

A Patient's Guide to Knee Replacement Surgery

(Includes Total Knee Replacement, Resurfacing, Revisions and Bilateral)

PLEASE BRING THIS GUIDE TO HOSPITAL



Hôpital
Hotel Dieu
Hospital



Hôpital Général de
Kingston General
Hospital

This booklet has been developed by
Kingston Health Sciences Centre, Orthopedic Care Program

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This handbook is based on information produced over the years by a variety of organizations. We would like to acknowledge the contributions made by:

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St. Joseph's Health Care London	Schroeder Arthritis Institute
Sunnybrook Holland Centre	Scarborough Health Network
The Ottawa Hospital	London health Sciences Centre

Important Surgery Information and Dates

Surgery Date: _____

Surgeon Name: _____

Surgeon's Secretary: _____

Surgeon's phone number: 613-549-6666 or

Toll-free 1-800-567-5722 Ext: _____

Pre-Surgical Appointment Date: _____

Anesthesia Appointment Date (if required): _____

Time to arrive at hospital: _____

Physiotherapy clinic name and number: _____

Pharmacy number: _____

Additional Appointments: _____

**If I have concerns about my new joint after surgery,
the first person I should call is my surgeon.**

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Introduction

You are the most important part of making your surgery a success by helping to plan your care. **If you do not have a discharge plan, your surgeon may delay your surgery until a plan is in place.**

This booklet will act as your guide before your surgery, during your hospital stay and throughout your recovery. Preparing for your upcoming surgery happens once you decide to have surgery. Please review this information with your caregivers and bring this booklet to the hospital so you can refer to it during your stay.

If your surgeon or healthcare team gives you different advice from what is provided in this booklet, please follow the specific directions you receive.

Please refer to the KHSC website for additional information, including a copy of this booklet:

<https://kingstonhsc.ca/surgical-care/your-education/hip-and-knee>



Surgery Preparation Checklists

Plan to get help from others:

Check Once Completed	Task
	Arrange who will drive you home from the hospital <hr/>
	Arrange for someone to stay with you for at least a few days (48 hours) after discharge. If this is not possible, consider an alternate discharge destination e.g. convalescent or respite bed, relatives' or friends' home. <hr/>
	Arrange for help at home after your operation as it will be difficult to clean, do laundry, get groceries, go to the bank, etc. During winter months, you will need to ask someone to shovel snow, and/or put down salt so it is safe if you need to go outside.
	Have someone help with your pets — especially if you need to lift litter boxes or go outside to walk.

Prepare your home:

Check Once Completed	Task
	Bed is a good height (a minimum of 2 inches above the back of the knee is ideal)
	Remove scatter rugs, telephone wires, cords, or anything on the floor that could cause you to trip
	Keep living areas well-lit and add a night-light in the path to the bathroom
	Add handrails to stairs that do not have any
	Move furniture so you can move around with your walker
	A comfortable chair with armrests
	Frequently needed items are within easy reach and placed between waist and shoulder height
	Consider grocery delivery or online click and collect services that someone can pick up for you
	Before your surgery, plan and pre-make meals to freeze them and stock up on non-perishable foods (frozen, cans, boxes) to help with meal preparation after surgery.

Prepare your personal belongings to bring to hospital:

Check Once Completed	Task
	Health card
	Insurance cards with plan/policy information Credit card if you want to pay for a semi / private room (dependent on room availability)
	Paperwork: <ul style="list-style-type: none"> ● Work- related/ insurance papers ● Patient guide book
	Single use prescription medications such as puffers, oils, lotions, creams, insulin pens. (Note: All other medications will be provided to you) * patients are asked to bring their medications with them day of surgery and then if not required will be sent home with family member
	CPAP machine (if applicable)
	Loose/comfortable pants or shorts and shirt – the clothes you wear to the hospital can be worn home.
	Non-elastic socks (if you are going to wear them)
	Flat, supportive, non-slip shoes/sandals – your foot will swell after surgery so ensure the shoes you bring will allow for some swelling
	Overnight personal items (e.g. tooth brush, toothpaste, mouth wash, eyeglasses, hearing aid and/or denture case, chargers/tablets/phone*) <i>The hospital is not responsible for any lost or stolen personal items</i>
	Put your walker in the trunk of the car that will be taking you home after surgery

Equipment List:

Equipment can be borrowed, rented or bought and you need to have these **before your operation**. Organizations that may loan equipment free of charge can be found on www.southeasthealthline.ca Try practicing with your equipment at home. Please label and **bring the long belt/strap to hospital** so you can start using them after your surgery.

Check once done	Equipment Item	Buy	Rent	Borrow from family, friend, or loan organization
	Long belt/strap (e.g. belt from house coat, yoga belt, 1-2 inch webbing)	—	—	—
	Long handled reacher (A)	•		•
	Long handled shoe horn (A)	•		•
	Sock aid or compression stocking aid (A) (Note: compression stocking aid is for Dr. Wood's patients only)	•		•
	Long handled sponge (A)	•		•
	Tub transfer bench for tub style shower (B) OR Shower chair (C) or stool for walk-in shower (D)	•	•	•
	One of these three: Raised toilet seat with arms (E) Commode (F) Toilet safety frame is for those with an adequate toilet seat height (G)	•	•	•
	2 Wheeled walker (H)	•	•	•
	Crutches (I) (can also purchase from hospital) OR Cane	•	•	•
	Cryotherapy (Cold Therapy) (J) (See Appendix C for more information)	•	•	•

A. Long handled sponge, reacher, shoe horn, sock aid



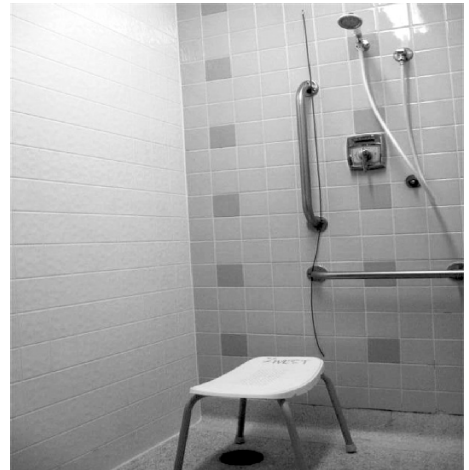
B. Tub transfer bench



C. Shower Chair



D. Shower Stool



E. Raised toilet seat with arms



F. Commode



F. Toilet safety frame



H. 2 wheeled walker



I. Crutches



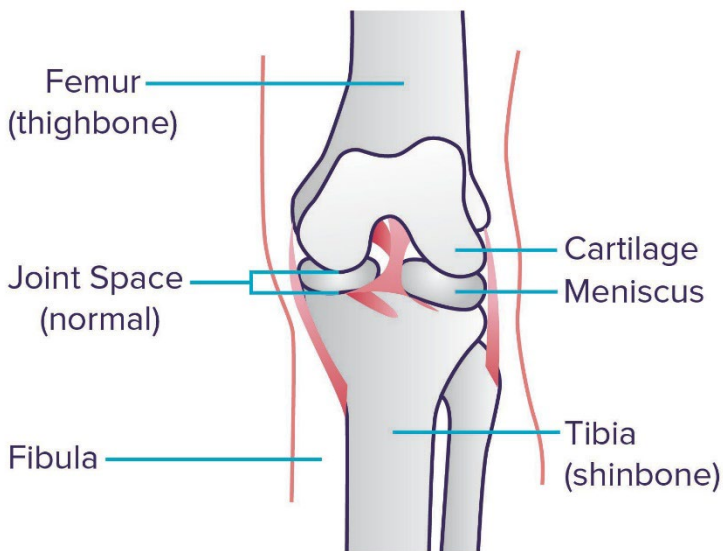
J. Cryotherapy (Cold Therapy)



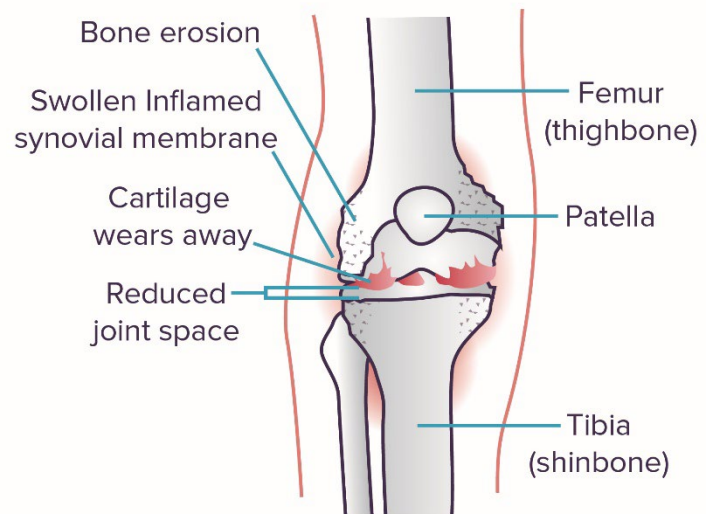
Anatomy and Total Knee Replacement

In a healthy knee joint, the cartilage is a smooth elastic tissue that covers and cushions the joint surfaces and allow for smooth movement without pain. When the cartilage wears away, the bones rub together causing pain. Bony spurs can form in the knee joint or under the kneecap, which can make weight bearing, walking and even sitting very painful. This damage to the knee structures can be caused by osteoarthritis, rheumatoid arthritis, and previous knee injuries.

Normal Knee Joint



Arthritic Knee Joint



Artificial Knee Joint



During the operation, the surgeon replaces the diseased joint with an artificial joint. The damaged bones are reshaped to fit the artificial joint. The ends of the thigh bone and shin bone are covered with metal shells separated by a plastic liner. If the kneecap is damaged, it may be lined with a plastic disc. This surgery takes about an hour.

Members of the Orthopedic Care Team

The **Orthopedic Surgeon** performs the surgery, monitors your overall progress during your hospital stay, and will ensure you are going home with the right medication. If you have questions about any part of your recovery, you should contact your surgeon's office.

A **Nurse Navigator** may help to oversee your preparation for the surgery, including arranging tests or accessing resources. Not all patients will need the assistance of the Nurse Navigator.

The **Anesthesiologist** will work with you and your surgeon to manage your pain, and closely monitor your vital body functions during your surgery.

Nurses help get you ready for surgery, and also help in the operating room. After surgery, they help by managing your pain, assisting you with moving around your room and preparing you, through education, to go home safely.

Patient Care Assistants will help you with personal care, if needed.

Physiotherapists will teach you specific exercises to help improve movement and strength. They will teach you how to use walking aids so you are able to move safely in your home.

The **Occupational Therapist** may help to prepare you for managing on your own when you go home. Not all patients will need the assistance of an Occupational Therapist.

A **Social Worker** may help you and your family if you need help to access community resources. Not all patients will need the assistance of a Social Worker

Other healthcare professionals may help you, if needed.

KHSC is a teaching hospital so you will likely meet surgical residents, medical students, and/or other health sciences students before, during and after your surgery. These individuals may also be involved in your care.

Creating a Healthy Lifestyle before Surgery

There are many things that you can do to get yourself prepared for surgery and make recovery easier. Discuss any concerns you may have about the topics below with your family doctor.

Exercise

Being active while you wait for your surgery is important and, if done safely, will not harm your joints. Exercise can help to decrease pain, improve strength and keep your heart in good condition.

Exercising is not meant to cause pain, but you may feel some slight discomfort afterwards. If you experience soreness a few hours after exercise, or even the next day, then you may be doing too much. We recommend you start slowly and listen to your body.

The goal is to be active most days of the week. Begin with a few minutes and aim for 30 minutes most days at a moderate level of intensity in which you sweat a little. You can also break up your exercise into smaller sessions, if needed. For example, exercising in 10-minute intervals is just as good as one 30 minute session. If you have questions about an exercise program, you may contact your family doctor a physiotherapist or exercise specialist.

Endurance Exercises

These exercises are ideal for building up your stamina and helping to keep your lungs and heart healthy:

- Walking
- Cycling on the road or stationary bike
- Swimming (water aerobics, aqua-fit programs, water jogging/running)

Strengthening Exercises

These exercises are designed to help build muscle strength, which will make everyday tasks easier after surgery. Using exercise bands or weights can help to make exercises harder. It is recommended you do exercises on both sides, not just the side that is having the operation, and that you include exercises for your arm and abdominal (core) muscles.

Stretching/Flexibility Exercises

Stretching and flexibility exercises can help improve how easily and how much the joint can move. These exercises are not meant to cause pain. They can help the muscles relax and reduce soreness.

Making Healthy Eating Choices

Making healthy eating choices helps your bones, muscles and skin heal after surgery. It is important to have good nutritional intake and take supplements if needed. Eating regularly and choosing a variety of healthy foods daily can help to maintain good health and get your strength back after surgery. These recommended websites can assist you with meal planning and making healthy choices:

- www.healthcanada.gc.ca/foodguide
- Unlock Food offers a healthy eating website and toll-free dietitian consultation if you have any nutrition-related questions and wish to speak or e-mail with a Registered Dietitian. For more information go to unlockfood.ca or call 1-866-797-0000.
- For meal delivery options in your area, please see the South East Health Line website: <https://www.southeasthealthline.ca/> (click on “Home Health and Community Supports”, then click on “Meal Delivery”)

Maintaining a Healthy Body Weight

Being overweight places unnecessary pressure on your joints, causes more pain, and makes recovery more challenging after surgery. Gradual and safe weight loss before surgery is one way to decrease pain in your joints, make exercise easier, and allow you to continue your healthy lifestyle choices after your surgery.

Protect Yourself from Falling

Having a sore hip or knee may increase your risk of falling, so it is important to be safe and know your limits. Here are a few tips to minimize falling:

- Regular exercise can help to improve balance.
- Use a cane or a walker, if one has been suggested to you.
- Ensure your footwear fits well and has non-slip soles. Wear shoes with elastic shoe laces or Velcro if you have difficulty reaching your feet.
- Take your time when standing up from lying or sitting.
- Walk on smoother surfaces – avoid uneven, unlit or icy surfaces.
- Remove any tripping hazards in your home, such as rugs or cords.
- Use night lights in bedrooms, hallways and bathrooms.
- Wear your prescribed eye glasses and hearing aids.

Quit or Decrease Smoking

Quitting or smoking less will decrease your chance of having heart and lung problems during and after your surgery.

If you want help to quit smoking, Telehealth Ontario (1-866-797-000) offers a smoking cessation program for Ontarians. A referral can be completed by you, the nurse or your family doctor. Your care is managed by a Care Coach who is available from 10 a.m. to 10 p.m. daily and Coach Care Assistant is available 24 hours a day to help with ongoing support and information.

Attend Regular Medical Appointments

Regular medical appointments with your doctor will ensure you are as healthy as possible for your surgery and will address any concerns that may arise. Visiting your dentist for routine check-ups and cleaning is important to ensure any tooth or gum problems can be treated.



Preparing for your Surgery

You will have homework to do before surgery to make sure your recovery goes smoothly.

Equipment and Home Safety

We have provided **checklists at the FRONT of the booklet** that will help prepare you for surgery and ensure a smooth discharge from hospital. Some items require your attention months before your surgery, while others can be done the week of your surgery. Read through these lists regularly and check off the items you have completed.

As you go through the checklists, you may need to make some adjustments to your home to ensure your safety. Some of the equipment you will need may require you to move furniture so you can use it safely and make the first part of your recovery easier. You need to have these items ready for use before coming in for your surgery and it is suggested you practice using them wherever you will be recovering (home, friend's place, etc.). **Please refer to Appendix B** for instructions on how to set up and use your equipment safely.

Discharge Plan

It is very important to have a discharge plan in place for when you go home after surgery. You will need help with preparing meals, shopping, laundry and other activities that will require driving. This plan ensures the following:

- You know where you will be staying after surgery
- A trusted and competent person will be staying with you for at least 48 hours after your discharge
- Where you will be staying is set up properly, including the equipment you will need.

If you do not have a plan, your surgeon may delay your surgery until a plan is in place.

Your time in hospital is short, some patient may go home the **same day as their surgery** and others may require a short stay.

Your length of stay in hospital will be assessed by your healthcare team regularly.

Physiotherapy Follow-up Before and After Surgery

Once you have gone home after surgery, you will be attending physiotherapy in your community as an important part of your recovery. Your physiotherapist will monitor your progress to ensure you are meeting your goals.

All patients will receive a phone call from our physiotherapist 1-2 weeks before surgery to talk about where they would like to do their post-operative out-patient physiotherapy or to book a pre-operative assessment.

If your surgeon has indicated that you could possibly go home on the same day of surgery, then our physiotherapist will see you for a pre-operative assessment. This assessment usually happens 1-2 weeks before your surgery and will cover your post-operative exercise program, where you would like to do your post-operative out-patient physiotherapy, the equipment you will need at home after surgery, and how to use that equipment properly.

Some patients may choose to have their physiotherapy covered under O.H.I.P., while others choose to pay for it or use their extended health insurance.

O.H.I.P. options in Kingston and the surrounding area include:

- Brockville General Hospital (75 Charles St, Brockville)
- Glengarry Memorial Hospital (20260 County Road 43, Alexandria)
- Kemptville District Hospital (2675 Concession Road, Kemptville)
- Lennox and Addington General Hospital (8 Richmond Park Drive, Napanee)
- Perth Hospital - Great War Memorial site (33 Drummond Street West, Perth)
- Physiotherapy Kingston (1469 Princess Street, Kingston)
- Providence Care Hospital (752 King Street West, Kingston)
- Quinte Health Care - Belleville General Hospital site (265 Dundas Street East, Belleville)
- Smiths Falls Hospital site (60 Cornelia Street West, Smiths Falls)
- Winchester Community Hospital (566 Louise Street, Winchester)

These are subject to change without notice and other options can be reviewed with you.

If issues are identified that would prevent you from attending physiotherapy in the community, other options can be discussed with you.

Pre-surgical Screening Visit

Please ask your pharmacy to provide you with an up-to-date medication list prior to this appointment. This will ensure the nurses or doctors can give you accurate medication instructions.

You will have an appointment with the Pre-Surgical Screening Department at the Hotel Dieu Hospital site. This visit may be in **person OR over the phone**.

This appointment is typically scheduled 1-3 months before surgery and you may not have a specific surgery date at the time of your Pre-surgical screening appointment. This appointment is important to ensure that you are fully ready for your surgery.

If you are coming to the hospital for your appointment:	If you are having your appointment over the phone:
Bring all medications in the original containers (including insulin, eye drops, inhalers, nitroglycerin spray, vitamins and herbal medications).	Have all of your medications readily available. Have paper and a pen to make notes.



During this appointment, you:

- Meet with a nurse to review your medical history, allergies, medications, and fasting guidelines and discharge plan for you. This includes:
- Have blood work, an Electrocardiogram (ECG), an x-ray, or other tests and you will be told where and when to have these tests done.
- Receive instructions about which medication(s), vitamin(s) and herbal supplement(s) to continue taking and which need to be stopped at specific times before surgery.
- Receive fasting instructions limiting your food and water before surgery.
- Discuss blood thinner medication, to prevent blood clots after surgery. Most patients are prescribed two 81mg low-dose Aspirin (ASA) for up to 6 weeks after surgery. If you are prescribed a different blood thinner there may be a cost associated with this medication. This cost may be covered through your own private insurance or a government program.
- Review of your discharge plan
- Receive two Chlorhexidine Gluconate surgical scrub brushes. You use one the **night before** surgery and the other the **morning of** your surgery. Take a shower and use it like a bar of soap, washing from the neck down, and paying particular attention to the joint you are having surgery on. Rinse and dry off with a freshly laundered towel. **For complete instructions see Appendix A**
- Will note that Dr. Wood does require his patients to wear compression stockings for 6 weeks after surgery. If you do not have them compression stockings will be provided by the hospital after surgery and should be worn during the day and can be removed at night.
- May speak to an anesthesiologist about your medical history, medications, and anesthetic options to decide the best care plan for you. You will let them know if you have had any problems with pain medication in the past. If you do not speak with the anesthesiologist, then these items will be discussed with you when you come to the hospital for your surgery.

Anesthesia and Surgery

Anesthesia medication will help keep you comfortable during the surgery. There are two main types of anesthesia:

1. Regional Anesthesia: local medication is used to numb part of your body. It includes spinal and nerve blocks
2. General Anesthesia: you are fully asleep and unconscious during the surgery and a breathing tube is placed in your throat

Spinal Anesthetic:

With a spinal anesthetic, the skin on your low back is made numb and a local anesthetic is injected into the spinal fluid with a needle that is inserted between the bones in your back. This needle is removed immediately after the injection. Shortly after this injection, you will not be able to move your legs or feel pain below the waist. This is TEMPORARY and will resolve as the medication wears off.

If you are anxious, medication can be given to help you feel relaxed or sleepy.

After the surgery, the sensation and movement in your legs will be checked regularly until it is back to normal.

Advantages	Complications
Avoids the need for a general anesthetic with a breathing tube in your windpipe	Bruising and discomfort at needle site on your back
Lower risk of breathing problems after surgery	Temporary difficulty urinating (urinary retention) in some patients
Lower chances of developing blood clots in your legs	Temporary decrease in blood pressure
	Spinal headache the following day is uncommon (approximately 1 in 100)
	Risk of nerve injury resulting in permanent damage is very rare (approximately 1 in 200,000)

General Anesthesia

Several medications are given through your IV to ensure you are fully asleep and unconscious during the surgery. Once you are asleep, a breathing tube is placed in your throat and you are connected to a breathing machine. This tube is removed after surgery once you are breathing on your own. Some of the risks with having a general anesthetic include:

- Mild sore throat for 1-2 days
- Tooth or airway damage from the breathing tube
- Nausea or vomiting
- Confusion or memory loss particularly in older persons
- Stomach contents getting into lungs (aspiration)
- Extremely rare: allergic reactions, awareness during surgery, nerve damage, death



Your Hospital Stay

The Day before Surgery

	If your surgery is at the Kingston General Hospital site	If your surgery is at the Hotel Dieu Hospital site
When do I receive a phone call about when I show up to the hospital for surgery?	The day before your surgery between 2:00 pm-6:00 pm (e.g. if your surgery is on Monday, you will receive a phone call on Sunday)	The day before your surgery between 12 p.m.–6 p.m. with the following exceptions: If your surgery is on a Monday, you will receive your phone call the Friday before If you surgery is after a statutory holiday, like Labour Day, you will receive your phone call the Friday before.

You will be asked to arrive two hours before your surgery time.

If you do not answer the phone, the hospital will NOT leave a message.

If you do not receive a call by 6 p.m. the day before your surgery, please call: 613-549-6666 ext. 7820

Here are some important reminders before you come to the hospital:

- Do not wear contact lenses, make-up, nail polish on fingers or toes, jewelry, perfume, cologne or scented personal care products.
- Follow all your fasting instructions and DO NOT eat after midnight. This includes not chewing gum or eating candy. However, you may drink clear fluids only up until 3 hours before surgery (water, apple juice, black coffee/tea, and ginger ale – NO dairy) then nothing until after your surgery.
- Shower the night before and the morning of your surgery with your Chlorhexidine Gluconate scrub. **See Appendix A for instructions.**
- Put the walker in the trunk of your car.
- Ensure your overnight bag is packed. Refer to your checklist to make sure you have everything you need.
- Avoid bringing valuables, including large sums or money. The hospital is not responsible for lost or stolen items.

Reasons your surgery may be CANCELLED:

- An active infection anywhere in your body (including your mouth)
- A sore throat
- Fever
- Head cold
- Flu
- Cold sore
- No discharge plan with appropriate supports
- Emergency comes in, lack of time, or bed not available

If any of these occur a day or two before surgery, **CALL YOUR SURGEON.**

The Day of Surgery

	If your surgery is at the Kingston General Hospital site	If your surgery is at the Hotel Dieu Hospital site
Where do I go in the hospital on my surgery date?	<p>Same Day Admission Centre (Connell 2 – 2nd floor)</p> <p>You can ask for directions at the Information Desk at the main entrance on Stuart Street</p>	<p>Day Surgery (Jeanne Mance 2 – 2nd floor)</p> <p>You can ask for directions at the Information Desk at the main entrance on Brock Street</p>

- Give any forms that need to be filled out to the staff.
- An intravenous (IV) line will be started and you will be given any medication that has been ordered before your surgery
- The anesthesiologist will speak to you about the type of anesthetic you will receive, and your choices for pain management.
- You surgeon will answer any questions about the surgery.
- Once surgery is completed, you will go to the Recovery Room for a few hours before going to your hospital room or being discharged.



Same Day Discharge/Short Stay

- In the recovery room, nurses will monitor your temperature, blood pressure, heart rate, breathing, pain and nausea.
- Patients deemed suitable to be discharged on the same day as their surgery will receive assistance with mobility and assessment prior to leaving the hospital.
- You will have a bandage over your incision. Instructions will be given to you on how to care for the type of bandage you have.
- A prescription for pain medications will be provided by your surgical team, if necessary.
- All equipment required for your surgery should be arranged and ready prior to your surgery.

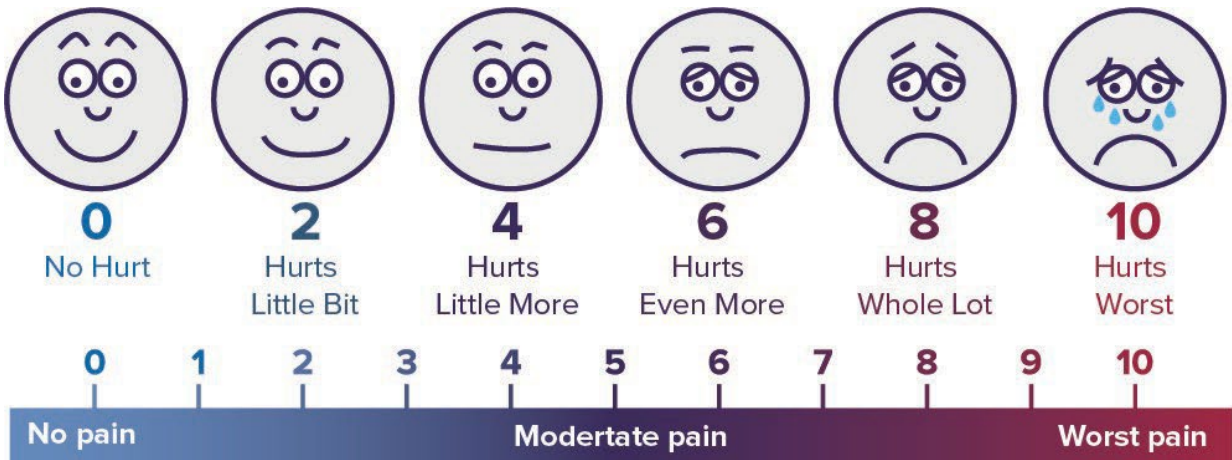
Inpatient Stay/ In your Hospital Room

- Your temperature, blood pressure, heart rate and breathing will be monitored by nurses.
- There will be a bandage over your incision when you come out of the operating room. Instructions will be given to you on how to care for the type of bandage you have.
- Your surgeon will order a blood thinner medication that is given by needle or taken by mouth. Blood thinners and exercise decrease the risk of blood clots forming in your legs. You or a family member will be taught by nursing staff how to correctly administer these injections at home, if needed.
- The intravenous fluid is typically stopped when you have finished receiving medications intravenously, are drinking well and are able to eat some solid foods.

Managing your Pain

Pain after surgery is normal and there are many words used to describe it such as soreness, discomfort, aching, burning or throbbing.

While you are in the hospital, medical staff will ask you frequently to rate your pain on a scale from 0 to 10. The scale helps you and the staff decide when we need to do something to help relieve your pain. If your level of pain is preventing you from moving and/or doing your exercises, your pain should be treated.



You will need to take an active role in asking for pain medication

Pain can be a sign that you are doing too little or too much activity. If getting up and moving does not decrease some of your pain, or if you are simply in too much pain to move, then you may need to consider asking for pain medication.

Different combinations of opioid and non-opioid medications can be given to control your pain and keep you comfortable.

Your healthcare team will decide what will work best for you based on your medical history and other regular medications you are taking. Some common pain medications include:

Types of Medications	Use	Examples
Non-Opioid	Decreases the amount of opioid medications needed Given as a pill	Acetaminophen (Tylenol®)
Opioid (narcotic)	Strong pain medication Given in pill, liquid, or needles	Hydromorphone (Dilaudid®) Morphine (Statex®)
Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)	Decreases pain that is caused by swelling Given in pill	Ibuprofen (Advil®, Motrin®) Naproxen (Aleve®, Naprosyn®)

You will often be discharged with instructions to take a combination of these medications.

With any medication, there may be some side effects and there are ways we can help minimize these. Please inform your healthcare team if you experience:

- Nausea (upset stomach)
- Sleepiness, drowsiness
- Itching, especially on your face
- Constipation (unable to pass stool)
- Urinary retention (unable to pass urine)
- Dizziness
- Confusion
- Sweating

Other Methods of Pain Management

Medicine is only one way to help control your pain. Other ways to control pain include:

- **Ice:** to reduce some of the swelling that is causing the pain (**See Appendix C**)
- **Deep breathing exercises:** tight muscles caused by stress can increase pain and deep breathing is a simple way to help you relax. Create a restful and quiet place, and take deep breaths in through your nose and slowly out through your mouth. Closing your eyes or turning out the lights may help. Focus all your attention on your breathing until you feel relaxed.

Managing your Nausea

You may have some nausea following your operation. Let your nurse know right away because there are medications that can help you when the nausea first starts. Taking your pain medication with food can protect your stomach and minimize nausea.

How soon can I move after surgery?

There are many benefits of getting out of bed and moving after surgery such as:

- **Skin:** prevent bed sores
- **Lungs:** improve breathing, ability to cough, and fight off infections
- **Nutrition:** improved appetite and less risk of choking while eating
- **Brain:** improved mood and sleep
- **Muscles and bones:** decrease muscle weakness and joint pain
- **Heart:** more stable blood pressure, improved blood circulation and lowered risk of blood clots

After your anesthetic has worn off, medical staff will help you to begin moving right away. We will help you sit on the edge of the bed, stand at the bedside, or begin taking steps with a walker. You may put as much weight as you can on your new knee. We recommend that you sit up for your meals on the edge of the bed or in a chair.

Your physiotherapist will help you with a walking and exercise program. They will provide teaching to make sure you are able to do the following activities with little to no help:

- Deep-breathing exercises to help keep lungs clear and prevent pneumonia
- Leg exercises to help prevent blood clots and specific leg exercises to help increase movement and strength
- Understand what NOT to do with your new knee joint
- Transferring in and out of bed and on and off a chair safely
- Walking with a walker or crutches
- Going up and down stairs (if required)
- Icing and controlling the swelling after surgery
- An exercise program that you will continue to do at home

Precautions

For knee replacement, never place a pillow behind your knee. Your knee should be as straight as possible to ensure you achieve full range of motion and mobility.

Discharge Day

By the time you go home from the hospital you will be able to safely:

- Get on/off a chair and toilet, and in/out of bed independently with little to no help.
- Walk by yourself or with little to no help using a walker or crutches, and safely go up and down stairs (if you have stairs).
- Know what positions and activities to avoid while your knee joint is healing
- Do your home exercise program

You will receive education to help you:

- Give your blood thinner injection safely (if needed)
- Recognize the signs and symptoms of wound infection
- Recognize the signs and symptoms of a blood clot
- Manage your pain medication schedule independently. You will be given a prescription for your pain medications that you will take to your pharmacy

At Home

Call 911 or go to your Nearest Emergency Room Immediately If You Have:

- Sudden onset of shortness of breath
- Sudden onset of chest pain, tightness or pressure
- Localized chest pain with coughing
- Sudden and severe increased pain in your new joint
- Uncontrolled bleeding
- Knee Joint Dislocation – if your surgical leg is suddenly extremely painful, or you can't move your knee

Recovering from your Surgery

Your Incision

- Avoid rubbing or scratching your incision, or putting creams, oils, lotions or soaps **on** your incision once the bandage has come off. You may use these items on the skin **around** the incision if it is dry.
- If you have staples, they will be removed by your family doctor **10-14 days** after your surgery.
- Do not sit in a bath, go swimming, or sit in a hot tub until your staples are removed and your incision is healed completely. This takes at least 4-6 weeks and your surgeon or physiotherapist can provide guidance on when these activities are appropriate.
- Only take antibiotics given to you by your surgeon.
- Your incision line, where your stitches or staples are, will be more pink/red right after the surgery. This will slowly fade over time.
- Some patients may find the incision is sensitive to touch, or feel a burning sensation. This sensation goes away as the area around your hip heals and the swelling decreases.
- You will have a bandage on after surgery, the type of bandage may vary.

Dermabond Bandage

- Your bandage looks like a snakeskin, it is glued to your skin over your incision
- There are dissolvable sutures underneath the dressing
- If there is drainage from your wound you may apply a dry bandage dressing over top. If drainage persists for multiple days contact your surgeon's office
- You can shower with this bandage on in 3 days. Pat dry after, do not rub the incision or bandage
- Your bandage is designed to fall off in 12-14 days naturally. If it has not fallen off in 14 days, you may remove it by gently peeling from one end of the wound
- If you need to remove the dressing, slowly peel away from the skin in line with the incision using your other hand to stabilize the skin as the mesh is peeled off



Waterproof Bandage

- Change your waterproof dressing if excessive drainage is present (70% of dressing has drainage on it) or it is leaking (***One additional dressing will be supplied to you by the nursing staff***)
- If a dressing change is required, remove the old dressing and apply the new one, and do not touch the incision
- You can shower with the waterproof dressing on
- The waterproof dressing can be removed in 5-7 days after your surgery and then the incision can be left uncovered



Medications

You will be given a prescription with different medication(s) and it is important to know what they are for, when to take them and what the side effects are.

Some of your current medications may have changed during your stay and a copy of these changes will be sent to your family doctor.

Your medications will be reviewed with you before you go home. Once you leave the hospital, your family doctor will take over prescribing any other required medications, including refills on any of the medications prescribed to you in the hospital.

Pain Control

You will continue to take pain medication once you are home. Remember, it is normal to have pain after surgery and you will be prescribed pain medication to help keep you comfortable so you are able to get in and out of bed, walk, rest, and exercise comfortably. It is important to use your medications as prescribed and to keep them in a safe place away from children and pets.

Ways to help with pain and swelling are:

- Point and flex your feet/toes hourly while awake.
- Walk short distances every one to two hours during the day.
- Lie down flat and support the length of the leg on the side of the operation or both legs with pillows to elevate your foot/feet above your heart.
- Place an ice pack wrapped in a towel on your joint while elevating your leg. Ice at home for 15 minutes every few hours for the first week or so.

How long will I need to use pain medication?

Everyone has different needs for pain medication. Some patients require the medication for a longer time, while others may require it only for a week.

If you feel you are ready to stop taking opioid pain medication, we recommend that you wean off it slowly to avoid withdrawal symptoms such as sweating, fever, shaking, nausea and/or vomiting, diarrhea, more pain, anxiety and feeling tense, worried or irritable.

Safely reducing your opioid medication can happen by spreading out the time you are taking your medication (i.e. taking them every six hours instead of every four hours), taking a smaller dose (i.e. taking 1 mg instead of 2mg) and/or only taking the pain medication when you need it.



Complications and When to Seek Medical Help

Some people may develop complications after their surgery and need more medical treatment. Medical treatment could mean contacting your family doctor, surgeon's office, pharmacist, Telehealth Ontario, SeamlessMD or by going to a medical clinic, urgent care center or an emergency department.

Blood Clots

Blood clots can form in the legs (Deep Vein Thrombosis – DVT) or lungs (Pulmonary Embolism – PE). Medication (blood thinners) such as, two low-dose Aspirin (ASA) OR Dalteparin* (or Fragmin®) are provided for up to 6 weeks after your surgery to lower the chance of developing a blood clot. There is an increased risk of this happening for up to 2 months or more after surgery. People who have problems with their circulation and/or are inactive are more likely to develop a blood clot. **You can reduce your risk of blood clots by taking your prescribed blood thinner, completing your daily exercises and walking short distances every 1-2 hours when you are awake.**

Tell your surgeon **immediately** if you have:

- Pain, aching, heat or redness in the heel, ankle, calf or thigh area
- Increasing severe swelling in your surgical leg (foot, ankle, calf or thigh)
- Tenderness or redness above or below your knee
- Increasing swelling in your foot, ankle or calf that does not go away by lying flat and elevating the leg with pillows to bring your foot above your heart

Infection:

An infection in your body can reach your new joint through your blood. People who develop joint infections need antibiotics and on rare occasions, require further surgery. There are various types of infections that can happen after surgery so it is important to seek medical help:

Incision Infection:

Keep your incision clean and don't pick at it or scratch it. Look out for signs of infection:

- The area around your incision is becoming redder and the redness is spreading.
- New liquid (green, yellow or foul-smelling) coming from your incision. This is noticeably different from the clear, pink or reddish drainage that is common and normal for the first 3-5 days after your surgery.
- Increased pain or swelling around your incision and surrounding area that does not improve with rest, lying down, and elevating your leg so your foot is above your heart.
- Fever above 38°C or 101°F.

Call your surgeon if you think you have a possible wound infection, and only take antibiotics that have been prescribed by your surgeon.

Urinary Tract Infection:

- Pain when you urinate.
- Frequent or urgent need to urinate.
- Foul-smelling urine.
- Fever above 38°C or 101°F

Sore Throat / Chest Infection:

- Swollen neck glands, pain when you swallow.
- Frequent cough, coughing up yellow or green mucous, shortness of breath.
- Fever above 38 C or 101 F.

Swelling

It is normal to have some swelling in your leg, ankle or foot after surgery and during your recovery. You will also notice some swelling around your new knee joint. Swelling is a cause of pain for some people and it is more common in the first week after surgery then slowly subsides. If you notice swelling in your lower leg and foot, elevate that leg for 15 minutes by lying flat and placing pillows under your entire leg so that your foot is above your heart. Most of the swelling should be gone after six weeks, but small amounts of swelling may last 6-12 months.

Anemia

If you have signs of anemia, see your family doctor. You may need an iron supplement. The signs of anemia are:

- Feeling dizzy or faint.
- Feeling very tired.
- Rapid pulse.
- Shortness of breath.

If you have signs of anemia, see your family doctor. You may need an iron supplement.

Constipation / Bladder Function

Constipation (difficulty having a bowel movement) can be a problem after surgery. A change in your diet, less activity and pain medication (especially narcotics) may cause or make constipation worse.

While in the hospital, your nurse may give you laxatives and/or stool softeners and you may need to keep taking these medications at home. Talk to your doctor, nurse or pharmacist to choose a stool softener. If you have not had a bowel movement in 5 days or have pain in your belly, please call your family doctor. Constipation can be serious, so do not ignore your symptoms.

Here are some ways to stay regular:

- Drink at least 8 glasses of water or low-calorie fluid each day
- Eat fibre, such as prunes, bran, beans, lentils, fruits and vegetables
- Move around regularly and do your exercises!
- Take bowel medication (laxatives and/or stool softeners), if needed

Some patients have difficulty urinating after their joint surgery. If you continue having issues with constipation or bladder function and have tried all the strategies listed above, then please contact your family doctor.

Life after Surgery

Medical Procedures

Please inform all your healthcare professionals that you have had a knee joint replacement surgery before having any medical procedures. You may need to be put on antibiotics to prevent infection from moving through your bloodstream to your new joint.

Dental Work

Although the subject is controversial, most joint replacement surgeons recommend that you take antibiotics before any dental procedures which are more involved than a cleaning, and that you do this for the rest of your life. The antibiotics are usually prescribed by your dentist, but some dentists are not comfortable doing this. You should talk to your surgeon's office if you are not sure whether you need antibiotics.

If you are having any dental work done before or after joint replacement surgery, you must discuss this with your surgeon.

Driving

There are a number of factors that can impact your ability to safely return to driving any vehicle including, but not limited to a car, all-terrain vehicle (ATV), tractor, motorcycle, boat or snowmobile. Narcotic (opioid) medications can impair your reaction time; so can joint stiffness.

If your surgery was on your **right** leg or you drive a manual/standard car, you should **not** drive for 6 weeks.

If your surgery is on your **left** leg, you may start driving once you feel safe. You should feel comfortable getting in and out of the driver's seat.

Air Travel

If you are planning a trip by plane after your surgery, there is an increased risk of blood clots the sooner you fly after your surgery. Most surgeons recommend waiting at least 6 weeks.

Airports can be large and require a lot of walking that you may not be ready for. Contact the airport or airline to inquire about transportation within the airport such as porter services or wheelchairs. Your new joint may set off metal detectors at the airport so give yourself plenty of time before your departure to clear security screening. You may find it more comfortable to bring a cushion to raise the height of your airplane seat.

Sexual Activity

Resume sexual activity as soon as you feel comfortable doing so. Do not forget the limitations you have with some movements. Avoid any position that causes you pain.

Physiotherapy after Hospital Discharge

Participating in a supervised physiotherapy program will help maximize your independence after your total knee replacement by focusing on your movement, strength, and teaching you how to walk properly.

The majority of patients who experience a total joint replacement receive post-operative physiotherapy in an outpatient setting. When having a knee replacement, your first physiotherapy appointment should be 1-2 weeks after you are discharged from hospital.



Exercise at home

The physiotherapist in the hospital will ensure you are comfortable with your home exercise program. In addition to your home exercise program, these are some important things to get you through the next few weeks until you have your first visit with your physiotherapist in the community.

Make sure you stand up and move during the day every few hours to minimize the stiffness in your new joint. Do not worry too much about walking very far for the first week or so. Just concentrate on walking frequently enough and for enough to minimize the stiffness.

After the first week, gradually build up your walking program and your physiotherapist will help guide you to ensure you are meeting your goals.

- There will be more swelling in the first few weeks before it slowly decreases. Your knee will also feel a bit warmer to the touch.
- Place an ice pack on your new joint every 1-3 hours during the first few weeks. Icing after each exercise session may help to minimize some pain and swelling. Ice for 15 mins and lie flat. If your leg looks or feels swollen, place 3-4 pillows under your entire leg to elevate your foot above your heart. This is the only time you will be allowed to have a pillow under your knee. Place a towel between the ice pack and your skin – never put ice directly on the skin.
- Use your walker until your physiotherapist tells you to use crutches or a cane. It is important to try to walk normally with your current walking aid before trying to move faster.
- Most important, listen to your body. If you are in pain or tired, stop and take a rest before continuing your exercise program.

Progress to expect in the first 6 weeks:

- By 4-6 weeks after surgery you should be walking with more confidence, have more strength and be able to walk longer distances. Start with short walks, regularly during the day, and then gradually increase the distance or time that you are walking.
- Most patients use a walker for the first week after surgery before moving to crutches or a cane. It is common to use a cane for 3-6 months after surgery when you plan on being out of the house all day, walking long distances, or walking on slippery, icy or uneven ground.
- Most patient's narcotic use will decrease and they will be using little to no narcotics within the first few weeks. Pain medication is to be used only as needed/prescribed.
- Start to do lighter activities around the house such as washing dishes and helping with meal preparation.
- A reasonable goal would be for you to have ~90 degrees of bend in your knee around 4 weeks after surgery. Also, your knee should be getting flatter (i.e. the back of your knee you be closer to the bed)
- Most people can walk down the stairs one foot per step within the first six weeks. You may not be able to walk up the stairs one foot per step at this time.
- You will still have some swelling in your knee.
- Your sleep should continue to improve, although it may take months to resume a normal sleeping pattern.

Progress to expect after 6 weeks:

Your body will continue to adjust to your new knee over the next year. You will return to some activities sooner than others and those that are more strenuous will take longer to get back to.

- Gradual improvement in strength – exercise may be more focused on a specific muscle or group of muscles. Your physiotherapist may recommend using light weights.
- Continue to work on improving the movement of your new knee so you are able to reach your feet (i.e. put on socks, tie up shoes).
- Decrease your use of walking aids unless you need them for balance, the other joints in your legs are sore, or you have been received different instructions from your surgeon or physiotherapist.
- Increase how far you are walking and your stamina so you are taking fewer breaks. Gradually incorporate walking on gentle hills before moving onto harder and more uneven ground.
- You may be able to return to the gym or some physical activities, such as golfing. Your physiotherapist will help guide you to return to these activities safely.
- Gradually return to all of your regular activities such as shopping, cleaning and hobbies with less fatigue.
- It is common to have some episodes of discomfort/pain, or even mild swelling that requires rest, ice, or heat, and over the counter pain medication(s).
- It may take months for you to be comfortable sleeping on the operated knee. This is normal.
- If you are planning to return to work, you can discuss this with your surgeon and physiotherapist to decide when it is safe to resume working. A job that is less physically demanding may be possible for you to return to sooner than a job that requires a lot of heavy lifting or spending time on your feet. Most people return to work 3 months after surgery and often require a gradual increase in hours worked and temporarily modified duties. If your job requires a lot of heavier lifting, it may take up to 6 months to return to your regular duties.

Appendix A – Chlorhexidine Gluconate Surgical Scrub

At your pre-surgical screening appointment you will be given two Chlorhexidine Gluconate surgical scrub brushes. You use one the night before surgery and the other the morning of your surgery.

It is important to clean your skin before your surgery to decrease your risk of infection.

If you have a reaction to the Chlorhexidine Gluconate surgical scrub, rinse it off and use a mild unscented soap instead. Tell the hospital staff about your reaction when you arrive on the day of surgery.

Washing Instructions:

1. Wash your hair with shampoo
2. Wash your body from your neck to your feet, using the Chlorhexidine Gluconate surgical scrub like a bar of soap
3. Make sure you pay particular attention to the joint you are having surgery on and clean it well.
4. Do your groin and anal area last
5. Leave the soap on for 2 minutes, and then rinse your body off well.

Be Prepared:

1. Use a clean freshly laundered washcloth and towel for each shower
2. Wear clean pajamas or clothes after each shower (including socks, underwear and shoes)
3. Sleep in clean bedsheets the evening before surgery

Don't:

- Do not use the Chlorhexidine Gluconate surgical scrub on your face or hair
- Do not apply body lotion, moisturizer, or powder after your shower
- Do not shave the area where you will be having surgery

Appendix B – How to Set up and Use my Equipment safely

Sitting and Standing (includes getting on and off toilet)

- Sit on a high, firm-cushioned chair with armrests - this makes it easier to get in and out of a chair.
- A chair that is at least 2 inches above the back of your knee will be the most comfortable. Avoid sitting on soft or low couches or chairs.
- During the initial part of your recovery, you will find it more comfortable to keep your operated leg out in front of you when standing up and sitting down, and use both arms rests on the chair. If there are no arm rests, place one hand on the walker/crutch handle, and the other on the surface you are sitting on.

Walking with walker or crutches

1. Move the walker or crutches forward first
 2. Step forward with the foot of your operated leg and put weight through your leg as you also take weight through your hands.
 3. Bring your foot on the non-operated leg and place it beside you operated leg
- The more weight you put through your leg, the less weight you will put through your hands.
 - You can put as much weight on your new knee as you can, and use your pain as your guide.
 - If you have been told you are able to walk with one crutch/cane and you are walking on flat ground, the crutch/cane always goes on the OPPOSITE side of your operated leg.

How to Adjust Walkers, Crutches and Canes to the Correct Height

To adjust your **walker or cane**, stand up tall with your arms down at your side. Adjust the walker so the top of the walker handles are at the level of your wrist crease. You will need to adjust all 4 legs of the walker to ensure that it sits evenly on flat ground.

To adjust your **crutches**, stand up tall and look straight ahead. Place the crutch under your arm with the bottom tip of the crutch 6 inches away from the side of your foot. The height of the crutch should rest against the rib cage – you should be able to fit 3 fingers between the top of the crutch and your armpit. Your crutch should never touch your armpit. Now adjust the handle of the crutch so it comes to your wrist crease. You always take the weight through your hands, not your arm pits.

Going Up and Down Stairs

- With your hand on the handrail and the crutch or cane on the other side, step UP with your good leg first. Follow by bringing the operated leg and crutch up to the same step
- When going DOWN using the handrail, place your crutch on the stair below. Step down with your operated leg first. Follow with your non-operative leg so that both feet are resting on the same stair. Repeat one stair at a time.
- On the stairs, the crutch/cane will always go on the opposite side of the handrail – it does not have to be on the opposite side of your operated leg

Getting in and out of Bed

- Back up with your walker in front of you until you feel the bed on the back of your legs. Slide your operated leg forward as you reach back with one hand for the bed. Keep your other hand on the walker.
- Once seated, slide your bottom backwards until your knees are on the bed
- Use your arms and your non-operative leg to turn and position yourself properly on the bed
- Use your hands or a belt/strap if you are unable to slide your bottom back far enough on the bed or lift your operated leg onto the bed

Getting Dressed

Choose loose fitting clothes and socks. Wear flat, closed-heel, slip-on shoes with non-skid soles because they will provide the best support. Sit on a bed or use a chair with armrests.

- Dress your operated leg first and undress it last.
- Use a reacher or dressing stick for putting on your underwear and pants.
- Using a sock-aid for putting on socks may be helpful.
- Use a long-handled shoehorn for putting on and taking off your shoes.
- NOTE: A reacher can also be used to pick things up off the floor or to reach lightweight items overhead.

Bathing

For the first few weeks, you will need to be seated on a chair while you are bathing. It is unsafe for you to stand while bathing on your new joint. It is also unsafe to sit at the bottom of the tub. You will require a shower chair. The bathroom is a wet and slippery environment which can put you at high risk for falls. It is also strongly recommended to have someone around when you bathe in the event that you need any assistance.

Please review video demonstrations of bath tub transfers on our KHSC website under Surgical Care -> Your education -> Hip and Knee

<https://kingstonhsc.ca/surgical-care/your-education/hip-and-knee>

General tips for bathing:

- Install / use a hand-held shower head to prevent bending forward for tap control.
- Use a long-handled sponge in the shower to prevent bending forward when washing your lower body.
- Use a non-skid bath mat inside the tub and a rubber-backed mat outside the tub.
- If you have sliding doors on the tub, you will have to remove them temporarily and install a temporary rod and shower curtain.
- Never hold on to a towel rack, shower curtain rod or soap dish for support. You may require a grab bar for secure support.
- Ensure your bathroom has proper ventilation as excess steam may make you feel lightheaded and potentially cause a fall.
- To provide balance and help you maintain your activity restrictions, you may require someone to help you bathe for the first few days.

Getting in/out of a bathtub with a tub transfer bench

- Back up with your walking device until you can feel the bench against the back of your legs.
- With one hand, hold onto the back rest of the bench for support. With your other hand, reach back for the seat of the bench.
- Slide your operated leg forward slightly and sit down.
- Lift your legs, one at a time, up and over the side of the tub – you may use your belt/strap.
- Slide over to the middle of the bench.
- To get out of the tub, reverse the procedure.

Getting in/out of a walk-in shower with a shower chair / shower stool

- Bring your walking device to the walk-in shower.
- Position yourself sideways to clear the lip threshold.
- Ideally, you could bring the walker into the shower. However, if that is not an option, consider a crutch or cane. Avoid doing the walk unsupported. Hold onto a grab bar or something secure. Never hold on to a towel rack, shower curtain rod or soap dish.
- Step into the shower with your non-operative leg first.
- Step far enough to make room for your operated leg.
- Then step into the shower with your operative leg.
- Reach for the shower chair/stool, extend your operated leg slightly, and slowly lower yourself into a sitting position.
- To get out of the shower, reverse the procedure.

Entering, Exiting and Riding in a Car

- Back up with your walking device until you can feel the car at the back of your legs.
- Hold onto the back of the seat and your walker/crutches for support.
- Slide your operated leg forward slightly and sit down.
- Push the seat back as far as it will go and recline the backrest for your comfort.
- Slide your buttocks back towards the middle of the car and lift your legs into the car. You can use your belt or strap to help lift your leg in and out of the car.
- Placing a plastic bag on the seat will make it easier to slide into the car. To get out of the car reverse the procedures above.

When **riding as a passenger in a car**, place a firm pillow on the seat to raise the height. Sit in the front seat. Adjust the seat back as far as it will go.

Videos are available on our website:

<https://kingstonhsc.ca/surgical-care/your-education/hip-and-knee>

Appendix C – Cryotherapy (Cold Therapy)

Cryotherapy (Cold Therapy)

Cryotherapy (Cold therapy) is an important part of your post-op recovery and can help with both short-term relief and long-term joint replacement success. Cold therapy helps reduce:

- Pain
- Swelling (edema)
- Blood loss
- Secondary tissue damage

Types of Cold Therapy

- Bag of crushed ice, frozen peas, or a soft freezer pack
- Cold therapy machine (i.e. IceMan, CryoCuff, or Game Ready) with or without compression
 - The compression option can further help with reducing or preventing swelling, increase blood flow, and help with the healing process

When to apply Cold Therapy

Cold and compression treatments are best applied shortly after surgery and it can be helpful to continue to use it for at least 2 weeks after the surgery. You will slowly discontinue using cold therapy as your pain decreases and your mobility and function improve.

- For bag of crushed ice, frozen peas, or a soft freezer pack apply for 15-20 minutes every hour as needed.
- Cold Therapy Machine follow the manufacturer's directions or instructions given by the physiotherapist

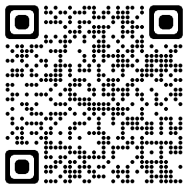
After the first 2 weeks the cold therapy can be used on an as needed based to continue to help with pain or swelling. It is often helpful to use after exercising. Cold therapy should never be left on overnight or while you are sleeping.

Vendors

Device	Local Vendor(s)	Estimated Cost	Privacy Insurance Cover
Game Ready	Best Health Physio 2-1329 Gardiners Road Kingston, ON (613) 634-2378	\$250 per week	Most privacy insurance will cover part or all costs. Contact your insurance for more information
	Verve 15845-6 Yonge Street Aurora, ON (905) 713-3730	Rental Only Min Rental 2 weeks	If you need a prescription, please contact your surgeon's office
CryoCuff	Best Health Physio 2-1329 Gardiners Road Kingston, ON (613) 634-2378	\$305 Purchase Only	Most privacy insurance will cover part or all costs Contact your insurance for more information If you need a prescription, please contact your Surgeon's Office
IceMan	Best Health Physio 2-1329 Gardiners Road Kingston, ON (613) 634-2378		
	V2 Innovations 12-745 Gardiners Road Kingston, ON (613) 767-2641	\$196 to \$386 depending on location	Most privacy insurance will cover part or all costs Contact your insurance for more information
	Active Orthopaedics 1469 Princess St Kingston, ON (613) 530-2233	Purchase Only	If you need a prescription, please contact your surgeon's office
	Hotel Dieu Hospital Johnson 7 166 Brock St Kingston, ON (613) 544-3400 ext. 2703		

* Information in chart is subject to change without notice*

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