



Joint Adventures Shoulder Replacement

at Northwestern Medicine Central DuPage Hospital
and Northwestern Medicine Delnor Hospital





Welcome

Welcome to Northwestern Medicine Central DuPage Hospital and Northwestern Medicine Delnor Hospital's Joint Adventures program. By now, you've met with an orthopaedic surgeon and set a date for your joint replacement surgery.

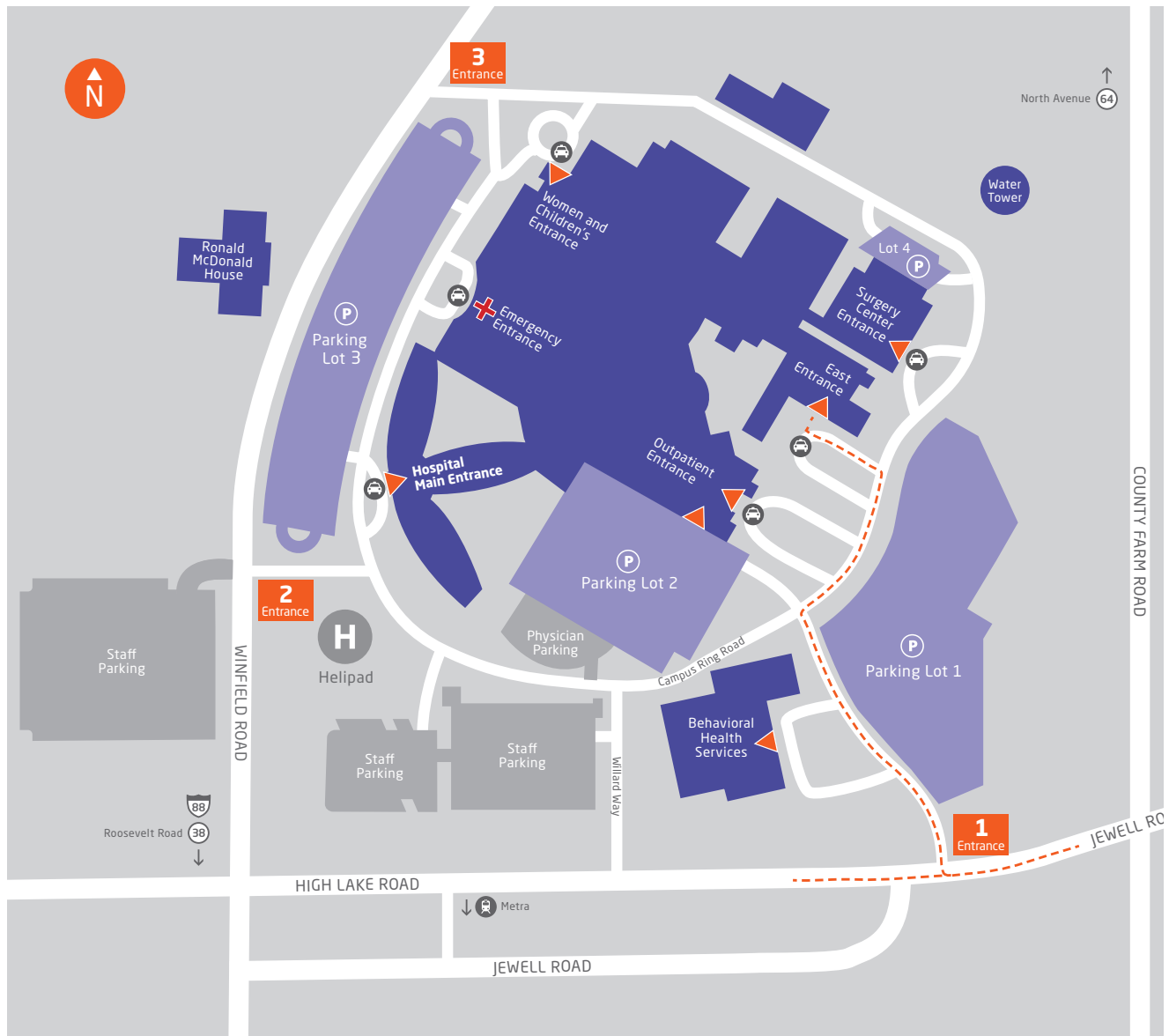
From this point on, the orthopaedic care team will be with you every step of the way. We look forward to giving you excellent care and service.

Knowing what to do before your surgery, and knowing what to expect afterwards, can help reduce the stress or fear you might have. Besides reading this book, you will be issued web-based Emmi[®] education about your joint surgery and recovery from your surgeon or the pre-admission nurse during your medical history call.




Please call your physician's/surgeon's office if you still have questions about your surgery schedule, physician appointments or medication.

The orthopaedic care team looks forward to helping make your joint adventure a pleasant one.

Joint Adventures Northwestern Medicine Central DuPage Hospital Campus Map



Map not to scale




-  Valet Parking
-  Parking Lot
-  Building Entrance

On the day of your surgery, or for your Pre-Op Clinic, use Entrance #1 on Jewell Road and enter the hospital at the East entrance. Valet services are available starting at 5 am. Valet parking is complimentary.

Joint Adventures Northwestern Medicine Delnor Hospital Campus Map



Map not to scale

- 
Valet Parking
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Parking Lot
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Building Entrance

On the day of your surgery, or for your Pre-Admission Testing, use Entrance #1 on Williamsburg Road and take Delnor Drive to the South Entrance. Valet services are available starting at 7 am. Valet parking is complimentary.

Table of contents

Getting Started

About your shoulder	7
Arthritis	8
Shoulder replacement	9
Emmi programs	10

Preparing for Surgery

Physician visits and lab tests	11
Dental care	11
Infection prevention	11
Health history	12
Pre-op visit	12
Surgery time	13
What to bring for your hospital stay	13
Prepare your home	14
Choosing a coach	14
Calcium	15
Vitamin D	16

Day of Surgery

Arrival and parking	17
Check-in and registration	17
Waiting room	17
Recovery room	17
Food and fluids	18
Visitors	18
Privacy	18

Your Hospital Stay

Post-surgery	19
Therapy	19
Bladder and bowel care	20
Incision care	20
Respiratory care	20
Circulation	20

Managing Your Pain

Comfort-function goal	21
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Discharge Instructions

Incision care	22
Infection prevention	23
Dental care	24
Urological care	24
Colonoscopy	24
Deep vein thrombosis	25
Pulmonary embolism	25

Leaving the Hospital

Discharged	26
----------------------	----

Safety Precautions

Transfers	27
Dressing	27
Toileting	28
Bathing/showering	28
Home precautions	29

Outpatient Physical Therapy

Outpatient rehabilitation services	30
Pain management during physical therapy	31
Exercises	32

Getting started

To help you better understand the process of shoulder replacement, it may be helpful to know more about your shoulder and how it works.

About your shoulder

The shoulder is made up of bones, muscles, ligaments and tendons. They work together so you can reach, swing and lift in comfort. Learning about the parts of the shoulder and joint will help you to understand your shoulder problem.

The parts of the joint

The shoulder joint is where the humerus (upper arm bone) meets the scapula (shoulder blade).

Muscles and ligaments help make up the joint; they attach to the shoulder blade and upper arm bone.

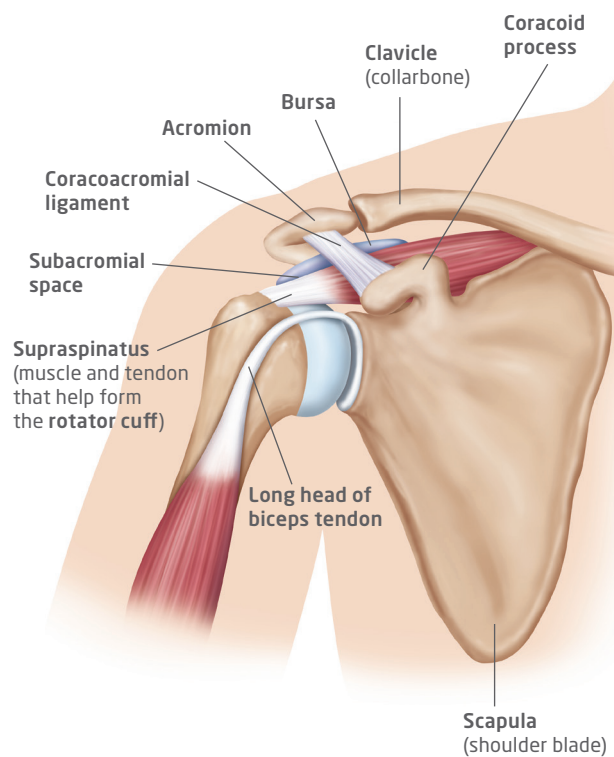
At the top of the shoulder blade are two bony knobs called the acromion and coracoid process.

The subacromial space is between the top of the humerus and the acromion; this space is filled with tendons, muscles and the subacromial bursa.

The bursa is a sac of fluid that cushions shoulder parts as they move.

The supraspinatus muscle and tendon are located in the subacromial space. They help form the rotator cuff and are commonly injured in a rotator cuff tear.

Normal shoulder



Arthritis

The word 'arthritis' means joint inflammation. Cartilage provides our joints padding and nutrition. Arthritis is a disease that wears away the cartilage. As arthritis progresses, the joint surface becomes irregular and the cushion diminishes. This may eventually lead to what is referred to as "bone-on-bone" or "end stage" arthritis. This can result in shoulder pain and stiffness.

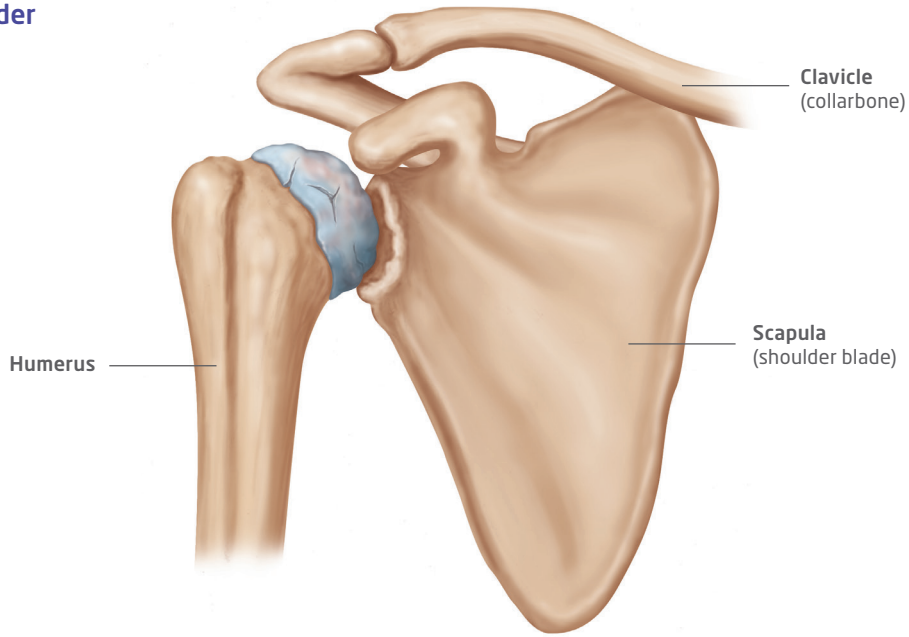
As with other joints, your physician* will likely discuss non-surgical options to treat arthritis which include activity modification, anti-inflammatory medications and joint injections (such as cortisone). These treatments may serve to lessen pain and improve function. If non-surgical measures are not successful in reducing pain, you may be a candidate for shoulder replacement surgery. A shoulder replacement resurfaces the damaged joint and creates a pain-free gliding surface to improve range of motion and reduce pain.

Osteoarthritis, often referred to as degenerative joint disease, usually gets worse with time. It is most common in people over age 50, but can occur at any age.

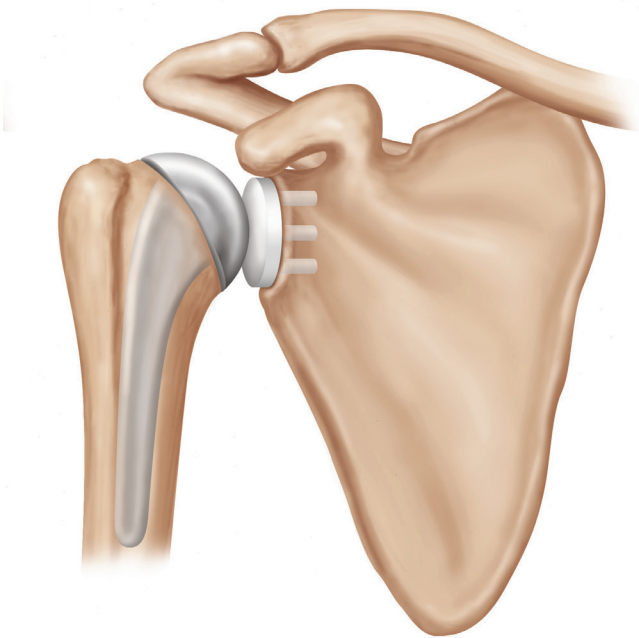
Rheumatoid arthritis is a disease that can attack any part of the body—including joints. In rheumatoid arthritis, the joint fluid contains chemical substances that attack and damage the joint surface. Swelling, pain and stiffness are usually present even when the joint is not in use.

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Arthritic shoulder

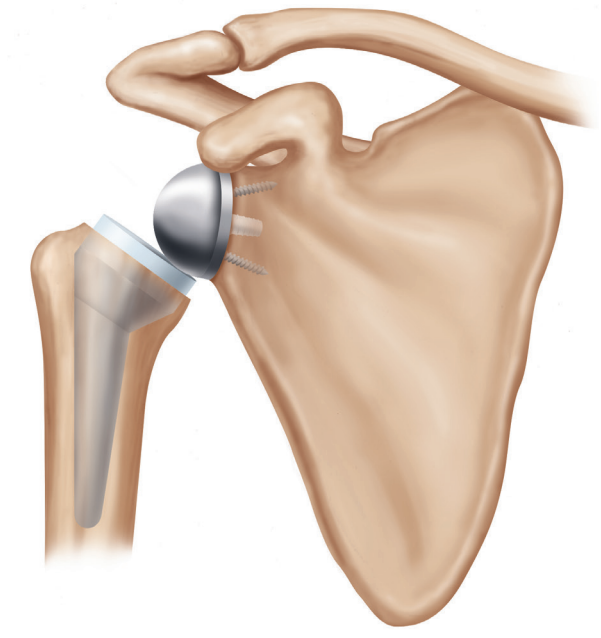


Total shoulder replacement



Surgical option for advanced shoulder arthritis. Requires an intact, functioning rotator cuff tendon. The humeral head (ball) and glenoid (socket) are anatomically resurfaced.

Reverse total shoulder replacement



Surgical option for an irreparable cuff tendon with or without arthritis. The ball is attached to the shoulder blade. The socket is placed in the humerus and uses the deltoid muscle to move the shoulder.

Congratulations. You've taken the first step to regaining your active lifestyle.

However, you need to take a few more steps to ensure you, your home and your caregiver are fully prepared for your joint replacement surgery.

During the next few days and weeks, you will need to:

Prepare your home for your return

Complete and return the Care Coordination form

Complete lab work or other tests ordered by your physicians*

Select a coach or support person to assist you at home for the first week after surgery

Watch Emmi educational internet programs

Emmi programs

Prior to your surgery, we recommend you watch the assigned educational web-based programs. The pre-admission review nurse will provide you with the information you will need so you can view these programs.

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Preparing for surgery

Joint replacement is an elective surgery. Therefore, it is important that your state of health be evaluated thoroughly prior to undergoing the procedure.

Physician visits and lab tests

Before surgery, most patients will complete an evaluation that may include a preoperative physical exam, lab tests, EKG and X-rays. Please be sure to speak with a pre-admission review nurse before you go for testing; anesthesia guidelines may call for additional tests. **Your physician* also may discuss temporarily stopping the use of some medications, such as anti-inflammatory medications, about one week prior to surgery. Stop taking aspirin two weeks prior to surgery.** These medications tend to make your blood thinner and could cause more bleeding during your surgery.

Dental care before surgery

Any invasive dental work, including routine cleanings, cavity filling, extractions, root canals or implant work, can introduce bacteria into the bloodstream. If you are scheduled to have dental work within the six weeks prior to your joint replacement surgery, please tell your surgeon's office staff. Your surgeon* may provide specific instructions or guidelines for you to follow. Consult your surgeon* regarding the length of time to wait after surgery before scheduling any future dental appointments.

Infection prevention

Infection is a rare complication of joint replacement surgery. We take special precautions to help prevent infections. **If you have any signs or symptoms of infection prior to surgery such as an open sore, flu symptoms, a cut, infected teeth or a bladder infection, tell your physician* immediately. Your surgery may need to be delayed until you receive appropriate treatment.**

While in the hospital, you will receive antibiotics before and after surgery to reduce your risk of infection.

If you have any signs or symptoms of infection prior to surgery, tell your physician* immediately.

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Your incision needs to be kept clean and dry until it is healed. Your new joint is artificial and does not have your body's natural protection against infection, so it is possible to develop an infection years later. Bacteria can enter your bloodstream and invade your new joint causing it to become loose and painful. **Call your physician* immediately if you experience signs or symptoms of infection such as fever, chills, pain, redness or drainage.**

Common infections include sore throat, urinary tract infection, deep cuts or an ear infection. Your physician* may prescribe antibiotics.

Health history

Once you have a confirmed surgery date, you will need to provide a complete health history. One of our experienced pre-admission nurses will call you to obtain your detailed health history.

After the phone interview you will be given instructions for the next steps (i.e. what tests will be performed, where to go for testing, etc.). Based on your history, required testing will be scheduled at the Pre-Op Clinic at Central DuPage Hospital, the Pre-Admission Testing Clinic at Delnor Hospital or one of our convenient care centers.

Pre-Op Clinic at Central DuPage Hospital

You are encouraged to attend the Pre-Op Clinic prior to the day of surgery. You will meet with a member of our Perioperative Nursing Team. One of our registered nurses will complete a nursing assessment, review surgical consents, review home medications and provide pre- and postoperative education. The Pre-Op Clinic also provides you the opportunity to ask questions in person and become familiar with the hospital before surgery. If the clinic nurse has a concern, or upon request, an anesthesiologist may meet with you during your Pre-Op Clinic visit.

Appointments for the Pre-Op Clinic will be made by a member of the pre-admission testing department when you are contacted for your health history. You may complete pre-op testing during the Pre-Op Clinic. Please allow 45 minutes to one hour for the visit.

Pre-Admission Testing at Delnor Hospital

You will meet with a member of our pre-admission nursing team. One of our nurses will draw blood for labs and other testing, if required. The nurse will provide any preoperative education. During this time, one of our anesthesiologists will meet with the patient. The Pre-Admission Clinic also provides patients the opportunity to ask questions in person and become familiar with the hospital before surgery.

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When is my surgery?

Your surgery time will not be determined until the day before your surgery. We will be able to confirm your surgical time after 2 pm the business day before your scheduled procedure. A member of the Surgical Services staff will call you and tell you when to arrive at the hospital and also inform you of any day-of-surgery tests that have been ordered.

For patients at Central DuPage Hospital

If you will not be home, or you miss our call, please contact us at 630.933.2647 after 5 pm, Monday through Friday, to confirm your surgery time. TTY for the hearing impaired 630.933.4833.

For patients at Delnor Hospital

If you will not be home, or you miss our call, please contact us at 630.208.4038 after 5 pm, Monday through Friday, to confirm your surgery time. TTY for the hearing impaired 630.933.4833.

When you call, you will be told:

Your scheduled surgery time

What time you need to arrive at the hospital

What time to stop eating and drinking the night before surgery

What medication(s) you are to take, if any, the morning of surgery, including insulin and any medications you should bring with you to the hospital

What to bring to the hospital

You may be discharged the day of surgery, or you may be in the hospital for a day or two. If you stay overnight in the hospital, you don't need to pack much.

The following is a suggested list of what you should bring to the hospital

An oversized button-down shirt or zip-up sweatshirt that will fit over the shoulder dressings

Your CPAP mask if you use one at night when you sleep

Insurance and Medicare cards

A list of all your known allergies (medication, food and environmental) and a description of your allergic reactions to each

Toiletries: toothbrush, toothpaste, comb, brush, deodorant, lotion, contact case or eyeglass case, denture case, etc.

List of any special dietary requirements

Underwear, socks, loose comfortable pants or shorts, button-down shirts, and shoes to wear during therapy (these can be the same clothes you wear to the hospital the day of surgery)

This book and any materials provided to you by your surgeon

The "Do Not" list

Do not wear makeup the day of surgery

Do not bring cash or personal items of great value

Do not wear any jewelry or rings on your operative arm or hand

Prepare your home

You may go home directly after surgery or stay in the hospital based on your surgeon's* recommendations. You need to prepare your home so it is ready for your return following joint replacement surgery.

Some things you may need to do include:

Prepare meals ahead so they can be easily reheated

Put anything stored in high places on the counter or table for easy access without reaching or stretching

Remove throw rugs and move small tables, ottomans (footstools) and chairs out of your path

Upon request, a therapist from Northwestern Medicine Home Health & Hospice can visit your home prior to surgery to evaluate what you need to prepare your home. There is a charge for this service. Check with your insurance carrier to determine coverage for this service. To arrange a home assessment, call 630.665.7000. TTY for the hearing impaired 630.933.4833.

Choosing a coach

As you prepare for surgery, another important thing to decide is who will be your coach or support person once you're home. This can be a family member or friend. Whomever you choose should plan to watch the Emmi programs and help prepare your home if you're not feeling up to the task. Most importantly, they need to be with you at least the first week after you return home. You may need assistance with meal preparation and daily living activities the first couple of days so you don't fall. Your caregiver also will encourage and remind you to do your home therapy exercises to get your new joint moving.

Northwestern Medicine Home Health & Hospice

(formerly CNS Home Health & Hospice)

690 East North Avenue
Carol Stream, IL 60188

630.665.7000 24-hour phone
630.933.4833 TTY for the hearing impaired
630.665.7006 Referrals
630.665.7059 Fax

homehealth.nm.org

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Good nutrition before and after surgery is important. A healthy diet helps build muscle strength, which is needed for a full recovery.

Calcium

Most of the calcium in your body is stored in your bones and teeth. The rest is used in your blood, muscle and the fluid between cells.

Benefits of calcium

Regulates muscle contraction, including heart beat

May help control blood pressure

Recommended Daily Allowance (RDA)

Adult women age 19-50 1000mg

Adult women age 51-70 1200mg

Adults over age 70 1200mg

Tolerable upper limits

Age 19-50 2500mg

Age 51 and over 2000mg

Osteoporosis

Osteoporosis is a disorder in which bone becomes weak and brittle. People with osteoporosis have an increased risk for broken bones. Osteoporosis may develop if your body doesn't get enough calcium.

Osteoporosis risk factors

Post-menopausal women

Small-boned women

Fair-skinned women of Northern European origin

Physically inactive individuals

Family history of osteoporosis

Alcohol and caffeine drinkers

Tobacco users

Factors that increase calcium absorption

Lactose Calcium deficiency

Vitamin D Pregnancy and lactation

Factors that decrease calcium absorption

Fiber Vitamin D deficiency

Oxalate Menopause

Alcohol Old age

Calcium supplements

Some people may need a calcium supplement because they don't get enough calcium from the foods they eat. Calcium carbonate is the least expensive supplement, and it contains the highest amount of calcium per tablet. Calcium carbonate is available under the brand names OS Cal® and Caltrate®, or as a generic calcium carbonate. Calcium also can be found in Tums®, an over-the-counter antacid.

The ingredient label on the back of the product lists the calcium content. Your body only can accept 500 milligrams of calcium at a time, so do not take more than 500 milligrams in one serving.

OS Cal® is a registered trademark of Glaxo SmithKline, Caltrate® is a registered trademark of Wyeth, Tums® is a registered trademark of Glaxo SmithKline

Vitamin D

Vitamin D is a fat-soluble vitamin that is stored in the body's fatty tissue. It's also called the "sunshine vitamin" because the body makes vitamin D after being in sunlight.

Vitamin D helps

- Promote calcium absorption
- Form and maintain strong bones
- Maintain the proper phosphorus levels in blood
- Prevent rickets, an abnormal distortion of the bones

Recommended Daily Allowances (RDA)

For adults age 19 to 70, 15 micrograms (mcg) or 600 international units (IU)

For adults over age 70, 20 mcg or 800 IU

Tolerable upper limit for any age, 4000 IU

Risk factors for vitamin D deficiency

- Age 50 or older
- Infrequent exposure to sunlight
- Darker skin tones

Vitamin D supplements

Vitamin D is needed to help your body absorb calcium. If you are not consuming the RDA for vitamin D, you should talk with your physician* about taking a daily supplement.

Vitamin D supplements are available over the counter from your local drug or vitamin store.

FOODS RICH IN VITAMIN D	INTERNATIONAL UNITS (IU) PER SERVING	PERCENT DAILY VALUE
Cod liver oil, 1 tablespoon	1,360	340
Salmon, cooked, 3½ ounces	360	90
Mackerel, cooked, 3½ ounces	345	90
Sardines, canned in oil, drained, 1¾ ounces	250	70
Tuna fish, canned in oil, 3 ounces	200	50
Milk, non-fat, reduced-fat or whole, vitamin D fortified, 1 cup	98	25
Margarine, fortified, 1 tablespoon	60	15
Pudding, prepared from mix and made with vitamin D fortified milk, ½ cup	50	10
Ready-to-eat cereals fortified with 10% of the DV of vitamin D, ¾ cup to 1 cup servings (servings vary according to the brand)	40	10
Egg, 1 whole (vitamin D is found in egg yolk)	20	6
Liver, beef, cooked, 3½ ounces	15	4
Swiss cheese, 1 ounce	12	4

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Day of surgery

For the day of your surgery, we have a few suggestions and recommendations to help ensure it goes smoothly for you and your family.

For patients having surgery at Central DuPage Hospital

Arrival and parking

Use Entrance #1 on Jewell Road (please see map on page 4) and enter the hospital at the East Entrance. Valet parking is complimentary and recommended the day of surgery. Wheelchairs are available if needed. Valet service is available starting at 5 am.

Check-in and registration

The Surgical Services check-in and registration area is on the second floor. You and your family/friends will wait there until you are taken to the preoperative holding area. We ask that only one family member accompanies you to this area.

Waiting room

During your surgery, your family/friends may wait in the surgery waiting room. The patient tracking board provides up-to-date progress information to your family. Your surgeon will speak with your family when your surgery is over.

For patients having surgery at Delnor Hospital

Arrival and parking

Use Entrance #1 on Williamsburg Road (please see map on page 5) and take Delnor Drive to the South Entrance. Wheelchairs are available if needed. Valet services are available at the South Entrance starting at 7 am.

Check-in and registration

The surgery registration desk is located near the South Entrance through the right corridor. There is a concierge at the South Entrance to direct you. You and your family/friends will wait there until you are taken to the preoperative holding area. We ask that only one family member accompanies you.

Waiting room

During surgery, your family/friends may wait in the surgical waiting room. The family liaison, our volunteers, and the patient tracking board will provide up-to-date progress information to your family. Your surgeon* will speak with your family when your surgery is over.

Recovery room

The average length of stay in the recovery room is two hours. The medications used in anesthesia may cause you to have blurry vision, a dry mouth, chills, nausea or a sore throat. When you are stable, you will be transferred to your room. Once awake, you will be encouraged to breathe deeply and cough. This will help clear out your lungs and prevent pneumonia.

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Food and fluids

After surgery, you will be able to have ice chips if you are not sick to your stomach. You can progress to solid food when you and your surgeon* feel you are ready.

Visitors

On the day of surgery, we suggest that you keep visitors to a minimum and limit the amount of time they stay. You will feel very drowsy from the medications.

Privacy

To protect your privacy after surgery, you will be requested to communicate directly with your family and friends regarding your condition. You will be asked to choose a password to protect your privacy if you are unable to update your family/friends yourself. Please advise family and friends they will need to provide the password to a nurse in order to obtain updates on your condition.

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Your hospital stay

Post-surgery

You may be discharged on the day of surgery, or you may stay for one or two days, depending on how you progress. Your orthopaedic care team will continue to closely monitor you after your surgery. They will check the color, movement and sensation in your arms. They will orient you to your new environment. A nurse will create a personalized plan of care to meet your individualized needs and work with other members of the orthopaedic care team. Your patient care technician (PCT) will assist you with activities of daily living, such as bathing, turning in bed, toileting etc. The care coordinator will assess your discharge needs, handle any insurance issues and arrange for services and equipment you may need after discharge.

Therapy

Therapy is one of the most important parts of your recovery. You will begin therapy soon after your surgery. Your surgeon* and the rehabilitation staff will work together to develop an individualized therapy plan for you. Pain management is important for your rehabilitation. It will also be imperative for you to elevate and ice your arm according to your surgeon's instructions.

During your therapy sessions, you will learn your surgeon's specific shoulder precautions, how to put on and take off your sling, proper positioning in bed and a chair, techniques for adapting the activities of your daily life, and recommended exercises to restore joint motion and strengthen surrounding muscles. You will learn and practice each of these in the hospital.

Therapy after you leave will be based on your health status, your functional progress with your activities of daily living, physical activity tolerance with home exercise program, and your surgeon's* specific recommendations. Your focus should be to achieve your optimal functional level within your home or as an outpatient.

Sling

After surgery, you may have a sling on your arm. The therapist will instruct, demonstrate and, if needed, modify your sling before you go home. You or your caregiver will be expected to be able to remove your sling and put it back on your arm.

Bed/chair position

The therapist will demonstrate optimum positioning of your arm when in bed or seated in a chair. You or your caregiver will place a pillow vertically behind and along your surgical shoulder, whether you're in bed or in the chair. This protects your arm and provides additional support.

Ice

The occupational therapist or nursing staff will provide ice packs to manage swelling if it occurs. You or your caregiver will place the ice pack(s) on your tender arm. This may also assist in pain management.

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Activities of daily living/adaptive techniques

The rehabilitation therapist will not only instruct you but have you or your caregiver demonstrate the recommended shoulder precautions as well as modified dressing, bathing and grooming techniques that will enhance your independence with your activities of daily living. This will ensure that you protect your new shoulder and follow your surgeon's* specific recommendations.

Exercise program

After surgery, you will be instructed and provided with an exercise program. Exercise references are provided in this book.

Bowel and bladder

Some people find it difficult to urinate after surgery because of the anesthesia, pain medication and decreased mobility. Let your health care provider know if you have difficulty urinating after surgery. Constipation can become another problem after surgery. To prevent constipation drink a lot of fluids and eat foods high in fiber. A stool softener or laxative may be given to you.

Incision care

Your incision will be covered by an adhesive bandage. Depending on your surgeon's* order, the bandage will be changed one or two days after your surgery with a smaller one. Your wound should be kept clean, dry, and covered. You will receive discharge instructions with incision care instructions from your nurse when you are ready to leave the hospital.

Respiratory care

After surgery, secretions can collect in the lungs and lead to pneumonia. To prevent this, we will teach you to breathe deeply and cough, and to use our blue breathing device in your room, which will help you fill the tiny air sacs in the bases of your lungs. The deep breathing also helps break up any mucus so you can "cough it out."

Circulation

Lack of activity causes blood to move slower and pool in your legs. It is imperative that you walk with the staff as soon as you are able. Set a goal to walk to the bathroom then to the door and then in the hall. This activity will reduce your risk for blood clots and enhance your recovery. Your surgeon* may order intermittent compression cuffs for you to wear. Blood thinners also may be prescribed.

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Managing your pain

You are at the center of your healthcare team. For the best possible outcome, we encourage you to be an active participant in your health care.

Participation takes many forms and includes:

- Providing information to your team
 - Educating yourself about your diagnosis and care plan
 - Knowing the medications you are taking
 - Expressing your questions and concerns
 - Telling your caregivers how you are feeling
-

Intraoperative pain management

Your anesthesiologist will speak with you the day of the procedure about pain management during your surgery. He or she may discuss a preoperative regional anesthetic block or “nerve block” with you. If your surgeon recommends this, it can provide good intraoperative and postoperative pain management. It is administered before the procedure by the anesthesiologist. This is utilized in addition to general anesthesia.

Managing your pain

Pain is experienced by people of all ages and can occur anywhere in your body. Feelings can vary from dull aches to severe sensations. You have the right to have your pain assessed and treated. To make you as comfortable as possible, we will regularly ask you to rate your level of pain using a numeric scale. The scale is from 0 to 10 with 0 being no pain and 10 being the worst pain possible. We are committed to helping you manage your pain throughout your stay.

Comfort-function goal

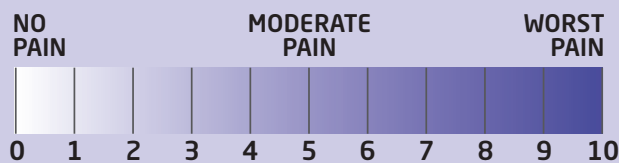
In order to perform your daily activities, you will need to set a goal for managing your pain. Your comfort-function goal should be a pain rating that allows you to continue your important activities.

To help set your goal, consider:

The daily activities you need to do after surgery, such as coughing or breathing deeply, to prevent complications

The pain rating that will allow you to manage those activities comfortably

Your caregiver will help you with your comfort-function goal and answer questions about the pain rating scale.



Discharge instructions

Preparation for your discharge actually started the day your surgery was scheduled. Your orthopaedic care team works with your surgeon* and primary care physician* to ensure a timely discharge.

Discharge instructions for shoulder replacements

Guidelines for how much weight your shoulder can bear at this time

Importance of adhering to recommended shoulder precautions

Proper positioning for a pillow behind your shoulder in bed and in a chair

How to remove/replace recommended sling

Your schedule of upcoming appointments

Incision care at home

Directions for preventing infection

Resume driving when surgeon approves

Resume work when surgeon approves

Do not participate in running sports immediately post-surgery

Incision care at home following joint replacement

Your incision will be closed on the outside by one of the following:

Staples

Dermabond

Steri-strips

When you are discharged from the hospital, these will still be in place. You will need to keep the incision clean and dry. If steri-strips are present, keep them in place until your next appointment with your physician*. If the ends come loose and curl up, they may be trimmed off, leaving the remaining steri-strip in place.

Each day, change the dressing that covers your incision until your first postoperative visit with your surgeon*.

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Here are a few suggestions to help promote healing and avoid infection:

Keep your incision clean and dry. You may not shower until directed by your surgeon.

You may wash the area gently with soap and water and pat dry after your first office visit. If you have staples, you may be asked to wait another couple of days after they are removed before showering.

Do not apply lotion or ointments to your incision unless directed by your surgeon.

You may experience the following:

Bruising near and below the incision that will often move down the arm and into the hand with gravity

Swelling in the elbow, forearm and hand

Mild to moderate pain and throbbing of the shoulder

Notify your surgeon* if you notice any of the following:

Separation of incision line at any point

Increased temperature greater than 101 degrees or chills

Increased redness, swelling or warmth of the skin around the incision

Increased pain at the incision site

Red streaks on the skin near the incision site

Tender bumps or nodules in your armpits or groin

Foul smell from the incision

Pus leaking from the incision

Please call your physician with any questions or concerns.

Infection prevention

Infection is a possible complication of joint replacement surgery. Therefore, it is very important to take good care of yourself with preventative care, screenings, tests and procedures. If you ever experience signs or symptoms of an infection such as fever, chills, or pain, redness and/or drainage from the incision area, call your surgeon. It's possible an infection could start from a sore throat, urinary tract infection, deep cut or even an ear infection.

In the event of a major illness or emergency, you may need medical care. Unfortunately, some tests, diagnostic procedures and illnesses can place you at a greater risk for developing an infection in your new joint even years after surgery. That's because bacteria can be inadvertently introduced into your bloodstream in any number of ways. Once in the bloodstream, the bacteria can travel to your new joint and cause an infection because the artificial joint does not have your body's natural protection against infection.

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Three of the most common healthcare situations you might encounter that can cause an infection are:

Dental care

Similar to dental care before your replacement surgery, dental care after surgery also can introduce bacteria into your bloodstream through cuts and trauma to the gums and gum lines. In anticipation of this risk, most surgeons recommend taking a onetime dose of antibiotics just prior to any dental work.

Your surgeon* will give you specific instructions about how to address this risk, and a directive about how long to follow them. Also, make sure your dentist and dental hygienist are aware of your new joint.

Urological care

Invasive procedures involving the urethra, bladder, ureters or kidneys are other ways that bacteria can enter your system and contaminate your bloodstream. Needle biopsies of the prostate are included in this risk. Under normal circumstances, the body can usually fight off potential infection associated with these procedures. However, that's not necessarily true after joint replacement surgery.

Your artificial joint is a potential infection site for these types of procedures, so make sure to inform any medical personnel about your artificial joint before they perform an invasive urological procedure. More importantly, make sure you discuss any urological procedure with your orthopaedic surgeon* before undergoing such a procedure. Your surgeon* will provide specific recommendations for you, and tell you how long after the procedure to follow them.



Colonoscopy

Colonoscopies can potentially introduce bacteria into the bloodstream and eventually your artificial joint. Speak with your surgeon* and gastroenterologist about the precautions you'll need to take, because it is important you have routine colonoscopy screenings. You want to make sure you follow their recommendations to protect yourself and your new joint.

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Deep vein thrombosis (DVT)

DVT is the formation of a blood clot within a deep vein, commonly the calf or thigh. The blood clot can either partially or completely block the blood flow in the vein.

DVT can result from leg inactivity brought on by:

- Surgery and reduced mobility
- Badly broken leg bones or other trauma
- Immobility or being bedridden
- Cancer
- Myocardial infarction (heart attack) or congestive heart failure
- Severe infection
- Pregnancy
- Use of oral contraceptives
- Decreased circulation
- Prior DVTs

Important activities you can do to increase your blood circulation are foot flexion and extension exercises. These involve moving your ankles up and down and tightening your leg muscles. After shoulder surgery, your mobility is maintained while in your sling.

DVT signs and symptoms

Because DVT can produce life-threatening complications, it is important for you to know and be able to recognize DVT symptoms.

Any or all of the following can be symptoms. If you notice any of them, call your primary care physician* immediately.

- Swelling in the calf or thigh area
- Pain in the calf area or behind the knee
- Increased pain with standing or walking
- Warmth/redness/tenderness in the affected area
- Low-grade fever

DVT also can occur without any of the above symptoms.

Pulmonary embolism (PE)

The most common and serious complication of DVT is a pulmonary embolism (PE). A PE occurs when a blood clot breaks free from a vein wall and travels to the lung where it blocks an artery. A PE is life-threatening and requires immediate medical attention.

Signs and symptoms of a PE include:

- Sudden onset of chest pain
 - Sudden unexplained cough or coughing up blood
 - Shortness of breath
 - Lightheadedness, dizziness or cold sweats
 - Feelings of restlessness, anxiety or rapid heartbeat
 - Sense of impending doom
-

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Leaving the hospital

Discharged

Once your physicians* and orthopaedic care team determine you are ready to be discharged from the hospital, you will embark on your next level of rehabilitation. You will likely be discharged to your home.

This is an excellent time for the people who wanted to visit you in the hospital to visit you at home. It gives your caregiver/coach a break and allows you quality time with family and friends.

We strongly recommend you have someone stay with you for at least one week after your discharge to help ensure a safer recovery.

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Safety precautions

Basic tasks require you to use safety precautions and procedures to prevent injury to yourself or your new joint.

Transfers in and out of bed:

Place a pillow vertically on the operative shoulder side of your bed.

Back up to the bed until you feel the back of your knees touching it.

Reach for the bed with your non-operative hand and lower yourself onto the bed.

Scoot back onto the bed as much as possible.

With your operative arm in the sling or your lap, gently lean toward your operative arm, slowly lowering yourself onto your side as you lift your legs up onto the bed.

Gently roll onto the pillow, then onto your back.

To get out of bed, reverse the steps.

Transfers in and out of chair:

Place a pillow vertically on the side of your chair, where your operative shoulder will rest.

Reach back with your non-operative hand and lower yourself onto the chair.

Scoot back in the chair.

Reverse the steps to get out of the chair.

Transfers in and out of a vehicle:

Have the driver open the passenger-side front door for you and make sure the seat is as far back as possible.

Turn around, using your non-operative hand to support yourself, and slowly lower yourself onto the edge of the seat.

Scoot as far back as possible on the seat.

Turn and swing your legs into the vehicle at the same time or individually.

Reposition seat to allow for proper seat-belt function and comfort.

Have your driver close the door for you.

To get out of the car, reverse these steps.

Dressing and undressing:

Sit on the side of the bed or in a chair.

Take off your pants and underwear with your non-operative hand.

Reach around your torso to bring your underwear or pants up over both hips with your non-operative hand.

Your occupational therapist will determine if you need adaptive equipment.

Socks/shoes:

Sit on the side of the bed or in a chair.

Remember to use gentle motion when putting on socks.

Your therapist will determine if you need adaptive equipment.

Toileting:

Back up to the toilet.

Slowly lower yourself onto the toilet by supporting yourself with your non-operative hand.

Reverse the steps to stand up from toilet.

Your occupational therapist will determine if you need home medical equipment, and inform your discharge planner of the recommendation.

Bathing and showering:

Shower only after your surgeon gives you permission.

Always have your caregiver present for safety.

Use your non-operative hand for washing.

Home precautions

To reduce the risk of falls or injury in your home following surgery, it is important for you to make it as safe as possible. This is fairly simple to do and can actually be done before your surgery. Most of the suggested modifications require no extra equipment or expense.

The following are home precautions you should follow:

Check hallways, stairs or traffic areas of your home for potential tripping hazards such as loose carpeting or throw rugs. Remove any clutter on the stairs.

Check the location of extension cords or phone cords to make sure they are not in a pathway.

Remove furniture that may cause a fall such as a rocking chair, glider, coffee table or ottoman.

The bathroom is the most accident-prone room in your home. Use non-slip strips on the bottom of the tub or shower.

Remove all throw rugs around the house, especially in the bathroom.

Place frequently used kitchen items in easily accessible places such as on the countertop or tables at or just below waist level, or just at shoulder height.

Do not use a "reacher" for overhead items.

If possible, have your bed accessible from both sides.

Do not use furniture that has casters.

Place portable phones in rooms where you will spend most of your time and in your bedroom.

Use nightlights in frequently traveled hallways and in bathrooms.

Outpatient physical therapy

Therapy is the most important part of your joint recovery. Your surgeon* can implant a new joint, but it is your job to do the required exercises to ensure your joint returns to an optimum functioning level. That's why we recommend you work with a therapist specially trained in orthopaedics and joint replacement.

The therapist will instruct you on the correct exercises, as well as how and when to increase your exercise time and repetitions to move your recovery along at a safe and beneficial pace.

Immediately following your surgery, a therapist will work with you to get you up and walking—in most cases the same day of your surgery.

Northwestern Medicine Central DuPage Hospital and Northwestern Medicine Delnor Hospital Rehabilitation Services

Continue with home exercises as instructed by your physician. Outpatient therapy will typically begin 10 to 14 days after surgery. Northwestern Medicine offers many rehabilitation locations and we encourage you to continue with our care team. However, the choice of where you receive your therapy is yours.

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When deciding where to go for outpatient therapy, you should consider the following:

Is the person performing therapy a licensed therapist, or only a trainer/instructor?

Will you have therapy with the same individual throughout your rehabilitation?

How will this person communicate your progress to your surgeon?

Does this person have access to your medical records?

What type of accreditation does this outpatient facility have? How long has it been treating patients? What is the most common type of treatment performed at this facility? How much experience do they have with joint replacements? How many joint replacement patients have they treated?

Do they have people to park your car or assist you in bad weather?

Do they have evening and weekend appointment times?

Is this facility in your insurance network?

Pain management during physical therapy

It is important to have adequate pain management to reach your optimal functioning level, but still be able to exercise. If you haven't had any pain medication within three hours of your scheduled therapy session, we suggest you take some at least 30 minutes before you begin exercising. With time, you should be able to decrease the amount of pain medication you take. Make sure you talk to your therapist about your pain level and the need for medications if it doesn't decrease after several weeks.

Your surgeon* will give you therapy protocols to follow. Please share these protocols with your therapist.

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Exercises

Exercise is very important following your shoulder replacement surgery. The exercises on the next few pages are recommended before and after surgery.

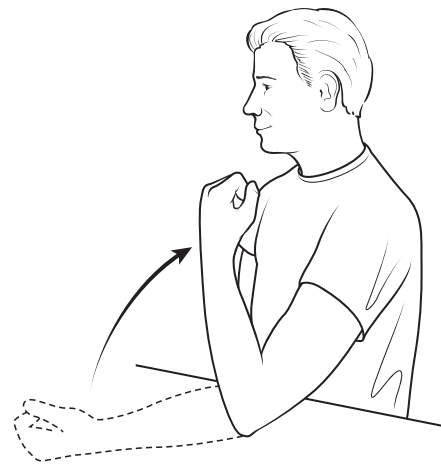
Your therapist also may give you additional exercises not listed in this book. Do only those exercises approved by your therapist. Begin with 10 repetitions of each exercise at least two times a day. As you get stronger, you can increase the number of repetitions and duration. Remember, the exercises should be done on a firm surface and don't hold your breath.

These exercises you can do the first two weeks at home by removing your sling. Additional exercises will start when you begin outpatient therapy.

If you undergo a reverse total shoulder replacement, your recommended exercises begin on page 36 of this booklet.

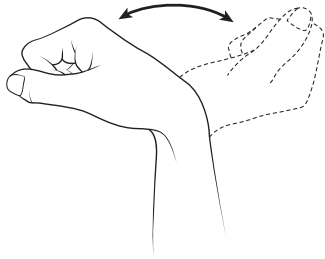
Exercise recommendations for total shoulder replacement

ELBOW FLEXION/EXTENSIONS



With palm up, gently bend your elbow as far as possible. Then straighten your arm as far as possible. Repeat 10 times.

WRIST FLEXION/EXTENSION



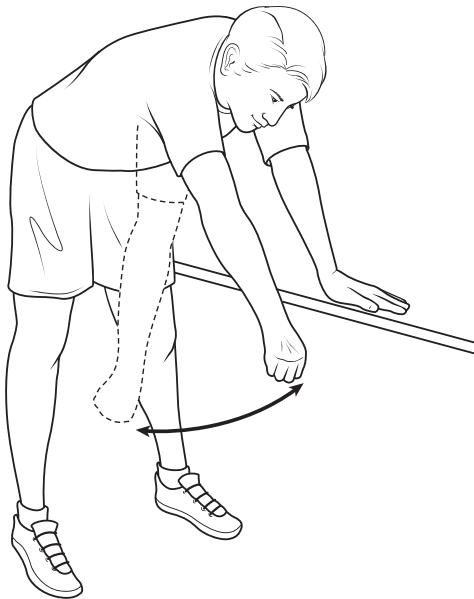
With your elbow close to your side, actively bend your wrist forward then back as far as you can comfortably. Repeat 10 times.

TOWEL ROLL SQUEEZE



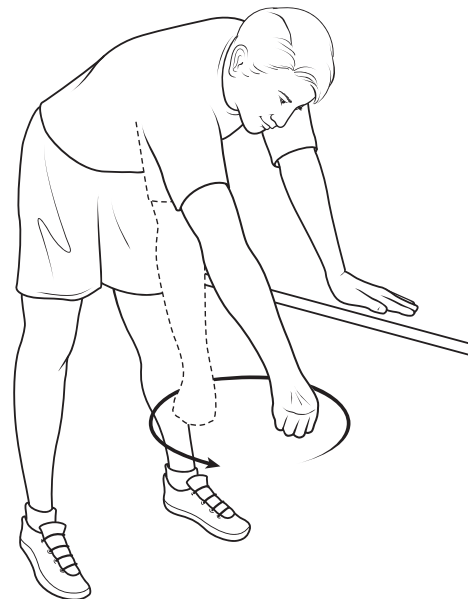
With your forearm resting on a table, gently squeeze a rolled towel. Hold for a count of 10 seconds. Relax. Repeat 10 times.

SHOULDER PENDULUM (SIDE-TO-SIDE)



Let your arm freely swing from side-to-side by using the momentum of rocking your body side-to-side. Repeat 10 times.

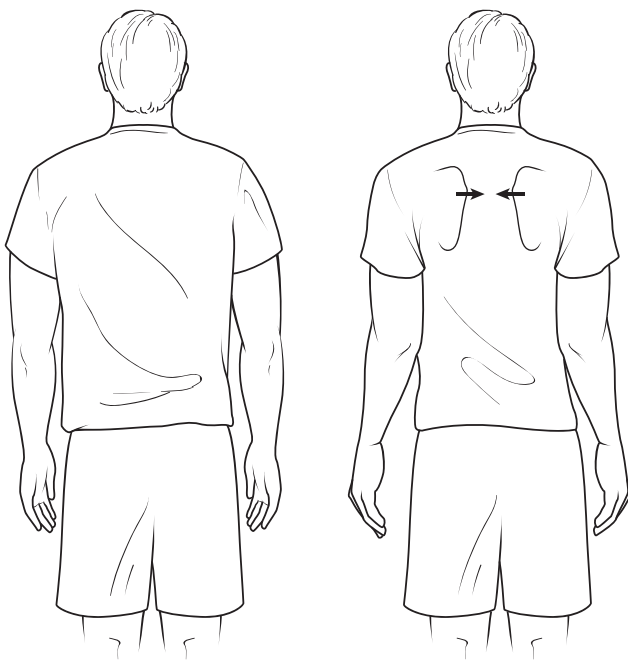
CIRCULAR PENDULUM



Let your arm move in a clockwise circle by rocking your body in a circular pattern. Repeat 10 times. Relax. Then repeat 10 times in a counter-clockwise pattern.

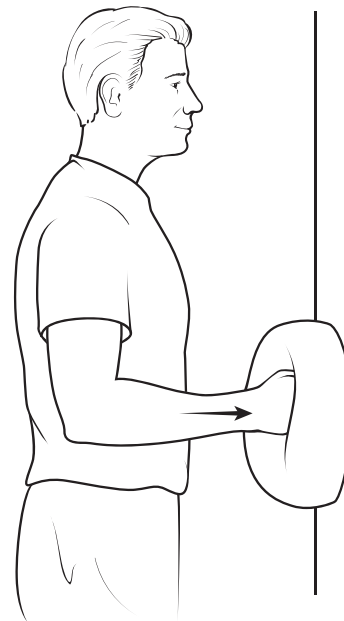
EXERCISE RECOMMENDATIONS FOR TOTAL SHOULDER REPLACEMENT *continued*

SCAPULAR RETRACTION



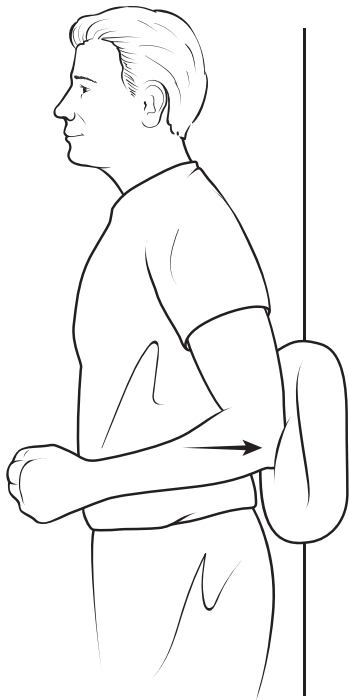
With your arms resting at your side, gently squeeze shoulder blades together. Hold for five seconds. Relax. Repeat 10 times.

ISOMETRIC FLEXION



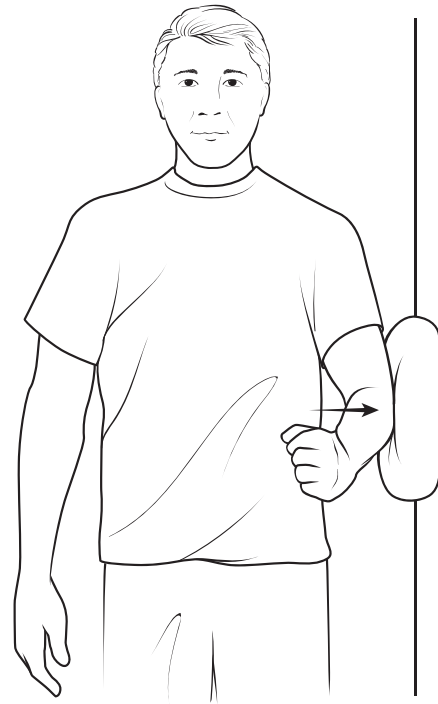
Facing the wall with your elbow bent at your side and using the wall for resistance, press your fist into a ball or pillow using light pressure. Hold for 10 seconds. Relax. Repeat 10 times.

ISOMETRIC EXTENSION



Facing away from the wall with your elbow bent at your side and using the wall for resistance, press your elbow into a ball or pillow using light pressure. Hold for 10 seconds. Relax. Repeat 10 times.

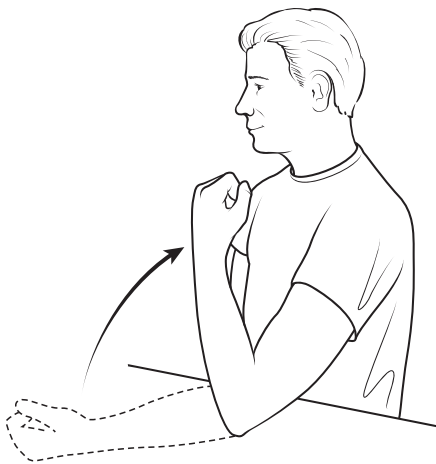
ISOMETRIC ABDUCTION



With your arm bent at your side and forearm against the ball or pillow, gently press elbow towards the wall. Hold for 10 seconds. Relax. Repeat 10 times.

Exercise recommendations for reverse total shoulder replacement

ELBOW FLEXION/EXTENSIONS



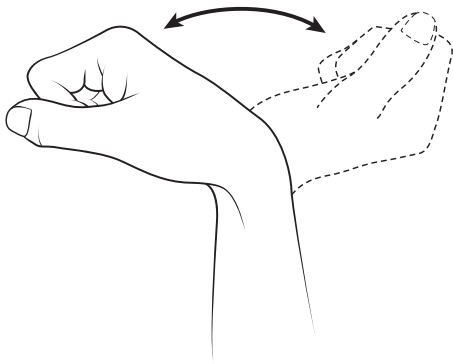
With palm up, gently bend your elbow as far as possible. Then straighten your arm as far as possible. Repeat 10 times.

TOWEL ROLL SQUEEZE



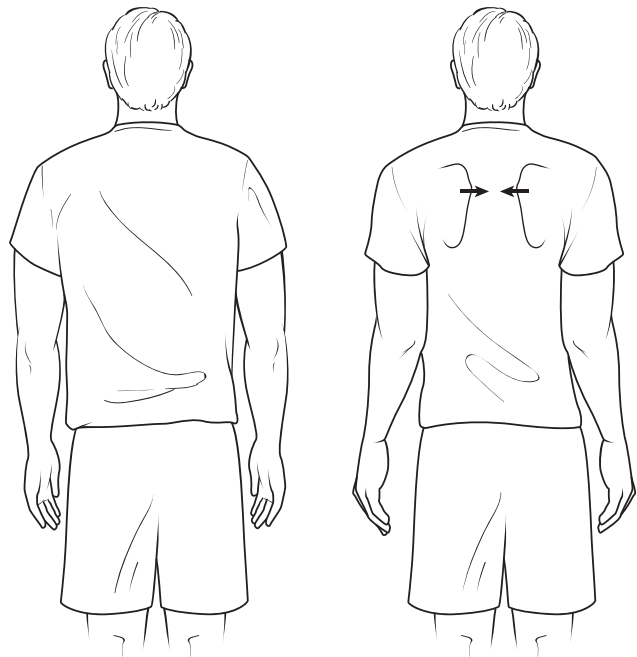
With your forearm resting on a table, gently squeeze a rolled towel. Hold for a count of 10 seconds. Relax. Repeat 10 times.

WRIST FLEXION/EXTENSION



With your elbow close to your side, actively bend your wrist forward then back as far as you can comfortably. Repeat 10 times.

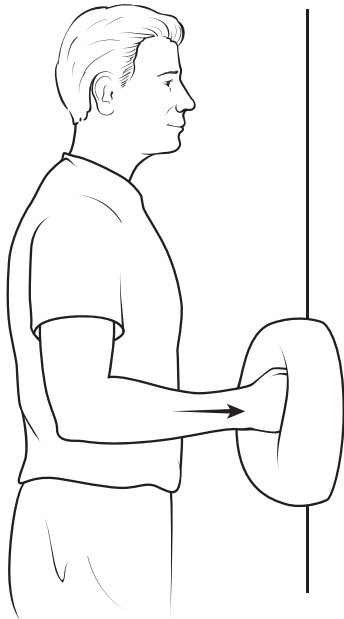
SCAPULAR RETRACTION



With your arms resting at your side, gently squeeze shoulder blades together. Hold for five seconds. Relax. Repeat 10 times.

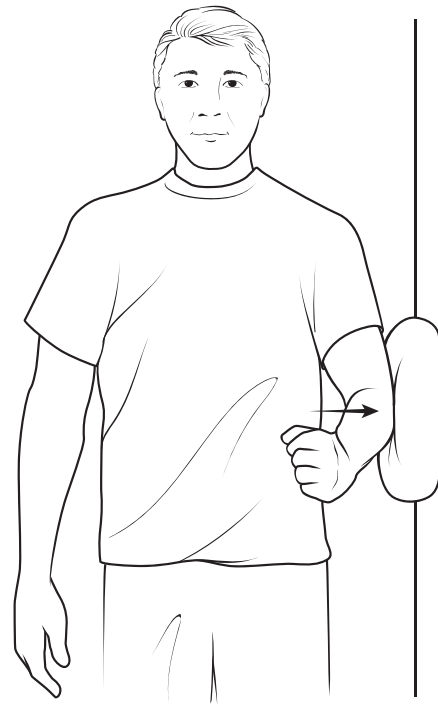
EXERCISE RECOMMENDATIONS FOR REVERSE TOTAL SHOULDER REPLACEMENT *continued*

ISOMETRIC FLEXION



Facing the wall with your elbow bent at your side and using the wall for resistance, press your fist into a ball or pillow using light pressure. Hold for 10 seconds. Relax. Repeat 10 times.

ISOMETRIC ABDUCTION



With your arm bent at your side and forearm against the ball or pillow, gently press elbow towards the wall. Hold for 10 seconds. Relax. Repeat 10 times.



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