfort, improve muscular strength, stability and endurance
- During the return to activity phase (Post-op week 10-20) - gradually return to work, recreational, and sports activities.

### Precautions/Activity Guidelines:

- Do not lift any objects with operative shoulder
- The sling or immobilizer should be worn at all times, except for physical therapy. This includes sleeping. When lying on your back, place a rolled towel under the elbow to support the arm. Many people find that lying on a 30 degree incline wedge in bed is more comfortable than lying flat.
- Shower with the arm held at your side.
- As you increase your ability to participate in usual activities avoid stress to the shoulder with aggressive overhead strengthening exercises. Follow weight lifting precautions. Avoid contact sports/activities.

## Shoulder Replacement Surgery (Arthroplasty and Hemiarthroplasty)

### Goals:

- During the immediate post-surgical phase (Post-op weeks 1-4/6) - promote soft tissue healing, maintain prosthesis position, increase passive and active ROM, increase ROM of elbow and wrist, reduce pain and inflammation, increase independence with daily activities
- During the early strengthening phase (Post-op after weeks 4-6) restore full ROM, establish stable movement of shoulder
- During moderate strengthening phase (Post-op weeks 6-12) - increase activities, improve muscular strength, stability and endurance
- During the advanced strengthening phase (Post-op week 12 and up) - experience pain free movement, increase ability to use arm for all daily activities

### Precautions/Activity Guidelines:

- The sling should be worn as advised by surgeon. When your arm is out of the sling, just let it hang by your side. Do not use it.
- Your activities will be advanced under the supervision of your surgeon and therapist according to your progress, healing and comfort level.
- Therapy will be prescribed by your surgeon's office. Pendulum exercises and gentle elbow ROM should be done several times daily.
- For approximately 6-8 weeks after surgery, while lying on your back, a small pillow or towel roll should be placed behind the elbow. This prevents you from extending the shoulder joint and stretching the underlying muscles. You should be able to see your elbow when lying flat.

### Until you are instructed otherwise:

- Avoid turning the arm in or putting your hand across the body, avoid reaching out to the side, and do not place your arm in any extreme position such as straight out to the side or behind your body.
- Do not lift anything heavier than a glass of water until allowed by your surgeon
- Do not use the arm to push yourself up in bed or from a chair, as this requires forceful contraction of muscles

# Exercises

The following exercises represent only a few of those that may be prescribed as part of your post-operative home exercise program. Review all exercises with your physical therapist. Perform your exercises 10-15 times, 2-3 times daily, unless told otherwise. Do not hold your breath while exercising.

## Pendulum Hang

For support, hold on to a stable object such as a counter with your unaffected arm. Lean forward 90 degrees at the waist. Allow the operated arm to gradually hang down. DO NOT actively use your shoulder muscles. Let the arm hang for up to a minute. Repeat 10 times.



## Circular Pendulum

For support, hold on to a stable object such as a counter with your unaffected arm. Lean forward 90 degrees at the waist. Allow the operated arm to gradually hang down. Move your body gently in a circular motion clockwise 10 times, then counterclockwise 10 times. DO NOT actively use your shoulder muscles. Let the motion of your body move the arm.



**Assistive Shoulder Flexion**

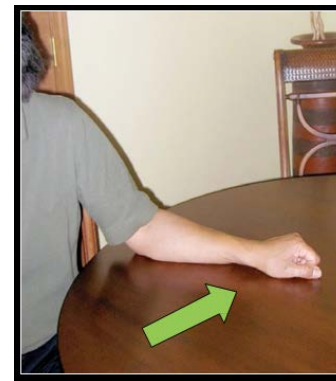
While lying down, clasp hands together. With your good arm, gently assist your operated arm up over your head. Keep elbows as straight as possible. Only move through a comfortable range of motion. Hold the position for 2-3 seconds.

Assist your arm back down to starting position with the good arm. Repeat 10 times.



**Shoulder Rotation with Support**

Support the operated arm and move the arm back and forth while keeping shoulder down and elbow straight. Repeat 10 times.



**Active Shoulder Flexion**

While keeping your elbow straight, raise the operated arm toward the ceiling. Hold in place for 10 seconds. Repeat 3 times.



# Activities of Daily Living with a Sling or Immobilizer

## Wearing a Shoulder Immobilizer or Sling

A shoulder sling is used to support your arm after injury or surgery. It may also be used to limit movement or to raise the arm to reduce pain and swelling.

### When to Wear the Sling

- All the time until your follow up appointment and your surgeon directs you otherwise.
- As you need for comfort.
- Remove your sling each day to wash your arm or to do your exercises.

### Putting on the Sling

Your sling will have:

- A strap that fits over your shoulder and back
- A pouch or pocket to hold your elbow and lower arm

### How to put on the sling:

1. Start by sliding the closed end of the sling over your hand on the injured side.
2. Fit the sling on your arm so your elbow is back in the pocket as far it can go.
3. The long strap of the sling should go from the back of your injured arm, across your back to your other shoulder and down your chest. If you are not able to work the strap around, you may attach the strap to the fastener and then lift the strap over your head to the opposite shoulder.
4. Attach the long strap to the fastener on the sling near your wrist.
5. Adjust the length of the strap so your hand is always at or above the level of your elbow.
6. Move the pad on the shoulder strap near your neck so it feels comfortable.

### Taking Off the Sling

1. Loosen the fastener and take the strap out.
2. Gently remove the sling from the injured arm.

### Care While Wearing the Sling

Unless you have been instructed otherwise, follow these general care guidelines:

- Adjust the strap on the sling so your hand is slightly higher than your elbow. This helps reduce swelling.
- Be sure your elbow is back in the pocket of the sling as far as possible.
- Smooth the sling so there are no wrinkles along your arm that may cause sore spots.
- Remove the sling each day to wash your arm and shoulder.

- Use a damp washcloth to wash your armpit and skin. Dry well with a towel. Limit movement of your injured arm.
- Ask about exercises for your fingers, wrist and elbow.
- Your sling can be hand washed and air-dried. You may need to purchase another sling to wear while one is being cleaned.
- Talk to your doctor, nurse or therapist if you have any questions or concerns.

### Bathing

It is vital that you regularly loosen and/or release the sling/immobilizer to exercise and move your elbow, wrist and hand to prevent stiffness of these joints at least four times every day.

1. **GETTING WASHED:** For the first 3 weeks you may still be sore from the surgery, and you will probably need assistance washing your non-operative arm. You should not use your arm that just had surgery for this. It would be a good idea to use a shower with an extension for the water. Please remember to keep the surgical wounds dry and protected while washing. Waterproof dressings would be very beneficial to get from the hospital or your physician.
2. **GETTING DRESSED:** You will find it easier to wear clothes that open in the front. Dress your operated arm first. Sit on the edge of a chair or stand with your arm 'hanging' by your side. Slide your operated arm into the garment first using your un-operated arm. Let your operated arm hang loose, do not assist with your operated arm. Once this arm is fully in the sleeve bring the garment around your back and put the other arm in. Any fasteners must be fastened only with your un-operated arm. Once you have dressed your upper body, place your arm back in the sling.

The waist up can be washed with warm soapy water. Armpits are difficult to clean and complete regular washing is really important. Avoid using antiperspirant spray or until the incision is healed. At 6 weeks your function should be closer to what is 'normal' for you.

### Feeding

For the first few weeks it would be a good idea to eat only with the non-operated hand.

### Transferring

Use only your non-operated extremity to help you get out of a chair, bed, toilet, or bath. After 6 weeks, you may return to using both extremities.

### Sleeping

You may find it easier to sleep on your back for comfort, with a pillow under your arm for support. You might find it comfortable to sleep sitting up in a chair.

### Kitchen Activities

You should use your non-operated arm for all your kitchen activities

### Housework

Light housework may resume after 6 weeks. Strenuous housework should be avoided until 3 months after your operation. Do not get your sling wet.

# Appendices

## Anesthesia Options

There may be options for the type of anesthesia available for your shoulder surgery.

- General anesthesia means that you are given medications to put you to sleep.
- Nerve Block placement will provide pain relief from movement as well as sensation. It can be combined with pain medications that you take by mouth while you are in the hospital, as well as when you are discharged home.
- Talk with your anesthesiologist/nurse anesthetist about what options are best for you.

## Living Will

If you have a living will, be sure to bring a copy of it with you during your preoperative appointment so that they can put a copy in your chart. If you do not have a living will and would like information about it, ask your nurse or a representative from the hospital as they should be able to provide you with information.

## Blood Donation

Before your shoulder surgery, your surgeon may recommend that you donate your own blood just in case you need a transfusion after surgery. There may be an option to have family members donate blood for you as well.

If you donate your own blood or have family donate for you, it is important to bring the blood bank slip to your pre-operative appointment so that they have the information available for after your surgery.

### Important Phone Numbers

Health Care Provider	Name	Phone Number
Your Orthopaedic Surgeon		
Hospital		
Home Health Care Company		
Rehab Center		
Outpatient Therapy Provider		

### Appointment List

Preoperative Appointment	
Time and location	Notes:

Day of Surgery	
Time and location	Notes:

Postoperative Appointment	
Time and location	Notes:

