

your **pathway** to healing



The Joint Replacement Center
at **Good Samaritan Hospital**

KNEE
REPLACEMENT



welcome

The Joint Replacement Center at Good Samaritan Hospital

It is with great pleasure that we welcome you to the Joint Replacement Center at Good Samaritan Hospital.

We understand you and your doctor have decided that a knee replacement procedure is needed to decrease your pain, improve your mobility, and enhance your quality of life.

This booklet is designed to help you understand what will happen in the following three phases:

1. Before surgery
2. Day of surgery and hospital stay
3. Discharge

We are pleased you have chosen Good Samaritan Hospital for your care. Our goal is to provide you with compassionate care during your hospital experience.

Your Healthcare Team

The Joint Replacement Center

our mission

- The Total Joint Replacement Center at Good Samaritan Hospital provides the most trusted, innovative surgical replacement options in your local community.

about us

A few features of our program include:

- **Dedicated Staff** Uses a team approach to surgical care, ensuring a smooth transition from pre-op through recovery. You and your team of health care professionals work together toward a common goal: your good health and wellness.
- **Rehab Focus** There are individualized therapy sessions twice daily to assist you in maximizing your recovery.
- **Coach** Each person is encouraged to select a coach, usually a family member or friend, who is actively involved in their care before, during and after discharge to home.
- **Wellness Focus** Patients are encouraged to dress in comfortable clothes such as shorts or sweatpants during the day for their therapy sessions.
- **Preoperative Class** All patients and coaches are encouraged to schedule to attend an educational class prior to surgery to learn about the procedure, what to expect in the hospital, and how to prepare for self-care upon discharge.
- **Superior Outcomes** Clinical and functional outcomes as well as patient satisfaction are evaluated on each patient and analyzed in our monthly physician/hospital team meetings. This data assists us in continued process improvement for our patients.

your healthcare team

Getting to Know Your Healthcare Team

We use a team approach to your health care at the Joint Replacement Center at Good Samaritan Hospital. This ensures a smooth transition from pre-op through recovery. In the weeks before surgery and while you are in the hospital, you will come in contact with many members of your healthcare team, including:

Orthopaedic Surgeon The doctor who will perform your joint surgery and is responsible for your overall health during your hospital stay and following your surgery.

Physician Assistants Physician assistants work with your surgeon to provide your care. They may assist with your surgery and see you in the hospital as well as in the office for your post-op appointment.

Anesthesiologist The doctor who administers anesthesia before and during your surgery, monitors your vital signs during and after surgery, and oversees your care while you are in the recovery room.

Hospitalist A hospitalist is a medical physician who may be asked to help manage any medical needs you may have while you are in the hospital.

Primary Care Physician The doctor who takes care of your general health. He or she will perform your pre-operative physical exam.

Total Joint Coordinator A nurse who coordinates your care before, during and after surgery.

Nurse Before and during your hospital stay, you will meet a number of nurses who perform different jobs. Some nurses attend to your daily healthcare needs in the hospital; others assist surgeons in the operating room while others work in the hospital admission area. Nurses are among the most visible healthcare professionals in the hospital.

your healthcare team

Getting to Know Your Healthcare Team (continued)

Case Manager Your case manager is a registered nurse or social worker in charge of coordinating your hospital discharge.

Physical Therapist Your physical therapist is trained to assist you in regaining strength and motion in your new joint as well as progression of your walking. A physical therapist will work with you during your hospital stay. You may also have a home health therapist if needed.

Occupational Therapist Your occupational therapist specializes in teaching you how to take care of yourself at home. They will assist you with learning how to dress, bathe, and get to the bathroom safely.

Dietitian Your dietitian is specially trained in meeting your dietary needs while you are in the hospital and assisting you to maintain a healthy diet before surgery and after you return home.

Patient Care Partner A patient care partner will be assigned to assist you and your nurse with a variety of tasks, including bathing, walking, changing clothes, using the bathroom, and changing your bed.

Nutrition and Environmental Services These are the friendly people who bring your meals to you and keep your room clean and organized.

Pharmacist They help ensure your medications are available and can answer any questions you have about your medications.

understanding your surgery

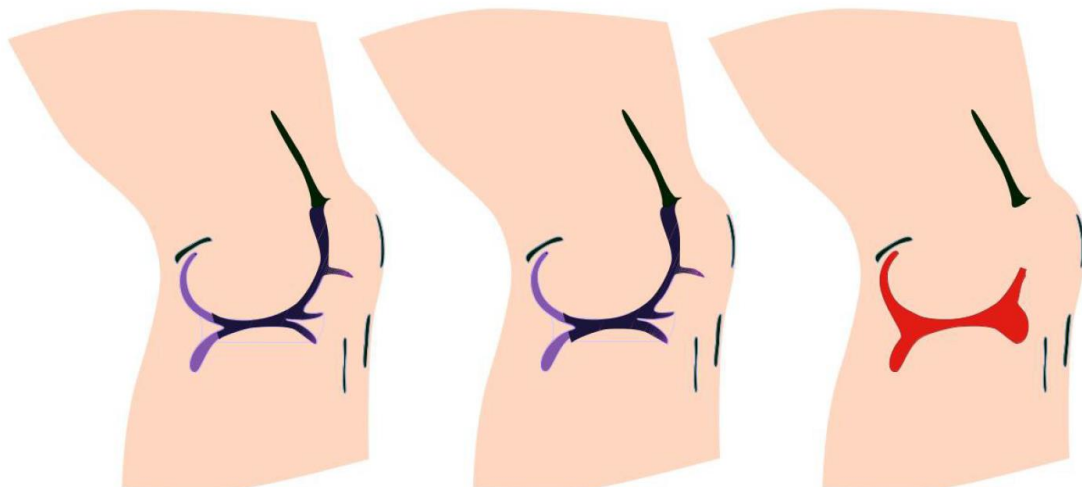
What Are the Causes of Knee Problems?

Problems with major joints like the hip and knee are most frequently the result of arthritis. There are many different types of arthritis. Two of the most common are osteoarthritis and rheumatoid arthritis.

Osteoarthritis is the most common form of arthritis. It is most often related to wear and tear that has been placed on the joints over the years. Its onset is usually after age 50. Factors that predispose this condition include family history, obesity, previous surgery to the joint where a large piece of cartilage (cushion between the bones) was removed, or previous fractures in the area of the joint.

Rheumatoid Arthritis is one of the more common kinds of inflammatory arthritis. It is a chronic inflammatory disorder affecting the joints of the body, which are lined with a membrane called synovium. These joints include the hip, knee, shoulder, elbow, wrist, hands and feet. Rheumatoid arthritis is likely of autoimmune origin, which means the body produces cells that irritate the synovium in the joint, leading to destruction of the cartilage. This form of arthritis occurs in all age groups.

It is characterized by stiffness, joint swelling, laxity of the ligaments, pain, and decreased range of motion.



Healthy Joint

Osteoarthritis

Rheumatoid Arthritis

understanding your surgery

What Is Total Knee Replacement

The knee joint is composed of three parts: the end of the femur (thigh bone), the top of the tibia (shin bone), and the patella (knee cap). In a normal knee, these three bones are covered with a smooth cartilage that cushions the bones and enables them to move easily. In the arthritic knee, the cartilage layers are destroyed, resulting in bone rubbing against bone, which causes pain, muscle weakness and limited motion.

Total knee replacement surgery involves the resurfacing of the knee joint. Metal components are cemented to the ends of the bones and a plastic liner is inserted between them. The kneecap is also resurfaced with a plastic liner. When in place, these components move together to allow normal motion of the knee joint. Bowed leg or knock-knee deformity can usually be corrected by the new alignment.



understanding your surgery

What Is Partial Knee Replacement

In some cases, arthritis damages only one side of the knee joint. In a partial knee replacement, one side of the joint is resurfaced while the other remains intact. Surgery can be performed using a smaller incision.



Risks of knee replacement surgery

Joint replacement is an elective surgery, not something you must do. Other treatment options available include anti-inflammatory medications, use of cane, walker or crutches, weight loss, and restrictions of activities.

Joint replacement is considered to be a major surgery. It is important that you are aware of potential risks and complications. These include problems from anesthesia, infection, surgical bleeding, blood clots, damage to nerves or blood vessels and, very rarely, death. Although these complications are rare, they are possible. Every precaution is taken by your healthcare team to avoid these complications. Over time, an artificial joint may become loose or wear out and could require further surgery and repair.

Results

Generally, knee replacement is successful. Pain is relieved, deformity is corrected, patients resume former activities, and they enjoy an active lifestyle. Long term success rates vary from 10–20 years, depending on age, weight, and activity level.

preparing for surgery

1. Pre-Operative Physical

If your orthopedic surgeon asked you to have a physical, please call your primary care physician to schedule an exam.

2. Pre-Admission Testing

This will consist of an interview by a nurse to discuss your medical and surgical history, your allergies, as well as medications you take at home. You will also have blood tests, urinalysis, type and screen and an EKG if not completed by your Primary Care Physician. You will see a Hospitalist if your primary physician does not come to the hospital. You will meet an anesthesiologist to discuss the options.

3. Medications to Stop

To minimize the risk of blood loss during surgery, you must avoid or stop taking medicines that contain anti-inflammatories, blood thinners, arthritis medications and herbal supplements before surgery.

Examples: Advil, Aleve, Ibuprofen, Motrin, Naprosyn, Relafen, and/or blood thinners such as Coumadin, Warfarin, or Plavix. (Refer to “Medications to Stop” sheet.)

Medications that do not have to be stopped: Pain medications such as Tylenol, Tylenol with Codeine, Hydrocodone, Lortab, Percocet, Tramadol, or Vicodin.

During your pre-admission testing interview, the nurse will discuss with you the medications that you will need to stop and any medications you may need to take the morning of your surgery with a small sip of water.

4. Preventing Blood Clots

Blood clots can sometimes occur after joint replacement surgery. In order to prevent blood clots, your doctor may prescribe the following:

- Blood-thinning medications: your surgeon will prescribe one of these medications.
 - Lovenox: will be started the day after your surgery.
 - Xarelto: will be started following your surgery when you are discharged.
 - Aspirin: will be started following your surgery when you are discharged.
- TEDS: above knee elastic support stockings that decrease swelling (if ordered).
- Foot pumps: mechanical devices that wrap around your feet and assist with pumping blood from your legs back to your heart.
- Ankle pumps: an exercise to bend and straighten the ankles of both feet. Do them ten times every hour while awake after surgery.
- Activity: begin walking the day of surgery.

preparing for surgery

5. Preventing Infections

The Infection Prevention Guidelines for Hospitals tell us that most infections are caused by microorganisms normally found on the patient's skin.

- Stop shaving 48 hours before surgery (except face).
- Evening before surgery and morning of surgery at the hospital: cleansing with disposable chlorhexadine (CHG) cloths
 - Wait at least one hour after showering prior to using the cloths; do not shower after using the cloths.
 - Cleanse your skin with disposable CHG cloths.
 - Allow your skin to air dry. Do not rinse or apply lotions after using CHG cloths
 - Put on clean pajamas and sleep on fresh bed sheets; wear clean clothes on the day of surgery.
- Hand hygiene: Clean hands reduce the spread of germs and protect us from getting sick.

6. Diet & Nutrition

Major surgery imposes unique nutrition requirements. Good nutrition can help lower your risk of infection, improve wound healing and reduce complications with a shorter hospital stay.

To achieve good nutrition, eat a balanced diet using MyPlate as your guide. Be sure to include a source of lean protein with all meals and snacks.

Guide to a balanced diet:

- Make half of your grains whole (100% whole wheat bread, oatmeal, brown rice, barley, whole wheat pasta).
- Vary your veggies, focus on fruit (spinach, broccoli, yams, carrots, tomatoes, oranges, bananas, canned fruit packed in its own juice).
- Get your calcium-rich foods (low-fat dairy products).
- Go with lean protein (boneless, skinless chicken, fish, beans, turkey, lean ground beef, egg whites, loin or round cuts of beef or pork).
- Make every bite count; limit empty calories from sweet beverages (soda, sweet tea, kool-aid, juice, sports drinks) and candy.

Visit www.myplate.gov for more information. ►



preparing for surgery

If your appetite is poor prior to surgery, ask your doctor or registered dietitian about adding a high-calorie/high-protein nutritional supplement to your diet. Examples of nutritional supplements include Ensure, Boost, and Carnation Instant Breakfast.

Drink extra fluid (water) *the day before* your surgery. Do not eat or drink anything *after midnight the night before* your surgery (including water). If you were instructed to take medication(s) the morning of surgery, please take it with a small sip of water.

7. Health Tips for Preparing for Surgery

Stop smoking

Smoking increases your risk of lung complications during and after surgery. Smoking cessation will improve your ability to heal. We are a non-smoking facility, so you will not be able to smoke in the hospital.

Dental exam

Schedule a dental check-up in the weeks before your surgery if you have not had one in the last six months.

Limit alcohol

Limit your alcohol intake to one glass of wine or beer, or a cocktail per day starting about five to seven days prior to surgery. After surgery, check with your doctor before resuming alcohol consumption.

Diabetes/Blood Sugar Control

Studies support the need for managing blood sugars to decrease the risk of infection and to improve recovery time. Your Hgb A1c will be checked with your pre-op labs. Blood-sugar goal for the morning of surgery is less than 180. Medications may need to be adjusted, and insulin may need to be added to manage your blood sugar before and after surgery.

preparing to go home after surgery

Hospital Stay

You will be in the hospital approximately one to two days following your surgery.

Discharge Planning

Our goal is to allow you to recover at home, continuing your physical therapy and related care in more familiar and comfortable surroundings. Our entire staff will work with you to ensure a successful transition to your home following surgery.

Preparing for discharge begins as soon as you make the decision to have surgery. Here are the steps to preparing:

- Discuss your discharge plans with your surgeon.
- Pick a family member or friend to be your “coach” to support you at home as recover.
- Choose a home health care agency; your surgeon may recommend one for you.

Remember that, once you return home, you will continue your home exercise program. Your recovery will be supported initially by a home care agency that has received specific care instructions from your surgeon. Achievement of good outcomes is a partnership of effort between you and your healthcare team. Your role is to actively participate with the care team in rehabilitation, exercise program, and daily activity.

Home Health Care (see Discharge Planning above)

The choice of a home health care provider is yours to make. There may be some restrictions based on your insurance coverage and where you live. You may contact your insurer for more information.

For more information about the agencies, you may visit www.medicare.gov/homehealthcompare.

While you are in the hospital, the Case Manager will meet with you to discuss the agency you have chosen and to arrange your home health care.

preparing to go home after surgery

Planning Your Homecoming

There are a number of ways that you will need to prepare for your return home after surgery.

Meal planning

You may wish to prepare meals and freeze them prior to surgery. Arrange for friends, family or church members to provide meals once you return home. Stock your pantry with groceries, freezing items for later use.

Recovery center

You may wish to set up a recovery center. In this area you will want to have a bed for resting, phone, television remote, books, small table for drinks, snacks, radio, tissues and a waste basket.

Disabled parking permit

You may obtain this from your physician's office prior to or following surgery.

Home safety

- Arrange kitchen, bedroom, and bathroom supplies so they can be reached with limited bending and reaching.
- Remove throw rugs from around the house and tack down larger loose carpets.
- Arrange furniture in your home so that you can walk easily with your walker.
- Provide good lighting throughout your house. Change any burned out lights. Install night-lights in the bathroom, hallways and bedroom.
- Arrange assistance for young children or anyone you may be caring for in your home.
- Make arrangements for care and safety of your pets, boarding them if necessary.
- Make sure all pathways throughout your home are free and clear of clutter and tripping hazards. Keep lamp cords, telephone cords, and oxygen tubing out of your pathway.
- Identify chairs with back support and arm rests that will be appropriate following surgery.
- Place a non-skid mat in the shower floor to prevent falls.
- Minimize the stairs you will climb when you first return home. ►

preparing to go home after surgery

- Do not use towel bars or toilet paper holders as grab bars as they may pull out of the wall easily.
- Install the raised toilet seat if needed.
- Check your porch rails to ensure they are sturdy. If you only have one rail, you may wish to hire someone to have a second rail installed.
- Do not use step stools.
- Keep a phone with you at all times.
- Ensure your glasses are up to date and you can see clearly.

your day of surgery

Packing for the Hospital

Pack your bag for the hospital a day or two before your surgery. Your family may bring it to you once you have arrived in your room following surgery.

Items to bring:

- Loose-fitting, comfortable clothing (shorts, capris, sweatpants, shirts).
- Tennis shoes or flat rubber sole shoes that tie or slip on. Do not bring slippers or open-back shoes.
- Personal items such as soap, lotion, toothpaste and toothbrush, lip balm and deodorant.
- Hearing aids with extra batteries.
- CPAP machine or your CPAP mask and setting if you use one. „

A picture ID and your insurance cards.

- You may need to have a form of payment for medical equipment or transportation.
- Pre-op education booklet (this manual).
- Cell phones are permitted; remember to pack your charger.

Remember:

- Take medications as instructed by your physician or pre-admission testing nurse with a small sip of water when you awaken the morning of your surgery.
 - Use your CHG cloths to cleanse your skin.
 - Brush your teeth and rinse with water, but do not swallow the water.
 - Leave jewelry and valuables at home.
 - Wear clothes that are loose fitting and easily removed.
 - Avoid using perfumes, shaving creams, or any scented lotions.
- Do not wear makeup or fingernail polish (except clear).

your day of surgery

Reporting to the Hospital

- Your surgeon will provide you with the time of arrival for your surgery.
- Report to the patient registration/admitting area located on the ground level of the hospital immediately after coming in the main doors of the hospital (in front of valet parking).

Pre-Operative Area

- You will then be escorted to the preoperative holding area, where you will be prepared for surgery. You will change, meet with a nurse to review your history. You will be seen by your surgeon to verify your surgical site.
- If you are diabetic, your blood sugar will be checked with a finger stick. If your blood sugar is elevated, you may need insulin before, during and after surgery.
- Once you are taken to the holding area, your family members can wait in the surgical waiting area located on the lobby level. There is a cafeteria, chapel and gift shop there for their convenience. Complimentary wi-fi is available in the hospital. The average length of time for the surgery is one to two hours.

Anesthesia

Multi-Modal Pain Management: the use of two or more medications that have different actions that are given together before, during, and after surgery. Our goal is to combine narcotics with anti-inflammatory medications, Tylenol, local anesthetics and other types medications to reduce the narcotic side effects— nausea, vomiting, respiratory distress, constipation— and better manage pain.

your day of surgery

Local Anesthetic Injection

One important part of multimodal analgesia for pain following surgery is local anesthetic injection. Your surgeon may use this procedure during your knee replacement 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

Spinal anesthesia

- This type of regional anesthesia makes the lower part of your body completely numb for your surgery.
- You will have an IV started, and you will be given IV sedation medication that will make you drowsy and comfortable during the surgery. You will not be awake during the surgery.
- Your anesthesiologist will inject numbing medication into your spine prior to surgery. The numbness will be gone soon after your surgery.
- Inform your nurse if you have nausea or itching after surgery. Medications can be given to minimize these.

your day of surgery

General Anesthesia

- This type of anesthesia puts you completely asleep for your surgery.
- You will be given a combination of medications and anesthetics to put you to sleep until your surgery is completed.
- After surgery you may use a patient-controlled analgesia (PCA) pump as part of your pain management.
 - This pump allows you to give yourself pain medication by pressing a button. The button signals the pump to deliver the medication to you through your intravenous (IV) tube.
 - The pump is set to limit the amount and frequency of medication dispensed so you cannot get too much. Only the patient should push the button, not the coach.

Recovery Area

After your surgery is completed, you will be wheeled into the post-anesthetic care unit (PACU) or recovery room. In the PACU:

- Nurses will check your blood pressure, pulse and breathing.
- You will receive additional medications for pain if needed.
- Nurses will check your bandage, and they will encourage you to take deep breaths and to move your ankles and feet.

Your recovery room stay will last a few hours. A nurse and anesthesiologist will monitor your progress closely. After you recover from the effects of anesthesia, you will be transferred to the Joint Replacement Center.

When you are ready to move from PACU to your hospital room, your family will be notified of your room number.

After surgery, your surgeon will provide a post-surgery update to your family.

your hospital stay

We have a specialized staff of nurses and therapists committed to world-class service. Please feel free to ask questions about your hospitalization and recovery.

Cell phones are permitted on this unit.

Post-Surgical Care

When you awaken, you will have some medical devices attached to you. They are a normal part of the post-surgical care.

Vital signs

Your temperature, pulse rate and blood pressure will be taken frequently. This will help ensure your condition remains stable.

Intravenous fluids

You will be provided with fluids through an intravenous tube for about 24 hours following your surgery. Antibiotics are also given intravenously to prevent infection.

Incision care

You will have a dressing over your knee incision after surgery. Your surgeon and nurse will provide instructions on how to care for your incision at home.

Foley catheter

A foley catheter may be inserted into your bladder during surgery to empty your bladder. The catheter will be removed the morning after your surgery.

Support stockings (TEDS)

After knee surgery, your physician may order elastic stockings to be placed on both of your legs to help your blood circulate and decrease swelling. You will continue to wear your stockings for about four weeks after surgery.

Foot pumps

Foot pumps wrap around your feet and help pump blood through your veins to help prevent a blood clot from forming in your legs. You will wear these when you are in bed. Be sure to continue doing your ankle pump exercises.

your hospital stay

Oxygen, pulse oximetry

After surgery, you may receive oxygen through a tube under your nose. A monitor will be placed on your finger to measure your oxygen levels.

Ice bags

Ice bags will be placed on your knee to assist with pain management and decrease swelling. Please ask for refills as needed.

Diet

After surgery, you will start with gelatin, broth, coffee, tea, juice, and solid foods as you can tolerate.

Lab tests

After surgery, your doctor may want blood samples to be taken to monitor your recovery from surgery. If you have diabetes your blood sugar will be checked by finger sticks multiple times a day. If your blood sugar levels are elevated, you may require insulin injections while you are in the hospital to reduce the risk of infection and promote wound healing.

Anticoagulation medication

You will be taking a blood thinning medication daily. You also will be given a prescription to continue taking it at home during your recovery.

Incentive spirometer

Coughing and deep breathing exercises help prevent lung congestion after surgery. To cough, take a deep breath in and cough forcefully from your abdomen.

You will also be given an incentive spirometer after surgery to help exercise your lungs. To use the spirometer, exhale completely then close your lips tightly around the mouthpiece. Inhale slowly and deeply, keeping the small blue ball between the two arrows. When you can't inhale any more, hold your breath for a few seconds, and then exhale slowly. You will be asked to use your incentive spirometer ten times every hour that you are awake.



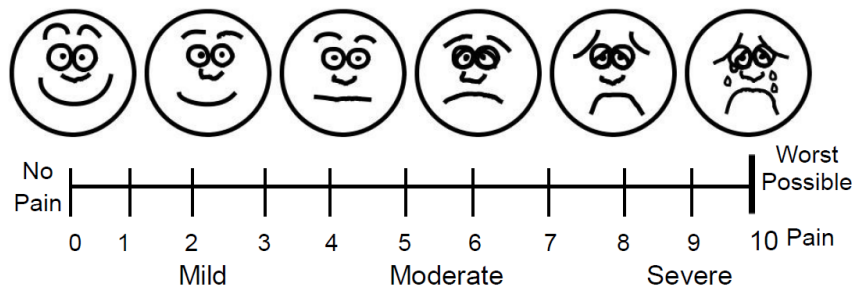
your hospital stay

Pain Medications and Pain Control Methods

Pain Scale

While you are in the hospital, you will be asked to rate the intensity of your pain and your response to medications through the use of a pain scale. A pain scale is a line numbered from zero to ten, with each number representing a degree of pain.

- 0 No pain with activity or movement.
- 1–3 Some pain but you can still complete most activities.
- 4–6 Pain makes it difficult to concentrate and may interfere with your ability to do normal activities such as walking.
- 7–9 Pain is quite intense and is causing you to avoid or limit walking. You cannot focus on anything but the pain.
- 10 The worst pain imaginable. Unbearable, intense, agonizing pain that prevents you from moving.



Multimodal Pain Management: the use of two or more medications with different action that are given together to better manage pain. Your surgeon will choose what is best for you.

If you experience pain not relieved by these medications or if you have nausea or itching, let your nurse know.

Try to eat a cracker or small amount of food before taking pain medication. It is important to stay ahead of your pain, and we encourage you to take pain medications on a regular basis to ensure that you are always prepared for activity.

therapy

Therapy Goals

Prior to discharge from the hospital, I will be able to:

- Walk 150 feet with supervision using a walker or cane.
- Climb up and down a minimum of four steps with supervision.
- Dress and bathe myself with minimal assistance from coach or staff.
- Bend my knee.
- Straighten my knee fully.
- Perform all exercises with supervision and support from coach.

Physical Therapy

Day of surgery (day 0)

- The physical therapist may see you after you arrive in your hospital room following surgery.
- The goal is to assist you with sitting on the edge of the bed and walking a short distance with a walker as you are able to tolerate.
- Remember: perform your ankle pump exercises ten times in a row every hour that you are awake to prevent blood clots.

Day 1 after surgery: You may be discharged to home if you meet your therapy goals.

- You will have a physical therapy session in the morning and the afternoon as needed.
- You will be assisted with exercises, getting out of bed to walk using a walker, sitting in a chair, and learning how to climb the stairs (if going home Day 1).
- We recommend your coach observe your therapy sessions in order to prepare for assisting you at home.
- Once you are able, you should sit in a chair for your meals. Do NOT get up without assistance from your therapist or nurse.

therapy

Day 2 after surgery

- You will have an individual physical therapy session in the morning to prepare you for going home.
- You will perform exercises, walk with a walker or crutches and learn how to climb the stairs.
- Your coach should attend your therapy session.
- If you have met your therapy goals, you will be discharged.
- If needed, physical therapy will see you in the afternoon to continue to work on exercises, walking and stair climbing, and then you will be discharged.

physical therapy

Bed Positioning

Lying in bed

- Think of this as your time to work on straightening your leg.



- Make sure your knee cap is facing up towards the ceiling, not rolled out to the side.



- If your leg tends to roll out to the side, wedge a pillow or towel roll to the outside of your leg to keep it from rolling out.



- Do not place a pillow under the bend of your knee except when exercising; be sure to remove it after you complete your exercises.

physical therapy

Transfers

Getting out of bed:



- Place foot under your surgery leg.



- Start to raise your upper body by leaning on elbows.



- With your arms behind you, move your hips to the edge of the bed. ▶

physical therapy



- Pivot your hips to allow your legs to come off the bed.



- Use your unaffected leg to support your surgery leg as you lower it to the floor.
- Sit on the side of the bed.



Westchester Medical Center Health Network

physical therapy

Standing:



- Use both hands to push off from the bed to stand.
- Get your balance before reaching for the walker.
- To begin walking, move the walker forward then your surgery leg, then your unaffected leg.

Remember: walker, weak (surgical leg), strong (non-surgical leg).

Getting into bed:

- Reverse the steps used to get out of bed.



physical therapy

Chairs Positioning

Sitting in a chair

- Think of sitting in a chair as your time to work on bending your knee.



- Sit in chair with firm seats and arms.
- An extra cushion or pillow may be needed on the seat of a low chair.
- If you can tolerate it, allow your foot to rest on the floor when sitting in the chair.
- If this is not tolerable, place support under your foot for short periods.

Getting up from a chair



- When using armrests, push up from the armrests, gain your balance then place your hands on the walker/crutches.
- If there are no armrests, keep one hand on the middle of the walker/crutch/cane and push off the chair with your other hand.

Sitting on a chair

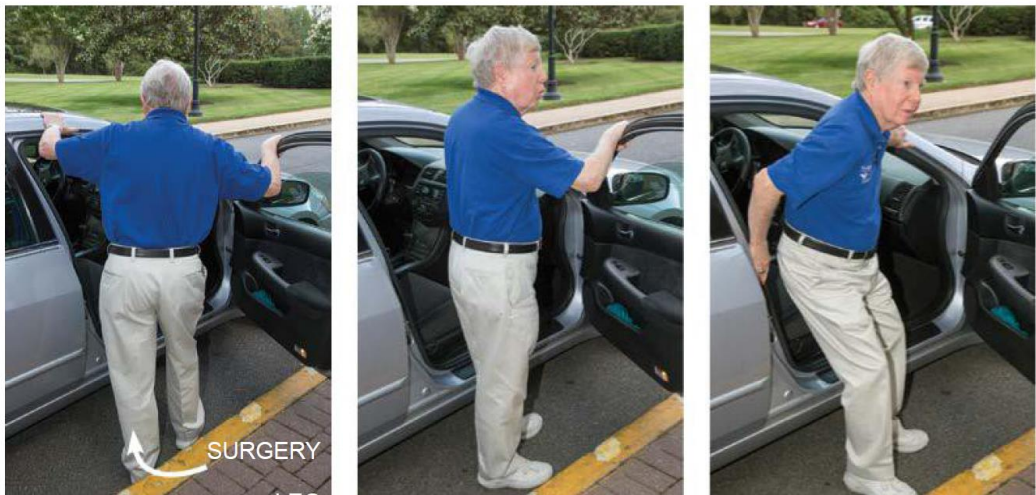
- Reverse the steps used to get up from a chair.

physical therapy

Vehicles

Getting into your vehicle

- Plan on sitting in the front passenger seat.
- Have your coach put the seat all the way back.
- You may want to sit on pillows to assist you with getting in and out of your vehicle if it is low to the ground.



- Back up to the vehicle until you feel it behind your legs. ▶



- Reach back for the back of the seat with one hand and the dashboard/frame of car with the other and lower yourself down onto the seat. Gently slide your operated leg forward for comfort when sitting

physical therapy



- Scoot backward as far as you can onto the seat.
- Turn toward the front of the car, leaning back as you lift one leg at a time into the vehicle.
- Bring seat back to comfortable position and put on your seat belt.

Getting out of your vehicle

- Reverse the steps used when getting into your vehicle.
- Push yourself up with one hand on the dashboard/frame of car and the other on the back of the seat.
- Once you gain your balance, you can place your hands on the walker/cane.



physical therapy

Stairs

General rule: Up with the good and down with the bad

Go up the stairs with your strong (non-surgical) leg first and down the stairs with your weak (surgical) leg first. Your therapist will give you detailed instructions. Below are general reminders.

Going up the stairs

- Remember the phrase: “up with the strong.”

Hold the handrail with one hand.



- Lead up each step with your strong, non-surgery leg.
- Then place the weak, surgery leg next to it on the same step.
- When using a cane on the stairs, keep it on the same step as your surgery leg.

physical therapy

Going down the stairs

- Remember the phase: “down with the weak.”
- Hold the handrail with one hand.



- Lead down each step with your weak, surgery leg.
- Then place your strong, non-surgery leg next to it on the same step.
- Again, a cane stays on the same step as your surgery leg.

equipment for home

Walker

- If you have either of these, please bring them to the hospital for the therapist to evaluate.
- Walkers with front wheels (five inches) are preferred.



Canes

- You may progress from a walker to a cane during your recovery.
- Raised toilet seat of commode
- This fits over your existing toilet and makes the seat higher to increase comfort.

home exercise program

Strengthening Program: Knee exercises before surgery

You may have noticed that you have become less active because of your knee discomfort. When muscles are not used they become weak. Having your knee replacement surgery will correct the joint problem, but you will need a regular exercise program to strengthen your muscles.

Beginning an exercise program before your surgery can greatly enhance your recovery period. Make sure you do the exercises on both legs to build strength.

Because everyone responds to exercise differently, you adjust how many exercises you can do each day. If an exercise causes an increase in joint discomfort, stop doing that exercise.

You should try to exercise two to three times a day, every day, prior to your surgery and do ten repetitions of each exercise (1-10.) For the most comfort, do exercises on through seven lying down in your bed and eight through ten sitting in a chair.

It is also important to strengthen your arms because you will be relying on your arms to help getting in and out of bed/chairs and for walking.

Exercise 1: Ankle pumps



With legs relaxed, slowly push your feet down and back up to bend your ankles. Repeat ten times, three times a day. (After surgery you will do ankle pumps ten times every hour you are awake.)

Exercise 2: Hamstring set (heel press)



Press heels down into the bed to tighten calf muscles. Hold for ten seconds. Repeat ten times, three times a day. Do NOT hold your breath.

Exercise 3: Quad set (knee press)



Push the back of your knees into the bed while tightening the muscles on the top of your thigh. Hold for ten seconds, and then relax. Do NOT hold your breath. Repeat ten times, three times a day.

Exercise 4: Heel slides (bending knee)



Bend your knee by sliding your heel towards your bottom and then straighten your leg. Repeat ten times (each leg) slowly three times a day.

Exercise 5: Knee extension (knee kicks)



Place a towel/blanket roll or pillow under your knee. Raise your foot off the bed by straightening your knee, hold for three seconds then slowly lower the heel back to the bed. Do not raise your thigh off the towel/blanket. Do NOT rest with a pillow directly under your knee. Repeat ten times (each leg) three times a day. (After surgery you may need assistance from your coach to get into this position to begin/end exercise.)

Exercise 6: Knee extension stretch (heel prop)



Place towel/blanket roll or pillow under foot to stretch and straighten your leg. Press your knee down and hold for 30 seconds to increase the stretch. Work up to a 15-minute heel prop in this position three times a day. (Remember: straightening your knee is just as important as bending your knee.)

Exercise 7: Straight leg raise



Bend your unaffected leg. Tighten your thigh muscles in your surgical leg, press knee down to straighten leg and lift the entire leg up slowly several inches off the bed. Keep your knee straight and your toes pointed up. Hold the leg up for three to five seconds and then lower it back onto the bed. Do NOT hold your breath. Repeat ten times, three times a day.

Exercises for your arms

Exercise 8: Bicep curls



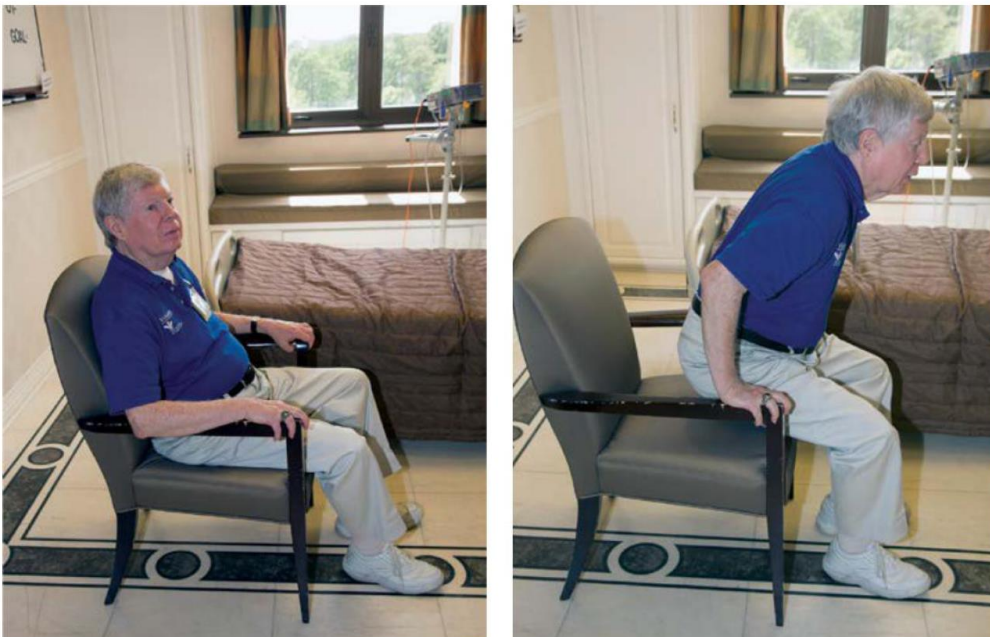
In a sitting position, slowly bend and straighten your elbow. If you find this to be very easy, you may use light weights (dumb bells, canned food items, water bottles). The stronger your arms are, the easier it will be to get yourself up from the bed, chair or toilet. Repeat ten times (each arm), three times a day.

Exercise 9: Shoulder raises



In a sitting position, slowly raise your arm up to shoulder level and then lower back down. If you find this to be very easy, you may use light weights (dumb bells, canned food items, water bottles). The stronger your arms are the easier it will be to get yourself up from the bed, chair or toilet. Repeat ten times (each arm), three times a day.

Exercise 10: Armchair pushups



Sit in a chair with arm rests with feet flat on the floor. With hands on armrests, push up from the chair straightening your arms while raising your buttocks off the chair. Do not stand all the way up, return slowly to sitting in chair. This will increase the strength in your arms. Perform up to ten repetitions, three times a day.

home exercise program

Hospital Program: Knee exercises after surgery

In addition to Exercises 1–7 that you started prior to surgery, the following exercises will be added to your exercise program by your therapist when they feel you are ready.

Exercise 11: Heel slides while sitting (knee bends)



While sitting in a chair or sofa, slowly slide your foot back toward you to bend your surgical knee. Hold for three to five seconds and then slide your foot forward. Remember this is very important for your recovery to be able to return to normal activities. Repeat ten times, three times a day.

Exercise 12: Ankle pumps seated



While sitting in a chair bend your ankles to move your feet up and down. Repeat ten times, three times a day.

Exercise 13: Knee extension seated



While sitting in a chair or sofa, kick surgical leg straight. Hold for five seconds. Repeat ten times, three times a day.

Exercise 14: Heel raises



While standing up, hold onto a counter (firm surface) and rise up on your toes. Make sure you keep your balance to prevent falls. Repeat ten times, three times a day.

Exercise 15: Mini-squat



While standing up, hold onto a counter (firm surface) with feet shoulder-width apart, gently bend knees as if you were getting ready to sit back in a chair. Remember not to go too far. Perform exercise slow and steady; do not let knees bend forward past toes. Repeat ten times, three times a day.

Exercise 16: Heel/toe touches with knee bend



While standing up, hold onto a counter (firm surface). Slowly bring your heel forward and touch the floor then bend your knee back and touch behind you with your toes. This is a similar swing that you have when you naturally walk. Repeat ten times (each leg), three times a day.

Exercise 17: Marching



While standing up, hold onto a counter (firm surface) and slowly raise your knee as if marching in place. Lift your knee to at least waist level and hold for two to three seconds. Slowly lower it back to the ground. Repeat ten times (each leg), three times a day.

Exercise 18: Hamstring curls (knee flexion while standing)



While standing up, hold onto a counter (firm surface) and slowly lift foot off the floor and bring it back and up towards the ceiling to bend your knee as tolerated. Hold for two to three seconds. Slowly lower it back to the ground. Repeat ten times (each leg), three times a day.

home exercise program

Home Exercise Program:

Knee exercises after return home from surgery

(This will be completed by your therapist in the hospital before you are discharged)

A regular exercise program will strengthen your weakened muscles. Your success with your rehabilitation after knee replacement largely depends on your commitment to follow the exercise program developed by your surgeon and therapist.

You should exercise two to three times every day. Complete ten repetitions of each exercise. As comfort allows gradually increase the number of repetitions of each exercise until you reach twenty repetitions

Upon your return home, you should be doing the following exercises that have been chosen by your therapist for you:

- [Exercise 1](#): Ankle pumps
- [Exercise 2](#): Hamstring set
- [Exercise 3](#): Quad set
- [Exercise 4](#): Heel slides
- [Exercise 5](#): Knee extension
- [Exercise 6](#): Knee extension stretch
- [Exercise 7](#): Straight leg raise
- [Exercise 8](#): Bicep curls (optional)
- [Exercise 9](#): Shoulder raises (optional)
- [Exercise 10](#): Arm chair pushups (optional)
- [Exercise 11](#): Heel slides while sitting
- [Exercise 12](#): Ankle pumps seated
- [Exercise 13](#): Knee extension seated
- [Exercise 14](#): Heel raises
- [Exercise 15](#): Mini-squat
- [Exercise 16](#): Heel/toe touches with knee bends
- [Exercise 17](#): Marching
- [Exercise 18](#): Hamstring curls

occupational therapy

Activities of Daily Living (ADL's)

An occupational therapist may also work with you while you are in the hospital to increase your independence with your bathing, dressing, and toileting.

Dressing When getting dressed in the morning, make sure you have all the items you will need. Sit in a sturdy chair with arm rests. Dress your surgery leg first and then your unaffected leg.

Bathing While in the hospital, you will sponge bathe daily with bath wipes to prevent infection. You will shower when you go home. Do not take a tub bath or get into a hot tub or pool until cleared by your surgeon, generally six weeks after surgery.

Toileting For home you may wish to have an elevated toilet seat or three-in-one bedside commode to make toilet transfers easier.

Walk-in showers To get into the shower, step over the threshold with your unaffected leg first. You may use the walker for stability by placing it in the shower as you enter as well as exit. Step out with your surgery leg first and then your unaffected leg. You may find it helpful to have a shower seat if you tire easily.

Tub showers Face the head of the shower or the rear of the shower so you can step over the tub with your unaffected leg first. You may brace yourself for support using the shower wall. Step over into the tub, and make enough room for your other foot. You may find it easier to bring your foot back behind you to clear the tub's edge. A shower bench or seat may be helpful if you tire easily. Reverse this for exiting the tub. For home, we recommend you practice shower transfers with your clothes on with the assistance of your home health therapist or coach.

Cooking If you prepare your kitchen prior to surgery by placing items you most frequently use within an arm's reach, it will make cooking much easier. Arrange your refrigerator so you can access items without bending over. Freezing meals prior to surgery to allow for quick preparation will be helpful.

Cleaning Have your home ready before surgery. You should avoid vacuuming, sweeping and mopping while you are using a walker/crutches. You may need assistance with changing your bed sheets, laundry and cleaning your home.

Pet care Make arrangements for your pets prior to surgery. You will not be allowed to walk your pet on a leash following your surgery.

Driving You may not drive until cleared by your doctor. Arrange to have family/ friends pick up prescriptions, do errands, and provide a ride to your follow-up appointment with your doctor.



Westchester Medical Center Health Network

your recovery at home

Going Home

You will be in the hospital approximately one to two days following your surgery. Your surgeon will discharge you when you have met your therapy goals. Before you leave the hospital, your nurse will provide and review with you and your coach:

- Prescription for pain medication and when to take it
- Prescription for blood thinning medication and when to take it
- Discharge instructions including how to care for your incision and when to see your surgeon in follow up
- Extra pair of elastic stockings (if ordered)
- Answer any questions that you have

Home Health

If home health has been arranged for you, the agency name and phone number will be included on your discharge instructions. You should receive a call from them to set up the date/time they will be coming to your home. If you do not hear from them within 24 hours after leaving the hospital, please call them.

General Instructions for Home

Remember, you make the difference

It is extremely important that you understand that your motivation and your participation in your Home Exercise Program are vital elements in the speed and success of your recovery. You are going home a well person; be as active as possible.

your recovery at home

Daily Activity

- Walking is very important as you recover from your knee surgery.
- Do not sit for longer than 45 minutes to one hour at a time. Use chairs with arms. Balance rest and activity, planning for short rest periods during the day. Take frequent, short walks in your home.
- If you feel dizzy when you first get up, wait a few minutes until it passes before you begin walking. Take your time while walking to prevent falling.
- Continue to use your walker and maintain any weight-bearing restrictions you may have until your home therapist or physician instructs you to do otherwise.
- You may do stairs with support/coach. If your bedroom is upstairs, go up at night and come down in the morning, increasing the amount of stairclimbing as you feel stronger.
- You may not drive prior to your first follow up visit with your surgeon. You may be a passenger in a car.

Ice and Elevation

- After knee replacement, swelling is expected. Swelling can cause an increase in knee pain and can limit the motion of your knee. It is important to take steps to reduce the swelling.
- To decrease the swelling use ice packs for 15–20 minutes especially after you exercise
- Do not apply ice directly to your skin; use a towel or cloth between your skin and the ice pack.
- Ice should not be applied for longer than thirty minutes at a time but you may use ice as often as once an hour to help control pain and swelling.
- Elevating your leg, along with ice packs, will help to reduce swelling.
- It is very important to elevate your entire leg, thigh to ankle, with a pillow. Do NOT put a pillow only behind your knee so it is in a bent position. Your knee should be straight when it is elevated.
- If your swelling increases significantly, you need to call your surgeon.
- How to make a reusable ice pack: In a ziplock freezer bag put in 1 cup of rubbing alcohol and 2 cups of water or ice. Get as much air out of the ziplock bag as possible. Place the bag inside of a second bag to contain any leakage. Bags can be refrozen and reused several times. It is recommended that you make several bags and place them in the freezer so that you always have cold packs available.

Exercises

Begin your Home Exercise Program once you return home.

Follow the instructions provided by your therapist.

Controlling Pain at Home

- By taking the pain medication prescribed, you will be able to manage your pain, allowing you to walk, increase your activity, and to do your Home Exercise Program.
- It is important to know that you may not be completely pain-free but comfort-able enough to walk and exercise. Not moving to avoid pain will cause more pain and swelling. It is okay to take pain medication when pain is interfering with walking, exercises or sleep.

Guidelines for the use of Pain Medication

- Take pain medications according to the directions. Do not exceed the number of tablets for each dose or how often you can take the medication.
- Take the pain medication with meals or with something in your stomach.
- Do not wait until the pain is severe. Pain pills take 30–45 minutes to begin to work. Take before exercise, walking, therapy and at night as needed.
- Notify your doctor if pain medication is causing nausea, vomiting, shakiness, disorientation or unsteadiness when walking.
- Do not drink alcohol while you are taking pain medication.
- Pain medication can cause constipation. This can be avoided by drinking extra fluids, increasing activity, eating prunes, dried fruits, prune juice, or taking stool softeners. It is important to have regular bowel movements. Your first bowel movement should be within three days following your surgery. If constipation occurs, take a laxative.

Other measures to increase comfort

- Establish a daily pattern of activity and rest.
- Do not sit too long without moving. Gradually increasing walking and other activities.
- Use ice frequently, especially following exercise/activity.

Diet

- You may resume your normal diet. Be sure to drink plenty of fluids, including water and low-calorie beverages.
- Follow a balanced diet. Choose vegetables, fruit, whole grains, lean protein and low-fat dairy products.
- If you have diabetes, good blood sugar control helps you heal. Avoid simple sugars and empty calories from sweet beverages and candy. Do not skip meals and follow instructions for blood sugar checks and taking of diabetic medications.
- Avoid alcoholic beverages and tobacco products.

your recovery at home

Precautions

Blood Clots

Blood clots can sometimes occur after knee replacement surgery. It is important to recognize the signs of blood clots.

Warning signs of blood clots in the leg:

- Increased pain in the calf of your leg
- Tenderness or redness
- Increased swelling of the thigh, calf, ankle or foot

If you experience any of these warning signs, call your surgeon.

Warning signs of blood clots in the lung:

- Sudden increased shortness of breath
- Sudden onset of chest pain
- Localized chest pain with coughing or when taking a deep breath

If you experience any of these warning signs, call 911 and go to the nearest hospital.

Infections

The most common causes of infection are bacteria entering the bloodstream through the mouth, urinary tract or skin. Following surgery, you should take antibiotics prior to dental work, or abdominal or urinary track testing/surgery.

Warning signs of infection include:

- Persistent fever (oral temperature greater than 101 degrees)
- Shaking or chills
- Increased redness, tenderness, swelling or drainage from incision
- Increased pain during activity and at rest

If you experience any of these warning signs, call your surgeon immediately.



Dental Protocol following knee replacement

- You should wait three months before having any dental procedures.
- Your surgeon or dentist may prescribe antibiotics before a dental procedure based on your risk factors-age, medical conditions such as diabetes, obesity, immunocompromised or previous joint infection as well as the type of procedure being done.*

**based on recommendations from the American Academy of Orthopaedic Surgeons-American Dental Association Clinical Practice Guidelines-Preventing of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures*

Metal detectors

Your new knee may activate the metal detectors used for security in airports and in some buildings. Tell the security agent that you have an artificial joint.

Lifetime activities

After three to six months, you will most likely be able to resume the majority of activities that you were able to enjoy when you had a healthy knee. Still, there are some activities that your doctor will want you to avoid entirely. Check with your physician prior to beginning these activities. Added body weight puts stress on the hip so try to maintain a healthy weight.

Recommended:

- Swimming
- Nordic Track
- Gardening
- Golf
- Dancing
- Walking
- Fishing
- Biking
- Bowling
- Elliptical stepper
- Tennis (social double on a clay surface)
- Low impact and water aerobics

Not recommended:

- ☒ Basketball
- ☒ Skiing
- ☒ Racquetball
- ☒ Weight

lifting with weights that exceed 50 pounds

Avoid entirely:

- Jogging or running
- Contact sports
- Jumping sports
- High impact aerobics

Notes



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