

Patient Guide for

Total Knee Replacement Surgery



Healthy Knee Joint

Arthritic Knee Joint

Artificial Knee Joint

Please bring this booklet, and a pen with you to the hospital

- **If your health changes or you develop a cough/cold/fever or any other illness within one week before your operation, please call your surgeon as soon as possible**
- **If you have a cough/cold/fever, please call the Preoperative Clinic to reschedule your appointments**
- **Please inform us ahead of time if you require an interpreter**

Table of Contents

Introduction	5
STEP 1: Needing a Total Knee Replacement	7
Understanding the Knee Joint.....	8
Benefits of Knee Replacement Surgery	9
Risks & Complications	9
Returning to Normal Activity	9
Returning to Work.....	10
Managing Pain and Activities While Waiting for Surgery.....	10
Precautions Before Surgery.....	11
STEP 2: Preparing for Surgery and Discharge Home	12
Checklist.....	12
Equipment and Assistive Devices.....	13
Physiotherapy	14
Accommodation and Community Services	14
STEP 3: Pre-Operative Assessment Clinic	15
Preparing for the Pre-Operative Assessment.....	15
What to Bring and Expect	15
Arriving at the Hospital	16
Anesthesia	16
Medication Routine Before Surgery	17
Pharmacy Pre-Operative Assessment	18-19
STEP 4: Surgery	20
The Day Before Surgery.....	20
Morning of the Surgery.....	21
What to Bring to Hospital	22
Arriving at the Hospital on the Day of Surgery	22
What to Expect Before Going to the Operating Room.....	22
Instructions for My Coach.....	22
STEP 5: My Hospital Stay	23
Pain Control After Surgery	23
What to Expect While in the Hospital.....	24
Exercises and Activities After Surgery	24

Therapy Goals in the Hospital	25
Review of Exercises	26-29
Getting In and Out of Bed	30
Sitting and Standing	31
Using a Walker	32
Using a Cane	32
Using the Stairs - Going Up	33
Using the Stairs - Going Down	34
STEP 6: Going Home	35
Preparing to Go home.....	35
What to Expect on Discharge Day	35
Leaving the Hospital - Getting In and Out of the Car	36
Discharge Instructions.....	37
Precautions	38-39
Returng to Normal Activity	40
Exercises After Surgery.....	40
Resuming Activities After Surgery	40-41
STEP 7: My Care After Knee Replacement Surgery	42
Physiotherapy	42
Follow-up Care	42
Night of Surgery Checklist.....	43
Day 1 Checklist	44
Community Resources	45
Device Equipment and Vendors.....	45
Notes.....	46

Introduction

Patients manage their hospital stay, and recover from their surgery better when they are prepared for surgery. This guide will help you understand what to expect before your surgery and after your return home.

The Ministry of Health and Long-Term Care of Ontario has introduced new care plans for all patients having hip or knee replacement surgery. The goal of this plan is to increase your satisfaction, help you to recover and return home as quickly and safely as possible, and is quite different than what you might have experienced or heard of in the past.

DISCHARGE ARRANGEMENTS

- Expect to go home one day after your knee replacement.
- Have a discharge plan in place following your surgery. This may include assistance in your home, staying at a family or friend's home, or arranging a short stay in a retirement home. A list of respite care locations can be provided to you.
- Someone from Cambridge Memorial Hospital will call you about 8 weeks prior to surgery to review the discharge resources available and talk to you about your options for rehabilitation following surgery. Most patients will attend a physiotherapy clinic covered by OHIP benefits. You can also organize your own Physiotherapy privately. Your first Physiotherapy session following your surgery should be booked to occur 1-4 days after your surgery date. You should book this session as soon as you know your surgery date.
- You may be referred by your surgeon to receive homecare services in your area. If you qualify for services, arrangements will be made before you leave the hospital

It is important that you prepare for surgery and participate in your recovery because this will ensure the best outcome for you. There are many educational resources available to help prepare yourself and your home before surgery. You will also have a chance to ask any questions you may have during your preoperative visit.

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STEP 1 Needing Total Knee Replacement Surgery

Welcome to Cambridge Memorial Hospital (CMH). Our goal is to prepare you for a successful outcome from your knee replacement surgery. Total knee replacement will improve your quality of life, independence, and overall health. This booklet will tell you what to expect before and after your surgery and how to prepare for going home.

Please bring this booklet to all of your appointments and to your surgery.

You should arrange for a family member or friend to be your Coach for the surgery. This person should come with you to all of your appointments if possible. A Coach is not only for support; they also help you understand what to expect at each step along the way. Your Coach plays a very important role in your care and will be your designated person for us to speak with, in addition to yourself.

At CMH, we have a team approach to providing care. In addition to your surgeon, anesthesiologist, and nurse, some of your other care team members include:

Physiotherapist (PT): Your PT will teach you exercises and techniques to help with your recovery and mobility.

Acute Pain Service (APS): The Nurse Practitioner on the APS will see you twice a day while you are in hospital and will adjust your pain medications whenever needed to ensure that you receive enough pain relief so that you can do your exercises and become mobile more comfortably.

Home & Community Services: This is a government funded service that connects you with the care you need at home and in your community. If you require assistance and qualify, a Home & Community Services case coordinator will assess you and coordinate home services for you.

Why Do You Need a Knee Replacement?

Knee replacement surgery resurfaces the arthritic bones of the knee joint with metal and plastic parts.

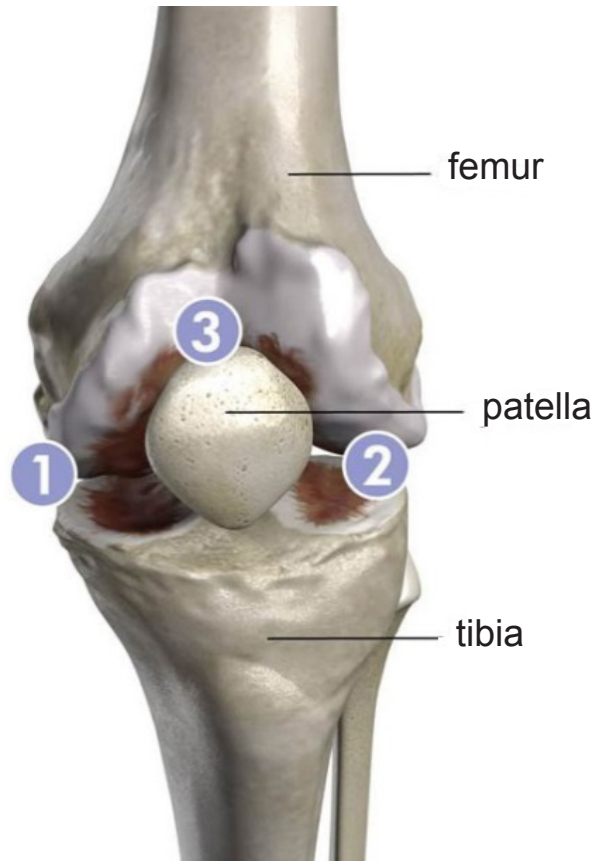
You may need a knee replacement to:

- Lessen your pain
- Improve the movement of your knee; and/or
- Make your knee more stable

Your surgeon can tell you more about why a knee replacement is right for you.

Understanding the Knee Joint

Your knee joint has 3 parts: the end of the femur (thigh bone), the top of the tibia (shin bone), and the patella (knee cap). In a normal knee, these 3 bones are covered with a smooth cartilage that cushions the bones and enables them to move easily. In the arthritic knee, the cartilage layers are destroyed resulting in bone rubbing against bone which causes pain. This causes pain, muscle weakness and even limited motion.



Before



After



Benefits of Knee Replacement Surgery

More than 90% of knee replacements last people the rest of their lives. Most patients are very pleased with the results because their walking, independence and quality of life are greatly improved. However, as with any major operation, there are risks and possible complications. These do not happen often and we take care to avoid the chances of complications happening.

Risks and Complications

Anesthetic Complications: Temporary confusion can happen after surgery. We take measures to reduce the chances of this happening. Your anesthetist will discuss this with you in more detail at your preoperative appointment before surgery. Pneumonia, heart attack and stroke rarely happen. Preoperative testing and **assessment by the anesthetist can reduce these serious events.**

Neurovascular Injury (injury to a nerve or blood vessel): This happens to less than 1% of all patients. Precautions to prevent this complication are described later in this guide.

Infection: Occurs in about 1% of patients. We will give you intravenous (IV) antibiotics during and after surgery to reduce the chance of infection.

Deep Vein Thrombosis and Pulmonary Embolism (Blood Clots in the Legs and Lungs): Starting on the evening of your surgery, we will give you an injection that will thin your blood to reduce the chance of blood clots forming. You will receive this injection every day you are in hospital. When you go home, you will continue to take a pill form of this medication every day for approximately 2 weeks.

Anemia (low red blood cells) Requiring Blood Transfusions: Less than 1% of patients will need a blood transfusion during the first 48 hours after surgery. We use many ways to reduce blood loss and build up your ability to produce new blood. If your doctor thinks you may need a blood transfusion, he/she will discuss this with you. In Ontario, donated blood is screened through a rigorous testing program to ensure safety.

Loosening of the Artificial Knee Components: This can be minimized by avoiding high impact activities, and keeping your body weight down. Loosening of the components rarely happens in the first 10 years after your knee replacement surgery.

Returning to Normal Activity

Your age, occupation, hobbies, other medical conditions (e.g. diabetes, heart disease, obesity, etc.), usual activities, and the condition of your joint will determine how soon you can return to your normal activities. Your surgeon will discuss when you can return to your normal activities and any limitations you may have.

Returning to Work

Depending on the type of work you do, your surgeon will advise you when it is safe for you to return to work. This can vary from weeks to months.

Managing Pain and Activities While Waiting for Surgery

Pain: Applying warm or cold packs on your knee for 15 minutes at least 3 times daily helps to relieve muscle pain. Make sure you have a thick layer between your skin and the heat/cold source. Check your skin every few minutes to make sure you do not burn yourself. Do not use pain relief creams or ointments with a warm or cold pack as this could cause a chemical burn. Do not use heat on a swollen or hot knee joint. Pain medication prescribed by your doctor can also help.

Weight Control: The force on your knee is approximately 3 times the weight of your body. Reducing your weight will reduce your pain and slow down the progress of osteoarthritis in your knees.

Diet: We suggest that you maintain a healthy diet while you wait for surgery. Foods high in protein, vitamin C, zinc, iron, and calcium are important for wound healing and for good recovery after surgery.

Smoking: If you smoke, it is important that you stop. If you are unable to stop, try to cut down the number of cigarettes you smoke per day. Stopping or decreasing the amount you smoke will improve the condition of your lungs and help you heal. If you do smoke, we will offer you nicotine replacement therapy while you're in the hospital, free of charge. Please note there is no smoking allowed on hospital property.

Drinking: Please provide a truthful description of your alcohol intake. Try to decrease your use of alcohol before your surgery. It can affect your recovery.

Fitness: The best activities to remain active with osteoarthritis of the knee are swimming, cycling and walking.

Walking: Use a walking cane on the opposite side of your painful knee. This will help you walk properly and reduce pain.

Physiotherapy: May help reduce pain and improve your mobility and strength.

Assistive devices: Such as long handled shoe horns, long handled reachers, raised toilet seats may make it easier for you to complete painful and difficult personal care tasks.

Activity: Stop or reduce the activities that make your knee sore.

Once you and your surgeon decide that you are a candidate for surgery, you will sign the following forms with your surgeon.

- Consent for Surgery
- Consent for blood transfusion or blood products

You will be given the following form to complete and bring back to your preoperative assessment appointment:

- Patient Questionnaire-Department of Anesthesia (Completed by you)

PRECAUTIONS BEFORE SURGERY

Important: Follow these instructions before surgery:

- Do Not have any dental work one month before your surgery, if possible (this may result in the cancellation of your surgery); wait until 6 months after your surgery
- Do Not have any injections into your joint within 6 months before your surgery (check with your surgeon)
- Do not shave the area where you will have surgery one week before your surgery date.
- Do not have any pedicures or manicures within 1 week before your surgery

STEP 2 Preparing for Surgery and Discharge Home

It is very important that you start planning for your surgery, hospital stay, and discharge home. You can expect to go home one day after your partial or total knee replacement.

CHECKLIST FOR DISCHARGE HOME

- Plan for someone to drive you to and from the hospital
- Arrange to obtain equipment from a medical supply store before surgery (raised toilet seat; walker or crutches; assistive devices)
- Set-up your equipment at home. Practice using the equipment
- Move your furniture so that you have a clear path for using your crutches or walker
- Set-up a chair so it is slightly higher in height, with a firm cushion and arm rests, to sit on after surgery
- Put frequently used items at a waist to shoulder height to minimize bending down
- Remove loose rugs and other items that you could trip on
- Make sure there is good lighting so you can see the floor clearly
- Make sure staircase handrails are securely fastened to the wall
- Arrange for a support person or Coach to be available
- If you think you will need help with daily living activities after surgery (e.g. bathing, toileting, getting dressed, etc.), you can contact your local Home & Community Services to see if you qualify for assistive services
- Arrange for grocery delivery (if available) and/or stock up on healthy frozen meals
- Arrange for someone to care for your pets, do your laundry, clean your house, water your houseplants and pay your bills

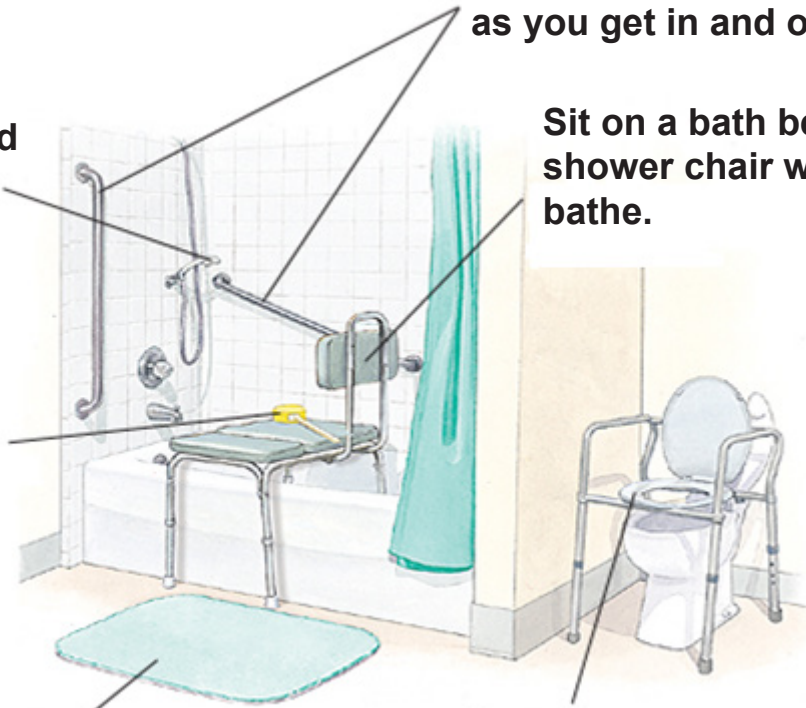
Preparing Your Bathroom for Coming Home After Surgery

Install grab bars in your shower or tub for support as you get in and out.

Install a hand-held shower head for easier bathing.

Sit on a bath bench or shower chair while you bathe.

Use a long-handled sponge to wash hard-to-reach areas



Use a rubber-backed bathroom mat to help keep the floor dry.

Use a commode chair or elevated toilet seat to raise the height of your toilet.

Equipment and Assistive Devices Required



Devices Recommended



Physiotherapy

You must make plans in advance to follow up with outpatient physiotherapy that will start after discharge from the hospital. Many communities, including KW and Cambridge, have an OHIP funded clinic that provides therapy after knee replacement. You will need to call and make an appointment well in advance. Try to schedule your first appointment for 1-4 days after your surgery date.

ACCOMMODATION AND COMMUNITY SERVICES

Private Respite Care After Surgery

Some people choose to stay in a respite care facility after their knee surgery. Respite care in a retirement home after surgery means that you may have all or some of the following:

- A fully furnished room
- Meals
- Assistance with bathing and dressing
- In room emergency bell system
- 24/7 assistance from qualified personnel

If you decide to purchase respite care, you must make these arrangements before your surgery, and the bed must be available when you are discharged.

Your discharge from hospital will not be delayed if your respite bed is not available on your day of discharge.

Please note that there will be a charge for these respite services, as they are not covered by OHIP.

Before your surgery, tell your care team and your family physician about your plans for respite care.

A list of local facilities offering respite care services can be provided to you upon your request.

STEP 3 Pre-operative Assessment Clinic

PREPARING FOR THE PRE-OPERATIVE ASSESSMENT

- Complete your Pre-Anesthetic Patient Questionnaire
- Ask your drug store to print a list of all your current medications and bring this list with you to your preoperative clinic appointment
- Bring all of your medications, vitamins and herbal supplements that you are taking in their original bottles to your preoperative clinic appointment
- Wear loose, comfortable clothing.
- Be prepared to spend 4-6 hours at the hospital for the preoperative clinic appointment (if you are diabetic, bring your lunch if needed)

WHAT TO BRING TO THE PRE-OPERATIVE APPOINTMENT

- Your health card
- The guide book
- The envelope you received at your surgeon's office, with the Pre-Anesthetic Patient Questionnaire completed
- Your medication list
- Your medications, vitamins, herbal supplements in their original containers
- A snack and water or juice
- please bring a cellular phone or tablet to your pre-operative assessment clinic visit if you have access to one
- Your Coach/support person

WHAT TO EXPECT

- Expect to be at the hospital for 4-6 hours
- You will see a nurse to review all of your completed forms, have your blood tested, and have an electrocardiogram (ECG) done if necessary
- You will see a pharmacist to review your medications
- You will see an anesthesiologist to discuss your anesthetic options
- You may see a medical doctor, if needed

ARRIVING AT THE HOSPITAL

- Go to the Preoperative Assessment Clinic on the Main Floor (level 1) in order to be registered
- You will wait in the Preoperative Clinic waiting area for your assessment appointment to begin
- You will watch an educational video on hip and knee replacements

Anesthesia

When you meet with the anesthesiologist, your health history will be reviewed, you will be assessed by the physician, and various sedation options will be discussed with you.

Spinal Anesthesia with Sedation:

This is the most common method of anesthesia for hip or knee replacement surgery. When having spinal anesthesia, you will also receive medicine to lightly put you to sleep. This is called sedation. You will not see or feel the surgery taking place. Spinal anesthesia involves putting medicine into the spinal fluid that surrounds the spinal nerves. This freezes the nerves so you have no feeling or movement in your legs. This numbness lasts about 8 hours, but everyone is different, and your freezing may last more or less than this. A long-acting pain medicine is also given with the freezing medicine, to help reduce your postoperative pain.

Benefits of Spinal Anesthesia:

- Less drowsiness
- Less nausea and vomiting after surgery
- Sometimes less blood loss during surgery
- Better pain control after surgery
- Lower risk of blood clots

Risks of Spinal Anesthesia:

- Headaches in less than 1% of patients
- Blood pressure may drop, but this will be monitored and managed
- Difficulty urinating after surgery. If this happens, a tube inserted into your bladder (catheter) can help
- Itching (can be widespread). There are medications to treat the itchiness.

General Anesthesia:

Is medicine given through an intravenous (IV) to put you to sleep. This form of anesthesia is not commonly used for knee replacement surgery.

Risks of General Anesthesia:

- Mild sore throat for a few days
- Nausea and vomiting
- Drowsiness after surgery
- Slight confusion or memory loss for a short time
- Bringing up stomach contents into your lungs (aspiration)

Nerve Block:

Your anesthesiologist may suggest you have a nerve block. This technique involves injecting a “local anesthetic” to freeze one of the main nerves around your knee. This nerve causes you pain, so by “freezing it”, your pain will be reduced. The injection is given before you receive either the spinal or general anesthetic. We expect the nerve block to provide pain relief for 12-24 hours.

MEDICATION ROUTINE BEFORE SURGERY

STOP THESE MEDICATIONS

Date	Medication

TAKE THESE MEDICATIONS

Date	Medication

PHARMACY PREOPERATIVE ASSESSMENT

Below are commonly asked questions about medications and having knee replacement surgery. While you are in the hospital, a pharmacist is always available to answer any additional medication questions you may have. On the day of your Preoperative Assessment appointment, a pharmacy technician will review your medications with you, and will complete a list of your medications for your surgeon and anesthesiologist to use.

1. HOME MEDICATIONS

- The hospital will supply most of your home medications during your stay. During your Preoperative Clinic visit, a pharmacy technician will alert you of any medications that the hospital does not have in stock (“non-formulary”). The technician will ask for your permission to use your home supply of medication while you are in the hospital.
- If you agree to provide a supply of your medications for use in the hospital, please bring them in their original labelled containers for safety reasons.
 - If your medications are organized in blister/compliance packaging, please ask your community pharmacy to provide you with a one-week supply in a labelled container because the hospital cannot give medications from blister/compliance packages
 - Please DO NOT bring any loose tablets of medication into the hospital
- Your nurse will give you/”administer” any non-formulary medications when it is time for them to be given
- Non-formulary medications are stored in patient specific, locked medication drawers in a secure location on the unit, as per hospital policy, to ensure the safety of all patients. The medications are not to be kept at the bedside.
- Your supply of non-formulary medications will be returned to you at discharge

2. VITAMINS / HERBAL SUPPLEMENTS

- Stop all vitamins and herbal supplements 7 days before surgery unless you are told otherwise by your surgeon or anesthesiologist
- Vitamins and herbal supplements can interact negatively with prescription medications. Check with your pharmacist or physician before taking any of these products
- Calcium and vitamin D supplements can be safely resumed after surgery
- Ask your anesthesiologist or orthopedic surgeon if you have any questions or concerns about stopping or restarting any vitamins or herbal supplements

3. NON-STEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDS)

{e.g. Ibuprofen (Motrin®, Advil®), Naproxen (Aleve®), Meloxicam (Mobicox®), Diclofenac (Arthrotec®, Vimovo®), Celecoxib (Celebrex®)}

- Your anesthetist will tell you when to stop taking these medications before your surgery
- These medications may interact with anticoagulants (blood thinners) and increase the risk of bleeding
- DO NOT take these medicines after your surgery until you are finished taking the prescription blood thinner (Eliquis®)

4. ANTICOAGULANTS (BLOOD THINNERS)

{e.g. Apixaban (Eliquis®), Rivaroxaban (Xarelto®)}

- You may be started on an anticoagulant (blood thinner) after your surgery to prevent blood clots from forming in your legs
- Your orthopedic surgeon will give you information about the type of blood thinner you are on, whether it will be continued when you are discharged home and how long you will need to take a blood thinner for.
- If you are on blood thinners before surgery, your anesthesiologist will tell you if/when you should stop taking these medications before surgery.
- Your orthopedic surgeon will tell you when it is safe to start taking these medications again after surgery

STEP 4 Surgery

THE DAY BEFORE SURGERY

- You may eat a normal supper (try to avoid spicy and gassy foods)
- No food can be eaten after midnight
- You may drink clear fluids (water, apple juice, sport drinks) up to 4 hours before the time your surgery is booked for
- Take a shower with the Chlorhexidine Soap (2% or 4% solution) that was given to you at your Preoperative Clinic appointment
- **The shower can be done on the evening before your surgery, or the morning of your surgery**
 - Do not use the Chlorhexidine Soap on your face or near your eyes and ears
 - Do not use the Chlorhexidine Soap if you are allergic to it
 - If you develop a rash while using the Chlorhexidine Soap, stop using it and notify the hospital staff when you come in for your surgery the next day
- Do not remove hair from the area of your body where the surgery will take place for one week before your surgery. Removing hair can damage skin which can increase your risk of infection.
- If your health changes, or you develop a cough, cold, fever or any other illness within 1 week before your operation, call your orthopedic surgeon as soon as possible.
- If your Coach cannot come with you to the hospital, please inform the hospital if you need an interpreter
- All jewelry, piercings, nail polish, make-up and false nails (including body ornaments; religious or cultural items, barbells, captive bead rings, tongue rings etc.) must be removed before you arrive for surgery. If this is not done, your surgery could be cancelled.
- If you can't remove your jewelry yourself you must go to a jeweler and have it removed before your surgery.
 - Wearing jewelry during surgery can result in:
 - Burns from surgery equipment
 - Loss of circulation (fingers and toes)
 - A risk of swallowing or suffocation
 - Loss of jewelry or precious stones
 - Infections and contamination.

Pack a bag with the following

- Comfortable clothes
- Non-slip shoes with Velcro/sandals with back support
- Toiletries (soap, toothbrush, toothpaste, tissues, comb/brush)
- Container for your dentures (if needed)
- Contact lens holder (if needed)

Label all of your belongings

- Do not bring valuables to the hospital. CMH is not responsible for any lost valuables (jewelry, money, etc.)
- Plan for someone to drive you to and from the hospital
- Arrange for someone to care for your pets

MORNING OF THE SURGERY

- Plan to arrive at the hospital 2 hours before the time of your surgery
- Take a shower with the Chlorhexidine Soap (2% or 4% solution) that was given to you at your Preoperative Clinic appointment.
- **The shower can be done on the evening before your surgery or the morning of your surgery.**
 - Do not use the Chlorhexidine Soap on your face or near your eyes and ears
 - Do not use the Chlorhexidine Soap if you are allergic to it
 - If you develop a rash while using the Chlorhexidine Soap, stop using it and notify the hospital staff when you come in for your surgery the next day.
- Do not remove hair from the area of your body where the surgery will take place for one week before your surgery. Removing hair can damage skin which can increase your risk of infection.
- Do not use any body lotion
- Avoid using perfumes, deodorants, shaving creams or shaving lotions
- Brush your teeth. Rinse but do not swallow any water
- Do not chew gum or have any hard candies/breath mints
- Remove all make-up and nail polish
- Wear loose fitting clothing that can be easily removed (avoid back zippers and pantyhose)
- All jewelry, piercings, nail polish, make-up and false nails (including body ornaments; religious or cultural items, barbells, captive bead rings, tongue rings etc.) must be removed before you arrive for surgery. If this is not done, your surgery could be cancelled.
- Leave all valuables at home

WHAT TO BRING THE DAY OF SURGERY

- Your Coach (if your Coach is not available and you need an interpreter, please notify the hospital ahead of time)
- Your Health Card
- Your bag with clothes and toiletries
- All of your prescription medications (including inhalers, eye drops, medicinal creams, etc.) unless otherwise specified
- Your CPAP machine, if you use one to sleep
- This guide

ARRIVING AT THE HOSPITAL ON THE DAY OF SURGERY

- Go to the Central Registration Desk (located on the Main Floor-Level 1)
- Once you are registered, you will be directed to Surgical Day Care (located on the Main Floor-Level 1)

WHAT TO EXPECT BEFORE GOING TO THE OPERATING ROOM

- An identification bracelet will be placed on your wrist
- You will be asked to change into a hospital gown and to remove your underwear and bra
- Recheck all of your medical records
- Check your vital signs (e.g. heart rate, temperature, blood pressure)
- Ask you to remove your dentures and contact lenses
- Ask you to use the washroom to empty your bladder
- An intravenous line may be put into your arm now, or once you get into the Operating Room
- You will be taken into the Operating Room

INSTRUCTIONS FOR MY COACH

- Coaches may wait in the Surgical Day Care waiting room. If you would like your surgeon to speak to your coach/family member after your surgery, please supply a name and phone number where they can be reached following the surgery. If time permits, your surgeon will try to contact this person.
- Our electronic tracking board will tell you when the patient's surgery is done and in the Post Anesthesia Care Unit (PACU)
- You will be able to see the patient in approximately 5 hours, when they are discharged from the PACU

STEP 5 My Hospital Stay

PAIN CONTROL AFTER SURGERY

Good pain control is important for a successful recovery. You will be asked to rate your pain using a pain scale. A pain scale helps us to make decisions on how to relieve your pain. You will be asked by staff to rate your pain on a scale of 0 to 10. 0 is no pain, and 10 is the worst pain you have ever experienced. We encourage you to try and keep your pain level at less than 5.

We will use different types of medication and methods to control your pain including oral pain medication and patient-controlled analgesia.

Oral Pain Medication:

Several different types of pain pills/tablets will be offered to you starting on the day of your surgery. Some will be long-acting pain pills, and some will be short-acting pain pills. If the medication does not control your pain please tell your nurse. Your nurse can then contact the Acute Pain Service (APS), who will make changes to your pain medications to improve upon your pain relief.

Patient-Controlled Analgesia (PCA):

In this form of analgesia, a special pump is used to give you pain medication through your intravenous (IV).

This form of pain management will only be used if we cannot control your pain with oral medication. This is rare, and most patients are very successful on a combination of oral medications.

With the PCA pump, a small amount of pain medication is injected into your IV when you push a button. It is important that only you push the button for the pain medicine and no one else! You are the best person to determine how much pain control you need.

WHAT TO EXPECT WHILE IN THE HOSPITAL

- After your surgery you may feel groggy for the rest of the day
- You may have a mild sore throat and feelings of nausea
- Vomiting may be a side effect from your anesthesia and/or your pain medication. On occasion, this can last for several days
- You will have bandages on your knee after surgery. This is a normal part of recovering from surgery
- You may have oxygen tubing in your nose. This is because you do not tend to breathe as deeply when you are groggy/sleepy. The tubes will be removed as you become more alert
- We will ask you to rate your pain from 0 to 10, and will work with you to keep your pain less than a 5 (out of 10) on the pain scale
- We will check your vital signs (blood pressure, heart rate, temperature) and circulation in your legs often
- We will encourage you to take deep breaths and cough every hour that you are awake
- You can eat and drink fluids
- We will teach you how to turn safely in bed. Turning in bed helps to prevent skin breakdown (bed sores), lung congestion and blood clots from forming
- You may receive fluids and antibiotics via an intravenous initially (tube in your vein)

EXERCISES AND ACTIVITIES AFTER SURGERY

Deep Breathing:

- Breathe in deeply through your nose
- Hold your breath while you count from 1-2
- Breathe out slowly through your mouth
- Repeat 1-2 times every hour

Coughing:

- Breathe in deeply through your nose
- Cough forcefully from your abdomen
- Repeat 5 times every hour

Deep breathing and coughing helps to prevent congestion in your lungs

Calf Pumping Exercises

- Lie on your back or in a sitting position
- Move your feet up and down
- Repeat 10 times every hour

Physiotherapy will help with:

- Reviewing precautions you will need to take
- Moving from your bed to chair
- Sitting and standing
- Walking
- Teaching bed exercises: Range of Motion and strengthening
- Deep breathing exercises
- Stair climbing

THERAPY GOALS IN HOSPITAL

EARLY GOALS

- Prevent post-operative complications by improving circulation and deep breathing
- Begin to weight bear on your legs
- Prevent joint stiffness
- Manage swelling
- Maintain knee replacement precautions when moving

MIDDLE GOALS

- Only a little help is needed to get in and out of bed
- Only a little help is needed to walk (with a walker/crutches)
- Maintain or improve knee range of motion
- Perform bed exercise routine by yourself 3 times a day

We strongly encourage you to review and practice these exercises before your surgery:

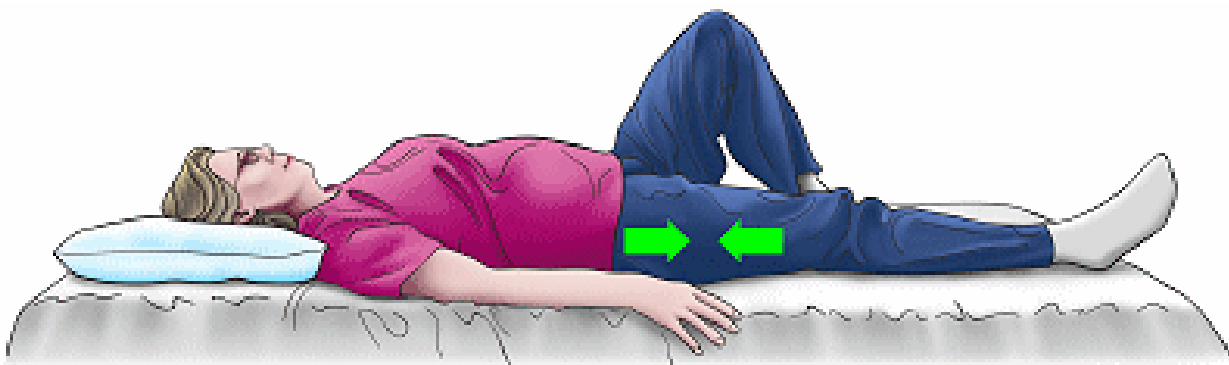
Ankle Pumps

- Point your toes down, then pull them back up
- Repeat 10 times. 10 times = 1 set; do 1 set every hour you are awake
- Do this for both ankles



Static Quads Contraction

- Lie on your back
- Keep your operated leg straight
- Squeeze your buttock muscles while pressing your operated knee down into the bed
- Hold for 5 seconds and release
- Repeat 10 times. 10 times = 1 set; do 3 sets a day



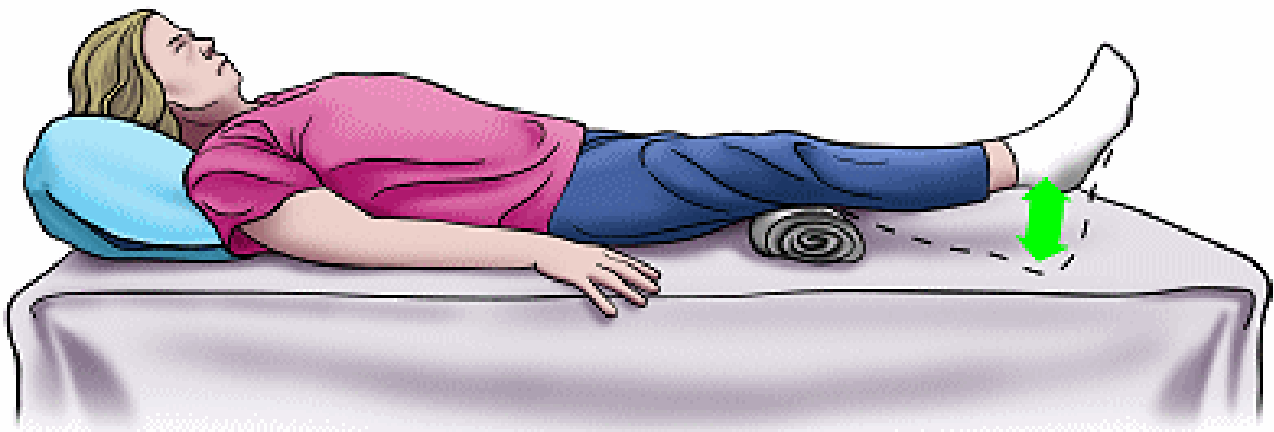
Gluteal Squeeze

- Squeeze buttocks muscles as tightly as you can tolerate
- Hold for 5 seconds and release
- Repeat 10 times. 10 times = 1 set. Do 3 sets per day



Quadriceps Over Roll-Lying Position

- Place a rolled towel under the operated knee
- Lift your heel off the bed
- Hold for 5 seconds and then lower the foot
- Repeat 10 times. 10 times = 1 set; do 3 sets per day



Heel Slides

- Bend your operated knee
- Slide your heel up the bed towards your buttocks
- Hold for 5 seconds
- Repeat 10 times. 10 times = 1 set; do 3 sets per day



Quadriceps in Sitting Position

- Lift your foot off the floor until your knee is straight
- Hold for 5 seconds
- Slowly lower your foot to the floor
- Repeat 10 times. 10 times = 1 set; do 3 sets per day



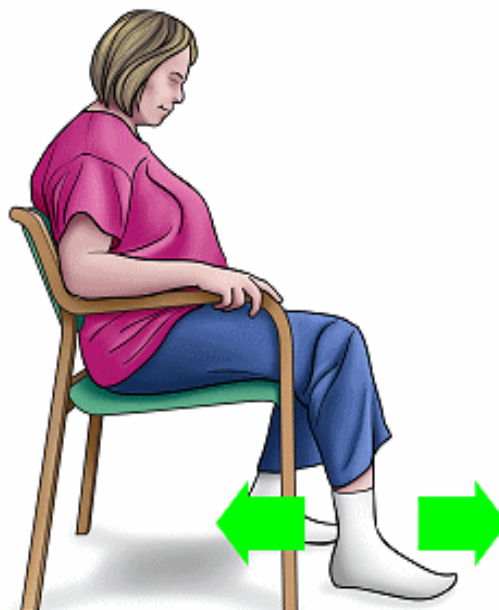
Straight Leg Raise

- Straighten out your operative leg
- Bend your other leg
- Lift your operative leg 5 inches off the bed
- Hold for 5 seconds
- Slowly lower the foot to the bed
- Repeat 10 times. 10 times = 1 set; do 3 sets per day



Sitting Foot Slides

- Slide your foot back underneath you as far as you can.
- Do not lift your bottom or hip off the chair.
- Hold 3 to 5 seconds, and then relax.
- Repeat 10 times. 10 times = 1 set; do 3 sets per day

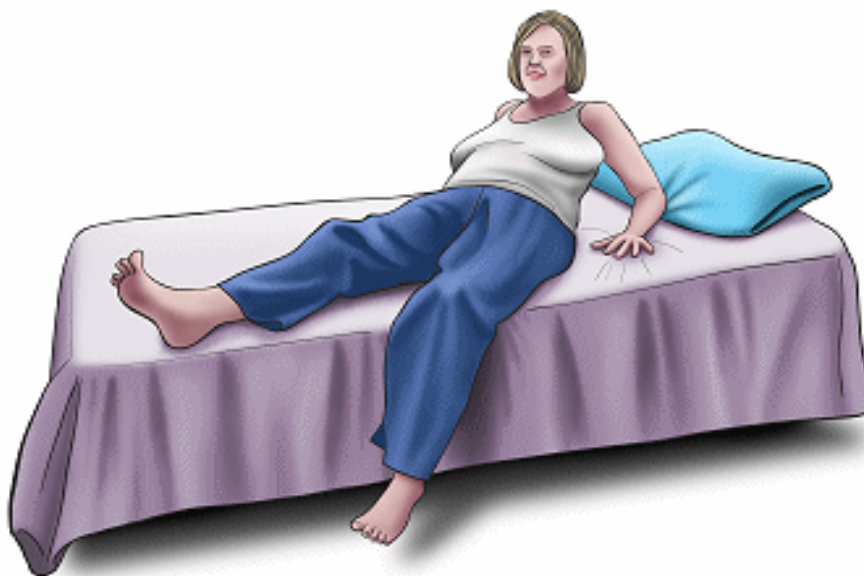


Do Not rest or sleep with a roll (or pillow) under your knees! This will make it very difficult for you to straighten your knee to walk, and can result in lasting stiffness. It is also bad for your circulation.

GETTING IN AND OUT OF BED

Getting into Bed

- Get into bed with your good side closest to the side of the bed
- Sit on the edge of the bed and move back using your arms until your thighs are supported by the mattress
- Swing both legs onto the bed. Come down on your side as you begin to lift your legs up
- Roll onto your back
- Adjust yourself in bed, as needed
- Physiotherapists will teach you this technique while you are in the hospital



Getting Out of Bed

- Get out of bed with your operated side closest to the side of the bed
- Move close to the edge of the bed
- Pivot on your bottom with your legs together until both feet are off the bed
- Push up using your arms until you are sitting at a 45° angle (your legs will lower towards the floor)
- Square up your sitting
- Physiotherapists will teach you this technique while you are in the hospital

SITTING AND STANDING

Sitting Down

- Using your walker, back into the chair until you feel the chair on the back of both of your legs
- Slide your operated leg forward
- Reach for the armrest of the chair
- Lower yourself into the chair



Standing Up

- Move to the edge of the chair
- Slide your operated leg forward
- Bring the non-operated leg back, to the edge of the chair
- Put one hand on the walker
- Keep the other hand on the seat or armrest of the chair
- Push up from the chair, using one hand on the chair while keeping one hand on the walker (never use 2 hands on the walker to stand – the walker could tip, causing you to fall)



Using a Walker

- Move your walker forward – keep your back straight
- Step with your operated leg first, so that your operated leg is even with your hands
- Bring your non-operated leg forward so that it is even with your operated leg (push down with your hands for support)
- As you improve, you can step all the way through with your non-operated leg, in a more fluid walking motion



Using a Cane

- You can begin to use a cane for walking after you have recovered enough strength and balance in your legs to be safe
- Place the cane on the side of your non-operated leg
- This will give you a steady base and provide you with balance
- Your cane should be adjusted so the handle is level with your wrist crease

USING THE STAIRS

A stair railing is a helpful safety aid after surgery. We recommend having a railing installed on your stairs before surgery if you don't have one. If this is not an option, have someone assist you up and down the stairs.

“Up with the good leg (non-operated)”

“Down with the bad leg (Operated)”

Going Up the Stairs

- Stand facing the stairs
- Grasp the handrail
- Hold your cane or crutch in your other hand
- Step-up with your non-operated leg
- Keep the cane or crutch on the same step as the operated leg
- Raise both the cane/crutch and the operated leg to meet the non-operated leg



Going Down the Stairs

- Stand at the top of the stairs
- Grasp the handrail
- Hold the cane or crutch in your other hand
- Step-down with your operated leg and the cane/crutch
- Bring your non-operated leg down to meet your operated leg



STEP 6 Going Home

You can expect to go home one day after your knee replacement.

You are ready to go home when you are medically stable and can do the activities listed below:

- Walk safely with an aid (e.g. a walker)
- Get out of and into bed on your own, or with a little assistance
- Get into and up from a chair on your own, or with a little assistance
- Get to and from the bathroom on your own, or with a little assistance
- Go up the stairs and down the stairs on your own, or with a little assistance

What to expect on Discharge Day

- Prescription for pain medication
- Prescription for an anticoagulant (blood thinner)
- An appointment date for your follow-up visit with your surgeon in the Fracture Clinic at CMH
- Written instructions from your surgeon (if applicable)
- Instructions for removing your dressing and staples (if applicable)
- Instructions for your physiotherapy exercises

GOING HOME

Getting In the Car

- Move the front passenger seat back as far as possible, and slightly recline the back of the seat
- Sit at the edge of the seat and back in until your thighs are supported by the seat
- Swing both legs into the car



- Turn towards the car door.
- Lift one leg out and then the other.
- You may use your hands to support your operated leg
- Use your hands to push off and stand up.

If your drive home is more than 1 hour, stop in a safe location after each hour to get out of the car, stand up, and walk for about 5 minutes. This will improve your circulation. Do foot and ankle exercises in the car to help with your circulation.

DISCHARGE INSTRUCTIONS

If you have any of the following signs and symptoms, go to your nearest Emergency Department or call 9-1-1.

- Shortness of breath, or difficulty breathing
- Excessive bleeding at your incision site
- Chest pain, chest tightness, or chest pressure

Contact your surgeon if you have any of the following:

- Excessive bleeding at your incision site
- Moderate to large amounts of drainage at the incision site for more than a few days
- A foul odor or yellow or green drainage at the incision site
- An increase in your temperature (more than 38° C)
- A sudden, severe increase in pain not relieved with pain medication

Pain and Swelling

Some pain and swelling at the surgical site is normal. This will improve over the next 6 weeks, but swelling may increase even after leaving the hospital. Use your pain medication as prescribed. Gradually try to wean yourself off of your pain medication. You can use ice packs to control pain and inflammation. Raising your leg mid-morning and mid-afternoon, as well, and calf pumping exercises can help reduce swelling.

It is normal to have some numbness around the area of the surgical incision. This may improve with time.

Prevention of Clot Formation and Pulmonary Embolus

Take your anticoagulant pill (blood thinner pill) after surgery as prescribed. Continue to walk short distances and do your exercises regularly as recommended by your physiotherapist.

Bandage/Dressing

If you have a dressing, it can stay on for up to 5 days. The date of removal will be written on the dressing. Please refer to the specific dressing instructions given to you upon discharge. These will be given to you by your surgeon.

If your incision is draining and/or leaking for more than 4 days after you leave the hospital, call your surgeon.

If your dressing is leaking, it should be removed. To remove your dressing, follow these steps.

- Wash and dry your hands
- Press down on the skin with one hand and carefully lift an edge of the dressing with your other hand
- Stretch the dressing down and out (not up and out) to break the adhesive seal
- Slowly work your way around the dressing, repeating the above steps, until the dressing is loose and can be removed
- Observe the incision site for any signs of infection
- Gently clean around the incision site with soap and warm water, if needed
- Apply a clean, dry dressing similar to the one provided when you left the hospital. When the wound is dry you do not have to cover the wound but may choose to do so if your clothes are irritating the stapled area.

Wound Infection

Take your anticoagulant pill (blood thinner pill) after surgery as prescribed. Continue to walk short distances and do your exercises regularly as recommended by your physiotherapist.

Signs of infection are:

- Redness
- Drainage
- Odor
- Excessive swelling around the incision
- Fever of 38°C or higher
- Increased pain in the knee joint that was operated on

Dental Precautions

Bacteria can go from your mouth, into your bloodstream and then into your knee, which can then cause an infection. Improving and maintaining good oral hygiene can help reduce bacteria.

Remember: No dental work for 4 weeks before surgery and/or 6 months after surgery (unless it is an emergency).

Other Medical Procedures

You should not have any invasive medical procedures for 3 months following your knee surgery (unless an emergency).

Bathing, Showering, Swimming

You can take a shower. Your dressing is waterproof. However, do not take a bath or go into a pool/hot tub until your incision is fully healed.

A walk in shower, shower chair and/or grab bar may be helpful. Showering while sitting on a bath bench in the tub is another option. Consider use of a long handled sponge to wash your feet and lower legs.

Incision

After the waterproof dressing is removed and your incision is dry, it can be left open to air. You should now shower without any dressing on the wound.

Bruising

Bruising is common, especially when there is no drainage from the incision. Often, the bruising can take up to a week to fully come to the surface of the skin. The bruising will go away gradually.

General Health

It is normal to feel tired and to have a poor appetite after surgery. This will last for 4 to 6 weeks. You may also experience constipation from your pain medication. Drink plenty of water, eat fruits and vegetables and add fiber to your diet to give you energy and prevent constipation. You can take a stool softener/gentle laxative such as Senekot-S® regularly to ensure a bowel movement every 1-2 days, if needed. You can gradually reduce the amount of laxative you are taking as you use less pain medication and are eating better.

RETURNING TO NORMAL ACTIVITY

Healing after surgery takes several months and too much activity, too early, can interfere with the healing process.

While your knee arthritis was developing, you were gradually losing range of movement and muscle tone. This often affects your tolerance to exercise, endurance, walking, and balance. Regaining those functions often takes longer than you and your family expect.

Follow the directions that your surgeon gave you, before you had surgery. If you have questions, or are unsure of some of the directions, speak with your surgeon at your first follow-up visit.

EXERCISES AFTER SURGERY

Keep this guide handy to help you follow your exercise routine. Do your exercises 2 to 3 times a day. The exercises will become easier as you become stronger. Remember to take your pain medications to keep your pain under control.

It is important to keep active after knee replacement surgery. This will keep you strong and moving well. Balance your activity and exercise with periods of rest. Gradually increase your activity, like walking and household chores. Always be mindful of knee precautions and how they affect your activity and exercise.

RESUMING ACTIVITIES AFTER SURGERY

Walking: Continue to use your cane, crutches or walker. This will help you walk without a limp. Walking with a limp puts more pressure on your joint and will prevent your muscles from getting stronger. It is better to walk without a limp than to walk with a limp.

Driving: In general, if your surgery was on your right knee, you can start driving again after 6 weeks. If your surgery is on your left knee, you can drive sooner with permission from your surgeon. Even if the surgery is on your left knee, you will feel weaker than normal for a while, and you may be taking strong pain medications. This should be considered when attempting to drive. Your surgeon will tell you at your follow-up appointment if it is safe for you to start driving again.

Returning to Work: You and your surgeon should have already discussed your expected return to work date. You can discuss this again at your first post-operative follow-up visit,

Leisure and Sport Activities: Activities like walking, dancing, swimming, golf and bowling are usually safe to do about 3 months after surgery. Speak with your surgeon about when it is safe to start your leisure activities.

Sexual Activity: This can begin again about 6 weeks after surgery. Remember your knee precautions and avoid any position that causes you pain. Discuss questions at your follow-up visit with your surgeon.

Travel: Security alarms may be set off by your knee components. A letter from your surgeon will not excuse you from security precautions at any airport. Stop and change positions hourly to prevent joint discomfort and stiffness. It is recommended that you do not travel by plane before 3 months after your surgery. If travelling out of the country, be aware that travel medical insurance may not cover problems related to this surgery. Verify when buying travel medical coverage whether they will cover problems related to this surgery or not.

Congratulations on your new knee! Although there is much work to do, we have already done a lot together. When you get home, take a deep breath and relax. The benefits of knee replacement surgery are great, and will be achieved with your time and effort.

STEP 7 My Care after Knee Replacement Surgery

PHYSIOTHERAPY

There are several OHIP covered physiotherapy clinics located across the province. You should make arrangements with one of these clinics for your post-operative knee therapy BEFORE you have your surgery. You should schedule your first appointment with your physiotherapy clinic for 1-4 days after your day of surgery.

Private physiotherapy clinics who rarely see total joint replacement patients may not know the correct protocols for your therapy. Please check with them before booking an appointment if you are choosing this option.

FOLLOW-UP CARE

Your first follow-up visit with your surgeon will be approximately 2 to 3 weeks after your surgery. You will be seen in the Fracture Clinic at CMH, which is located on Main Floor, Level 1. You will be given an appointment date and time for this appointment before you go home from hospital. If you were not given a follow-up appointment when you were discharged from hospital, the Fracture Clinic will call you with one.

If you are having any concerns or complications, you may be seen earlier than these scheduled times. Please call your surgeon's office to arrange for an earlier appointment, if you have any concerns.

Night of Surgery Checklist

- | | |
|--|--|
| <input type="checkbox"/> I sat at the side of my bed | <input type="checkbox"/> I sat or walked _____ times today |
| <input type="checkbox"/> I sat in a chair | <input type="checkbox"/> I had sips of clear fluids |
| <input type="checkbox"/> I walked to the bathroom | |

Time	Check	Exercise
12:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
1:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
2:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
3:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
4:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
5:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
6:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
7:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
8:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
9:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
10:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises

Day 1 Checklist

I sat in a chair for

- Breakfast
- Lunch
- Supper
- I sat in a chair during other times.
- I walked down the hall _____ times today

Time	Check	Exercise
7:00 am	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
8:00 am	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
9:00 am	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
10:00 am	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
11:00 am	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
12:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
1:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
2:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
3:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
4:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
5:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
6:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
7:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
8:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises
9:00 pm	<input type="checkbox"/>	Deep breathing and coughing
	<input type="checkbox"/>	Leg exercises

Resources

Arthritis Society: www.arthritis.ca or 1-800-321-1433

Canadian Orthopaedic Foundation: whenithurtstomove.org or 1-800-461-3639

Community Care Access Center: healthcareathome.ca

Community Resources: www.healthline.ca

OHIP-Covered Physiotherapy Clinics: www.collegept.org or 1-800-583-5885

Ontario Retirement Home Directory: Ontario.senioropolis.com

Ortho Connect: www.orthoconnect.org

Ontario Physiotherapy Association: www.opa.on.ca or 1-416-322-6866

Device and Equipment Vendors

Disclaimer: The listed services are not endorsed by Cambridge Memorial Hospital. This list does not claim to be exhaustive and some facilities/resources may have been inadvertently missed.

Preston Medical Pharmacy

519-653-1994

www.prestonmed.ca

M-F 9-6, Sat 9-2

125 Waterloo Street South, Cambridge

Shoppers Home Health Care

1-800-746-7737

www.shoppershomehealthcare.ca

Multiple locations across Canada

