



live your life.



Knee Replacement Surgery Guide

Our Mission

CCM Health provides exceptional patient care that focuses on improving the health and well-being of those we serve.

Our Vision

CCM Health will be the health and wellness leader and the employer of choice in our region.



live your life.

Thank you for choosing CCM Health!

Thank you for choosing to have your joint replacement surgery completed at CCM Health. Pain and limited mobility affect millions of people and we are committed to helping you reach your goals and regaining positive quality to your life.

This information guide is designed to help give you the necessary tools and understanding of joint replacement surgery to enhance your recovery effort. Our goal is to help you and your support system ensure that you are prepared and ready to achieve the best outcome possible.

The information provided is intended to help prepare you for success. By completing this education, you are starting your joint replacement journey in the right way.

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Health Care Team



Rodney Brandt, MD
Orthopedic Surgeon



Anthony Nwakama, MD
Orthopedic Surgeon



Shayna Lovdahl, PA-C
Orthopedic Physician Assistant

Your Orthopedic Surgeon will:

- consult and assess your surgical needs,
- complete your surgery,
- provide post-surgical aftercare,
- follow up with you to ensure your best outcome.

Your Orthopedic Physician Assistant will:

- assist in your surgery,
- evaluate your progress and provide care after your joint replacement surgery.

Your Primary Care Provider/Hospitalist will:

- round on you daily during your hospital stay to evaluate and talk about your progress and goals.

Your Joint Replacement Navigator (Registered Nurse) will:

- direct all before and after surgery processes, including:
 - provide education prior to surgery,
 - perform a review of your medications,
 - coordinate pre-operative appointments,
 - answer questions that you may have.

Your Operating Room Team

Your Registered Nurse will:

- admit you on the day of surgery and prepare you for your procedure,
- provide education before and after surgery,
- provide continual assessments for safety and positive outcomes.

Your Certified Registered Nurse Anesthetist (CRNA) will:

- provide anesthesia care during your surgery,
- provide pain and nausea medications, if needed, after your surgery.

Your Surgical First Assist will:

- support your surgeon with the surgical procedure.

Your Certified Surgical Technician will:

- assist your surgeon with instrumentation during your surgery.

Your Medical/Post-Surgical Team

Your Nursing Staff (RNs and LPNs) will:

- provide care for you while you are in the hospital,
- help manage postoperative pain and prevent complications,
- continue providing education during your hospital stay,
- help you achieve your goals.

Your Certified Nursing Assistants (CNA) will:

- assist your nurse(s) with providing routine daily cares, hygiene, and room upkeep.

Your Physical Therapist will:

- evaluate your mobility after surgery,
- provide coaching and guidance to perform safe physical activity and exercises,
- assess your home needs to help you be successful at home.

Your Occupational Therapist will:

- assist you in recovering and improving skills needed for daily living tasks,
- be a great resource to identify special equipment needed in the hospital or home.

Your Discharge Planner will:

- assist you in being discharged from the hospital,
- coordinate with your health care team to reach discharge goals,
- assist in arranging extended care if unable to be discharged to your home,
- be a great resource for questions related to hospital discharge, community resources, and aftercare plan.

Your Support Person/Coach will:

- be a positive and supportive person to help you meet your goals before and after surgery,
- be involved with your care and education.

Pre-Surgery Time Line

Two to four weeks prior to surgery:

- If not already scheduled, schedule your pre-operative History and Physical Exam with your primary care provider within 30 days of your surgery date.
- Start taking a multivitamin daily if okay with your primary care provider.
- Start doing your pre-operative exercises on both legs. Exercises found on page 10.
- Make sure dental work is up-to-date.
This will help prevent a blood infection which could travel to your new joint.
- It is recommended to stop smoking and using tobacco products. Nicotine affects your body's ability to fight infection, increases respiratory difficulties, and slows bone healing.
Talk with your provider about options to assist in quitting tobacco use.
- Refer to page 12 and prepare your home for after-surgery.

One week prior to surgery:

- Stop taking all herbal supplements.
- If taking a blood-thinning medication, follow provider instructions on when to stop.
Examples of these medications include Warfarin, Plavix, Xarelto, and Eliquis.
- Make sure to protect your skin. If you notice any new skin issues such as scratches, cuts, or rashes, specifically on the leg the surgery is planned for, contact the CCM Health Surgery Department immediately at (320) 321-8155.
- DO NOT** shave surgical area prior to surgery.

Two to three days before surgery:

- Pack your supplies for the surgery. Refer to page 13 for more information.
- If you have a walker and other assistive devices, prepare to bring them on the day of surgery.
- A registered nurse from the surgery department will call you one to three days before your surgery is scheduled to give you further instructions and your scheduled arrival time.

The night before surgery:

- Do not eat or drink anything after midnight unless instructed to do so by your provider or the surgical registered nurse. This includes avoiding chewing gum or hard candy.
- Do not use any tobacco products.
- Complete the pre-operative antibacterial shower per instructions on page 14.

The morning of surgery:

- Complete the pre-operative antibacterial shower per instructions on page 14.
- Take your medication as instructed by your provider.
- Pre-operative instruction:**
 - Do not eat or drink anything after midnight.
 - You may brush your teeth, swish and spit.
 - If you wear dentures, do not secure them firmly in your mouth. You will be asked to remove them for surgery.
 - Remove all valuables and jewelry.
 - Do not apply any lotion, deodorant, make-up, or leave-in hair products.
 - Wear glasses instead of contacts, if possible.

Contact your Joint Replacement Navigator or the CCM Health Surgery Department if:

- You develop a cold, fever, or any other acute illness.
- You develop a new skin condition such as rash, scratch, or cut on the operative leg.
- You experience any change in your medical condition.

Before Surgery Checklist

- Schedule a pre-op History and Physical Exam with your primary care provider.
- Prior authorization will be completed by CCM Health staff before your surgery is scheduled, however, not all insurance companies pay 100% of all surgery, hospital, and therapy costs. Call your insurance company to answer any coverage and financial questions you may have.
- Have an up-to-date list with all your prescription medications and supplements, including the strength and what time of day you prefer to take them.
- Perform Physical Therapy exercises before surgery as described in this information guide. These can be found on pages 10-11 and 25-31.
- Complete a safety walk-thru of your home before surgery. See the Preparing Your Home section on page 12.
- Pack your hospital bag.
 - Loose-fitting comfortable clothes
 - Toiletries
 - Entertainment items (books, tablet, knitting, etc.)
 - Specialty medical devices (such as a C-PAP machine)
- Complete Chlorhexidine wash the night before and morning of surgery, and follow any other preoperative instructions you receive. Bathing instructions can be found on page 14.

History and Physical Exam with Primary Care Provider

Once your surgery is scheduled, you will need to have a History and Physical Exam completed by your primary care provider. This appointment must be completed within 30 days of your surgery date.

If a history and physical is not completed before surgery, your procedure will need to be rescheduled.

Your provider will examine you to determine if you are in appropriate physical condition to go through surgery and anesthesia. Tests that your provider may ask you to complete at this appointment include:

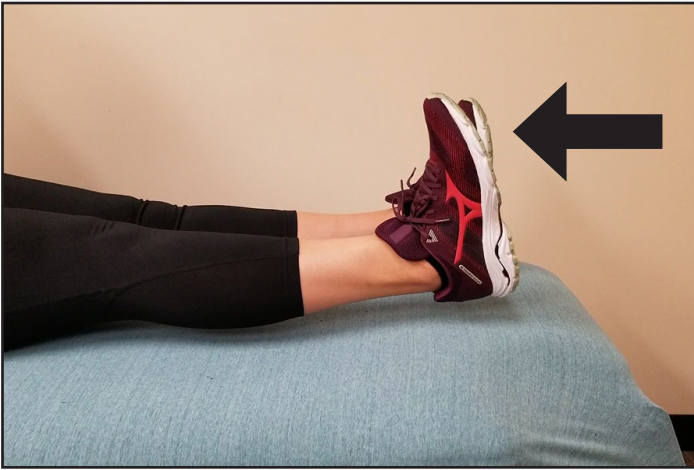
- Blood work
- Urine analysis
- X-ray
- Electrocardiogram

If abnormal results are found, your provider will discuss these with you and order additional tests as needed to ensure your safety before surgery.

Physical Therapy Exercises

Knee Exercises | Before Surgery

ANKLE PUMPS



Relax leg. Gently bend and straighten ankle. Move through full range of motion.

Repeat _____ times. Do _____ times per day.

QUAD SETS



Tighten muscles on top of thigh by pushing surgery knee down into bed. Hold 5 seconds.

Repeat _____ times. Do _____ times per day.

HAMSTRING SETS



Bend surgery knee slightly. Push heel into bed. Hold for 5 seconds.

Repeat _____ times. Do _____ times per day.

HEEL SLIDES



Slide heel of your surgery leg toward your buttocks, bending the knee.

Repeat _____ times. Do _____ times per day.

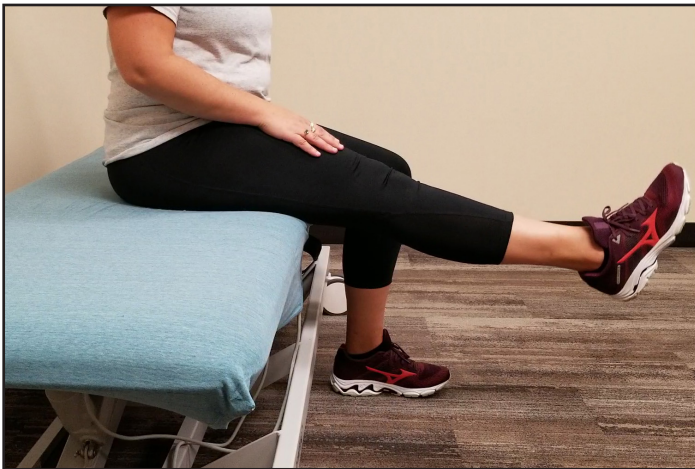
STRAIGHT LEG RAISES



Bend knee of good leg, rest foot on the bed. Tighten muscle on top of surgery leg. Keeping knee locked, lift surgery leg 8-10 inches from bed.

Repeat _____ times. Do _____ times per day.

LONG ARC QUADS



Sit on edge of chair or bed. Straighten knee of surgery leg. Hold 3-5 seconds and lower slowly.

Repeat _____ times. Do _____ times per day.

HIP ABDUCTION



With kneecap and toes pointed toward ceiling, slide surgery leg out to side and back. Do not cross midline.

Repeat _____ times. Do _____ times per day.



Scan with your smartphone or tablet to visit our YouTube Channel today and watch all the pre-surgery exercises!

Preparing Your Home

- Move furniture as needed to provide easy access to the bathroom, bedroom, and kitchen with a walker. A 26-28" width walkway is needed for most standard walkers.
- Make sure all sidewalks and walkways to your home are free of ice and snow as these are fall hazards.
- Make sure all walkways are free of clutter, throw rugs, or loose carpets as these can pose a tripping hazard.
- Remove electrical/phone cords from walkways.

Things to consider:

- Place nightlights in the bedroom, bathroom, and hallways to avoid tripping or bumping into things at night.
- Use a bed with a firm mattress, if available.
- Prepare meals ahead of time. Freeze in single-serving containers, have easy-to-fix options available at home, or consider utilizing Meals-on-Wheels.
- Arrange all items frequently used for easy reach/access such as meal prep items, clothing, medications, and personal hygiene items.
- Acquire a shower chair or bench to use in the bathroom along with a hand-held shower head. Place non-slip strips or mats in the shower or tub.
- Find a chair in your home that will allow you to sit comfortably and allow you to get in and out easily.
- Install handrails on your steps, if necessary.
- Install grab bars near your shower and toilet.
- Prepare a sleeping area on the main level if your bedroom is not on the main level.
- Arrange to have someone collect your mail and take care of pets or loved ones while you are in the hospital.
- Arrange to have someone assist with things such as taking out the garbage, grocery shopping and housekeeping for up to a few weeks after surgery.
- Acquire additional adaptive equipment such as a sock-aid or a reacher/grabber device, and possibly a toilet riser or commode.*
- Sock aids and reacher/grabber devices are available during your inpatient stay if you do not have your own.

*Depending on your insurance, some adaptive equipment may be covered, please inquire with your insurance company regarding specific coverage and requirements.

Additional options for purchasing personal adaptive equipment include Walmart and Amazon.

Checklist of Items to Bring to the Hospital

- Your insurance card, prescription card, and photo ID.
- Your Joint Replacement Guide.
- Personal bag (shirt, pants, underwear, pajamas). Clothes should be loose fitting and comfortable.
- Comfortable slip-ons or walking shoes. Slip-on shoes should be relatively secure.
- Toiletry items (soap, shampoo, toothbrush, denture care items, deodorant, electric razor, etc.)
- Any free time activities you like, such as: books, magazines, games, needlework, tablet/laptop, etc.

If you have the following, please bring as well:

- Walker or other personal mobility items you normally use.
- Adaptive equipment such as a sock aid or reacher/grabber.
- Cell phone and charger.
- Eyeglasses, contact lenses/case, hearing aids, batteries, and case.
- C-PAP Machine (if applicable).

Please leave at home for safety:

- Jewelry and valuables (rings, earrings, necklaces).
- Credit card, checkbook, and large sums of cash.
- Prescription medication, unless directed otherwise.*

*While you are in the hospital, all prescribed medications will be dispensed to you from our in-house pharmacy.

Pre-operative Antibacterial Bathing Instructions

You will be given an antibacterial soap called chlorhexidine gluconate (CHG) at your clinic visit. A common brand name for this soap is Hibiclens.

If you are allergic to CHG, use liquid Dial antibacterial soap instead.

Instructions for showering:

Shower with CHG two times before surgery.

- The evening before your surgery.
- The morning of your surgery.

Do not shave the area of your body where your surgery will be performed.

Start each shower or bath by washing your hair with your normal shampoo and conditioner.

Rinse your hair and body thoroughly after you wash your hair to remove the soap residue. Do not use leave-in conditioner styling agents.

Apply the CHG soap to a wet clean washcloth and wash your entire body only from the neck down.

To avoid injury or burning, do not use CHG near your eyes or ears.

- Wash thoroughly, paying special attention to the area where surgery will be performed.
- Wash your body gently for 5 minutes. Do not scrub your skin too hard.
- Rinse your body thoroughly.
- Pat yourself dry with a clean, soft towel.
- Do not use lotions, powder, or deodorants.
- Dress in clean, loose-fitting, comfortable clothes.





Arriving at the Hospital for Surgery

Come to the main clinic entrance to register for your surgery. While registering for your surgery, you may be asked to present your insurance card, ID card, or Medicare ID.

Once registered, you will be directed to the surgery waiting area until a registered nurse calls you back to your pre-operative room. The nurse will then greet you and start the admission process. You will be in the pre-operative area preparing for surgery for approximately two hours.

A nurse anesthetist will assess your physical condition, medical history, and discuss anesthesia options best suited for you. Types of anesthesia that are generally used during these procedures are:

- **General anesthesia** - deep sleep involving a breathing tube.
- **Spinal anesthesia** - numbing of the waist down and lighter sleep not involving a breathing tube.

When it is time for surgery, you will be taken to the operating room and your family can wait in the waiting room. You will be in the operating room for approximately two to three hours.

When your surgery is finished, you will be taken to the surgical recovery area. You may feel sleepy, cold, have a dry mouth or a sore throat, be nauseous, or have some discomfort. These feelings are normal.

Registered nurses will monitor your vital signs and your comfort level closely. Once you are awake enough and it is considered safe, you will be transferred to your inpatient hospital room. Patients are typically ready for transfer out of the surgical recovery area within one hour.

Your Hospital Stay

Once you arrive at your hospital room, the nursing staff will greet you, help you get settled, and continue your surgical aftercare.

An ice pack or Polar Care machine will be regularly used on your new joint. Ice is very important to help reduce post-operative pain and swelling.

There will be a big dressing and/or wrap around your surgical knee.

Sequential Compression Devices (SCD) will be used on your lower legs to help prevent blood clots.

If needed, you may have oxygen running to your nose in a small clear tube or through a mask. Your oxygen, heart rate, blood pressure, pain, and overall comfort will be monitored frequently by your nurse.

Pain is expected with joint replacement surgery, and medications will be provided to you to help make you as comfortable as possible.



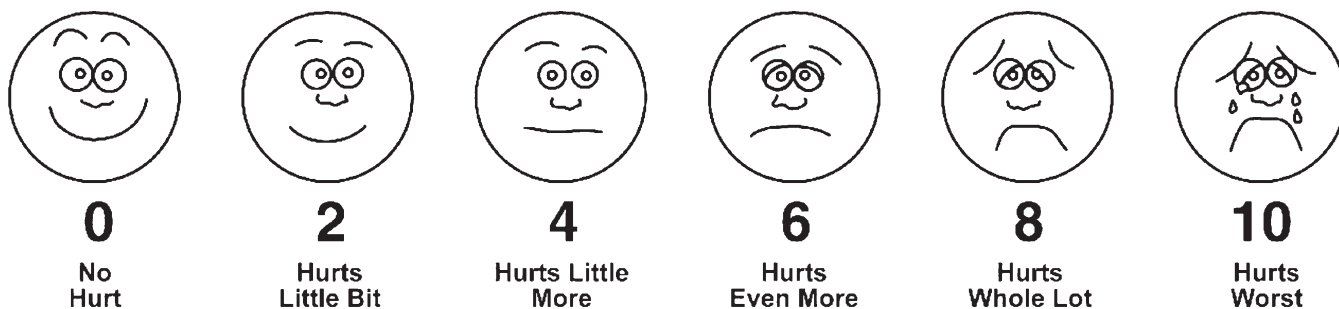
Pain Management

Pain and discomfort are expected after knee replacement surgery. It is everyone's goal to assist you in controlling your pain. The better your pain is controlled, the more quickly you will recover.

Having a realistic expectation of pain and discomfort is important to your success. You must remind yourself that each day you will feel better. It is important to set goals and remember that the end goal will be worth the challenging times ahead.

Rating your pain or discomfort is important to your success in recovering from surgery. Everyone is different with the pain that they experience. **It may not be realistic to expect or achieve no pain or discomfort in the early days after surgery, but it should be tolerable.**

You will be asked often to rate your pain using the 0-10 pain scale. Zero being no pain and 10 being the worst pain ever. The faces below may be used to assist in rating your pain.



It is important to stay on top of your pain control. Maintaining pain levels at or below five out of 10 is typically the goal, as it is easier to maintain lower levels of pain rather than reduce more intense spikes of pain (greater than six out of 10). Pain medications may not be given on a regular schedule, you may need to request them.

Nursing will assist you in choosing the best medication option based on the type and level of pain you are experiencing. Oral pain medication will take 20-30 minutes before it starts working. Medication provided through your IV will work within minutes. If you feel a pain medication is not helping, talk with your nurse or provider.

Controlling Pain and Discomfort

Your pain and discomfort should decrease as your swelling reduces, and you will likely see improvement of your mobility.

- **Rest:** Take breaks when needed. Dividing larger tasks into smaller parts with breaks can be more comfortable than trying to push through a big project from start to finish.
- **Ice:** Apply ice to your surgical site at least four times/day for 20 minutes. More frequently is better, if able. At a maximum, this can be done hourly.
- **Compression:** Using your compression stockings will help decrease swelling. You can expect to wear these for four to six weeks after surgery, unless otherwise directed by your provider.
- **Elevation:** Regularly positioning your affected leg higher than your heart will help decrease swelling. This can be done both during the day and at night, if able.
- **Activity:** It is important to get moving as soon as possible after surgery. It may feel uncomfortable, but over time the pain will improve, and you will heal more quickly. You will get out of bed the day of surgery with help. Physical Therapy and Occupational Therapy will begin working with you either the day of surgery or the day after surgery. Exercise and activity instructions after discharge are included in this guide on pages 25-30, and your physical therapist will review these with you.
- **Distraction:** Focusing on activities can help you manage your pain or discomfort. Watch TV, read a book, listen to music, or visit with your support people.

To have the best results in controlling discomfort, multiple approaches will need to be used.

A positive attitude and realistic expectations can go a long way!

Your Hospital Care

Day 0: Day of Surgery

After surgery and post-operative recovery, you will be transitioned to your hospital room. Nursing staff will get you settled into your room and continue to monitor you throughout your stay. Physical Therapy and Occupational Therapy will come to evaluate you the day of surgery or the day after surgery. Therapy staff will have you up and out of bed (and walking!), if appropriate. Expect that you will be up to the chair for supper that evening.

Day 1: After Surgery

A physician will see you each day you are in the hospital. This may be your surgeon, primary care provider, or hospitalist. Physical Therapy and Occupational Therapy will continue to work with you and establish your exercise program. Meals should be eaten while sitting up in a chair. If you have IV pain medication, nursing staff will work with you to transition to oral medications. You will also be using your incentive spirometer (IS) to prevent pneumonia and SCDs to prevent blood clots. If your pain is controlled, you will be able to go home.

Day 2: After Surgery

You will be ready for discharge. Your physician, care management coordinator, and therapy team will evaluate your progress and determine if you are ready to go home and arrange for your discharge.

Dedication to your exercises and communication regarding any difficulty or discomfort you experience will help in determining the best discharge plan for you. Taking breaks when needed can also be helpful during this time. You will continue to use your incentive spirometer to prevent pneumonia.

Planning for Discharge

If you are going directly home:

You will need to arrange a ride home after leaving the hospital. Please coordinate this with your support person/coach prior to your surgery. You will receive verbal and written instructions regarding your medications, cares after surgery, and your follow-up appointments. Your surgeon or discharging provider will determine if and when you should begin outpatient physical therapy. The CCM Health Rehabilitation Services Department, or other facility of your choice, will contact you to schedule your outpatient therapy appointments when the orders are received. Follow instructions provided regarding bandage changes. Stitches or staples on your surgical incision will be removed by a nurse or provider at your follow-up appointment.

If you are going to a Swing Bed or skilled nursing facility:

When changing to Swing Bed status you will likely remain in the same hospital room. If you are leaving our facility, someone must drive you or we will help you arrange transportation. Your discharge instruction and orders will be given to the nursing staff. Your primary care provider, along with your surgeon, will still care for you.

Preventing Complications

Blood Clots

Blood clots can develop after major surgery due to a decrease in physical activity.

- Do several sets of 10 ankle pumps throughout the day.
- You should have sequential compression devices (SCDs) on your lower legs after surgery. These pumps help push blood from your lower extremities back to your heart, especially during the short period after surgery when you are less mobile.
- Once you are able to walk regularly, you will receive compression stockings. These should be worn during the day for four to six weeks after surgery. Compression stockings help push blood back to your heart, reducing swelling and discomfort.
- Your surgeon may prescribe a blood thinner while you are in the hospital.
- You will be highly encouraged to stay active while in the hospital with physical therapy, occupational therapy, and nursing staff.
- Report any tenderness or soreness in the back of the calves to your nurse.

Pneumonia

- An incentive spirometer (IS) is an important tool in the prevention of pneumonia. An IS helps you breathe deeply and keeps your lungs strong. Respiratory therapy or a nurse will educate you on the use of an IS the day of surgery and throughout your hospital stay.
- Do several repetitions on your IS at least three times per hour while you are awake.
- Deep breathing and coughing also assist in keeping your lungs clear. Two deep breaths followed by a cough multiple times throughout the day is a good goal to set.
- Being active and changing positions is important in maintaining healthy lungs. Sitting up and moving about in your room will help prevent pneumonia.

Infections

- You will receive an antibiotic before surgery and for 24-hours after surgery. Your surgeon and primary care provider will address whether more antibiotics are needed throughout your hospital stay.
- Keep your incision site clean and dry. Showers are OK. Do not submerge the incision site under water until after your follow-up appointment.
- Report signs and symptoms of infection, such as:
 - redness and tenderness surrounding the surgical site,
 - green or yellow drainage from your incision,
 - fever of 101 degrees or greater.

Constipation

- Pain medication and inactivity can cause constipation.

To help prevent constipation:

- drink plenty of non-caffeinated fluids,
- eat foods high in fiber such as fruits, vegetables, and whole grains,
- use stool softeners as recommended by your provider (Miralax and Metamucil are examples),
- be physically active.

Falls

- Multiple things can increase your risk for falls, including:
 - pain medication,
 - unfamiliar environments,
 - general instability.
- Always ask nursing staff for assistance with walking and transferring until a physical therapist has cleared you to do this independently.
- If you are ever unsure, call for assistance.

Pressure Ulcers

- Pressure ulcers can develop over bony body parts such as elbows, heels, and buttocks with prolonged immobility.
- Ways to prevent pressure ulcers include:
 - frequent changing of positions,
 - using lotion on your skin,
 - maintaining proper nutrition and drinking fluids,
 - being active,
 - decreasing opportunities for friction and sheering of the skin.
- If you have pain in any bony area, notify nursing staff.

Rehabilitation Services

Occupational Therapy

- You will be visited by an Occupational Therapist (OT) either the day of surgery or day after surgery. This visit will include an evaluation to assess your needs and discharge plan, as well as a physical assessment of your abilities.
- Goals will be set by you and the evaluating OT, and will be achieved before safe discharge to home or a short-term rehab facility.
- You will be visited by an Occupational Therapist or Certified Occupational Therapy Assistant one to two times per day to work toward your goals.
- Typically, you will be assisted to achieve mobility needed to safely and independently get in and out of bed, to and from the bathroom, on and off the toilet, and in and out of a chair. This will be together with Physical Therapy, usually in separate sessions.
- Occupational Therapy staff will teach you how to be as independent as possible with activities of daily living, including getting dressed in clothing you brought from home, and training you to use adaptive equipment as needed.
- Adaptive equipment you may need, such as a reacher/grabber or sock aid, will be made available to you during your stay unless you already have these items.
- You will work toward safely completing grooming and hygiene tasks as well as toileting independently.
- During these sessions, recommendations will also be made for toileting equipment you may need for home, such as a riser or support bars.
- During one of the last days of your hospital stay, you will likely complete a shower with Occupational Therapy staff. This is done so safety can be assessed and recommendations can be made for the equipment needed for your home.
- If you are going to have assistance in your home from a spouse or caregiver, Occupational Therapy staff may request they attend an occupational therapy session for educational purposes.
- If you will be home alone after discharge, occupational therapy sessions may include working on higher level tasks, such as meal preparation and home-making.
- Occasionally, there is a need for additional occupational therapy after you return home. This will be determined during your hospital stay, and arrangements will be made if necessary.

Physical Therapy

You will meet your Physical Therapist (PT) either the day of surgery or the morning after surgery. They will complete an evaluation and help you get on your feet, up to the chair, and started with your exercises. Once up to the chair, you may rest there for one to two hours and eat your supper. If you begin to feel dizzy while in the chair, please let your nurse know. You will be seen by a PT or Physical Therapist Assistant (PTA) two times per day.

Each visit, you will progress in range of motion, strength, and the distance you are able to walk. The PT or PTA will collaborate with your surgeon or provider regarding recommendations for the most appropriate assistive device to use after discharge, usually a front-wheel walker or four-wheel walker, as well as options for continued physical therapy services.

Typical Physical Therapy Goals:

Day 0:

- Physical Therapy Evaluation,
- Bed Mobility and Transfers: Moderate Assist,
- Gait: 5-10 ft. with Moderate Assist with Assistive Device,
- Exercises: Active Assisted Range of Motion (AAROM) x 10 reps.

Day 1:

- Bed Mobility and Transfers: Minimum Assist to Independent,
- Gait: 50-100 ft. with Minimum Assist with Assistive Device,
- Exercises: Minimum Assist,
- Stairs: Min to Moderate Assist.

Day 2:

- Bed Mobility and Transfers: Independent,
- Gait: 150-200 ft. Independent with Assistive Device,
- Exercises: Minimal Assist or with Supervision, able to bend to 90 degrees,
- Stairs: Independent or with Supervision.

Rehab Care

- You will likely be seen on the day of surgery, and the Physical Therapist may get you up on your feet that same day, if appropriate.
- It will be uncomfortable. This will gradually improve, and remember you are trading a pain that was not going to end for one that will.
- Ice will be very important once the ace bandages are removed. Apply for twenty minutes per hour, on the skin. If you do not dislike the first five minutes, it is not cold enough.
- Goals are to be independent with bed mobility, transfers, walking functional distances, and stairs (if necessary) prior to discharge.
- TED stockings may be used for swelling and to prevent blood clots.
- Your provider will decide when you should stop or start using the compression stockings.
- Your provider will tell you when you can drive. Technically, if you are taking a narcotic pain medicine, you are under the influence.
- If you do not have a treadmill at home, you should find a place to walk after your discharge. CCM Wellness Center, local stores, TACC, health clubs, and Montevideo High School are places you can walk. Walking outside is good too, as long as the weather allows.

Early Mobilization

- Plan to be out of bed on the day of surgery
 - At least sit up when safe to do so and dangle legs off the side of bed.
 - If possible, transfer from bed to chair with assistance.
 - A MEDICAL PROFESSIONAL NEEDS TO BE PRESENT FOR TRANSFERS until told otherwise by those medical professionals.
- Keys to early mobilization
 - Pain control.
 - Vitals signs stable.
 - Anesthesia or blocks have worn off.

Physical Therapy Exercises

Knee Exercises | After Surgery

ANKLE PUMPS



Relax leg. Gently bend and straighten ankle. Move through full range of motion.

Repeat _____ times. Do _____ times per day.

QUAD SETS



Tighten muscles on top of thigh by pushing surgery knee down into bed. Hold 5 seconds.

Repeat _____ times. Do _____ times per day.

HAMSTRING SETS



Bend surgery knee slightly. Push heel into bed. Hold for 5 seconds.

Repeat _____ times. Do _____ times per day.

HEEL SLIDES



Slide heel of your surgery leg toward your buttocks, bending the knee.

Repeat _____ times. Do _____ times per day.

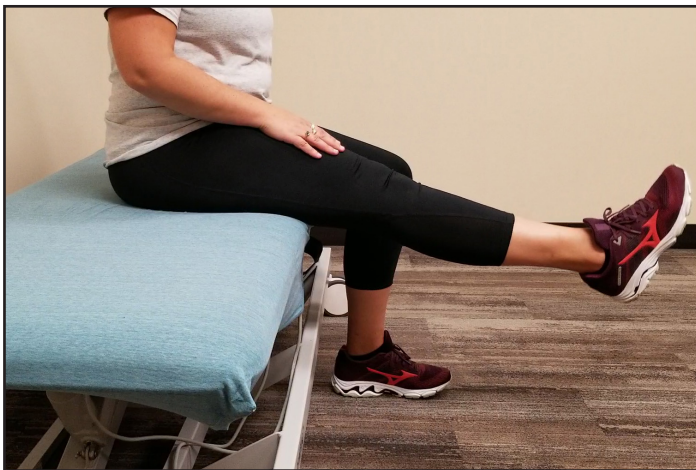
STRAIGHT LEG RAISE



Bend knee of good leg, rest foot on the bed. Tighten muscle on top of surgery leg. Keeping knee locked, lift surgery leg 8-10 inches from bed.

Repeat _____ times. Do _____ times per day.

LONG ARC QUADS



Sit on edge of chair or bed. Straighten knee of surgery leg. Hold 3-5 seconds and lower slowly.

Repeat _____ times. Do _____ times per day.

HIP ABDUCTION



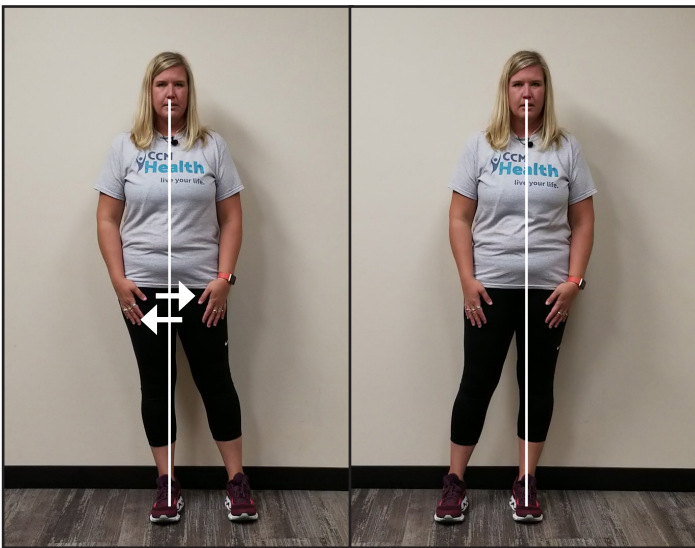
With kneecap and toes pointed toward ceiling, slide surgery leg out to side and back. Do not cross midline.

Repeat _____ times. Do _____ times per day.

Knee Replacement

- Early range of motion is critical to a good outcome. It will be uncomfortable, but you cannot wait for the pain to stop before you begin. Go to the barrier and stay for a bit, then back off.
- Straightening is most important, followed by bending.
- Don't relax or sleep with a pillow under your knee (resulting in a slightly bent knee – this provides a greater opportunity for swelling in the joint).
- Be aware that sometimes when you elevate the head of your bed, the bed bends up under your knee.
- Physical Therapy staff will work with you to get your knee fully straight, and also bent at least to 90 degrees.
- Stairs – After surgery, it is most comfortable to step up first with the stronger leg and step down first with the weaker leg.
- “Up with the good, down with the bad” is an easy way to remember the technique for stairs. Lift and lower with the stronger leg. You may find it easier to descend backward.
- Always use a railing when available.

FRONTAL PLANE WEIGHT SHIFTS



Shift your weight from one foot to the other.
Keep your nose over your navel.

Repeat _____ times. Do _____ times per day.

FUNCTIONAL HIP ROTATION



Place your hands on your hips, and both shift your weight and turn to your right. Keep your navel and your nose pointing in the same direction. Allow the backside heel to lift up naturally. Smoothly reverse directions, both shifting your weight and turning to your left. This should not cause any pain.

Repeat _____ times. Do _____ times per day.

STRIDE STANCE WEIGHT SHIFTS



Start with one foot about one step in front of the other foot. Shift your weight from the back foot to the front foot to simulate walking. The front knee should remain straight and the back heel should come off the ground. Rock back and forth, shifting your weight from one foot to another. Reverse and repeat with the other foot in front.

Repeat _____ times. Do _____ times per day.

SQUAT



While maintaining a neutral lumbar spine (a slight curvature), squat as if you were about to sit on a chair. Do not allow your knees to move in front of your toes.

This technique should be used whenever you lift anything that cannot be handled with one hand.

Repeat _____ times. Do _____ times per day.

GAIT THOUGHTS

Walk faster.

If walking slower than your normal speed, try walking closer to your usual speed.

Walk with an even cadence.

Think of walking to the beat of a drum or music.

Let one step feed the next.

This creates a more fluid walk, rather than choppy steps.

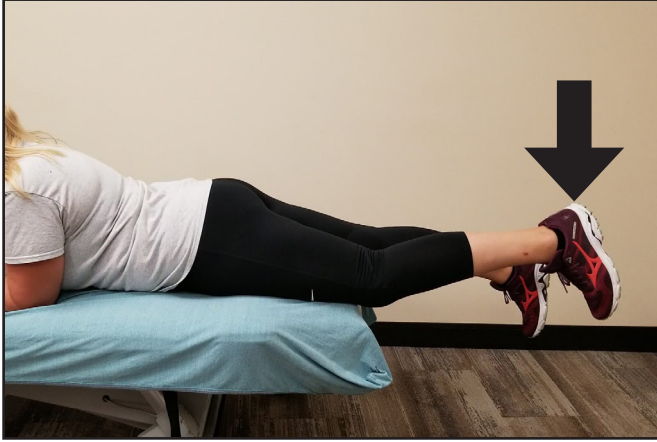
Take a longer step (with your surgical leg) to make sure you are landing on your heel and not flat-footed.

EXTENSION STRETCHES

Put your surgical leg in any one of the positions below. Relax and let it hang straight.

Hold _____ minutes. Do _____ times per day.

Do not be aggressive with this. A gentle, but frequent and persistent approach works better.

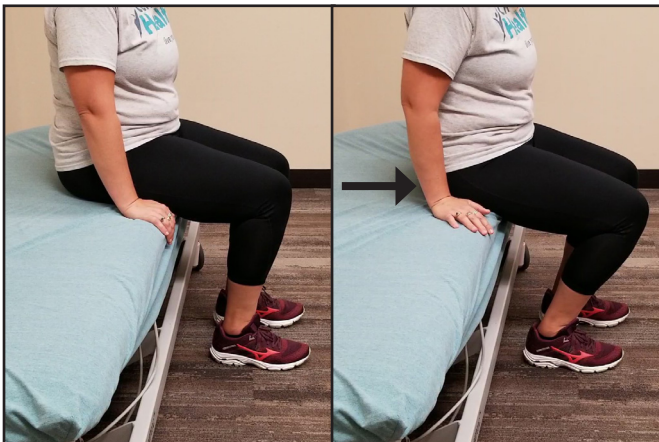


FLEXION STRETCHES

Bend your knee as far as it will go with mild discomfort. Do not go to sharp pain. Get to the barrier and hold 30 seconds.

Repeat _____ times. Do _____ times per day.

Do any of the pictures below. Frequent and persistent is important.



Scan with your smartphone or tablet to visit our YouTube Channel today and watch all the post-surgery exercises!

CAR TRANSFER

- Position seat back as far as it goes.
- Tilt seat back.
- Use one hand to stabilize on dash, and the other hand on the seat back, seat base, or handle above your head.
- Slide your buttocks on to the seat first, then lift your legs in to the vehicle.
- Placing a garbage bag or pillow case on the seat will assist with the slide, if needed.



Starting Position



Sitting Position

SIT/STAND TRANSFER



Stand-to-Sit: Simply continue the squat, keeping your trunk tipped forward until your bottom is on the seat. Reach back with your hands for the surface on which you are going to sit.

Sit-to-Stand: Use your arms to help you lean forward until your navel is between your feet and your nose is over your toes. Maintain that forward lean until your bottom is off the seat.

Before Leaving the Hospital

While you are in the hospital, a health care team consisting of your physician, nurses, physical therapist, occupational therapist, and care management coordinator will work with you on discharge planning. Your therapy needs, prescriptions, and adaptive equipment needs will be reviewed.

Continuous evaluation of your strength and endurance levels along with your family resources, home environment, support systems, and insurance benefits will all be considered when planning for discharge.

For most knee replacement patients, four to six weeks of outpatient physical therapy is recommended.

Sometimes, outpatient physical therapy is not the best option for the patient. In these situations, home health therapy can be scheduled. If you have Medicare as your insurance carrier, qualification for home health therapy requires that you are homebound, meaning that it is a significant and taxing effort for you to leave the home, and there are few exceptions (church or doctor appointments). Once the patient is strong enough and no longer meets homebound criteria, the therapy can be transitioned to the outpatient setting.

If your recovery is taking longer than expected or you need increased support, you may be referred to a Swing Bed or a skilled nursing facility for a short time after leaving the hospital. This will allow you to receive extra therapy until you are ready to return home safely. The care management coordinator will help you make these arrangements during your hospital stay.

Returning Home

Your hospital stay will likely be **one to two days**, after which our goal is for you to return home. You will have been educated on the necessary techniques, exercises, and skills needed to help ensure a safe transition home.

When you first get home, it is not uncommon to have a decreased appetite, difficulty sleeping, or decreased energy level. This is all normal after having surgery, and as you improve, you will gradually return to feeling normal. The goal is to keep a positive attitude and remember some days will be more challenging than others.

Pain Management at Home

- **It is normal to have manageable pain after surgery.** To help manage your pain, you will receive a prescription for a narcotic pain medication. It is also helpful to add an over-the-counter anti-inflammatory, such as ibuprofen or naproxen, if it is ok with your primary care provider. Acetaminophen (Tylenol) is recommended at 1,000mg every eight hours if the narcotic prescription does not already have it included.
- Make a schedule to take your pain medications regularly. Be sure to take your pain medication at least 30 minutes before your physical therapy and performing your home exercise program.
- Time your pain medication and take a dose before going to bed. This may help keep you comfortable through the night and get better rest.
- Use ice packs to help with pain and swelling. **Swelling is expected.** Ice may feel particularly good before and after completing your home exercise program. You should ice your knee at least 20 minutes, four times per day; more is better if you have swelling.
- Be sure to elevate your knee when possible. This will help decrease swelling and improve comfort. Standing too long can cause increased swelling and pain. It is important to be active and walk, but pace yourself as you recover.
- Taking pain medication and being less active can put you at risk of constipation. Use stool softeners as recommended by your primary care provider. Be sure to eat plenty of fiber (fruits and vegetables). Also drink six to eight glasses of water each day.
- Continue to take a multivitamin everyday if it is OK with your primary care provider.

Prevention of Infection

- Wash your hands, especially before touching the bandages.
- Keep your incision covered until seen by your provider.
- Keep your incision clean and dry.
- Follow the bandage change instructions you were provided at discharge.
- Showering is permitted once you return home. Follow your instructions provided at discharge.
- No tub baths or soaking in a pool or hot tub is allowed until the incision line is healed.
- Notify your primary care provider or surgeon if you have signs of infection. These include:
 - A change in color or odor,
 - increased pain,
 - surrounding skin feels hot to the touch,
 - an increasing amount of redness around your incision.
- Call your primary care provider or surgeon if your temperature is higher than 101 degrees.
- Do not have any dental work, unless in an emergency, for three months after your surgery.
- Notify your dentist that you have had a joint replacement. You should take a prophylactic antibiotic when you have dental work or any other invasive procedure to help prevent mouth bacteria from traveling in your blood stream to your artificial joint.

This will need to be done for the rest of your life.

Home Exercise Program

- Continue to do your exercise routine two times per day.
- Keep walking; this will help your muscles get stronger. You will need a walker to do this for your safety. Keep using your walker until your physical therapist or surgeon tells you otherwise.

Blood Clot Prevention

When you go home, you will still be at risk for blood clots because you will not be at your “normal” physical activity. Compression stockings, blood thinners, ankle pumps, exercises, and frequent walks will help you prevent a clot from forming.

- A pair of compression stockings will be given to you while you are in the hospital. These help to minimize swelling and help to decrease the risk of blood clots. They must be worn for the first four to six weeks following surgery. They should be worn on both legs and can be taken off at night when sleeping.
- Blood thinners (can be aspirin) will be prescribed. Keep taking your blood thinning medication as prescribed to prevent blood clots. The blood thinners may be administered orally or by injection in your abdomen.
- Try to change position once every hour while awake to prevent blood clots.
- When you take a prolonged car ride, make sure that you get out and walk for a few minutes every one to two hours. If flying, do ankle pumps often when sitting, and get up and walk in the aisle every one to two hours.
- Call your physician if you begin to experience calf pain, increased leg swelling that does not go down with elevation, or increased warmth or redness in the calf.
- Sometimes, an unrecognized blood clot can break off and travel to the lungs. This serious and possibly fatal condition is a pulmonary embolus. The signs are sudden chest pain, difficult/rapid breathing, shortness of breath, sweating, and confusion.

If you notice these symptoms call 9-1-1 immediately.

Considerations for After Surgery: Post-Acute Discharge Planning

Considering the questions below will help you and CCM Health staff work together to figure out a discharge plan that is best suited for your care needs.

Please mark your answers in the checkboxes below:

- Do you live alone? YES NO
- Will someone be staying with you upon discharge from the hospital? YES NO
- Is everything in your home on one level? YES NO
- Will someone be able to drive you to outpatient therapy appointments? YES NO
- Do you have a walker or will you need to borrow/purchase one? YES NO

Answers to the above questions will help determine which setting will be the safest and most beneficial transition for you after leaving the hospital.

Most often, patients transition back to their homes. While in the hospital, physical therapists and occupational therapists will work with you to improve functional abilities and teach adaptive ways of doing routine daily activities.

If more rehab is needed prior to returning home, the following options may be considered.

It is important to acknowledge that there are certain qualifying criteria for the following options that must be met in order to secure admission and ensure insurance coverage of further services.

Your Care Management Coordinator will work with you. Some options include:

- **Home Health Care:** Based on homebound status, a registered nurse (RN), home health aide, and/or PT and OT will work within your home. If you have Medicare parts A or B coverage, Medicare will cover 100% of the cost if it is documented by your doctor that in-home services are medically necessary and that you are homebound due to medical conditions that contribute to your normal inability to leave your home to participate in outpatient therapies. Otherwise, most other insurances require patients to privately pay for in-home services.
- **Skilled Swing Bed:** Skilled Swing Bed represents a status change from an acute level of care to one that allows for a patient to receive skilled nursing care in the hospital environment. In order to qualify for a Swing Bed stay, you **MUST** have a skilled need such as PT, OT, IV medications, etc.

Medicare part A will cover a skilled swing bed stay 100% if a patient has a qualifying three-night acute stay prior to change in bed status. Other insurance may cover the cost of the stay if prior authorization is obtained ahead of time.

- **Short-Term Rehab Stay at a Skilled Nursing Facility:** Patients may seek placement at a skilled nursing facility (SNF). Specific criteria must be met in order to be considered for admission to the facility and for insurance to cover the services you receive there.

If you feel that you will need placement at a skilled nursing facility once you discharge from the hospital, please research facilities that you would be interested in using. The Care Management Coordinator will assist in making referrals to those facilities that you identify as preferred.

Other Considerations:

- **Durable Medical Equipment (DME):** It is likely that you will need to use a walker for a short time following surgery. Often, patients know a friend or family member who has a walker that may be borrowed. Otherwise, Medicare will cover the cost of a new walker every five years. The Care Management Coordinator can work with you to see what insurance coverage options are for DME. Walkers can also be purchased at an out-of-pocket expense at pharmacies or medical supply stores.

If you already have a walker, please bring it with you to the hospital.

- **Transportation:** It is helpful to have someone identified ahead of time who will be able to pick you up from the hospital and bring you home – whether it is your spouse, friend, or neighbor. Transportation arrangements made with a company to provide services are not typically covered by insurance and therefore would need to be paid for out of pocket by the patient.
- **Meal Planning:** Once home, many patients find it helpful to have meals already prepared which will be easy to heat up or are ready to eat. Also available are community resources such as the Meals on Wheels Program sponsored by Prairie Five Community Action Council, which will deliver meals to your home. If this is an option that you would like to learn more about, please ask the Care Management Coordinator during your hospital stay.

Frequently Asked Questions

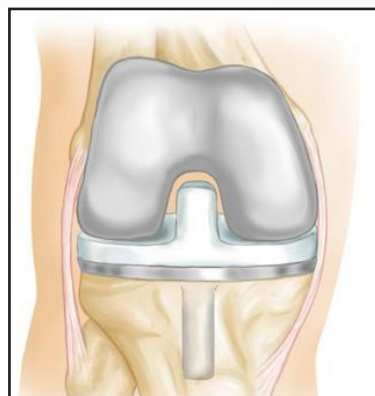
1. What is a knee replacement?

There are two types of knee replacements: a total knee replacement and a partial knee replacement

Total Knee Replacement:

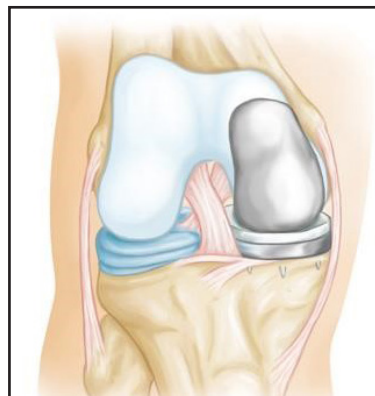
A total knee replacement is really a cartilage replacement with an artificial surface. The knee itself is not replaced, as is commonly thought, but rather an artificial substitute for the cartilage is inserted on the end of the bones.

This is done with a metal alloy on the femur and plastic spacer on the tibia and kneecap (patella). This creates a new smooth cushion and a functioning joint that does not hurt.



Partial Knee Replacement (hemiarthroplasty):

Partial knee replacement involves the same cartilage replacement as the total knee replacement, however just one half of the end of the femur is replaced instead of both sides.



2. What are the results of a total knee replacement?

90%-95% of patients achieve good to excellent results with relief of discomfort and significantly increased activity and mobility.

3. Am I too old for this surgery?

Age is not a problem if you are in reasonable health and have the desire to continue living a productive, active life. You may be asked to see your personal physician for an opinion about your general health and readiness for surgery.

4. How long will my new knee last, and can a second replacement be done?

We expect most knees to last more than 20 years. However, there is no guarantee, and 5-10% may not last that long. A second replacement may be necessary.

5. Why do they sometimes fail?

The most common reasons for failure is loosening of the artificial surface from the bone or infection.

6. Should I exercise before the surgery?

Yes. You should either consult an outpatient physical therapist or follow the exercises listed in this guide. Exercises should begin as soon as possible.

7. What are the major risks?

Most surgeries go well, without any complications. Infections and blood clots are two serious complications that are most concerning. To avoid these complications, we use antibiotics and blood thinners. We also take special precautions in the operating room to reduce risk of infections. The chances of this happening in your lifetime are 1% or less.

8. How soon will I get moving?

Depending on your post-op recovery, you will get up and out of bed with assistance from a physical therapist the same day of your surgery and hopefully up to a chair for supper that evening. The next morning you will get up, sit in a chair or recliner, and should be walking with a walker that day if you have not done so already.

9. How long will I be in the hospital?

Most patients will be hospitalized for one or two days after surgery. There are several goals that you must achieve before you can be discharged.

10. How long does the surgery take?

Surgery usually takes two to three hours to complete. Some of this time is used by the operating room staff to prepare for the surgery.

11. Do I need to be put to sleep for this surgery?

You may have a general anesthetic, which is a deep sleep. Some patients prefer to have a spinal or epidural anesthetic, which numbs your legs only and requires a lighter sleep. The choice is made together by you and the nurse anesthetist.

12. Will the surgery be painful?

You will have discomfort following the surgery, but we will keep you comfortable with appropriate medication. Your doctor will work with nursing to help control your discomfort.

13. Who will be performing the surgery?

Your orthopedic surgeon will do the surgery and may be assisted by a physician's assistant and surgical tech.

14. How long and where will my scar be?

The scar will be approximately four to six inches long. It will be straight down the center of your knee unless you have previous scars, in which case we may use the prior scar.

15. Will I need a walker or crutches or cane?

Yes. Post-operatively we recommend using a walker for increased stability and safety. You will eventually return to your previous assistive device, or no device at all.

16. Will I need any other equipment?

Yes. You may need a raised toilet seat or three-in-one bedside commode. A tub bench and grab bars in the tub or shower may also be necessary. An occupational therapist can help you decide what is needed.

17. Where will I go after discharge from the hospital?

Most patients are able to go home directly after discharge. Some may transfer to a Swing Bed or short-term rehabilitation facility.

18. Will I need help at home?

Yes. The first several days or weeks, depending on your progress, you will need someone to assist you. If you qualify, a home health care nurse can come to your house. It is helpful if family members or friends are available to help.

19. Will I need physical therapy when I go home?

More than likely. Your surgeon will determine if you will need physical therapy. We can help you arrange for physical therapy as an outpatient at the clinic of your choice. If necessary, we will arrange for a physical therapist to provide therapy at your home. The length of time required for this type of therapy varies with each patient.

20. How long until I can drive and get back to normal?

The ability to drive depends on whether surgery was on your right leg or your left leg and the type of car you have. If the surgery was on your left leg and you have an automatic transmission, you could be driving within two weeks.

If the surgery was on your right leg, your driving could be restricted as long as six weeks. Getting “back to normal” will depend somewhat on your progress. Consult with your surgeon or physical therapist for advice on your activity.

Your pain medication may determine how long before you can return to driving. If you are using narcotic pain medication, you may not return to driving until it is discontinued as this would be considered driving under the influence.

21. When will I be able to get back to work?

We recommend that most people take at least one month off from work, unless their jobs are quite sedentary and they can return to work with crutches. An occupational therapist can make recommendations for joint protection and energy conservation on the job.

22. How often will I need to be seen by my doctor following the surgery?

Two to three weeks after discharge, you will be seen for your first post-operative office visit. The frequency of follow-up visits will depend on your progress. Many patients are seen at six weeks, twelve weeks, and then yearly.

23. What physical/recreational activities may I participate in after my recovery?

You are encouraged to participate in low impact activities such as walking, dancing, golfing, hiking, swimming, bowling, and gardening.

24. Will I notice anything different about my knee?

Yes. You may have a small area of numbness to the outside of the scar which may last a year or more and is not serious. Kneeling may be uncomfortable for a year or more. Some patients notice some clicking when they move their knee. This is the result of the artificial surfaces coming together and is not serious.

**For more information regarding knee replacement surgery
please visit these resources.**



**American Academy of Orthopaedic Surgeons
Patient Education Site:
orthoinfo.org**



**Total Knee Replacement Animation:
bit.ly/3yjWeZv**



JOINT REPLACEMENT PROGRAM

824 N 11th Street, Montevideo, MN 56265

ccmhealthmn.com