



PATIENT EDUCATION
Shoulder Replacement Surgery

EDUCATION
learning EXCELLENCE
HEALTHY LIVING CARING INTERACTION

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About Shoulder Replacement Surgery

A healthy shoulder joint includes both the round head, or ball, of the upper-arm bone and the flat part of the shoulder-blade socket. They are called the humerus and the glenoid.

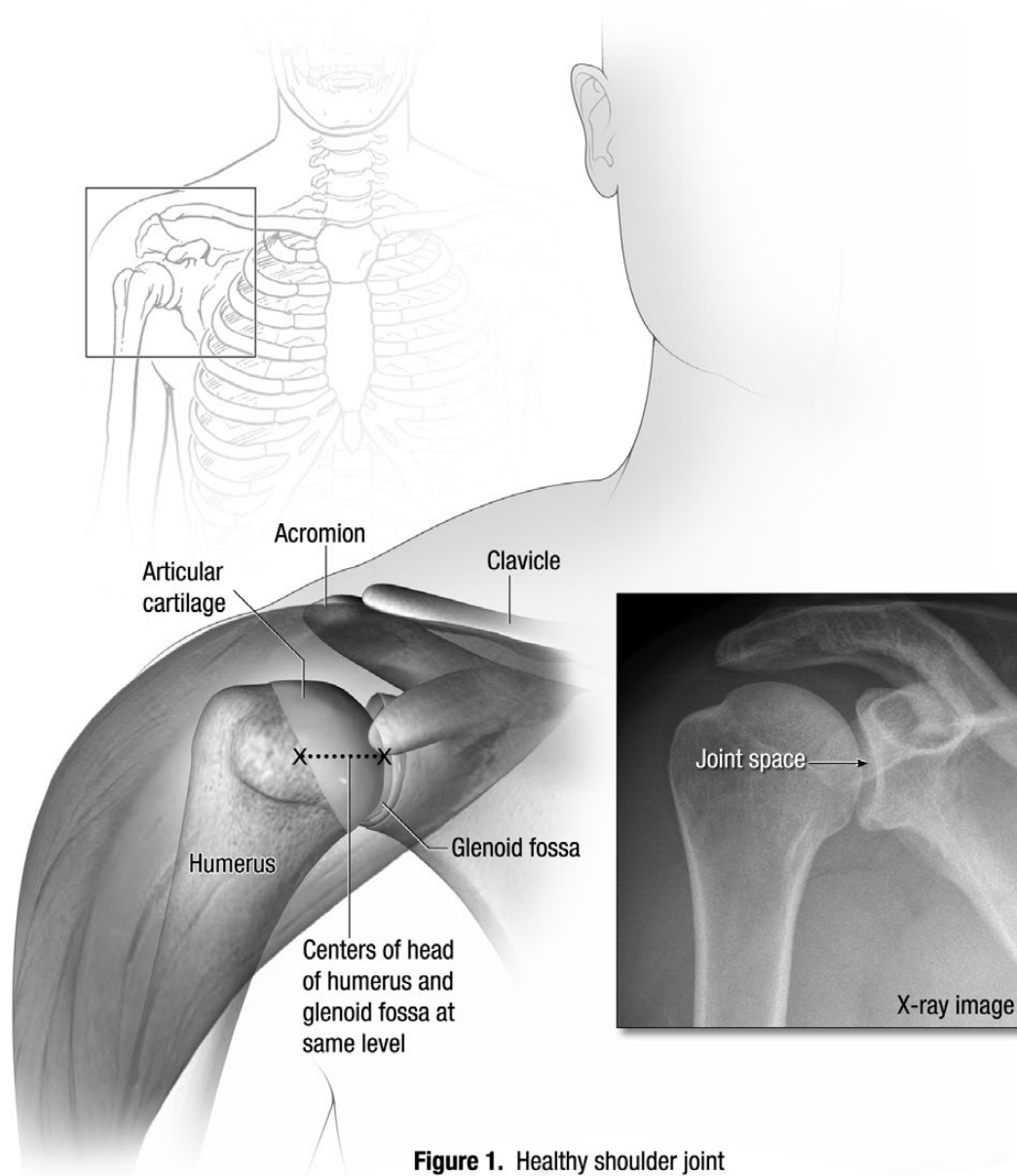


Figure 1. Healthy shoulder joint

A person may need shoulder replacement surgery for many reasons. These include problems caused by osteoarthritis, rheumatoid arthritis, fractures, osteonecrosis, and others.

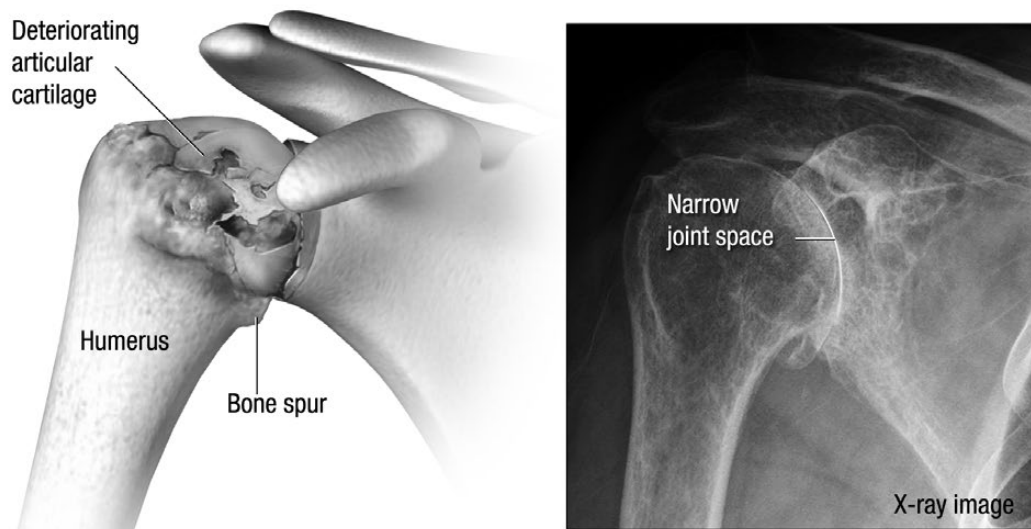


Figure 2. Arthritis in the shoulder

Shoulder replacement surgery is done with artificial parts. These new parts are called implants. Replacement surgery also is called shoulder arthroplasty.

Shoulder replacement options

Replacement options depend on how much joint damage you have.

- **Partial shoulder replacement** also is called hemi-arthroplasty. Only the head of the humerus is replaced. The new part matches your original anatomy.
- **Total shoulder replacement** also is called anatomic total shoulder arthroplasty. Both the humerus and the socket are replaced. The new parts match your original anatomy.
- **Reverse total shoulder replacement** uses implants so that the round portion is placed on the socket side.

Anatomic shoulder replacement

To replace the head of the humerus, the surgeon first removes the damaged head of your humerus. Next, the surgeon prepares your humerus so that the stem of the implant can fit snugly inside. The implant typically is made of metal.

To prepare the shoulder socket, the surgeon smoothes your damaged bone and implants the plastic socket replacement. The new ball fits against the new socket. This allows smooth movement of the joint.

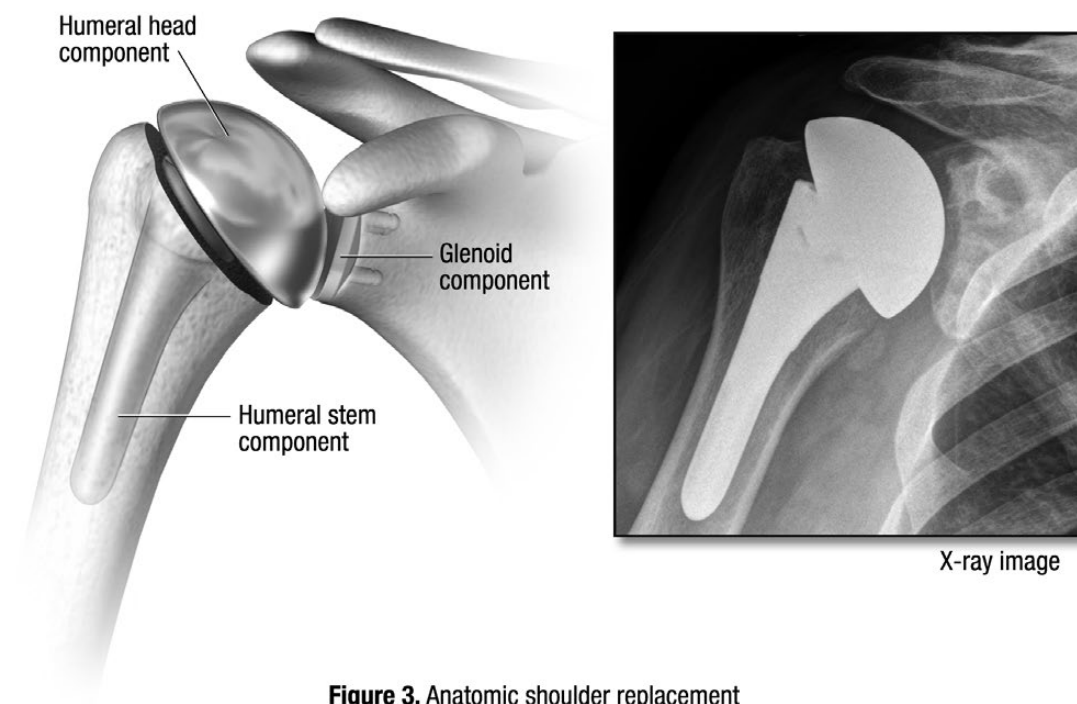


Figure 3. Anatomic shoulder replacement

Most people who have anatomic shoulder replacement surgery say they have less shoulder pain afterward than they did before surgery. Most people have increased range of motion and strength. Some people still have joint stiffness.

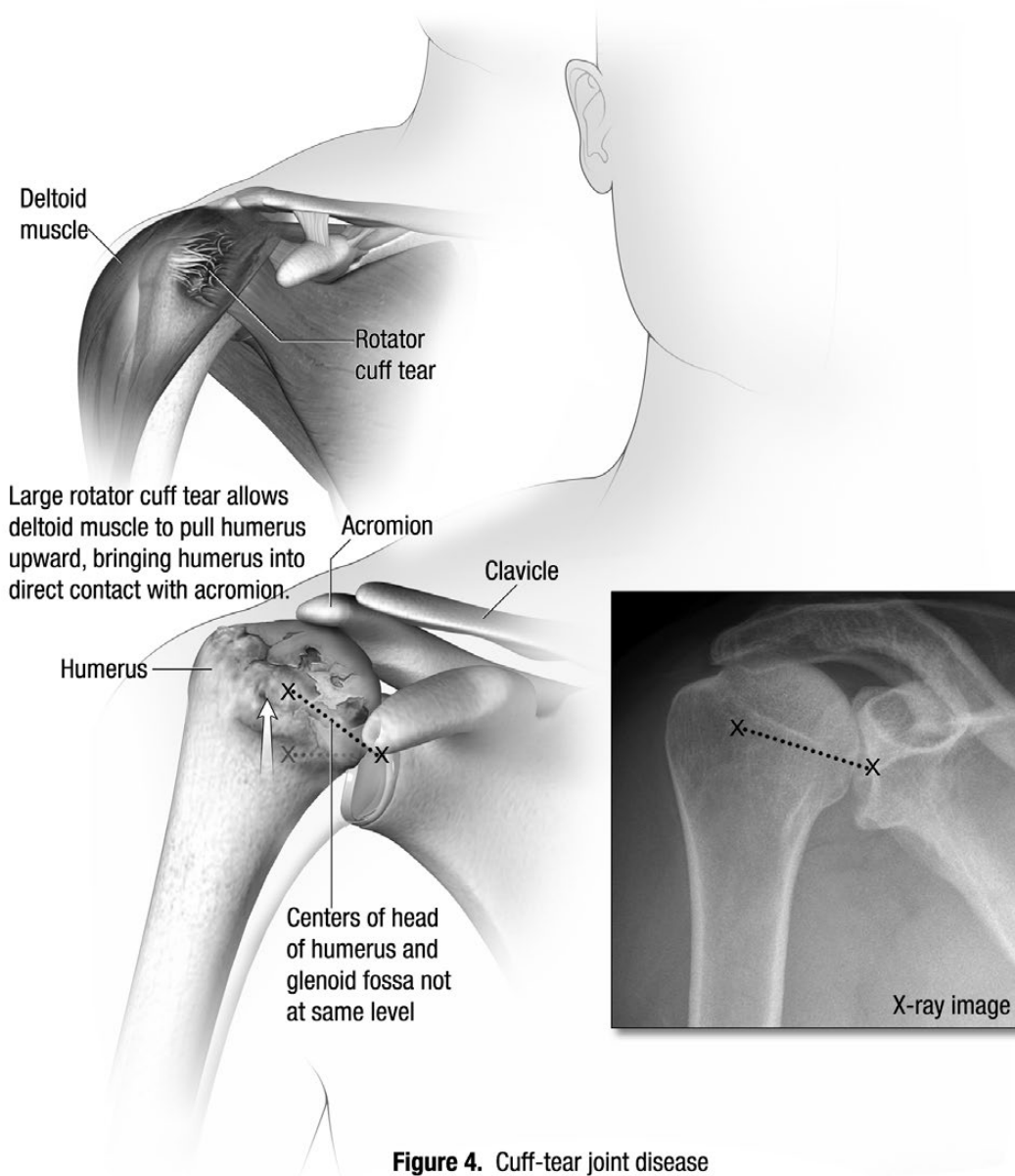
Reverse shoulder replacement

Anatomic replacement surgery uses implants that are made to match the shape of the body part that's being replaced. Sometimes, this is not possible because of the way the shoulder is damaged. In those situations, reverse shoulder replacement is done.

With reverse total shoulder arthroplasty, the artificial parts are switched, or reversed. Instead of putting a rounded part on the end of the humerus bone as it normally is, your surgeon puts the rounded part on the socket side of the joint. Next, the surgeon puts an artificial socket, known as a humeral cap, on the end of your humerus bone.

When reverse shoulder replacement is needed

A group of muscles and tendons called the rotator cuff keep your shoulder in place. They allow you to move your arm and shoulder. When these muscles and tendons are severely damaged, they can't move the shoulder as they should. Damage can come as a result of injury, from disease, such as arthritis, or because of overuse. Over time, as the bones rub together, they become damaged. This condition is often called cuff-tear joint disease or arthropathy.



When the rotator cuff is greatly damaged, replacing the shoulder with parts that match your anatomy often doesn't work. The parts can slip out of place or quickly loosen. And if that happens, it may not be possible to get movement back to the shoulder.

The shape of the reverse total shoulder arthroplasty implant allows the deltoid muscle to make up for the torn rotator cuff. Typically, replacement of the shoulder provides pain relief and improves range of motion.

For some people, the socket may be too worn for an anatomic shoulder replacement implant. In those cases, surgeons often recommend reverse shoulder replacement surgery.

In a reverse shoulder surgery, a plate is screwed to the shoulder-blade socket, and the glenosphere is placed on the plate.

At the top of the humerus, where the ball used to be, a metal stem is inserted. A plastic socket, called the humeral cap, is attached to the stem.

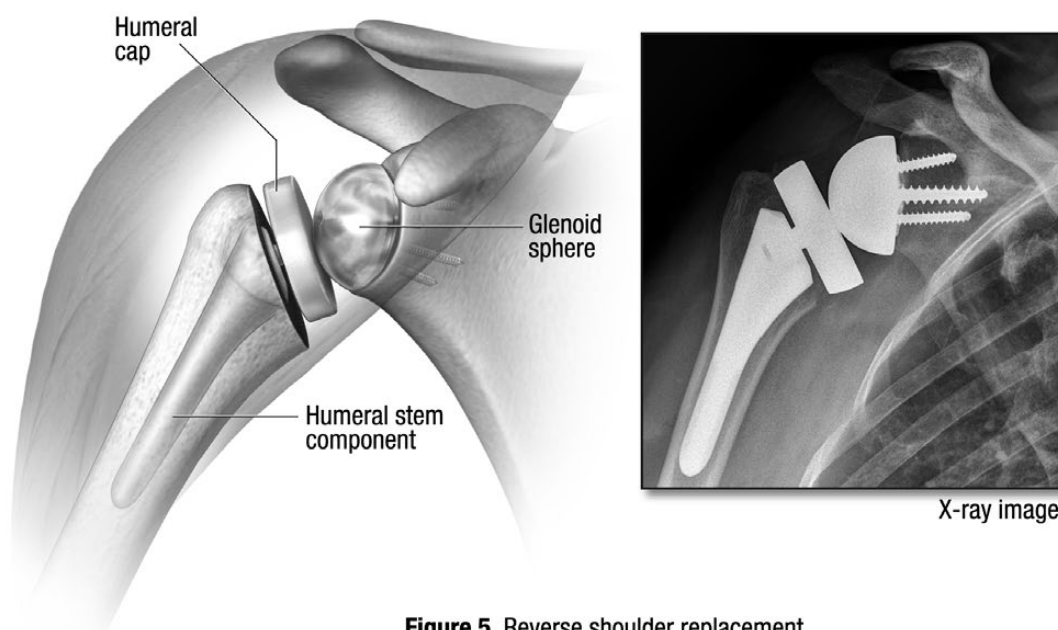


Figure 5. Reverse shoulder replacement

The new ball is fitted against the new socket. This allows the joint to move smoothly. Sometimes joint stiffness or deltoid weakness does not allow as much range of motion after surgery. Placing your hand behind your back may be difficult. Ask your health care provider questions you may have about shoulder movement after you heal.

Healing tendons and shoulder replacement surgery

With shoulder replacement, most of the muscles and tendons of the shoulder are left intact. However, for some people, the subscapularis, which is the rotator cuff muscle in the front of the shoulder, is divided in surgery and needs to be repaired at the end of the surgery.

Healing of this tendon is important for your shoulder to work well. That is why you wear a sling for the first few weeks after surgery. The sling is also called an immobilizer. For proper healing, you must limit arm and shoulder movement for those first few weeks after surgery.



Figure 6. Wearing a shoulder immobilizer

Overview for your shoulder replacement surgery

You will receive anesthesia. The operation usually lasts between one and two hours. Once done, you are taken to a recovery room. This room also is called the post-anesthesia care unit or PACU. Typically you stay in the recovery area for about two hours.

How long you stay after surgery depends on you and your overall health. Most people go home the same day or the next day. Talk to your health care provider about your stay.

Most of the recovery happens over the first three months. But it may take a full year to recover.

You are the most important member of your health care team. You are encouraged to speak up and take an active role in your care. You and your family are welcome to ask questions. Learn all you can about your surgery and recovery.

Risks for Side Effects and Complications

Every person and every surgery is different. Although rare, it is possible that your condition may not be helped by surgery. It's possible that your pain may not lessen or go away completely.

Possible side effects

Common side effects of surgery include:

- Pain, swelling and stiffness around the shoulder.
- Headache.
- Nausea, vomiting, dry mouth, sore throat, shivering, and sleepiness are common side effects of anesthesia.

The side effects of anesthesia should go away in one to two days.

Possible complications

Complications from shoulder replacement surgery are rare. The following are the most common:

- **Shoulder dislocation.** It is possible for the new ball and socket joint to dislocate.
- **Bone fracture.** The humerus bone, scapula and the glenoid bone can break during or after surgery. If this happens, you may need another surgery.
- **Replacement part failure.** Shoulder replacement components are very durable. But like any artificial device, these components may become loose or worn over time and require further surgery.
- **Rotator cuff failure.** It's possible the repair to your rotator cuff could fail. It's also possible that long-term wear and tear can cause the rotator cuff to tear. In those cases, you may need another surgery.
- **Nerve damage.** Your implant is placed in an area where there are lots of nerves. Rarely, nerves may be injured when the implant is placed. Nerve damage can cause numbness, weakness and pain. Some people may lose feeling in the skin around the shoulder. This is more common where the incision was.
- **Infection.** Infections after shoulder replacement may require surgeries to treat it.
- **Blood clot(s).** Blood clots after this type of surgery are rare. However, people who have shoulder replacement surgery are at a slight risk for developing blood clots during the first weeks after surgery. Your surgical team may take steps to try and prevent a blood clot. Preventive steps and treatment for blood clots are different for each person.
- **Complications related to anesthesia,** which depend on what type of anesthesia you have.
 - Infection at the injection site.
 - Bleeding.
 - Temporary or permanent nerve injury.
 - Serious complications from anesthesia are rare, but they can include stroke and death.

Get Ready for Surgery

Use the following information in the months, weeks and days before your surgery to get yourself and your home ready.

Do not use tobacco products for at least two months before surgery

Nicotine, carbon monoxide and other poisons in tobacco products decrease your blood flow. Smoking also increases the risk of complications after surgery. Examples include poor bone and wound healing, pneumonia, blood clots, and the need for more surgery.

If you use tobacco products, you must stop using tobacco products at least two months before your surgery date. Plan to be nicotine-free for at least one year after surgery. It can take up to a year for bones to heal. If you do not stop tobacco use, you may not be eligible for surgery. If you need help to quit, talk to your health care provider. There is help available for you.

Tell your health care team about the following

- **Blood clots.** If you have had a blood clot, be sure to let your health care team know.
- **Blood- thinning medication.** Blood-thinning medications affect clotting and bleeding. Both the health care provider who manages these medications and your surgeon need to decide if your medications need to change.

Contact the health care provider who manages these medications about whether you should stop taking them before surgery and for how long. After the procedure, the health care provider who manages these medications and your surgeon need to decide when to restart these medications.

- **Pain medications.** If you have been taking pain medication in recent weeks, be sure to tell your surgeon. Together, you and your surgeon can plan on how to adjust your pain medications before surgery.

It is easy to get addicted to opioid pain medication, also called narcotic pain medication. Talk to your health care provider about other ways you can manage your pain. Most people stop taking opioid pain medication within one week after surgery. Over-the-counter pain medications, such as acetaminophen, can help ease pain that you still have.

- **Herbal medication.** If you have been taking any herbal medication, such as St. John's wort, fish oil or omega 3, it is also important to stop taking it when your surgeon tells you to stop. Some herbal medications can thin your blood. This puts you at risk for severe bleeding during surgery.
- **Diabetes.** Before your procedure, contact the health care provider who manages your insulin or other diabetes medications for specific instructions on taking or adjusting them.
- **Any implanted devices.** Your health care provider needs to know about any implanted devices, such as a pacemaker, internal defibrillator, vagal nerve stimulator, interstim, insulin pump, or pain pump. Bring your device information card with you when you have surgery.

Plan to change your activities

Depending on the type of surgery you have, make plans now to change your daily activities, such as school, work and home, for a few weeks or a few months.

No dental work in the four weeks before surgery

Dental work, including teeth cleaning, must be completed at least four weeks before your surgery. If you need unexpected dental work done within four weeks before your scheduled surgery, tell your surgical health care team. Talk to your health care provider about when you can have dental work after surgery. Most people can have dental work about three to six months after surgery.

If you have family or pets

Make plans for your family and pet care while you are gone or recovering. While you work on your recovery you are not able to care for others as you did before.

Learn more to help you prepare

Ask your health care provider if there are face-to-face or online classes you can take to help you prepare for surgery.

Integrative and healing therapy

- As you prepare for surgery, think about what you can do to be mentally and physically prepared to help your recovery and to speed healing.
- Eat a healthy, well-balanced diet.
- Stay active and exercise regularly.
- Practice stress-relieving techniques.
- Create a social network of people who will support you during and after your recovery.

Talk to your health care provider about your plans for recovery

Most people are able to go home or able to stay with a friend or relative after this surgery. No matter where you go, it is important to make a decision well before your surgery.

Recovery after your shoulder replacement surgery takes time. Take note of special needs you may have. You may also have needs that are not listed in this information.

Caregiver support

- **Plan to have a driver take you home after surgery.** It is not safe for you to drive while you use a shoulder immobilizer or take opioid pain medication. Plan ahead of time for a responsible adult to take you home after your surgery.
- **Plan for support at home.** Make sure you have caregiver support for the first few days after surgery. Your health care provider may ask you about your caregiver support.

Your caregivers must be willing and able to help you:

- Get in and out of bed.
- Prepare meals.
- Get dressed and bathed.
- Adjust your shoulder immobilizer.
- Do prescribed shoulder exercises with you.

Changes with work

- Talk to your health care team about how much time you may need off work.
- Talk to your employer about this surgery. Bring any forms that members of your health care team may need to sign for your employment.

Getting around

You may feel slightly off balance after surgery. Pace yourself. Take things slow. It may take a while before you have your normal energy back.

Get your home ready

Plan for a temporary decrease in your activity. If you are not sure how your shoulder surgery might affect your activity level, talk to your health care provider.

- Leave your home clean and tidy, so you don't have to clean during your recovery.
- Install handrails in your bathroom, such as around the toilet and in the shower.
- Remove clutter from walking areas. And remove rugs.
- If necessary and possible, rearrange your bedroom. Allow extra space for getting in and out of bed.
- In your living room, put a table with any supplies you need next to a sturdy chair with arms. Supplies may include items such as books and magazines, hobby supplies, television remote, and a telephone. The chair should be high enough to get out of easily.
- In the kitchen, move things you use often to a place where you can reach them without having to stretch or lift.
- Make and freeze meals now to heat and eat after you go home.

What to bring to your surgery

Do not bring valuables, such as jewelry, with you. Bring the following items.

- Your surgical checklist.
- Any materials your health care team asked you to complete before your surgery.
- A list of prescription medications, over-the-counter medications, and vitamins or herbal supplements you take. Include the dose and times that you take them.
- Information cards you have about implanted devices you have in your body. Your health care team may need to see these.
- Comfortable, non-skid walking or athletic shoes with elastic laces or Velcro™ fasteners.
- Soft, loose-fitting clothes, such as jogging suits and sweatpants with pockets to help carry small items. Tight-fitting clothes may not be comfortable after surgery.
- Toiletry items, such as an electric razor and toothbrush and toothpaste.
- Personal items, such as books, magazines and a cell phone.
- Photo ID and money or credit card to pay for take-home medications.
- If you use any of the following, bring them with you:
 - Glasses or contact lenses with their case and solution.
 - Hearing aids with batteries and their labeled container.
 - Dentures and their labeled container.
 - Continuous positive airway pressure (CPAP) machine, if you use one at home while you sleep.
 - Advance directive or living will, if a document is not already in your medical record.

The day before your surgery

- Tell a member of your health care team if you have any symptoms of a respiratory, urinary or other infection. Also tell your care team about any recent illnesses you've had, such as a cold or flu, and if you still have some symptoms of these infections, such as coughing, stuffy nose or a fever.
- Read the instructions in your surgical checklist. You get anesthesia for this surgery, so you need to follow instructions about what to eat and drink. Your surgical checklist tells you what to eat and drink and when to eat and drink during the hours before your surgery.



The evening before your surgery

- Take a shower or bath the evening before surgery. Bathing helps to lower the amount of bacteria on the skin. Bathing may lower the risk of infection after surgery.
- You should be given an antibacterial soap to use while you bathe. Do not shave around the surgical area.
- Remove any nail polish you are wearing.
- Sleep in clean pajamas with clean sheets.

The Day of Surgery

The morning of your surgery

- Take a shower or bath the morning of surgery. If your health care provider gave you antibacterial soap, use it while you bathe.
- Take only the medications your health care provider tells you to take.
- Wear clean clothes the day of surgery, and wear comfortable, non-skid shoes.
- Remove all jewelry, including rings and body piercings, before you arrive on the day of surgery. Leave your jewelry at home.

Before you go to surgery

- Your health care team members check your temperature, pulse, respiration rate, and blood pressure.
- Let your health care team know whether you have any implanted devices, such as a pacemaker, internal defibrillator, vagal nerve stimulator, interstim, insulin pump, or pain pump. Show them the device information card you brought with you.
- Your surgeon or another care team member writes your surgeon's initials on the shoulder to be operated on. This safety measure ensures that everyone in the operating room knows which shoulder is to be replaced. If you are not sure which shoulder will be replaced, ask your health care provider.
- A thin tube, called a catheter, is placed in a vein in your hand or arm, called placing an IV. You are given fluids and medication through the IV. The medication you receive depends on your medical history, physical condition and the type of procedure.
- You go to the bathroom.
- You take off your glasses, contact lenses, hearing aids, and dentures if you are wearing them. These are removed in the surgical area before your surgery. They will be available to you right after surgery.
- Your family members and friends are shown where to wait while you are in surgery.
- Anesthesiology team member talks with you about how you will be sedated for surgery. Most people get a nerve block and general anesthesia.
 - A nerve block is a numbing medicine around your shoulder nerves. Nerve blocks are helpful to block pain signals during surgery. The numbing block also helps keep you more comfortable after you wake up from surgery.
 - With general anesthesia, you either receive medications through an IV or you inhale them. The medications put you into a very deep sleep. They block your memory of surgery and keep your brain from sensing pain signals. You have a breathing device in place during surgery.

In the recovery area

After surgery, you rest in a recovery area for a short time.

- Your loved ones are told when you are out of surgery and recovering.
- Your blood pressure, pulse, alertness, pain or comfort level, nausea and need for medications are monitored.
- You may get oxygen through nasal prongs or a facemask to help you breathe.
- As you wake up, noises may sound louder than usual.
- You may have a dry, sore throat. You may feel cold, like you have an upset stomach and a little forgetful.
- How long you remain in the recovery area depends on your unique needs. Most people stay about two hours.
- Your health care team decides when you are ready to leave the recovery area.

If you had general anesthesia, for your safety and the safety of others, do not drive for 24 hours.

After sedation

After you have been sedated, it is common to have lapses of memory, slowed reaction time and impaired judgment. Arrange for someone to accompany you to and from your appointment and drive you home.

For the rest of the day after being sedated:

- Rest.
- Do not drive or operate motorized vehicles or equipment.
- Do not return to work or school.
- Do not take on responsibility for children or anyone who depends on your care.
- Do not use exercise equipment or take part in rough play or sports.
- Do not drink alcoholic beverages.

Your care right after surgery

You may get fluids through your IV right after your surgery. Tell a member of your health care team if you have pain or redness around the IV site. You may also get antibiotic medication to help prevent infection.

You may continue to get oxygen. You might have one or two small plastic suction tubes to drain excess blood and fluid from the area around the incision. You may also have blood samples taken.

You are encouraged to drink liquids. You and your health care team can decide how quickly you should increase what you eat and drink.

After you pass urine a few times, your bladder may be checked to see if it is emptying. If you cannot empty your bladder all the way, a catheter may be inserted to help empty your bladder. You may have difficulty emptying your bladder all the way for a few days after surgery.

Moving right after surgery

Do not try to get up without help. The side rails on your bed may be raised for your safety. Your health care team:

- Decides when it is safe for you to get out of bed.
- Helps you move in and out of bed until you are ready to do this on your own. Do not get up without help unless a health care member says you may. Usually you sit on the edge of the bed and transfer to a chair the day of surgery.

Pain and discomfort

Members of your health care team ask you to rate the level of pain you feel. The scale is 0 to 10, where 0 is no pain and 10 is the worst pain you can imagine. The goal is to keep your pain level around 4 or less. Your pain may stay at this level for the first week or two after your surgery.

Tell a member of your health care team if you have any other discomfort or if you think the pain medication is making your stomach upset or causing other symptoms.

You will still have some pain after surgery. Your health care team helps you manage your pain. They do this in the following ways.

- **Oral pain medication.** This can help ease your discomfort. You will do best if you take pain medication before your pain becomes significant. Tell your nurse if your pain gets worse.
- **Cold packs.** You can use cold packs to help lessen swelling and discomfort around your incision. Use a thin towel between the ice pack and your skin.

Encourage circulation

While you are less active after surgery, the risk is high for your legs to swell. To lower your risk to develop blood clots, it is important to increase your blood circulation.

Hand exercise

For less hand swelling, close and open your fists as fully as possible for a few minutes every hour.

Leg exercise

Doing ankle pumps helps promote blood circulation and lowers the risk for blood clots.

- Pump your ankles by pointing your toes away from your head, then back toward your head.
- Relax.
- Repeat this exercise 10 times on each foot every hour you are awake.

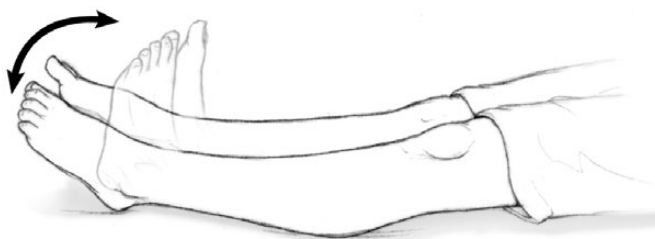


Figure 7. Ankle pumps for circulation

Coughing and deep breathing

You may be encouraged to cough and breathe deeply every hour you are awake for the first few days after surgery. This clears your airways of mucus. You may be given a device called an incentive spirometer to help you with deep breathing exercises.

Shoulder position and your shoulder immobilizer

- After surgery, your shoulder is placed in an immobilizer. It looks like a sling. It protects your arm and shoulder and keeps them in place as much as possible without movement. That helps your shoulder heal. Your own muscles should not be used to support the shoulder. If they do, your pain will increase.
- Typically, you need to wear the immobilizer for the first six weeks after surgery.
- To be comfortable when you rest or sleep, your elbow should stay slightly in front of your body. To keep your elbow from resting on the mattress, you may place folded towels or blankets under your elbow and arm.
- If you think your immobilizer is not in the correct position, tell your health care provider.
- Do not try to move the operated shoulder unless you are told you may do so.

Your stay after surgery

During your stay after surgery, you and your team may focus on the following:

- **Pain management.** Your pain, however, may not go away completely.
- **Physical therapy.** Physical therapy teaches you and your caregiver how to put on and take off your shoulder sling, shower sling, and your upper body clothing within your movement restrictions. Physical therapists can teach you how to do shoulder exercises. They help you recover the function in your shoulder and they help to maintain the flexibility of your hand, forearm and elbow. Be sure to ask when you should start to exercise and how to do the exercises.
- **Occupational therapy.** If needed, this service helps you with daily living tasks.
- **Maintaining good blood circulation.**

Getting you ready to leave

Before you leave, you learn how to care for yourself after surgery. Taking part in your care helps you be more independent. Your health care team may work with you on how to:

- Do everyday tasks and get around. You may need help from your loved ones for some of these tasks.
- Learn how to care for yourself. Your health care team also may help your loved ones learn how to support you.

Your care team may:

- Ask your loved ones to show that they understand your exercise program and wound care.
- Help you set up follow-up appointments. Ask your surgical care team about this.

You are ready to leave when you:

- Can move around safely.
- Feel your pain is manageable. It's important to note that some pain is a normal part of the healing process.
- Know your home care plan. Be sure you take your dismissal instructions with you when you go home.
- Have your medication prescriptions and know how and when to take your medications.
- Have your shoulder immobilizer and know how to use it.
- Have a ride and driver ready to help you leave.

Taking Care of Yourself at Home

Getting around

You gradually may increase your activity. Let your shoulder symptoms guide you. How active you were before surgery may affect how quickly you can return to your normal daily activities.



- Do not use your shoulder until your health care provider tells you it is okay.
- Use your shoulder immobilizer as directed by your surgeon. Most surgeons recommend use of the immobilizer day and night for the first six weeks, except when you change your clothes or practice your therapy. You will need some help to put on or adjust the immobilizer.
- Set some time aside every day to do your physical therapy exercises with the help of a family member or friend. Arrangements may be made for a physical therapist to help you if you do not have a caregiver available to help.
- Active movement of your elbow, wrist and hand is safe as long as the shoulder is not actively moved.
- Avoid heavy housework while you recover, such as vacuuming and anything that requires you to move furniture. You may use your unaffected arm to do some light housework, such as dusting and loading the dishwasher.

Daily living

- Sleep with your immobilizer until your health care provider tells you differently. You may be more comfortable sleeping in a recliner.
- You may go back to driving when:
 - You no longer take opioid pain medication.
 - You are no longer using a shoulder immobilizer.
 - Your health care provider tells you it OK.

Sexual activity

- You may resume sexual activity when you feel comfortable.
- Wear your shoulder immobilizer during sexual activity. Do not allow your shoulder to rotate or twist. Continue to do this as long as your health care provider tells you to use the immobilizer. Typically, this is for six weeks.

If you have questions about sexual activity, talk with your health care provider.

Diet

Constipation may occur as a side effect of pain medications. It may also be a result of less activity after surgery. To help prevent constipation:

- Eat high-fiber foods, such as fresh fruits and vegetables and whole grains.
- Drink 6 to 8 glasses of water every day, unless you are told otherwise.
- Use stool softeners, laxatives, or both. Follow the instructions given to you by your health care provider.

Icing your shoulder

Ask your provider about applying ice to your shoulder after you exercise. This may reduce pain and swelling. **Do not use a heating pad. Heat makes swelling worse.**

Managing your pain with medication

Your health care provider may give you a prescription for pain medicine.

- Tell your health care provider about any medication you are taking, including other prescriptions, over-the-counter medications, vitamins, and herbal supplements.
- Talk to your health care provider before beginning new medications while you are taking prescription pain medications.

Prescription opioid pain medications can cause side effects, such as constipation, light-headedness, dizziness, and nausea. Using prescription pain medications for even a short time can lead to addiction. The goal is to use the smallest effective dose of pain medication for the shortest period of time. Most people should stop taking opioid pain medication one week after surgery.

It is important that you take the prescribed medications exactly as instructed. Talk to your health care provider about how to slowly change to other pain-control methods. Those methods may include over-the-counter medication.

While you are taking prescription pain medications, do not:

- Drive or operate motorized vehicles or equipment.
- Drink alcoholic beverages.
- Be responsible for children or adults who depend on you for care.

Some common pain relievers can affect blood thinning. Examples include aspirin, aspirin-containing products, ibuprofen (Advil™, Motrin™), and naproxen (Aleve™, Naprosyn™). Ask your health care provider about what you should take to manage your pain.

If you do not take a blood thinning medication or prescribed pain medication, you may take acetaminophen or generic Tylenol™ as needed for pain. Talk to your health care provider about the dose you should take and the schedule you should follow. If you take more than the recommended dose of acetaminophen, you could damage your liver. If you take aspirin for your heart, ask your health care provider whether you should continue to do so.

Incision care and bathing

Make sure you follow the instructions from your surgeon about bathing and taking care of your incisions.

Antibiotics to prevent infection

You need to protect this new part of your body from infection. Although it is not common, your artificial joint could become infected any time bacteria get into your bloodstream. Talk with your health care provider about taking antibiotics before any of the procedures listed in this information. Your health care provider or dental provider reviews whether you need antibiotics and, if you do, he or she recommends the antibiotic you should take. If you have ever had a reaction to a certain antibiotic, tell your health care provider.

Other procedures affected by shoulder replacement surgery

After you have a shoulder replacement, certain medical procedures can affect your new shoulder. These procedures are listed here. Tell the medical care providers you have for any of the following procedures that you had shoulder replacement surgery.

- **Dental or oral procedures.** Routine dental cleaning is recommended to maintain your dental health. If you have symptoms of dental conditions, seek immediate diagnosis and treatment.
 - For one year after surgery, antibiotics are recommended before dental cleaning or other procedures.
 - For six months after surgery, delay elective dental procedures, such as orthodontics or implant placement.
 - After one year has passed since surgery, most people do not have to take antibiotics before procedures anymore. However, antibiotics may be recommended if you are at higher risk of infection. For example, you are at higher risk if you are taking immune-suppressing medications, such as chemotherapy or disease-modifying medications for rheumatoid arthritis, or if you have had a prior joint infection or complex joint reconstruction.

- **Urologic procedures.**
 - For six months after surgery, delay higher risk urologic procedures, for example, any stone manipulation, including shock wave lithotripsy, transrectal prostate biopsy, endoscopic procedures of the upper tract (ureter and kidney) and any procedure involving entry into your urinary tract.
 - For one year after surgery, if any of these higher-risk procedures are necessary, antibiotics are recommended.
 - After one year has passed since surgery, most people do not have to take antibiotics before procedures anymore. However, antibiotics are recommended if you are at higher risk of infection. For example, you are at higher risk if you have an indwelling catheter, a history of recent or recurring urinary tract infections or prostatitis, are taking immune suppressing medications such as chemotherapy or disease-modifying medications, or have had prior joint infection or complex joint reconstruction.
- **Gastrointestinal procedures.** Gastrointestinal procedures include any procedure during which an instrument or tube is inserted into your body. This may include upper endoscopy, colonoscopy or sigmoidoscopy.
 - Antibiotics are not recommended before most gastrointestinal procedures.
 - For six months after surgery, delay non-urgent endoscopy, for example, to follow-up on reflux. If you are due for a 10-year screening colonoscopy, wait six months.
 - If you experience symptoms of gastrointestinal bleeding, seek emergency diagnosis and treatment.

When to Get Medical Care

Get emergency medical care

If you have any of the following problems, call 9-1-1 or have someone drive you to get emergency medical care.

- Chest pain.
- Shortness of breath.

Contact your surgeon or health care provider

Contact your surgeon or health care provider if you have any of the following problems.

- Signs of an infection:
 - Increased tenderness, redness or swelling.
 - Increased pain, or pain not relieved by pain medications.
 - A bad-smelling odor or new or increased drainage.
 - A temperature of 100.4 degrees Fahrenheit (38 degrees Celsius) or greater.
 - Chills.
- A urinary tract infection, bronchitis or any other infection.
- Easy bruising, nosebleeds or blood in your urine.
- Calf or thigh pain, tenderness or swelling in either of your legs.

Contact your surgeon or health care provider about any of these changes:

- New or increased numbness and tingling in the arm you had surgery on.
Or numbness or tingling that has never gone away.
- Swelling that doesn't go down even though you regularly elevate your shoulder above your heart when lying down.
- Changes in color and temperature in the arm you had surgery on.
- Sudden and severe shoulder pain.
- A bump that you can feel at the shoulder.
- A fall or injury to your shoulder.
- Less motion in your shoulder or loss of arm length.

Follow-Up Appointment

You may be asked to return for a follow-up appointment after your surgery. During this appointment, your health care team checks to see how your shoulder is healing.

Before you leave after surgery, you may get information about this appointment. Or you may get a follow-up appointment letter by mail at your home.

If you have questions about shoulder replacement surgery or the information in this resource, talk with your health care provider.

Notes

Notes

BARBARA WOODWARD LIPS PATIENT EDUCATION CENTER

Mrs. Lips, a resident of San Antonio, Texas, was a loyal Mayo Clinic patient of more than 40 years and a self-made business leader who significantly expanded her family's activities in oil, gas and ranching. Upon her death in 1995, Mrs. Lips paid the ultimate compliment by leaving her entire estate to Mayo Clinic. By naming the Barbara Woodward Lips Patient Education Center, Mayo honors her generosity, her love of learning, her belief in patient empowerment and her dedication to high-quality care.

This material is for your education and information only. This content does not replace medical advice, diagnosis or treatment. New medical research may change this information. If you have questions about a medical condition, always talk with your health care provider.

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MC2111-04rev0520