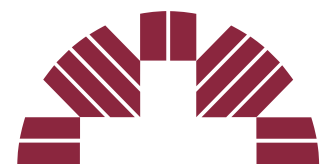


Total Knee Replacement



What to Expect and How to Prepare



MOUNT CARMEL



Welcome

Thank you for choosing Mount Carmel to meet your healthcare needs.

Our team of specialized healthcare professionals are dedicated to providing you with the highest quality care. This guide contains information to help you better understand the different aspects of your care and will be a helpful resource throughout your surgery and recovery.

A large part of your recovery will be using your new joint by walking and doing the exercises that your surgeon orders. Because each patient responds differently, your care and exercise plan will be tailored to meet your needs. Please share your questions and concerns with your healthcare team.

Please review this book for information about:

- ▶ How to prepare for surgery
- ▶ What to expect during your hospital stay
- ▶ How to prepare for your recovery and discharge
- ▶ Activity and physical therapy after surgery

Table of Contents

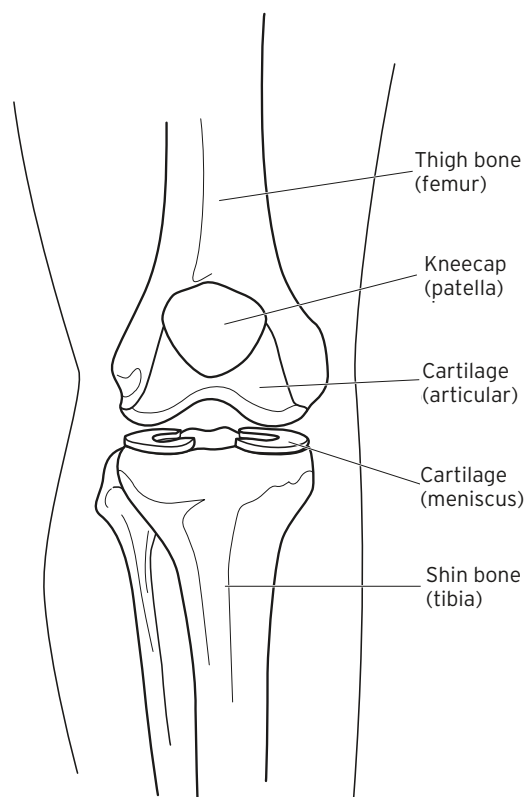
Understanding Your Surgery	4	Going Home	18
The Knee Joint	4	Discharge Process.....	18
Knee Replacement Surgery	4	Your Care at Home	18
Partial or Unicompartmental ("Uni") Knee Replacement	5	Activity Guidelines.....	20
Anesthesia	6	What to Expect in the Future	20
Preparing for Your Surgery	7	Physical Therapy	21
Before Your Surgery.....	7	Bed Mobility.....	21
Planning for Care after Surgery.....	9	Standing Up and Sitting Down	23
Packing for Your Hospital Stay	10	Using a Wheeled or Standard Walker.....	24
Getting Ready for Surgery.....	10	Using Crutches	27
 		Using a Toilet.....	30
Your Surgery and Hospital Stay	13	Taking a Shower	31
The Patient Care Team	13	Getting In and Out of a Car.....	32
Your Surgery Day.....	13	Exercise Program	33
Plan of Care.....	14	 	
Continuous Passive Motion (CPM)	16	Notes	36
Managing Your Pain.....	16		
Positioning in Bed.....	17		

Understanding Your Surgery

The Knee Joint

The knee is the largest joint in the body. The bones of the knee form a hinge joint. These bones include the lower end of the thigh bone (femur), the upper end of the shin bone (tibia), and the kneecap (patella).

The rough surfaces of the ends of the femur and tibia are protected with shock-absorbing tissue called cartilage. In a healthy knee, the cartilage cushions the joint for movement and allows the femur and tibia to move smoothly against each other without causing pain.



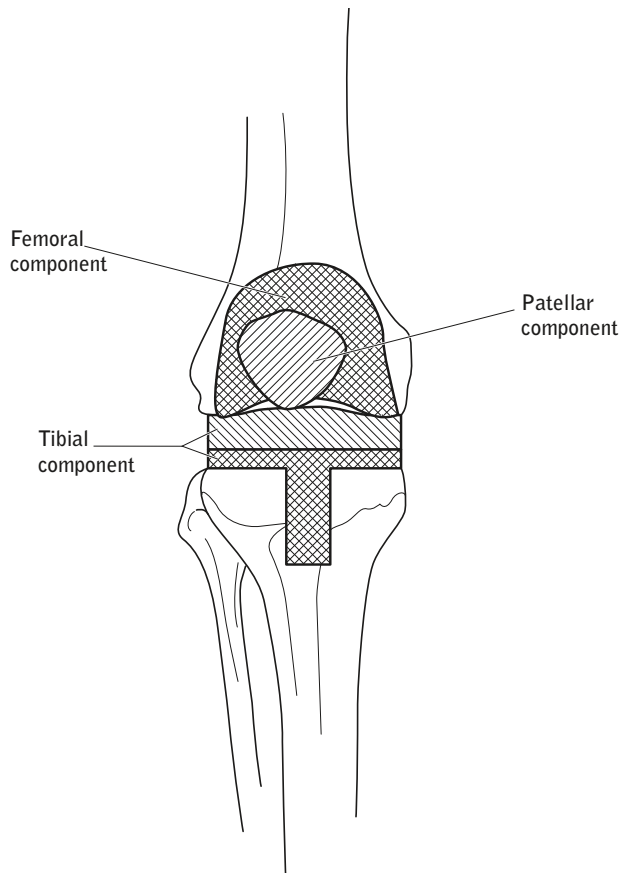
Knee Replacement Surgery

Knee replacement surgery involves removing parts of the damaged knee and replacing them with artificial parts called implants. Damage is the result of arthritis and/or injury. The decision to have a knee replacement is made with your surgeon and is based on your general medical health and how much your daily life is affected by your knee:

- ▶ **Pain** — affects your activities of daily living, your walking, or your sleep
- ▶ **Swelling** — does not improve with rest or medications
- ▶ **Stiffness** — unable to bend or straighten the knee
- ▶ **No improvement with medications, therapy, or knee injections**
- ▶ **Deformity**

The knee replacement consists of three parts (components):

- ▶ **Femoral component** — metal piece that caps the end of the femur and has a groove, which allows the kneecap to move up and down as the knee bends and straightens.
- ▶ **Tibial component** — flat piece of metal with a plastic plate that covers the top of the tibia.
- ▶ **Patellar component** — dome-shaped piece of plastic that allows it to glide smoothly over the new knee.

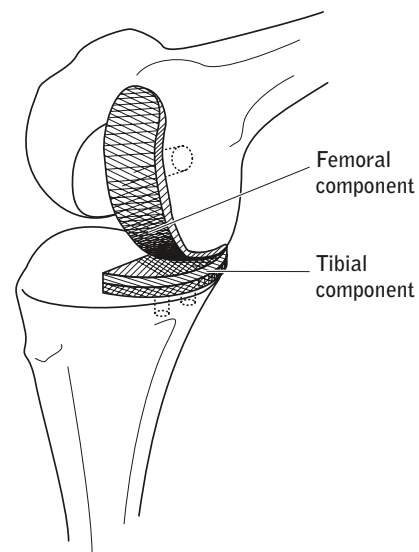


Partial or Unicompartamental (“Uni”) Knee Replacement

A unicompartamental knee replacement may be an option when only one compartment of the knee needs to be replaced:

- ▶ **Medial compartment** — inner side.
- ▶ **Lateral compartment** — outer side.

Certain other factors need to be considered, and your surgeon will discuss these with you.



Surgical Consent

As with any major surgery, there are risks with knee replacement surgery. You will be asked to sign a surgical consent form before your surgery. This form gives consent to the surgeon to perform your surgery. Before signing the consent form, make sure to ask any questions you may have so that you understand your surgery and its risks and benefits. It is important that you fully understand the information and are an active partner in your care.

Anesthesia

Anesthesia is medication that is used to control pain and make you comfortable during surgery. An anesthesiologist is a doctor specially trained to give anesthesia and monitor you during the procedure. Your anesthesiologist will meet with you before surgery to discuss your anesthesia options.

The type of anesthesia you receive will depend on the kind of surgery you are having and other factors, including your medical history. There are various types of anesthesia that may be used alone or together. They include:

General Anesthesia

General anesthesia is medicine that puts patients in a sleep-like state so they do not feel pain or remember the surgery. A breathing tube may be placed to support your breathing during general anesthesia. During the surgery, your heart rate, blood pressure, breathing and other vital signs will be carefully monitored.

Regional Anesthesia

Regional anesthesia involves the use of anesthetics and/or pain medication to block the feeling in a certain region of the body, such as the lower body (called a spinal block) or just a single leg. Intravenous (IV) sedation may be given with regional anesthesia.

Advantages of regional anesthesia include:

- It provides a high level of anesthesia to a region while having little effect on other areas such as the heart, lungs, and brain.
- It may decrease the amount of pain medication needed after surgery.

Preparing For Your Surgery

Before Your Surgery

Pre-admission Testing

All patients are required to have pre-admission testing before surgery. This is to assess your body's ability to tolerate the surgical procedure. It will include a review of your medical history, a physical exam, and blood tests. Please arrange to have this testing at the hospital pre-admission testing department or with your primary care doctor. Please check with your surgeon about their preference for pre-admission testing.

Testing must be completed **two to four weeks prior to surgery** (two weeks prior to surgery is preferred). This allows time for follow up testing to be completed as needed, such as a chest X-ray, EKG, or other testing. Tests cannot be used if they are completed more than 30 days prior to surgery and would need to be redone.

Medication

Your pre-admission testing appointment is the time to discuss the medications you are taking for your medical conditions (for example: diabetes, high blood pressure, acid reflux, chronic pain, asthma or other breathing problems). Bring a list of all of your medications, including prescription, over-the-counter, herbal products, and supplements. You may be instructed to temporarily stop taking certain medications because they could complicate surgery or interfere with other medications you might need. This may include non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin or ibuprofen.

If you are taking blood-thinning medications for any reason — such as heart stents, atrial fibrillation, or previous blood clots — contact the doctor who prescribes them. You will need to discuss your upcoming surgery and whether the medication can be stopped before surgery.

If you have any questions about which of your medications to take before surgery, contact the doctor who prescribes them.

Advance Directives

Mount Carmel supports and complies with our patients' advance directives for medical care. In order to comply with your wishes, we will ask you about a Living Will or Health Care Power of Attorney. If you have one or both of these documents, please bring a copy to the hospital. If you do not have an advance directive and would like information about writing one, talk with your nurse.

Flu and Pneumonia Vaccinations

To keep you well and provide you with the fastest recovery, we recommend that you receive a flu and/or pneumonia (pneumococcal) vaccine before you have your surgery. You should receive the vaccine(s) at least 2 weeks before your surgery. You can contact your primary care doctor, pharmacy, or the local health department to get the vaccines. We will need to know the dates you received these vaccines.

Call your doctor if you have a fever, cold or flu symptoms, or any other changes to your health during the week before your surgery.

Dental Care

If you need dental work, make certain to have it done well before your surgery. Bacteria from your gums can enter your blood stream and cause an infection. Do not schedule any dental work, including routine cleanings, for several weeks after your surgery.

Diet

Eat a well-balanced diet in the weeks before surgery. Be sure to include protein such as beef, poultry, fish, legumes, and eggs.

Skin Care

Any cuts, open sores, or rashes need to be treated and healed before surgery. If you have any of these skin problems, report them to your surgeon.

Smoking

If you are a smoker or tobacco user, it is important to quit at least a few weeks before surgery. Smoking greatly increases your risk of having complications after surgery including respiratory issues, pneumonia, delayed wound healing, and infections.

The support that professional counseling provides makes it twice as likely you'll quit successfully. At Mount Carmel, our pharmacists are trained to help you quit smoking by providing one-on-one counseling, planning, and approved medications as needed. We offer tobacco cessation counseling at locations across central Ohio, and most insurance plans cover up to four visits per year.

Talk to your healthcare provider about a referral to the **Mount Carmel Smoking Cessation Program**. To learn more, call 614-234-8844.

For more support, call the Ohio Tobacco Quit Line at 800-QUIT NOW, or visit smokefree.gov.



Planning for Care After Surgery

The best place for you to recover from surgery is in your own home. Plan to have someone help you until you are safe with your daily routine.

There are times when other arrangements need to be made. If you live alone, your caregiver is unable to care for you, or you are having difficulty meeting physical therapy goals, your multidisciplinary health care team may make other recommendations. It may be necessary for you to have home health care or be discharged to a skilled nursing or rehabilitation facility. The case manager will work with you in the selection of a facility. They will also work with your insurance company to determine eligibility.

Outpatient physical therapy is very beneficial to your recovery as it requires you to complete your daily hygiene, dress, get in and out of the car, and walk to the appointment. If you are homebound and unable to do outpatient therapy, your physician may order home health services.

Driving

- ▶ Arrange to have someone drive you home or to the skilled nursing facility upon discharge from the hospital. Transportation costs will be your responsibility.
- ▶ A higher vehicle is easier to get into than one that is low to the ground.
- ▶ Do not drive after surgery until you are given permission from your surgeon. This may be several weeks. Do not drive while you are taking narcotic medications.
- ▶ You will also need someone to drive you to and from your follow-up appointments.

Home Preparations

For your safety, you or your family should:

- ▶ Make certain you have secure handrails along stairways and in the bathroom. Consider installing grab bars.
- ▶ Place a non-skid bath mat in your tub.
- ▶ Make sure that you have good lighting and that the light switch is within easy reach.
- ▶ Remove anything in your walking path that may cause you to trip, such as throw rugs, cords, and furniture.
- ▶ Have a telephone within easy reach.
- ▶ Use a cushion to raise the seat of a low chair with arms.
- ▶ Run errands and grocery shop before surgery.
- ▶ Stock up on food that is easy to prepare, and store it at waist to shoulder level to avoid bending and reaching.
- ▶ Make sure your pets can be out of your way when you return home.

Durable Medical Equipment (DME)

- ▶ Check with your surgeon about special equipment you may need after surgery, such as a walker, shower chair, elevated toilet seat, crutches, or a cane.
- ▶ Check with your insurance plan to find out which items will be covered. Some equipment may need your doctor's authorization, and not all equipment is covered by insurance.
- ▶ If you already have a walker or brace, plan to bring this to the hospital with you.

Packing for Your Hospital Stay

What to Bring

- ▶ A list of your medications and your preferred pharmacy information
- ▶ Your driver's license and insurance card
- ▶ Copy of Living Will and/or Health Care Power of Attorney
- ▶ Credit card or money for insurance co-payment
- ▶ Glasses, contacts, hearing aids, dentures, and cases
- ▶ CPAP or BiPAP
- ▶ Walker or brace
- ▶ Pair of non-skid shoes that are not tight — you may have swelling.
- ▶ One set of clothes — loose-fitting shirt and pants or shorts. If you wish to wear a robe, bring one that opens along the entire front and is no longer than calf length.

What Not to Bring

Please leave all valuables such as jewelry, keys, and electronic devices at home. After registering for your surgery, plan to give your purse/wallet, checkbook, credit cards, cell phone, and any other valuables to your support person to be responsible for these items. It is recommended that these items are taken home.

Leave your medications at home unless you have been instructed to bring them to the hospital.

Getting Ready for Surgery

A Few Days Before Surgery

You will receive multiple phone calls in the days leading up to your surgery. These calls are critical in helping to prepare for your surgery. A hospital staff member will contact you to verify information, including instructions on which medications you should take the morning of surgery.

- ▶ Follow all instructions given by your doctor.
- ▶ Call your doctor right away if there are any changes to your health before your surgery, including a cold or other infections.

The Day Before Surgery

Many details are involved in determining your final surgery time. Depending on where your surgery will be performed, you will be notified of your arrival and surgery times either at your pre-admission testing appointment or by phone. You may receive a call with additional information or time changes up to the evening before your surgery.

Do not smoke, eat, drink, chew gum, or eat mints or candy after midnight the night before surgery until you are allowed to have fluids after surgery.

Shower using a CHG solution the night before surgery. Follow the directions on the next page unless your surgeon gives you other instructions.

The Day of Surgery

Before you come to the hospital:

- ▶ Shower again using CHG solution. Follow the steps below.
- ▶ Remove all jewelry, including wedding bands and body piercings. You may replace body piercings with temporary plastic posts before coming to the hospital. If you have rings that will not come off, please tell a staff member.
- ▶ Do not wear makeup, perfume, powders, lotions, or creams.
- ▶ You may brush your teeth, but do not swallow the water.
- ▶ Wear glasses instead of contacts or bring a container to remove your contact lenses before surgery.
- ▶ If you have been told to take certain medications the morning of surgery, take them with a small sip of water.
- ▶ Do not smoke or use tobacco products before your surgery.

Preparing Your Skin with Chlorhexidine Gluconate (CHG) Solution

Infection is a risk with any surgery. Our care team takes every measure to protect you and to prevent infection while you are in our care. You play an important part in this.

To help reduce the risk of infection, before your surgery:

- ▶ Use a special soap to clean your body. The soap contains an antiseptic called *chlorhexidine gluconate* (CHG). Cleaning your body with CHG soap before surgery helps prevent infection.
- ▶ Do **not** shave the surgical area.
- ▶ Put **clean** sheets on the bed you will be sleeping in the night before surgery.

The Night Before and Morning of Surgery

Your surgeon has directed that you use a Chlorhexidine product such as Hibiclens™, Dyna-Hex™, and others. Use **half** the bottle the night before and the **other half** the morning of your surgery.

Your doctor may instruct you to begin using CHG wash earlier. Follow your doctor's instructions.

Follow these steps as you shower:

- ▶ Shower or bathe as usual with soap and water. Then wash off the soap completely. If you plan to wash your hair, use regular shampoo on your hair and rinse well.
- ▶ Thoroughly rinse your entire body with warm water from the neck down. Turn off the water or step out from under the shower stream to avoid rinsing the CHG soap off too soon.
- ▶ Apply the CHG product directly to your skin from **the neck down** and wash gently. *Do not use above your neck, in your genital area, or on wounds that are deeper than a scratch. DO NOT touch your eyes, ears, or mouth while scrubbing.*
- ▶ Pay special attention to washing the area of your surgical procedure very well. Use a back and forth motion to gently scrub the area.
- ▶ Allow the product to soak on your skin for **2 to 3 minutes**.
- ▶ Turn on the water or step back under the shower stream to rinse well. Do not use regular soap after applying and rinsing the product.
- ▶ Pat your skin dry with a **clean** soft towel.

- Do not use any makeup, perfume, deodorant, powder, lotion or cream after you have showered.
- Put on **clean** nightwear or clothes.

**Repeat these steps the morning of your surgery.*

It is a good idea to read the label for full product information and precautions. Do not use this product if you are allergic to it. If your skin becomes red or irritated, stop using the solution and contact your surgeon for further instructions.



Your Surgery and Hospital Stay

The Patient Care Team

You are the most important member of the healthcare team. Your health and wellbeing is our highest priority. In our efforts to make your hospital stay as comfortable as possible, you will be asked your preferences during your time with us. Please let the healthcare team know if you have any questions or concerns.

There are many other members of the healthcare team who will be working with you. They will provide care, evaluate your progress, and communicate with each other and with you and your family.

Your surgeon, anesthesia provider, and primary care physician or hospitalist will manage your medical care. Your healthcare team will also include a team of specially trained nurses, patient care technicians, physical therapists, and occupational therapists to care for you as you recover from surgery.

A number of other clinicians will work with you to meet your healthcare needs. These may include respiratory therapists, dietitians, social workers, discharge planners, and nurse case managers.

Your Surgery Day

Registration

When you arrive at the hospital, go to Patient Registration. You will need to have your driver's license and insurance cards. You will receive a "find code" to ensure your privacy and confidentiality. This is a four-digit number that only you can give out to family or friends. It is important for you to know that anyone calling or asking how you are doing cannot be told any information unless he or she has this find code.

Pre-op

Once your paperwork is completed, you will be directed to the pre-operative area. You will change into a hospital gown. A nurse will start an IV line and take your blood pressure and temperature.

The anesthesiologist will meet with you and review your health history. He or she will discuss the types of anesthesia that can be used. Once a decision is made, you will be asked to sign a surgery and anesthesia consent form. Please ask your surgeon or anesthesiologist any questions you have before your surgery.

Surgery

Your surgeon will tell you how long it should take to complete the surgery. Family members should not be alarmed if your surgery takes longer. Surgery times are sometimes delayed or changed due to emergencies or cancellations. Every attempt will be made to notify your family if your surgery is delayed.

Your family should wait in the surgery waiting room so they can receive updates throughout your surgery and recovery. The surgeon will talk with your family after surgery.

Post-Anesthesia Care

After surgery, you will go to the recovery room, also called the post-anesthesia care unit (PACU). This is where you will wake from anesthesia. You may have a dry mouth, nausea, itching, chills, or feel confused. Tell your nurse if you experience any of these symptoms. Also tell your nurse if you awaken with pain.

You may be given medication for pain and nausea. An X-ray may be taken of your new joint. Most patients stay in the recovery room for 1 to 2 hours, although some patients require a longer stay.

Nursing Unit

Once you have recovered from anesthesia, you will begin your therapy and make progress toward your discharge.

Please make sure to let us know what we can do to make your stay more comfortable.

Plan of Care

Members of the care team will be checking on you around the clock to ensure your safety as you recover and progress.

Activity

Your first step in getting active again will be sitting on the side of the bed, followed by standing and walking. With the help of the therapist or another staff member, you will start to increase your activity. Moving after knee surgery is one of the most important things that you can do to speed your recovery

process. Early activity after surgery also helps prevent many surgical complications, including:

- Infections
- Pneumonia
- Blood clots
- Urinary tract infections
- Urinary retention

The therapist will work with you before you are discharged from the hospital. You will learn how to properly use a walker, how to get in and out of bed, how to use stairs safely, and mobility and strengthening exercises.

Call, Don't Fall

Always call for help before getting out of bed. A staff member should always help you while you are in the hospital. Preventing a fall is a key part of your safety and recovery.

Hand Hygiene

Preventing infection is important after surgery. One of the best ways to prevent infection is by washing your hands often — after using the bathroom, before meals, and before and after you touch your incision or change your dressing. Follow these five steps every time:

Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.

Lather your hands by rubbing them together with the soap. Lather the backs of your hands, between your fingers, and under your nails.

Scrub your hands for at least 20 seconds.

Rinse your hands well under clean, running water.

Dry your hands using a clean towel or let them air dry.

Soap and water are best, but an alcohol-based hand sanitizer that contains at least 60% alcohol can be used as long as your hands are not visibly soiled. Ask all visitors to wash their hands when they enter and leave your room. Don't be afraid to remind the staff about hand hygiene.

Medications

You will resume your regular medications once you are able to take them. Your doctor may also order other medications such as antibiotics, stool softeners, blood-thinners, pain medication or medicine for nausea. Ask your nurse for more information.

Treatments

- You will wear compression hose and may have compression pumps, also called sequential compression devices (SCDs), throughout your stay. The compression pumps are worn while you are in bed. Both help prevent blood clots from forming in the legs.
- You may have a Foley catheter in your bladder to drain urine when you wake up from surgery. This will be removed as soon as possible.
- You may have a dressing (bandage) over your incision. The nursing staff will care for your incision, change your dressing, and teach you how to do this at home.
- You will have ice packs to help relieve swelling and pain.

Be sure to ask the staff any questions you have throughout your stay.

Diet

You may begin with ice chips. If you are able to tolerate these without nausea, you will progress to clear liquids such as broth, gelatin, Popsicles, and clear soda. Once your nurse feels your stomach is able to handle solids, you will be able to start your normal diet.

Breathing Exercises

You will be taught coughing and deep breathing exercises to help keep your lungs clear and prevent pneumonia. You will also be instructed on how to use an incentive spirometer:

- Just after you exhale normally, put your lips tightly around the mouthpiece.
- Breathe in as deeply as you can. The meter will rise.
- When you feel that you've taken a full breath, keep trying to breathe in more and more for about 2 seconds.
- Repeat this deep breath action **10 to 15 times each hour** while you are awake.

You can see how much air you have taken in by reading the number on the meter. Your breathing technique will improve as you are more awake, have less pain, and move around more. If you have trouble using the spirometer on your own, please ask your nurse or respiratory therapist for help.

Circulation Exercises

Exercise improves blood flow (circulation) and reduces the risk of blood clots. Exercising will also help you gain strength and mobility, and decrease your recovery time. After surgery, you will be instructed to do ankle pumps, quadriceps sets, and gluteal sets. Do each exercise 10 times every hour when you are awake. See pages 33-34 for instructions.

Continuous Passive Motion

Your surgeon may order that your knee be placed in a continuous passive motion (CPM) machine. The benefits of CPM are the same as those of gentle exercise: decreased pain, decreased stiffness, and improved circulation.

The CPM will slowly bend and straighten your hip and knee. You will start with a small amount of flexion (bend) in your knee. The amount of flexion will be increased slightly each day.

Your doctor will determine if the CPM is right for you.

Managing Your Pain

After surgery, some pain is to be expected while your knee is healing. You and your healthcare team will work together to manage your pain for a smoother recovery. Although we want your pain controlled, we do not want you too groggy or sedated so you are able to do your therapy.

You will be asked to rate your pain. This will help us know how your medication and other comfort measures are helping. You can use a number or choose a face on this scale that

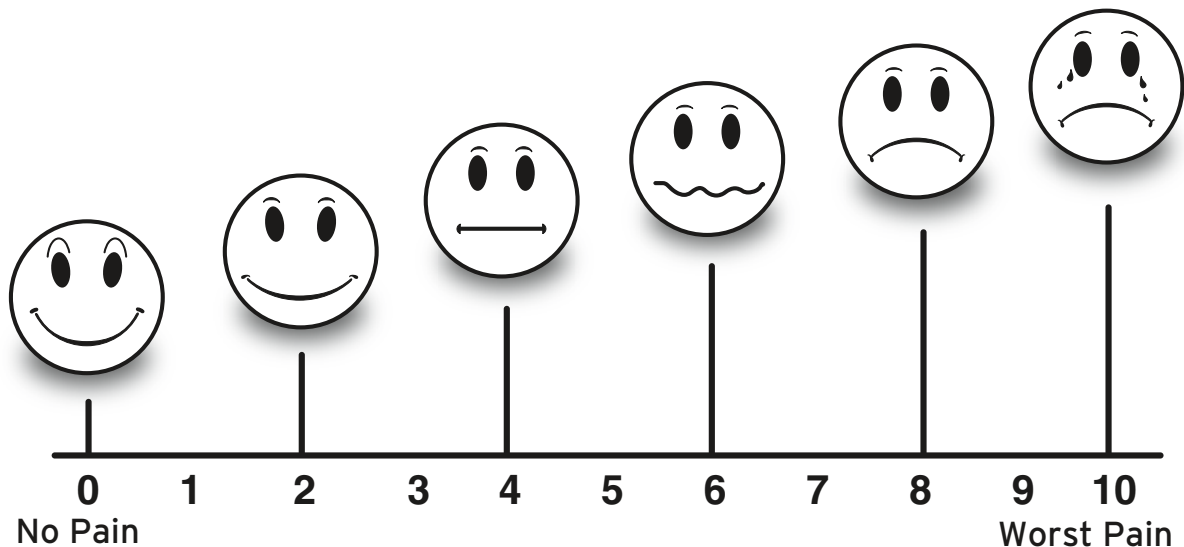
best rates your pain. Many people hesitate to report their pain and to take pain medication. It is most helpful to take pain medication before the pain becomes severe. If you wait too long to take pain medication, it becomes harder to get relief.

Your doctor and anesthesiologist will order medication to help manage your pain. This may include oral pain medication (pills) or intravenous (IV) pain medications. Your nurse will explain what medications are available to you and discuss other pain relief options.

Your pain medication may cause side effects such as nausea, itching, confusion, and constipation. Ask your nurse any questions you may have about side effects.

Talk to your healthcare team about other ways to relieve pain. Rest is not always the best solution, especially after surgery. Changing your position in bed and getting out of bed can make you more comfortable. Taking your mind off the pain by listening to music, watching TV, reading, or visiting with family and friends can also be helpful.

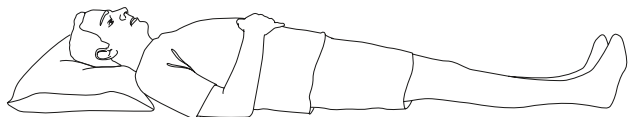
As you heal, your need for pain medication should decrease. Talk with your doctor if you have any questions or concerns about your pain management at any time during your recovery.



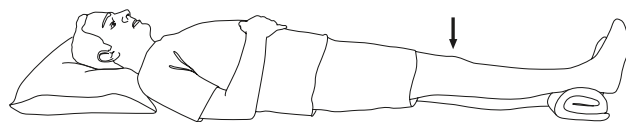
Positioning in Bed

An important part of knee replacement recovery is maintaining knee extension. Full knee extension, which is straightening the knee and leg, is needed to have a normal walking pattern.

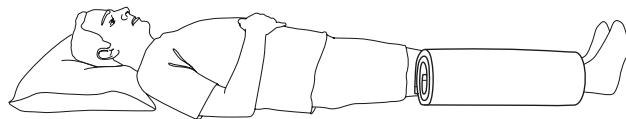
To ensure knee extension, when you are in bed:



Do not place anything under your knee.



You may place a towel or blanket roll under your ankle to promote extension.



If your leg tends to roll outward when you are lying down, you may place a blanket roll along the side of your leg to keep your toes pointed straight up.



Going Home

Discharge Process

Knee surgery typically requires a short hospital stay. You may be discharged the same day as your surgery. You will continue to heal and recover at home.

Your surgeon and your general medical doctor will release you when you have met required medical and therapy goals. These include:

- ▶ Your oxygen level is adequate.
- ▶ You are able to urinate on your own.
- ▶ Your pain level is tolerable on oral medications.
- ▶ You are able to meet your therapy goals.

Please keep in mind that the discharge process may take time. Make sure to discuss your discharge goals with your health care team. Your case manager and nurse will work with you to coordinate discharge planning.

Your doctor may prescribe outpatient therapy, home therapy, or a therapy program that you do independently at home. If you have outpatient therapy, you will need someone to drive you to your therapy sessions. These are often 2 to 3 times a week.

It is important to have a family member with you on your day of discharge to see how you are doing with your care and activities, listen to your discharge instructions with you, and transport you home.

To help the discharge process go smoothly, please have your ride prearranged so you are able to go once your discharge is finalized.

Your Care at Home

You will be given written discharge instructions and prescriptions for any medications needed after discharge. The nursing staff will review these with you and your family member. If there is any information that you do not understand, please ask the staff before you leave.

Incision Care

Your incision may be closed with sutures, staples, or surgical glue. If you have sutures or staples, arrangements will be made to remove them in the doctor's office or by a home health nurse.

If you have Steri-Strips in place, allow them to fall off on their own. Do not pull them off.

You will be instructed how to change your dressing and care for your incision. You may shower when instructed to do so by your surgeon.

Do not take a tub bath. Keep your incision clean and dry. Do not use lotions, powders, or oils on your incision. Keep your incision open to air unless your surgeon instructs you to keep it covered with a bandage.

Check your incision in the morning and evening for signs of infection. Always wash your hands before checking it.

Call your surgeon right away to report any of the following signs of infection:

- ▶ The area around your incision is red or hot to touch.
- ▶ You have drainage or continued bleeding from the incision.

- ▶ You have drainage that is yellow or green colored and/or foul smelling.
- ▶ You have chills or a fever of 100.4°F or more.
- ▶ The edges of your incision start to separate.

Also notify your surgeon of any of the following symptoms:

- ▶ If you have new or a sudden increase in swelling or bruising around your incision.
- ▶ You have numbness or tingling of your legs or feet.
- ▶ You have severe pain even after taking your pain medication.
- ▶ Your leg or foot becomes cool or discolored (blue or pale in color).
- ▶ You have pain, warmth, or redness to your calf (may indicate a blood clot).

Medications

Resume your regular medication as directed by your care team. The nursing staff will instruct you on any changes and on new medications, such as pain medications or blood thinners.

Check with your doctor about over-the-counter pain relief and anti-inflammatory medication. Do not take Tylenol and your prescribed pain medication together.

If you continue pain medications or iron supplements at home, you may need to take a stool softener to avoid constipation.

Swelling

Swelling, also called edema, is common after surgery. It may occur while you are in the hospital or once you are home and more active. Swelling occurs most often in the foot, ankle, knee, and at times, the thigh.

To decrease swelling:

- ▶ Wear your compression stockings as instructed at discharge.
- ▶ Lie with your surgical leg elevated so that your foot is higher than your heart for at least 45 minutes 2 to 3 times each day.
- ▶ Place a cold pack on the swollen area for 20 minutes at a time. Leave the cold pack off for 40 minutes before using it again. You can do this several times throughout the day as needed.
- ▶ Walk often during the day. This will contract the leg muscles, which will decrease the swelling. Bearing weight on your leg will also help with bone healing.
- ▶ Perform the circulation exercises you learned — ankle pumps, quadriceps sets, and gluteal sets.

If your swelling persists or worsens, call your doctor.

Antibiotics

An infection in another part of your body (sinuses, mouth, lungs, urinary tract, bowel, or skin) could possibly spread to your new joint. Contact your doctor if you develop any signs of an infection after your surgery.

You will also need protection to avoid infection for at least 2 years when you have:

- ▶ Dental work, including teeth cleaning
- ▶ A procedure or surgery on certain parts of the body such as the mouth, nose, or digestive tract

Always tell your dentist or doctor that you have a knee replacement when scheduling any procedure. You may need to take antibiotics before your appointment. Your surgeon may give you specific guidelines for antibiotic therapy. Share these with your dentist or doctor.

Activity Guidelines

Driving

Do not drive until instructed by your surgeon — often this is about 4 to 6 weeks after surgery. Do not drive if you are taking narcotic pain medication.

Sexual Activity

You may resume sexual activity when you feel able.

Returning to Work

Getting back to work will depend on how quickly you heal and the type of job you have. Your doctor and therapist will guide you on when you can return to work.

Future Activities

Staying active is an important part of your long-term recovery. How soon you are able to return to activities and which activities are acceptable will depend upon:

- ▶ Your progress
- ▶ Your overall health
- ▶ Your ability to do the activity before surgery
- ▶ Your doctor's recommendations

Talk to your surgeon about which activities are encouraged and what must be avoided. Speak to your surgeon about specific limitations you may have or what modifications should be made. Ask for recommendations about participating in recreational sports or activities that you previously enjoyed.

Recommended activities that will not overstress the implant may include:

- ▶ Cycling
- ▶ Calisthenics
- ▶ Low-resistance rowing
- ▶ Stationary skiing machines
- ▶ Walking
- ▶ Hiking
- ▶ Low-resistance weight lifting

What to Expect in the Future

After surgery you can expect gradual improvement for the next 18 months. You can look forward to less pain and stiffness. You will begin to enjoy activities with more comfort and independence.

Progress may take time, but completing the exercises as instructed will build your strength and endurance. Follow up with your surgeon as recommended and contact them with questions or concerns. Be patient with yourself, knowing that it will take time to reach the full benefit of knee replacement surgery.

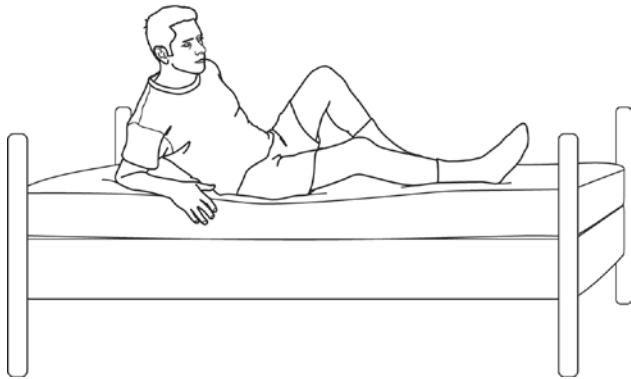
Physical Therapy

Once you have had your surgery, you may begin to think about going home with your new knee — how you will get around and get back to your daily life. Before you go home, your therapist will teach you the skills you will need, such as how to get in and out of bed and how to use the stairs. Your therapist will also teach you how to walk with a walker, crutches, or a cane. The type of equipment depends on your doctor and your level of comfort.

Bed Mobility

Getting Out of Bed

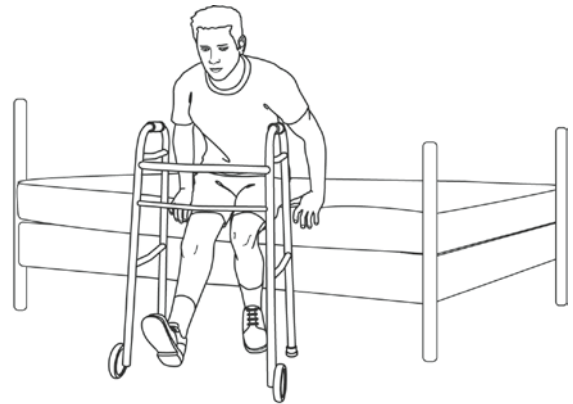
You will get out of bed as soon as possible. Do not try to get up by yourself. A member of your care team will help you.



Slide your surgical leg to the edge of the bed as you bend your non-surgical leg.

Push with your hands and non-surgical leg as you lift your buttocks off the bed and move toward the edge of the bed. Begin to sit up.

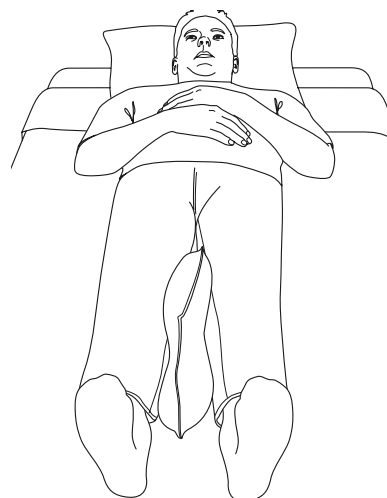
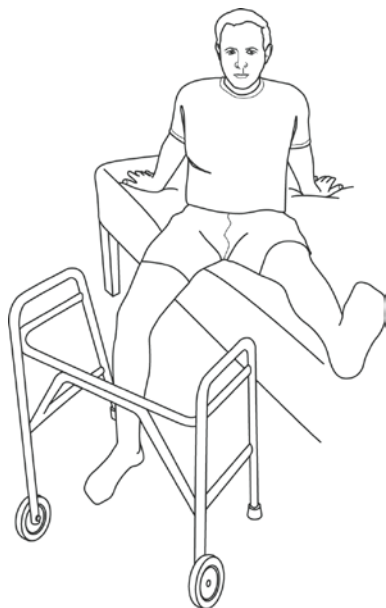
Using your arms and non-surgical leg, lift your buttocks and pivot toward the side until both your feet are on the ground.



Stand up, pushing down on the bed with both hands. Reach for the walker.

Getting Back Into Bed

You will also need help getting into bed at first.



To get into bed, slowly back up until you feel the bed against the back of your legs.

Reach back for the bed and sit as far back as you can. Using your arms and non-surgical leg, scoot back until your surgical leg is supported.

Lift your legs onto the bed as you slowly turn your body. You may need someone to help you lift your surgical leg at first.

Scoot back as needed with your arms and non-surgical leg.

Standing Up and Sitting Down

Follow these steps when you are using a walker, a wheeled walker, or crutches.

Standing Up



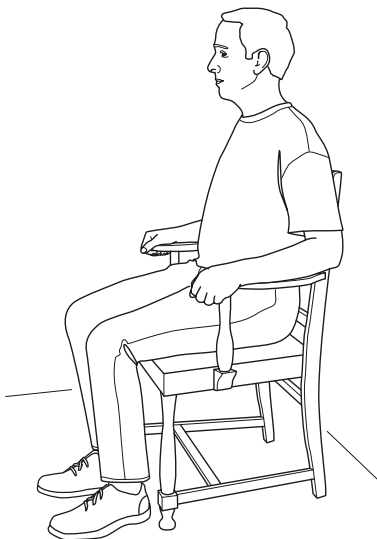
When you try to stand up from a sitting position, scoot your hips forward to the edge of the chair, bed, or toilet seat. Keep your surgical leg stretched out and your non-surgical leg bent with your foot flat on the floor.

Use your arms to push down on the edge of the bed, chair, or toilet seat to push yourself up.

As you stand up, shift your weight onto your non-surgical leg and grasp the handgrips of the walker, wheeled walker, or crutches. At the same time, move your surgical leg back in line with your non-surgical leg.

Do not pull yourself up with the walker, wheeled walker, or crutches, as this could cause you to fall backward. Once you are standing, take a few seconds to get your balance before you take a step.

Sitting Down



When sitting down, slowly back up until you feel the chair or bed against the back of your legs.

Slide or place your surgical leg forward. Then reach back for the armrests of the chair or the edge of the bed.

While leaning slightly forward and keeping the surgical leg outstretched in front of you, lower yourself slowly into the chair. Use a firm chair with armrests.

Do not hold on to the walker, wheeled walker, or crutches while lowering yourself.

If you are using crutches, hold them in one hand, to one side, when you get up or sit down.

Using a Wheeled or Standard Walker

Your therapist will provide you with a walker that is the correct size for you and teach you how to use it. If you already have a walker, the therapist will check to make certain it is fitted for you.

Walking with a Wheeled Walker



Push the walker as you walk, using as normal a walking pattern as possible.

Do not step too close to the front edge of the walker.

Keep your body in line with the back legs of the walker.

Walking with a Standard Walker



Lift the walker so that all four legs of the walker clear the floor. Move the walker forward about an arm's length, placing all four legs of the walker on that floor at the same time.

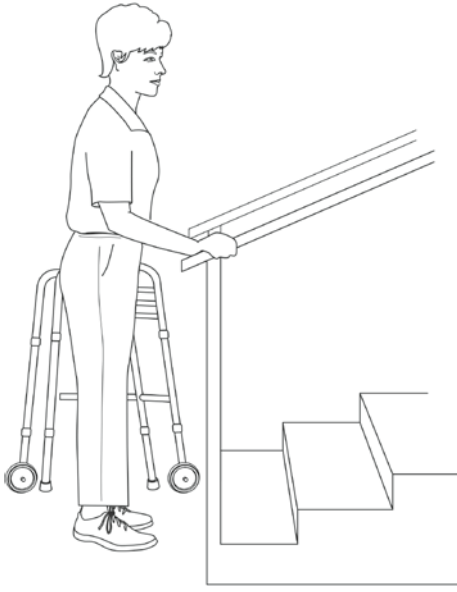
Step forward with your surgical leg first. Do not step too close to the front edge of the walker.

With much of your weight on the handgrips of the walker, step forward with your non-surgical leg and bring it slightly ahead of your surgical leg.

Hold your head up and look straight ahead so you will be aware of any obstacles on the ground.

When you need to rest while standing, make sure that all four legs of the walker are on the ground.

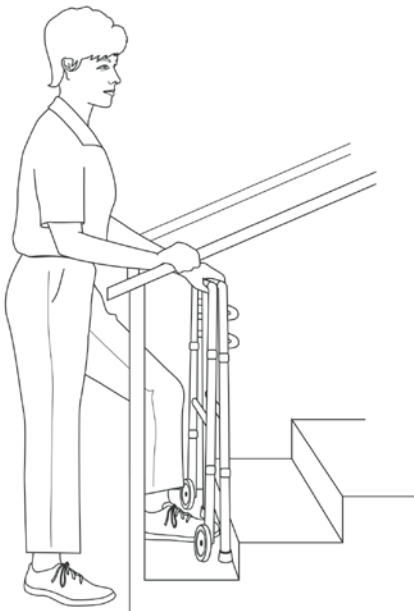
Going Up Stairs – Up with the “Good”



- 1** To go upstairs, place your feet about 6 inches from the first step. Fold your walker and hold it in one hand. It may be easier to put the front legs of the walker on the first step before folding it. Hold the rail with your other hand.

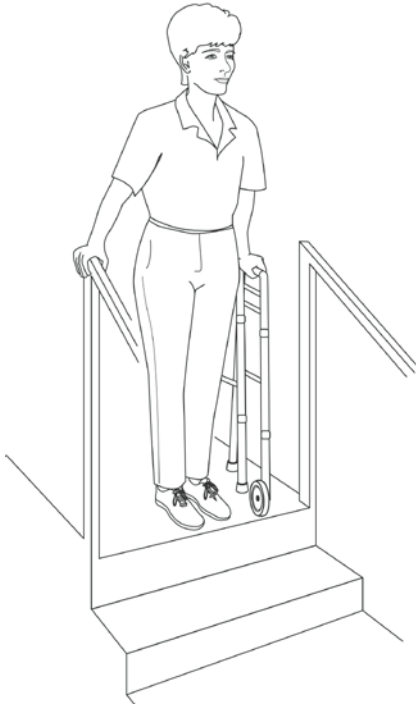


- 3** At the top of the stairs, unfold the walker and set it on the landing. Make certain you hear the walker click into the locked position. Place both hands on the walker. Step up first with your non-surgical leg and then bring up your surgical leg.

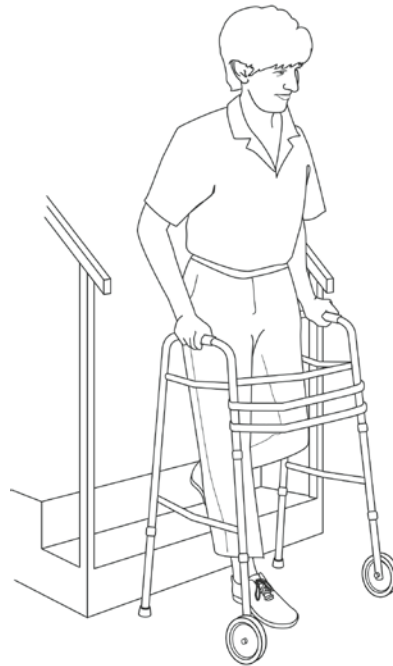


- 2** Lift your walker and place it at the back of the step. Step up with your non-surgical (good) leg and then bring up your surgical leg. Do this with each step, taking your time.

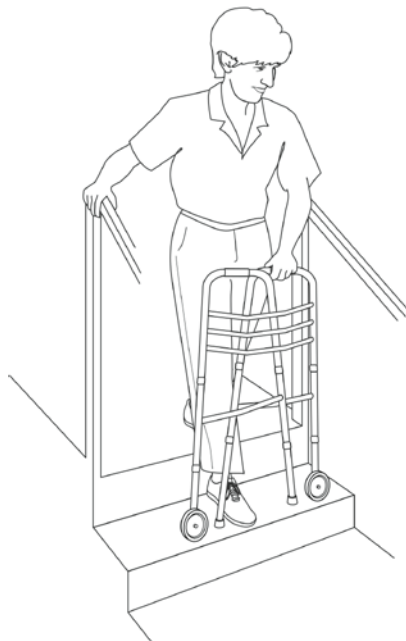
Going Down Stairs – Down with the “Bad”



- 1** To go down stairs, place your walker close to the stairs. Fold your walker and hold it in one hand. Hold the rail with your other hand.



- 3** At the bottom of the stairs, unfold the walker and make certain it clicks into the locked position. Place both hands on the walker. Step down with your surgical leg and then with your non-surgical leg.

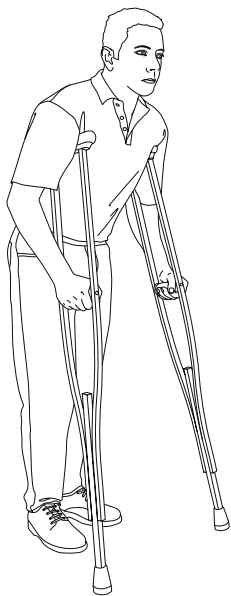


- 2** Lower your walker to the front edge of the first step. Step down with your surgical (bad) leg and then step down with your non-surgical leg. Do this with each step, taking your time.

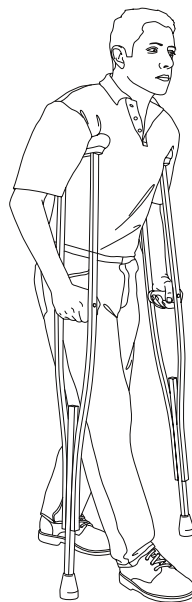
Using Crutches

Your therapist will adjust your crutches to the proper height and instruct you on how to use them. If you are using forearm crutches, your therapist will give you different instructions.

Walking with Crutches



- 1** Place both crutches ahead of you at a comfortable distance — usually about 1 foot (12 inches).

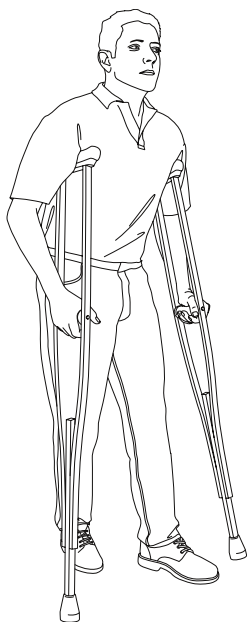


- 3** Step forward with your non-surgical leg, bringing it through the crutches and past your surgical leg.

Move your crutches forward to balance. Continue these steps.

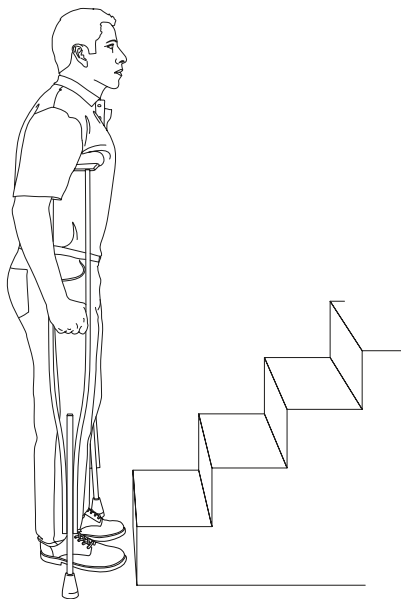
Remember to:

- ▶ Keep your weight on your hands — not on your underarms.
- ▶ Hold your head up and look straight ahead.

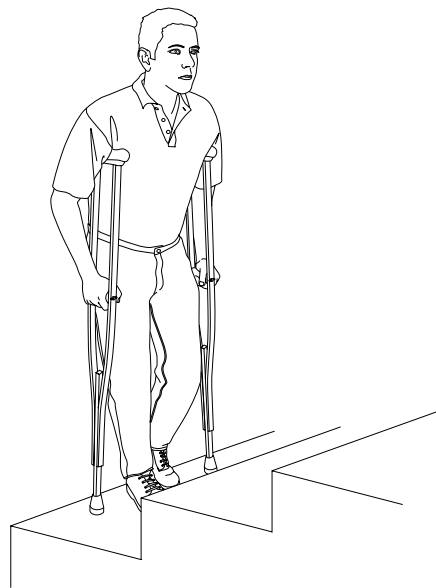


- 2** Step forward with your surgical leg.

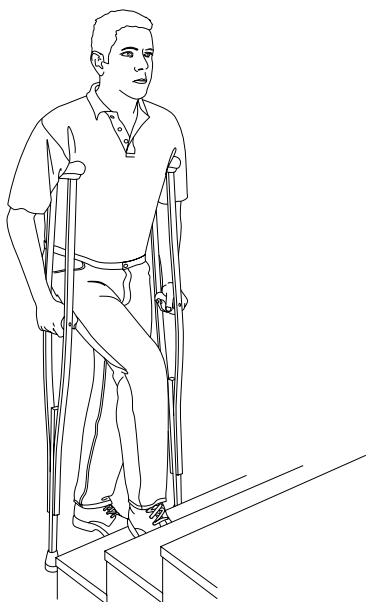
Going Up Stairs – Up with the “Good”



- 1** Allow about 2 inches between your feet and your first step. If there is a railing on the stairs, you may put one crutch under one arm and place your other hand on the railing for support.

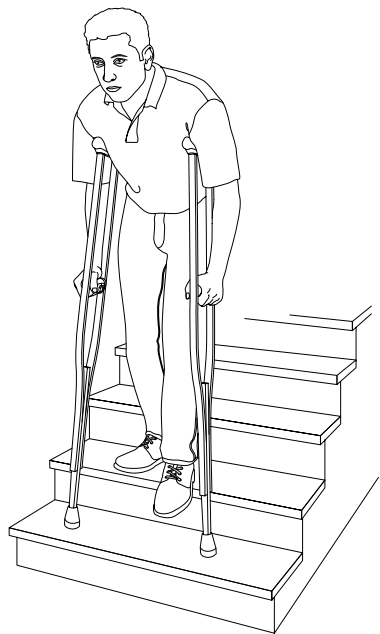


- 3** Straighten your non-surgical leg and bring the crutches and your surgical leg up to the same step.

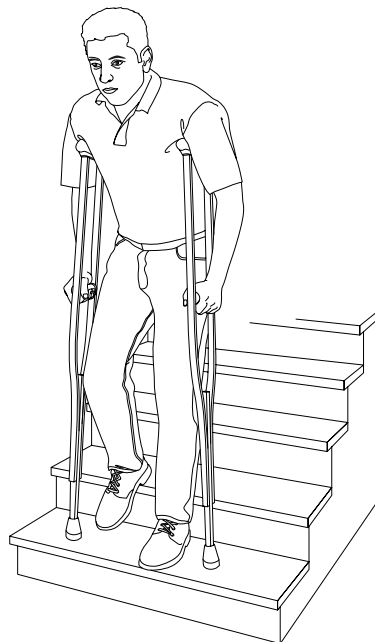


- 2** Push down on the crutches and step up with your non-surgical (good) leg first.

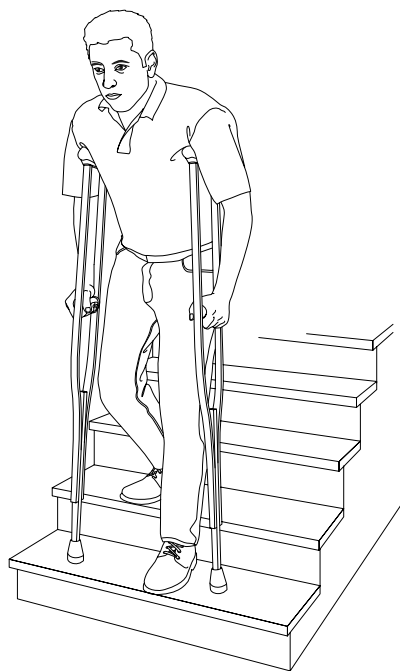
Going Down Stairs – Down with the “Bad”



- 1** Stand at the edge of the step, and lower the crutches to the step below. Place the crutches near the front edge of the step to help you keep your balance. If there is a railing on the stairs, you may put one crutch under one arm and place your other hand on the railing for support.



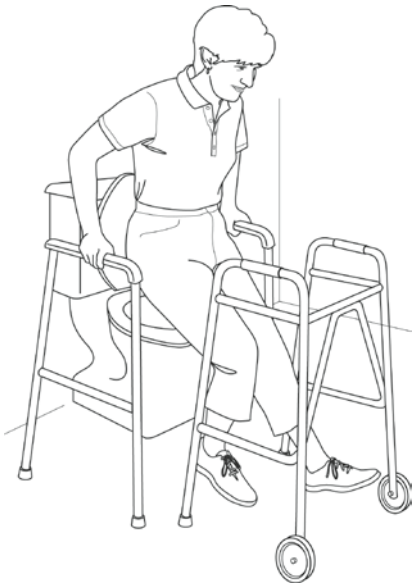
- 3** Push down on the crutch(es) and slowly step down with your non-surgical leg.



- 2** Step down to the same step with your surgical (bad) leg.

Using a Toilet

Using a Raised Toilet with Armrests

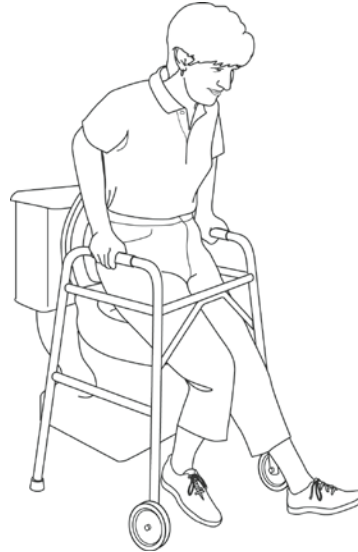


Slowly back up until you feel the toilet against the back of your legs. Reach back for the armrests and slowly lower yourself onto the toilet. Keep your surgical leg straight out in front of you.

Bend your knee and hip on the non-surgical side as you lower yourself onto the seat.

Reverse the steps when getting up. Use the armrests to push yourself up. Get your balance before reaching for the walker or crutches.

Using a Raised Toilet Seat without Armrests



Slowly back up until you feel the toilet against the back of your legs. Keep one hand on the handgrip of the walker or crutch while you reach back for the edge of the raised seat.

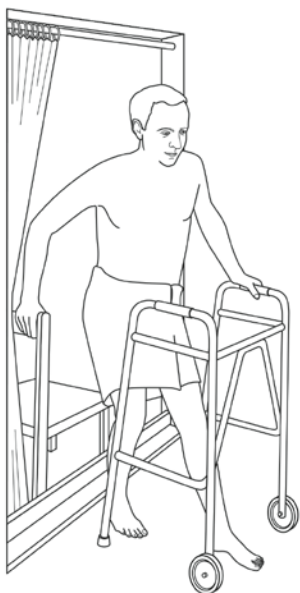
Bend your knee and hip on the non-surgical side as you lower yourself onto the seat. Keep your surgical leg straight out in front of you.

Reverse the steps for getting up. Place one hand on the handgrip of the walker or crutch and the other on the edge of the toilet seat. Get your balance before reaching for the walker or crutch.

Taking a Shower

The first week after your surgery, it is best to have someone with you to assist with taking a shower. Make certain you have your towel and supplies before you get in. Walk-in showers with a small step of 2 to 6 inches are preferred. Tub-showers require you to lift your legs over the edge and bear more weight upon one leg at a time. Your therapist can make suggestions about how you can safely bathe based on your home's setup.

In a Walk-In Shower



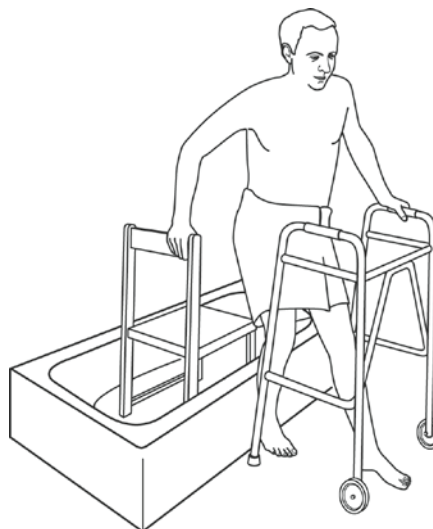
Use built-in grab bars when possible. Step into the shower leading with your stronger, non-surgical leg. Step out of the shower leading with your stronger, non-surgical leg.

If using a shower bench, back up to the edge of the shower using your walker. Reach back with one hand and grab the shower bench. Leave your other hand on the walker.

Sit down on the bench. Lift one leg at a time over the lip of the shower stall and turn to sit facing the faucet.

To get out of the shower, turn your body while lifting one leg at a time over the lip of the shower stall. Stand up outside the shower stall by pushing off from the chair.

In a Tub



You may use your tub for a shower, but do not lower yourself for a bath. Place a walker or chair beside the tub. Stand between the walker or chair and the tub.

Your support person should support you with one hand and steady the walker or chair with the other. Steady yourself with one hand on the walker or chair and the other on the wall or grab bar. Step over the tub with your stronger, non-surgical leg. Next, lift your operative leg over the tub.

If you choose to use a shower bench, request that your support person position it in the tub behind you. Reach back with one hand and grab the shower bench. Leave your other hand on the walker.

Sit down on the bench. Lift one leg at a time over the side of the tub and turn to sit facing the faucet.

To get out of the tub-shower, turn your body while lifting one leg at a time over the side of the tub. Stand up outside the tub by pushing off from the chair.

Getting In and Out of a Car

Getting In

A taller vehicle is easier to get in and out of than one that is lower to the ground. You are safest sitting in the front seat with your seat belt on and the seat upright.



1. Move the seat back as far as possible.
2. Stand facing away from the car.
3. Place one hand on the back of the seat and the other on a secure spot and slide onto the seat.
4. Lower yourself slowly to the seat.
5. You may need someone's help to lift and swing your legs in.

Getting Out



Have your helper place the walker close by. Pivot and lift your legs out of the car. You may need someone's help with this.

Scoot to the edge of the seat, and with one hand on the back of the seat and the other on a secure spot, push to stand.

If you are riding longer than 30 minutes, take a break from sitting. This will help prevent stiffness, swelling, and blood clots. Look for a safe place to park where you can walk — at least 25 feet to aid your circulation.

Exercise Program

Guidelines

Unless instructed otherwise by your therapist:

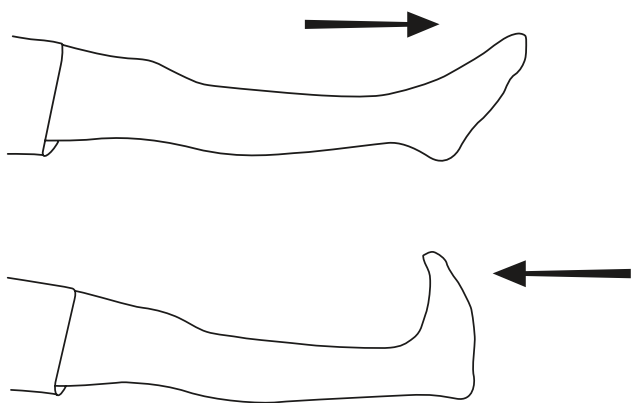
- ▶ Do each exercise 10 times each.
- ▶ Increase to 15 repetitions of each exercise.
- ▶ Do not hold your breath or bounce your leg while doing the exercises.

Exercises: Lying on Your Back

You may lie on your bed for these exercises.

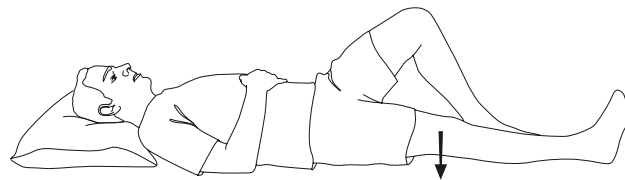
Do these 3 exercises — Ankle Pumps, Quadriceps Sets, and Gluteal Sets — every hour when you are awake.

Ankle Pumps (Both Legs)



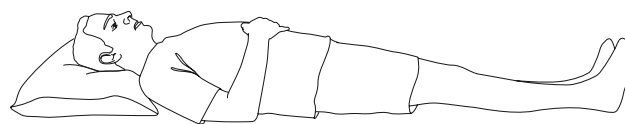
Move your foot up and down at the ankle — pointing your toes toward your body and away from your body.

Quadriceps Sets (Both Legs)



Push the back of your knee down against the bed and tighten the muscle on the front of your thigh. Hold for 5 seconds and relax.

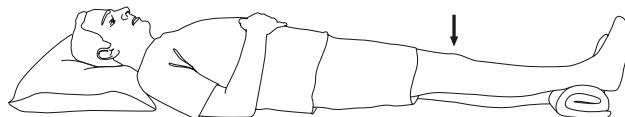
Gluteal Sets



Tighten your buttock muscles. Hold for 5 seconds and relax.

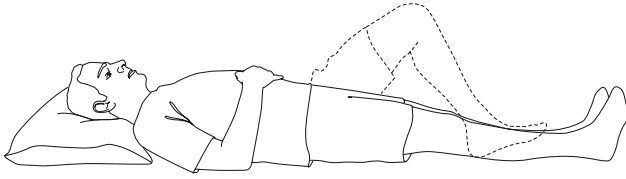
**Do the following exercises
3 times each day:**

Quadriceps Set with Stretch



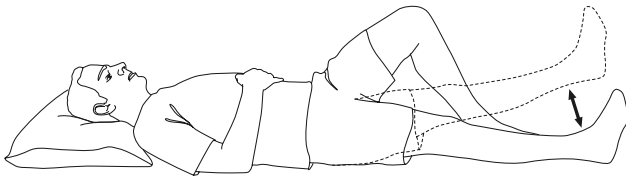
Place a small towel roll or pillow under your heel. Tighten the muscle of the top of your thigh by trying to press the back of your knee toward the bed. You should feel a mild tension or stretch behind your knee. Hold for 10 to 20 seconds.

Heel Slides



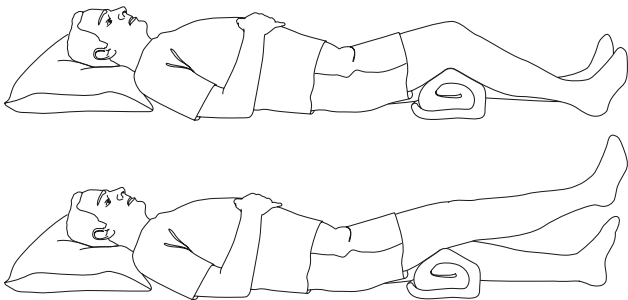
Slide your foot along the bed and bend your knee. Slowly slide your foot down until your leg is straight again.

Straight Leg Raises



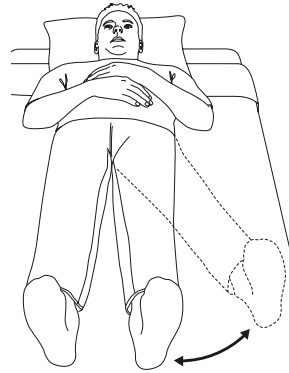
Keeping your knee straight, raise your surgical leg off the bed 1 to 2 feet, then slowly lower it. Brace yourself by bending your other knee and placing your foot flat on the bed. Remember not to hold your breath.

Short Arc Quad



Raise your leg and place a blanket roll or bolster under your knee. Lower your heel to the bed. Raise and lower your heel, leaving your thigh on the roll or bolster. When raising the heel, straighten your knee as much as possible. Repeat. Modify this exercise by using various sizes of rolls.

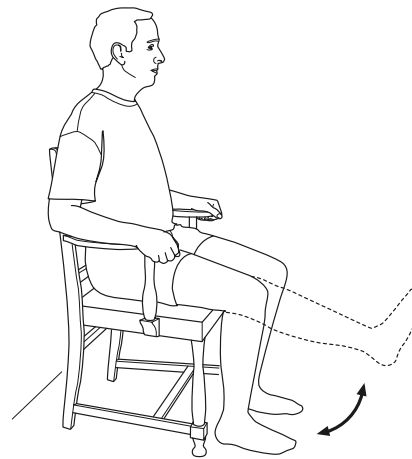
Hip Abduction and Adduction



Keep your knee straight and toes pointed upward. Bring leg out to the side and then back to the center.

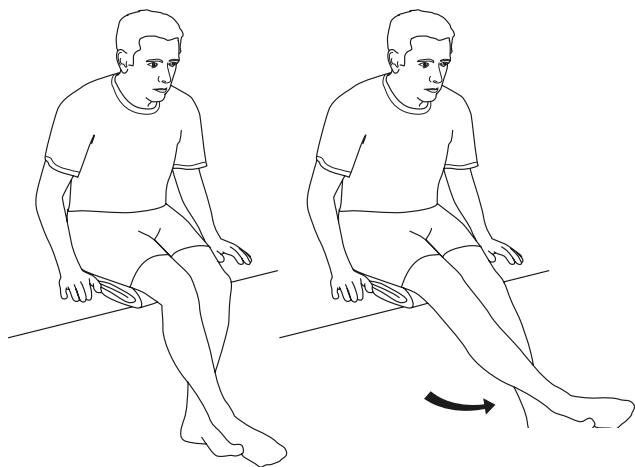
Sitting Exercises

Knee Extension/Flexion



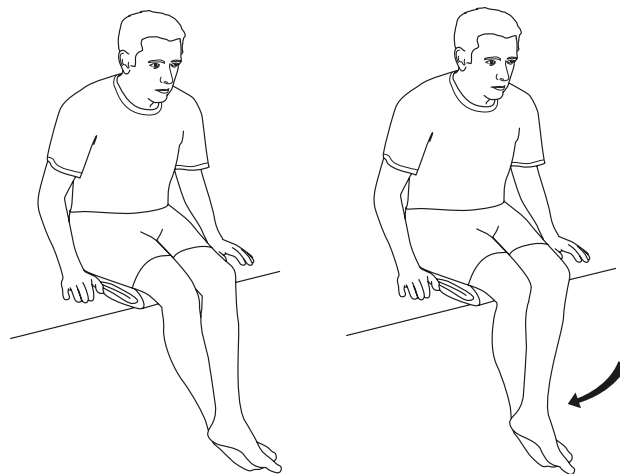
Raise your foot off the floor and straighten your knee as much as possible. Lower your leg to the floor slowly, then bend your knee as far back as you can.

Larrick's Exercise: Extension



Cross your ankles, keeping your non-surgical leg beneath your surgical leg. Try to raise that leg to a straight position, using your other leg to help. You should feel a mild tension or stretch behind your knee. Hold for 10 to 20 seconds.

Larrick's Exercise: Flexion



Cross your ankles, keeping your surgical leg beneath your non-surgical leg.

Try to bend your surgical knee, using your other leg to help. You should feel a mild tension or stretch in the front of your knee. Hold for 10 to 20 seconds.

The background features a soft-focus bokeh of light green and yellow circles, overlaid with several sharp, vibrant green leaves from a tree branch in the upper portion of the frame.

**Thank you for choosing Mount Carmel
for your knee replacement surgery.**



MOUNT CARMEL

March 2021